Data General Corporation Product/Price Catalog

AViiON Computer Hardware & Services

February 15, 1993

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FOREWORD

Welcome to Data General Corporation's AViiON Hardware Product Price Catalog. We have designed this book to provide you easy access to product pricing, ordering, and configuration information.

The Catalog is structured as follows:

This AViiON Hardware Product Price Catalog was designed to provide you model, pricing, discount, ordering, and configuration information for products and services in one easy-to-use format. The structure/layout of the information is identical within each section; i.e., between processors, between products in mass storage, etc. This means quicker access time for you as well as consistency throughout the book. In addition, a series of ordering/configuration notes follow each section as required.

To begin using the book, you may want to familiarize yourself with the "Table of Contents." If you already know a model, the "Index by Model" will guide you to locations where the model may be found. Multiple page references are available where indicated. The "Introduction" supplies you with: Heading definitions, notes, suffix and power information, and CPU designators. You will find the "Introduction" a handy reference section whenever you use this catalog.

If you have any questions concerning this AViiON Product Price Catalog, contact:
Sam Robinson at (508) 480-7361, via CEO Robinson S:IMG001.

Good Selling!

DATA GENERAL PROFESSIONAL SERVICES GROUP - SERVICES OVERVIEW

AViiON FAMILY PROCESSORS

PROCESSORS (Continued)

AViiON EXTERNAL MASS STORAGE

AViiON COMMUNICATIONS

AViiON HARD COPY

AViiON Terminals

AViiON CABINETRY

INDEX BY MODEL NUMBER

AViiON SERIES SYSTEMS INTRODUCTION

Information and references contained in this AViiON Hardware Product Price Catalog are specific to ordering and configuring AViiON products. Requirements for some products (peripherals, cables, connectors, etc.) may be different if used on non-AViiON processors/products.

HEADING DEFINITIONS

Model No. The number indicates the model number of the unit. Note that some models require prefix identifiers for color, and/or suffixes for Power and Font Types for hardware and CPU Type for software.

Examples: Hardware

G6692-#!@

G = Color Prefix
# = Interface/Cable Suffix
! = Font/Keyboard Suffix
@ = AC Power Suffix

Software

Q001APY1CA - AViiON Server Operating System

Q001 Base Model

A = Version
P = User Count
Y = CPU Class
1C = Service Offering
A = Media Code

Description A general description of each unit is included.

US List Price ($) This identifies the US List Price.

On-Call ($/mo) This identifies the "On-Call" Service monthly price.

On-Site Select ($/mo) This identifies the "On-Site Select" Service monthly price.

Discount Class Discount Class identifies whether the equipment is discountable and its category in the DGC Dollar Volume discount agreements.

Warranty Code This identifies the product's warranty code. Complete descriptions of DGC's available warranties can be found in the "Hardware Warranties and Services" section of the Introduction.

Prerequisite In this Product/Price Catalog, the Prerequisite column is used to reference pertinent "Notes" concerning ordering information.

Space Requirements "Slots available" indicates the number of slots available in a computer or expansion chassis for additional option boards.

"Slots" indicates the number of slots in a computer or expansion chassis occupied by the unit.

Entry in inches followed by "RM" indicates the vertical height of a 19-inch wide, rackmountable unit.

"FS" indicates that the unit is free standing.

"DT" indicates a desktop unit.

"DS" indicates a deskside unit.

"HH" indicates a Half-Height device.

"FH" indicates a Full-Height device.

NOTES

Price Information For most current price information, contact the local DGC sales office. All prices are subject to change without notice, and are subject to DGC's Terms and Conditions.

Non-System Orders (SX) When an order does not include a central processor, it is considered a System Expansion (SX) order. SX orders must specify the CPU type/designator in which the ordered equipment will be installed.

Example: AV 6200-20 is a CPU type/designator

Discounts For information on discount schedules, contact the local DGC sales office. Non-discountable items are indicated throughout the price list by a "blank" in the Discount Class Column.

Cables Equipment prices do not always include the price of cables. Cable information may be found in the product description and the "NOTES" area.

CCIS	The Customer Configuration Instruction Sheet is used to provide manufacturing with any special requirements/instructions. A fee is charged for this service. Consult your local DGC Sales Office for additional information.
SIMM	"SIMM" refers to Single In-Line Memory Module
VME	"VME" refers to the industry standard bus.
XCVR	"XCVR" is the acronym for "transceiver". "XCVR" and "transceiver" are used throughout the book interchangeably.
Subpanel	Refers to "backplane subpanel", used to configure Host Adapters on a bulkhead.

ADDITIONAL INFORMATION

Quick Reference Tables	Quick Reference Tables are used throughout the book to assist with packaged model/component information.
Model Location Bar	Models are highlighted in the text by a "Model Location Bar". This vertical bar can be found in the left margin.

FONT SUFFIX DEFINITION

Font suffixes are assigned to keyboards and Workstation Packages to define language supported. The following is a list of Font suffixes supported on the AViiON product line. It is important to note that all suffixes are not available on all products and that not all Font/AC Power combinations will exist. These combinations are defined by required country power/language support.

FONT SUFFIX	LANGUAGE
A	ASCII
B	U.K.
C	FRENCH
D	GERMAN
E	KATAKANA
F	SWEDISH
G	SPANISH
H	DANISH
I	ITALIAN
J	SWISS/GERMAN
K	SWISS/FRENCH
L	CANADIAN (ENGLISH)
M	CANADIAN (FRENCH)
N	SWEDISH/FINNISH
O	NORWEGIAN
P	FINNISH
Q	DUTCH
R	INTERNATIONAL ASCII
S	KANJI
T	GREEK
U	TURKISH
V	ARABIC
W	HEBREW
X	INTERNATIONAL MULTI-FONT
Y	SWISS
Z	RUSSIAN
AA	PORTUGUESE
CA	BENELUX
CB	BENELUX/AZERTY
IA	Italian Keyboard/English Documentation
IB	English Keyboard/Italian Documentation

AViiON AC POWER SUFFIX DEFINITION

As of 04/90 Data General adopted an enhanced AC Power suffix scheme for NEW products. This "New Model Matrix" will better enable us to define power requirements related to new technology which could not be identified within the constraints of the old matrix. Existing product lines were not affected and any additions to these existing products will retain the old power suffix scheme. The previous AC Power Matrix ("Early Model Matrix") will be included for reference purposes.

Line cord dependent devices (PC's, Workstations, Printers, Terminals, etc.) will continue to use the same structure as in the past. This matrix is listed separately and generally pertains to any device which will plug into the wall instead of mounting within a DGC cabinet. Exceptions would be large standalone processors and cabinets. Although these products plug directly into the wall, special High Power receptacles are normally required. Reference the "Standalone Power Cord Dependent Device Matrix". All products listed in the AViiON Product Catalog have their applicable AC Power suffixes listed within the associated section. These matrices are for reference purposes.

AViiON RACKMOUNT PRODUCTS POWER SUFFIX MATRIX

	RACKMOUNT COMPONENT	POWER SUFFIX	REQUIRED RECEPTACLE	COMPONENT AC POWER
See "EARLY MODEL COMPONENT/CABINET AC POWER MATRIX" on next page.	AV 6240-20	-	5-20R	120V/60Hz
	AV 8000	-B1	6-15R	200V/50/60Hz
		-2	6-15R	220V/50Hz
		-4	6-15R	240V/50Hz
	AV 6200	-	5-15R	120V/60Hz
		-1	5-15R	100V/50/60Hz
		-2	6-15R	220V/50Hz
		-4	6-15R	240/50Hz
	G6586-A	-	5-15R	120V/60Hz
		-1	5-15R	100V/50/60Hz
		-2	6-15R	220V/50Hz
		-4	6-15R	240V/50Hz
See "NEW MODEL COMPONENT/CABINET AC POWER MATRIX" on next page.	AV 6280-20	-F	6-15R	240V/60Hz
	AV 8000-8	-F1	6-15R	200V/50/60Hz
		-F2	6-15R	220V/50Hz
		-F4	6-15R	240V/50Hz
	AV 6225-20	-E	5-20R	120V/60Hz
		-F1	6-15R	200V/50/60Hz
		-F2	6-15R	220V/50Hz
		-F4	6-15R	240V/50Hz
	CSS2/H.A.D.A. II	-E	5-15R	120V/60Hz
	6588-A/TA	-E1	5-15R	100V/50/60Hz
	Reel Tapes	-F2	6-15R	220V/50Hz
		-F4	6-15R	240V/50Hz

AViiON desktop and deskside workstations/servers, Combined Storage Subsystem 2/DC, deskside Disk Array Subsystem, and desktop Peripheral housing Unit will utilize the "Standalone Power Cord Dependent Device Matrix"

NEW MODEL COMPONENT/CABINET AC POWER MATRIX

PROCESSOR/PERIPHERAL CABINETS AND RACKMOUNTABLE DEVICES

ALPHA KEY	DEFINITION OF VOLTAGE	NO SUFFIX	1	2	3	4	5	6	7
E **	Single PH LV	120V	100V	N/A	N/A	N/A	100V	100V	85-138V
F **	Single PH HV	240V or 208V	200V	220V	N/A	240V	200V	200V	170-276V
G **	Split Phase 3W GND MID (PH-N/PH-PH)	120V/ 240V	100V/ 200V	N/A	N/A	N/A	100V/ 200V	100V/ 200V	85-138V 170-276V
H **	3 PH, WYE (PH-N/PH-PH)	120V/ 208V	N/A	N/A	220/ 380V	240V/ 415V	N/A	N/A	187-276V 232-477V
J **	3 PH, DELTA (PH-PH)	208V	200V	220V	380V	415V	200V	200V	N/A
Frequency Hz → →		60	50/60	50	50	50	50	60	47-63Hz

** **Alpha key always displayed.**

Power Suffix 1, 5, and 6 is Typical of Japan, 2 and 3 are Typical of Continental Europe, and 4 is Typical of the United Kingdom and Australia.

Power Suffix 7 is used to define devices that are able to run over a wide range of voltage and frequency as defined by the matrix. These suffixes are most often utilized by cabinetry.

EARLY MODEL COMPONENT/CABINET AC POWER MATRIX

PROCESSOR/PERIPHERAL CABINETS AND RACKMOUNTABLE DEVICES

ALPHA KEY	DEFINITION OF VOLTAGE	NO SUFFIX	1	10	11	2	3	4
A *	Single PH LV	120V	100V	100V	100V	N/A	N/A	N/A
B *	Single PH HV	240V	200V	200V	200V	220V	N/A	240V
C *	1 PH, 3W GND MID	240V	200V	200V	200V	N/A	N/A	N/A
D *	3 PH, LV	208V	200V	200V	200V	220V	380V	415V
	FREQUENCY Hz → →	60	50/60	50	60	50	50	50

* **Alpha key sometimes displayed.**

STANDALONE POWER CORD DEPENDENT DEVICE MATRIX

(TERMINALS, PRINTERS, DESKTOP/DESKSIDE WORKSTATIONS/SERVERS, ETC.)
(NON-CABINET MOUNTED DEVICES)

ALPHA KEY	(-) BLANK	1	2	3	4	5	6	7	8	9	0
A *** 1 PH	120V 60Hz	100V 50/60Hz	N/A	N/A	N/A	240V 50Hz	240V 50Hz	220V 50Hz	220V 50Hz	220V 50Hz	220V 50Hz

*** **Alpha key never displayed**

Country Support

The following lists countries supported by the applicable suffix.

Blank (-) Bahamas, Bolivia, Brazil, Canada, Columbia, Costa Rica, Dominican Republic, Ecuador, Guatemala, Haiti, Honduras, Korea, Mexico, Nicaragua, Panama, Paraguay, Peru, Philippines, Taiwan, Trinidad, Uruguay, U.S., Venezuela.

-1 Japan, China (U.S. power cord).

-5 Belize, Bermuda, British West Indies, England, Hong Kong, Ireland, Kenya, Malaysia, New Zealand, Nigeria, Northern Ireland, Oman, Scotland, Singapore, South Africa, United Arab Emirate, United Arab Republic, U.K.

-6 Australia.

-7 Aruba, Austria, Belgium, Chile, Egypt, Finland, France, Germany, Greece, Hong Kong, Iceland, Indonesia, Iran, Israel, Jordan, Luxembourg, Morocco, Netherlands Antilles, Netherlands, Norway, Spain, Portugal, Saudi Arabia, Spain, Sweden, Switzerland, Turkey.

-8 Italy

-9 Denmark, Greenland, Faroe Islands.

-0 Switzerland.

ALPHA/NUMERIC MATRIX DESCRIPTION

Alpha Key	Definition of Alpha key
A	Free standing and table top products.
E	Single Phase- Low voltage
F	Single Phase - Hi voltage
G	Single Phase - 3 wire, grounded mid point (PH-N/PH-PH)
H	3 Phase, (Wye) (PH-N/PH-PH)
J	3 Phase, Delta (PH-PH)

AViiON CPU DESIGNATORS

The following is a list of current CPU designators associated with the AViiON product line. It is EXTREMELY IMPORTANT to include the correct CPU Designator on all System Expansion business. This designator is utilized by the Order Distribution system to include processor specific items such as internal and external cables. If the designator does not define the customer's processor type incorrect component parts of the model ordered will be shipped. The CPU Designator is also used by the Field Quote Generator/Configurator and Order Validation system to determine support of a product on a specific processor. An (obs) designation is placed next to a Processor Series or CPU Designator when that product is no longer actively marketed. However, this designator must still be specified on any System Expansion orders for existing systems.

DESIGNATOR LISTING

PROCESSOR SERIES	CPU DESIGNATOR	DESCRIPTION
AV 100	AV/100	AV 100, 16MHz
AV 200	AV/200 (obs) AV/210	AV 200+, 16MHz AV 210, 20MHz
AV 300	AV/300 (obs) AV/310 (obs) AV/300D (obs) AV/310D	AV 300, 16MHz AV 310, 20MHz AV 300CD, 16MHz (dual async.) AV 310CD, 20MHz (dual async.)
AV 400	AV/400 (obs) AV/402 (obs) AV/410 AV/412	AV 400, 16MHz, Single Processor AV 400, 16MHz, Dual Processor AV 410, 20MHz, Single Processor AV 412, 20MHz, Dual Processor
AV 3200 (obs)	AV3200	AV 3200, 16MHz
AV 4000 (obs)	AV/4000 AV/4020 AV/4100 AV/4120	AV 4000, 16MHz, Single Processor AV 4020, 16MHz, Dual Processor AV 4100, 20MHz, Single Processor AV 4120, 20MHz, Dual Processor
AV 4300	AV/4300 AV/4320	AV 4300, 25MHz, Single Processor AV 4320, 25MHz, Dual Processor
AV 4600	AV/4600 (obs) AV/4620 (obs) AV/4605 AV/4625	AV 4600, 33MHz, Single Processor AV 4620, 33MHz, Dual Processor AV 4605, 33MHz, Single Processor, Deep Cache AV 4625, 33MHz, Dual Processor, Deep Cache
AV 5010 (obs)	AV5010	AV 5010, 20MHz, Single Processor
AV 5100 (obs)	AV5100 AV5120	AV 5100, 20MHz, Single Processor AV 5120, 20MHz, Dual Processor
AV 5200 (obs)	AV5200 AV5220 AV5225 AV5240	AV 5200, 25MHz, Single Processor AV 5220, 25MHz, Dual Processor,16MB AV 5225, 25MHz, Dual Processor, 64MB AV 5240, 25MHz, Quad Processor
AV 5200+	AV5200+ AV5225+ AV5240+	AV 5200+, 25MHz, Single Processor, Enhanced chassis AV 5225+, 25MHz, Dual Processor, 64MB, Enhanced chassis AV 5240+, 25MHz, Quad Processor, Enhanced chassis
AV 6100 (obs)	AV6100 AV6120	AV 6100, 20MHz, Single Processor 10-slot rack mount chassis AV 6120, 20MHz, Dual Processor 10-slot rack mount chassis

AViiON CPU DESIGNATORS

DESIGNATOR LISTING

PROCESSOR	CPU DESIGNATOR	DESCRIPTION
AV 6100-20 (obs)	AV6100-20 AV6120-20	AV 6100-20, 20MHz, Single Processor, 20-slot rackmount chassis AV 6120-20, 20MHz, Dual Processor, 20-slot rackmount chassis
AV 6200	AV6200 AV6220 (obs) AV6225 (obs) AV6240 (obs)	AV 6200, 25MHz, Single Processor, 10-slot rack mount chassis AV 6220, 25MHz, Dual Processor, 16MB 10-slot rack mount chassis AV 6225, 25MHz, Dual Processor, 64MB 10-slot rack mount chassis AV 6240, 25MHz, Quad Processor 10-slot rack mount chassis
AV 6200-20	AV6200-20 (obs) AV6220-20 (obs) AV6225-20 AV6240-20 AV/6280	AV 6200-20, 25MHz, Single Processor, 20-slot rackmount chassis AV 6220-20, 25MHz, Dual Processor, 16MB, 20-slot rackmount chassis AV 6225-20, 25MHz, Dual Processor, 64MB, 20-slot rackmount chassis AV 6240-20, 25MHz, Quad Processor 20-slot rackmount chassis AV 6280-20, 25MHz, Octal Processor 20-slot rack mount chassis
AV 7000 (obs)	AV/7000	AV 7000, 25MHz, Quad Processor Office system
AV 7000+	AV7000+	AV 7000+, 25MHz, Quad Processor Office system, Enhanced Chassis
AV 8000	AV/8000	AV 8000, 25MHz, Quad and Octal Processor 20-slot rackmount system

AViiON Hardware Warranties & Services Section

HARDWARE WARRANTIES AND SERVICES

SUMMARY OF HARDWARE WARRANTIES

WARRANTY CODES

The Price List specifies a Warranty Code for each hardware product. This table summarizes the warranties signified by the warranty codes. For complete warranty information, always refer to the relevant sales agreement. (Forms 201-DV, 202-DV)

WARRANTY CODE SUMMARY

CODES:	A	C	F
PERIOD:	90 Days	3 Years	1 Year
LOCATION:	On-Site	90 Days On-Site 33 Mo Parts Replacement	On-Site Select
RESPONSE TIME:	Next Day	On-Site=Next Day Parts Repl=Overnight	(See Code F - Next Page)
PRODUCTS:	Servers, Workstations	CLARiiON Disk & Tape Arrays	Terminals

Note: Supplies & Accessories carry a "B" (90 Days - Return to Depot/Parts Exchange) or "G" (5 Years - Return to Depot) warranty. See the DG/Direct Catalog for warranty details.

WARRANTY SERVICE PROCEDURES

On-Site (Code A)
- Customer calls 1-800-DG-HELPS.
- Customer Service Representative dispatches Account Engineer to customer site. Account Engineer will arrive at site generally within the next business day.
- Parts and labor are covered under this warranty.

Note: Warranty upgrades to contract service that provides 4-hour response are available and attractively priced.

On-Site - 1st 90-days (Code C)
- Customer calls 1-800-DG-HELPS
- Customer Service Representative dispatches Account Engineer to customer site. Account Engineer will arrive at site generally within the next business day.
- Parts and labor are covered under this warranty.

Overnight Parts Replacement-33-months (Code C)
- Customer calls 1-800-DG-HELPS.
- Customer identifies self as CLARiiON customer with serial number of product.
- Customer identifies failing part and receives Return Authorization number.
- DG sends replacement part via overnight express.
- Customer returns faulty part in same container immediately.

WARRANTY SERVICE PROCEDURES (Continued)

(1) If customer requests technical phone assistance they are billed by the Customer Support Center at $150 for each incident.
(2) If customer requests on-site support they are billed at the current T & M rates, materials excluded.

On-Site Select (Code F)

- Customer calls 1-800-DG-HELPS.
- A trained specialist helps customer identify the inoperable or defective part.
- Data General rushes a replacement part, with easy installation directions and prepaid return mailer, via overnight carrier.
- Customer installs the replacement part and returns the defective part to Data General (DG) with copy of original packing slip, sales receipt, or other **proof of warranty coverage.** Data General pays shipping both ways.
- If customer needs help replacing part, they call 1-800-DG-HELPS and a trained specialist will walk them through the process.
- If customer still has difficulty replacing part, a trained specialist will dispatch a Account Engineer for next day arrival (unless site is more than 100 miles from nearest field service office) to complete the installation.

WARRANTY PERIOD

The warranty period begins on shipment if the customer is to install; on completion of installation if Data General is to install.

The warranty period begins ten days after arrival at Buyer's site if Data General was supposed to install but was prevented from doing so (site not ready, etc.).

WARRANTY UPGRADES TO CONTRACT SERVICE
(Conversions to Hardware Contracts)

2 Hardware Service Contract offerings are available:

* ON-CALL

* ON-SITE SELECT

There are a significant number of important advantages customers gain under contract service from the very beginning of their system installation, not the least of which is **continuity of good service coverage** right after the warranty, and **confidence that all of the service needs have been taken care of** at the time of initial purchase. To capture all of the "contract service" benefits, we make it easy and attractive to convert and/or upgrade the "warranty service" features to those provided under our "contract service" offerings.

To maximize the benefits of all of these considerations, customers should sign up for hardware contract coverage at the time of initial sale.

Additional Service Upgrade/Conversion Benefits:

1. Upgrades from "90 DAY ON-SITE WARRANTY" to "1 YEAR ON-CALL SERVICE AGREEMENT"

   - Faster Response Time -- 4 hours (versus "next day")

     On-Call Contract response time is 4 hours or less. Warranty response time is "next day" (within 24 hours). Most customers, and certainly those with more "mission critical" applications, will want the faster response time. Other response times are, of course, available under contract coverage options.

   - Free Access to DASH Plus Service

     DASH services include: Bulletin Board, Electronic Search Program (ESP), Customer to Customer E-Mail and Electronic Software Problem Resolution support. (Refer to Yellow Pages for more detail).

   - Attractive Pricing -- No Additional Charge for first 3 months

     There is no charge for the first 3 months of enhanced contract service when the warranty is upgraded to an On-Call Service Agreement. The remaining 9 months will be billed at the current standard On-Call Monthly Unit Charge.

     This is equivalent to getting 12 months of our most popular service level for the price of 9 months.

     - "No Charge" Installation

       For new systems with a one-year or multiyear contract (for systems that are not "customer installable"). See the Installation Policy section for more details.

     - No "pre-contract" inspection costs after the warranty runs out

     - Reduced "Time & Materials" Charges -- for unique service requirements

       For unique services outside of the normal contract features (such as equipment moves and re-installations, etc.), Time & Materials charges are significantly reduced for Contract Customers and there is no 2-hour minimum requirement.

2. Upgrade from "36 MONTH EXPRESS PARTS REPLACEMENT WITH THE 1ST 90-DAY NEXT DAY ON-SITE SERVICE" TO "AN ON-CALL SERVICE AGREEMENT"

   - Faster Response Time -- 4 hours (versus "next day").

     On-Call Contract response time is 4 hours or less. Warranty response time is "next day" (within 24 hours) for the first 90-days and overnight replacement of parts for the remaining 33 months. Most customers, and certainly those with more "mission critical" applications, will want the faster response time. Other response times are, of course, available under contract coverage options.

Additional Service Upgrade/Conversion Benefits: (Continued)

- Free Access to DASH Plus Service

  DASH Services include: Bulletin Board, Electronic Search Program (ESP), Customer to Customer E-Mail and Electronic Software Problem Resolution support. (Refer to Yellow Pages for more detail).

- Attractive Pricing

  There is no charge for the first 3 months of enhanced contract service when the warranty is upgraded to an On-Call Service Agreement. The remaining 33 months is priced at a 50% discount off the standard On-Call Monthly Unit Charge.

- No "pre-contract" inspection costs after the warranty runs out.

- Reduced "Time & Materials" Charges -- for unique service requirements.

  For unique services outside of the normal contract features (such as equipment moves and re-installations, etc.), Time & Materials charges are significantly reduced for Contract Customers and there is no 2-hour minimum requirement.

3. Upgrading from "1 YEAR ON-SITE SELECT WARRANTY" to "1 YEAR ON-CALL SERVICE AGREEMENT"

   - Faster On-Site Automatic Response Time -- 4 hours (versus "next day")

     On-Call Contract response time is 4 hours or less on-site. Warranty response time is "next day" (overnight shipment of replacement parts with help in installation or on-site dispatch as a subsequent option). Most customers, and certainly those with more "mission critical" applications, will want the faster response time, with immediate on-site dispatch. Other response times are, of course, available under contract coverage options.

   - Free Access to DASH Plus Service

     DASH services include: Bulletin Board, Electronic Search Program (ESP), Customer to Customer E-Mail and Electronic Software Problem Resolution support. (Refer to Yellow Pages for more detail).

   - Attractive Pricing -- 60% Discount

     Upgrading from a 1 Year On-Site Select warranty to a 1 Year On-Call Service Agreement is priced at a 60% discount to the standard On-Call Monthly Unit Charge. (That is, pricing is 40% of the standard MUC).

   - No "pre-contract" inspection costs after the warranty runs out

   - Reduced "Time & Materials" Charges -- for unique service requirements

     For unique services outside of the normal contract features (such as equipment moves and re-installations, etc.), Time & Materials charges are significantly reduced for Contract Customers and there is no 2-hour minimum requirement.

For more information on service contracts, call our Contract Sales Representatives at 1-800-343-8842.

SERVICES SUMMARY OVERVIEW	
PRIMARY SERVICES:	
On-Call Service –	is the most comprehensive and popular offering and provides on-site service at the customer's location by a trained Account Engineer. (Form 303)
On-Site Select Service –	is an enhanced shared maintenance service available on Data General "customer maintainable" equipment. It offers overnight shipment of replacement parts with an option of on-site replacement completed by a Account Engineer if the customer has difficulty making the replacement. (Form 313)
Note: See Prepaid Contracts Program for discounts that are available with these contracts.	
ON-CALL SERVICE OPTIONS	
* **Multiyear Plus** –	offers significant discounts and price protection in return for signing a long-term agreement over 3, 4, or 5 years.
* **Extended Coverage** –	offers the customer the ability to have service when they need it. Coverage is available up to 7 days a week, 24 hours a day.
* **Enhanced Response** –	offers 2-hour on-site response for those installation sites located within 50 miles of a Data General Service Center and 4-hour on-site response for those sites located within 100 miles of a Data General Service Center.
* **Basic Response** –	offers a relaxed response where the Account Engineer will generally arrive at the customer's site within 24 hours of their service call.
* **Multi-Device Deferred** –	offers significant discounts to those customers who have a large number of PCs, workstations, terminals, and desktop printers and can wait until a specified number are down before placing a service call. (Form 311)
* **Maximum Uptime** –	offers 96%-98% guaranteed uptime coverage for locations within 50 miles of a Data General Service Center and 99% guaranteed uptime coverage for locations within 25 miles of a Data General Service Center. (Form 309)
* **Critical Response** –	offers 2-hour on-site response for a 12-hour period, 8AM - 8PM, Monday - Friday, for locations within 50 miles of a Data General Service Center. (Form 312)
* **Resident Account Engineer** –	offers a resident Account Engineer to customers with very critical operations.
OTHER SERVICE OPTIONS:	
Time & Materials –	provides service as it is needed. The customer pays for parts, labor, and travel time as services are needed.
Terminal Maintenance– (Remote Term/Printers)	provides on-site repair for video displays and character printers that do not qualify for On-Call or On-Site Select service.

PRIMARY HARDWARE SERVICES - DETAILED DESCRIPTIONS

This section describes the various hardware services available to DGC customers. For more information and for placing service orders, customers can call their local DGC sales office or our Contract Sales Telemarketing Representatives at 1-800-343-8842.

ON-CALL SERVICE AGREEMENT (Form 303)

The On-Call Service Agreement offers numerous benefits:

* A four hour on-site response goal to a service call if the site is located within 50 miles of a Data General Service Center.
* On-Site repair service including unlimited parts, labor, and travel.
* Field Change Orders (FCOs) to ensure the customer's system is operating efficiently and with the latest in state-of-the-art functionality and system enhancements.
* A choice of any nine hours of Principal Period of Maintenance (PPM) service coverage between 8AM and 6PM, Monday - Friday, excluding holidays.
* Remote Diagnostic Assistance.

ON-SITE SELECT SERVICE AGREEMENT (Form 313)

* Available on customer maintainable equipment.
* Toll free telephone support from 8AM to 5PM, customer local time, Monday - Friday.
* Telephone assistance from a trained specialist who will help diagnose and identify the inoperable or defective part.
* Overnight shipment of replacement part.
* Telephone assistance with part installation,

OR

* Next day dispatch of Field Engineer to complete installation.

Note: On-Site Select Service Agreement is paid on a yearly rather than monthly basis.

PREPAID CONTRACT PROGRAM:

* The Prepaid Contract program offers On-Call and On-Site Select service customers the opportunity to save money by prepaying their service contract. The terms and discounts are as follows:

PREPAID CONTRACT DISCOUNTS (%)

Cancelable Prepayment Terms	Discount
6 months	3%
12 months	5%
24 months	7%
36 months	10%

Note: 6 and 12 months not available for On-Site Select Contract

Non-Cancelable Prepayment Terms	Discount
12 months	10%
24 months	17%
36 months	25%

Note: 12 months not available for On-Site Select Contract

HARDWARE SERVICE OPTIONS

ON-CALL OPTIONS:

1. MULTIYEAR PLUS

* Offers significant discounts and price protection in return for signing long-term agreements over 3, 4, or 5 years.

* Multiyear Plus offers discounts of 5% off the Monthly Unit Charge during the second year and a 10% discount in succeeding years. This is a direct reduction in the monthly charge.

MULTIYEAR PLUS DISCOUNTS (%)

Year	Discount
1	0
2	5%
3	10%
4	10%
5	10%

* Prices remain fixed until the Consumer Price Index (CPI) increases 25% or more from the Index published the year the contract was signed.

* If additional equipment is added later to the agreement, the then current Monthly Unit Charge will apply to the new equipment. The added equipment will then fall under the same price protection and discount structure as the original equipment under contract.

ON-CALL OPTIONS: (Continued)

2. EXTENDED COVERAGE

* Extended Coverage extends all the benefits of On-Call service beyond the Principal Period of Maintenance (PPM). The Extended Coverage period starts at the end of the PPM, unless Regional Director approval has authorized it to be non-contiguous.

* Eleven Extended On-Site Coverages are available, up to 24 hours per day, 7 days per week. Non-standard Extended On-Site Coverage periods are available through SPVR. Regional Director approval is needed for remote customer locations.

* Pricing is based on percentage surcharges applied to the Monthly Unit Charge as follows:

EXTENDED COVERAGE SURCHARGE (%)

Coverage Days	Number of Service Coverage Hours Per Day			
	9 Hours	12 Hours	16 Hours	24 Hours
Mon - Fri	-	15%	24%	34%
Mon - Sat	15%	24%	33%	44%
Mon - Sun	25%	33%	44%	55%

ON-CALL OPTIONS: (Continued)

3. ENHANCED RESPONSE

* Enhanced Response offers quicker on-site arrival of a Field Engineer for customers with critical operations.

* It is available on all Data General system types except standalone PCs and Intelligent Workstation units, dependent on Regional Director approval.

* Charges are assessed as a percentage surcharge of the Monthly Unit Charge, per shift of Enhanced Response weekdays and per shift weekends. Half shifts are charged as full shifts and weekend shifts are charged as 1.4 shifts. The On-Call service PPM, 9 hours Monday through Friday, is one shift. The second shift, Monday through Friday, is one shift, as is the third shift Monday through Friday. The first shift Saturday and Sunday is one shift, but is charged as 1.4 shifts, as are the other two weekend shifts.

ENHANCED RESPONSE SURCHARGE (%)

Distance from Service Center	Response	Surcharge Per Shift
Within 50 miles	2 Hours	30%
Between 50-100 miles	4 Hours	15%

* Pricing example: The customer, located within 50 miles of a DG Service Center, purchased Extended Coverage of 12 hours per day, Monday through Saturday, and purchased Enhanced Response for the entire Contracted Period of Maintenance: The 1.5 weekday shifts are charged as 2 shifts, plus the Saturday shift is charged as 1.4 shifts, which adds up to 3.4 shifts. Charges = 3.4 * 30% = 102% surcharge to the Monthly Unit Charge.

4. BASIC RESPONSE

* Basic Response is a lower cost response option to customers who can wait until **the next day** for on-site service (versus standard 4-hour response goal).

* It is offered with a 10% discount off the Monthly Unit Charge.

BASIC RESPONSE DISCOUNT (%)

Distance From Service Center	Response	Discount
Within 50 miles	Next Day	10%

* Basic Response is available on all Data General systems covered under an On-Call Service Agreement and located within 50 miles of a Data General Service Center.

* Extended Coverage is not available in conjunction with Basic Response.

ON-CALL OPTIONS: (Continued)

5. MULTI-DEVICE DEFERRED (Form 311)

* Multi-Device Deferred offers reduced service charges to large multiple device installations (AViiON workstations, terminals, personal computers, desktop printers) in exchange for waiting to place a service call until a specified number of devices are down.

* This offering is available to customers that have at least 10 devices and have all devices serviceable within a one square mile area. Extended Coverage is available under Multi-Device Deferred.

* The sum of the Monthly Unit Charges for services to all eligible devices will be discounted according to the following Discount Schedule:

MULTI-DEVICE DEFERRED DISCOUNTS (%)

Number of Eligible Devices	Required Minimum Number of Inoperable Devices Before Requesting Service	Discount Percentage
10-19	2	15%
20-34	4	20%
35-49	5	25%
50-74	7	30%
75-99	10	35%
100-149	15	35%
150-200	20	40%
200+	as quoted	as quoted

6. MAXIMUM UPTIME (Form 309)

* Maximum Uptime offers 96%-98% guaranteed uptime coverage for locations within 50 miles of a Data General Service Center. Locations within 25 miles of a Data General Service Center are guaranteed 99% uptime coverage.

* The uptime guarantee covers the "Essential System" only, as defined in Addendum.

* There is a 10% surcharge to the Monthly Unit Charge in addition to the surcharges for the Extended Coverage required for specific uptime levels.

* Uptime is calculated on consecutive 90-day periods. If the uptime requirements are not met, Data General will return the Maximum Uptime Service charge and a percentage of the system's 90-day maintenance costs for every hour of outage beyond the agreed upon criteria as defined in the Addendum.

ON-CALL OPTIONS: (Continued)

7. CRITICAL RESPONSE (Form 312)

* Critical Response is for customers who need fast service and an extended coverage period. It includes a guaranteed uptime of 96% for the "Essential System".

* A 2-hour on-site response time is offered for locations within 50 miles of a Data General Service Center during the PPM. Outside of the PPM, response time is normally 4 hours and the customer is billed on a per-call basis.

* Critical Response service covers a consecutive 12-hour time period between 8AM and 8PM, Monday - Friday.

* A 25% surcharge to the Monthly Unit Charge is applied for this service.

8. RESIDENT ACCOUNT ENGINEER

* This is offered to customers with very critical operations. Under this program, Data General Account Engineers work at the customer site exclusively during the PPM. The minimum term is 3 months.

* This program is available for all system types dependent on Regional Director approval.

* Pricing is as follows and is added to the total of the Monthly Unit Charges:

RESIDENT ACCOUNT ENGINEER OPTION

1st Resident Account Engineer at a site	$5,000 per month
2nd Resident Account Engineer at a site	$2,500 per month
3rd Resident Account Engineer at a site	$2,000 per month

ADDITIONAL DISCOUNTS AND SURCHARGES:

HIGH DENSITY DISCOUNTS & SURCHARGES:

1. LOWER EXTENDED COVERAGE SURCHARGES

* Customer MUST sign a Multiyear Agreement. *AND*

* Equipment MUST be located in the 15 designated High Density areas.

* Pricing is based on percentage surcharges applied to the Monthly Unit Charges as follows:

HIGH DENSITY EXTENDED COVERAGE SURCHARGE (%)

Coverage Days	Number of Service Coverage Hours Per Day			
	9 hours	12 hours	16 hours	24 hours
Mon - Fri	-	15%	19%	26%
Mon - Sat	15%	17%	22%	30%
Mon - Sun	16%	19%	25%	35%

2. 10% MULTISITE DISCOUNT

* To qualify there must be 4 or more sites within one of the 15 High Density cities. *AND*

* Customer MUST Sign a Multiyear Agreement.

* The 10% discount is off the Basic Monthly Unit Charge.

HIGH DENSITY CITIES AND THEIR ARBO'S

Los Angeles, CA
7125 - Riverside, CA
7131 - Van Nuys, CA
7141 - Irvine, CA
7143 - Long Beach, CA
7151 - Manhattan Beach, CA
7154 - Los Angeles, CA
7135 - City of Industry, CA

San Francisco, CA
7113 - San Francisco, CA
7161 - Walnut Creek, CA
7162 - San Leandro, CA
7111 - Santa Clara, CA

New York City, NY
6184 - New York City, NY
6171 - Armonk, NY
6181 - Downtown New York, NY
6191 - Melville, NY
6192 - Woodside, NY
6131 - Saddlebrook, NJ
6132 - Edison, NJ
6182 - Federal Reserve Bank

Atlanta, GA
6571 - Atlanta, GA

Detroit, MI
7431 - Detroit (Birmingham) MI

Philadelphia, PA
6151 - Blue Bell, PA
6153 - Philadelphia, PA
6154 - Marlton, NJ

Boston, Ma
6121 - Newton, MA
6141 - Metheun, MA
6145 - Westboro, MA

Miami, FL
6511 - Ft. Lauderdale, FL
6512 - Miami, FL

Minn/St. Paul, MN
7491 - Minneapolis, MN

Chicago, IL
7411 - Chicago, IL
7421 - Schaumburg, IL

Wash. DC/Baltimore, MD
6531 - Vienna, VA
6533 - Wash, DC
6532 - Baltimore, MD
6534 - U.S. Senate, DC

Pittsburgh, PA
6111 - Pittsburgh, PA

Houston, TX
7551 - Houston, TX

Dallas, TX
7511 - Arlington, TX

Phoenix, AR
7171 - Phoenix, AZ

ADDITIONAL DISCOUNTS AND SURCHARGES: (Continued)

CLUSTER DISCOUNT

5% discount for 5 MV class systems or AViiON servers at one site
10% discount for 10 MV class systems or AViiON servers at one site

ALASKA and HAWAII SURCHARGES

On-Call service is available in Alaska and Hawaii with zone surcharges to the Monthly Unit Charge as follows:

Distance From Service Center	Surcharge
0 - 99 miles	0
100 - 149 miles	20%
150 - 199 miles	40%
200 - 249 miles	60%
250 + miles	80%

OTHER SERVICE OPTIONS:

TERMINALS MAINTENANCE AGREEMENT (Form 305)
(Remote Terminals and Printers)

* The Terminals Maintenance Agreement provides on-site repair service for terminals and character printers that do not qualify for On-Call service because they are not connected to a local Data General processor. Under this agreement, Data General will provide on-site repair and maintenance service for Data General terminals and printers that are part of a Data General system, **but are operated remotely from the Data General computer** with which they interface, or are part of a non-Data General system.

* Inspection costs $150 per unit plus mileage charges and any materials or labor necessary to put the equipment in good operating condition.

* Zone mileage charges are added to the Monthly Unit Charge for each unit if the site is located more than 25 miles from a DGC Service Center.

TERMINALS MAINTENANCE AGREEMENT
ZONE MILEAGE CHARGES

Zone	Distance From Service Center	Additional Monthly Charge
A	0-25 miles	$0
B	26-50 miles	$10
C	51-75 miles	$25
D	76-100 miles	$35
E	101-150 miles	$40
F	151-200 miles	$50
G	201+	$65

OTHER SERVICE OPTIONS: (Continued)

TIME AND MATERIALS

* Time and Materials is an alternate on-site option available as needed. There is no contract to sign. Customer must issue a Purchase Order (PO).

* Standard business hours are 8AM to 6PM, Monday - Friday, holidays excluded. Non-standard hours are after business hours, weekends and holidays.

* Pricing is as follows:

TIME AND MATERIALS RATE/HOUR

	Std Hours (8-6 Mon-Fri Excluding Holidays)	**Non-Std Hours** (After Hours Mon-Fri, Weekends, Holidays)
Contract Customers (no minimum)	$145	$180
Non-Contract Customers (2-hour minimum)	$190	$275

* Non-Contract customers have a 2-hour minimum. There is no minimum for contract customers.

INSTALLATION POLICY:

No-charge installation is available under the following circumstances (for systems that are not defined as "customer installable"):

1. New system* with a one-year or multiyear contract

   OR

   New system with a net invoice exceeding $30K, if:

   a. System is purchased under an End User Agreement

      OR

   b. System is purchased under a Value Added Reseller Agreement AND is the first system to be installed.

2. Installation site is located within 100 miles of a Data General Service Center. Over 100 miles, customer pays Time & Materials.

Add-on equipment does not qualify for free installation. Installation charges are at the current Time & Materials rates.

The **EXCEPTION**, as mentioned above, to this is a system that is classified as "customer installable". These systems do not qualify for free installation. Data General will install a customer installable system or intelligent workstation for a fixed charge or at the current Time & Materials rates.

Note: Site preparation is customer responsibility.

* **A system is defined as a combination of computer equipment supplied by Data General Corporation which is interconnected by power or signal cables and connections, and which meets Data General's minimum equipment configuration requirements, including without limitation, a central processing unit, and a Data General terminal/console device or equivalent input/output device deemed acceptable by Data General.**

INSTALLATION POLICY: (Continued)

AViiON FAMILY CUSTOMER INSTALLABLE EQUIPMENT CHARGES

CPU	INSTALLATION CHARGE
AV 100 AV 210 AV 310 AV 410 AV 530	$200 for initial unit $100 for each additional unit $50 for each option
AV 4100 AV 4120 AV 4300 AV 4320 AV 4600 AV 4605 AV 4620 AV 4625 AV 5200 AV 5225 AV 5240	$300 for initial unit $200 for each additional unit $100 for each workstation $50 for each option
AV 6200 AV 6225 AV 6240 AV 6280 AV 7000 AV 8000 AV 8000-8	Non-Customer Installable (See #1 below)

1. If the system is "non-customer installable", installation is free within 100 miles of a DG service center with a minimum one year hardware service contract OR if the system hardware value is over $30K. This applies to all end user systems and to a VAR's first installation only.

2. The **initial unit** is defined as a system sold under one model number. The initial unit may also include a pre-configured disk and tape plus a DG monitor and keyboard. An **option** is any separate, unique model number. OPTION EXAMPLE: AViiON communication products that are sold as a single model number.

3. When purchasing hardware installation for multiple units and/or options, the lower rate for following units and/or options only applies if they are installed at the **same time** and at the **same site** as the initial unit.

4. Travel charges are included in the initial unit price for all installations that are within 50 miles of the DG service branch. A travel and expenses surcharge will be added to the installation charges, for any site more than 50 miles for the DG service branch.

DATA GENERAL PROFESSIONAL SERVICES GROUP - SERVICES OVERVIEW

Data General Corporation's Professional Services Group (PSG) provides a full suite of specialized professional services that meet diverse customer needs. PSG offers extensive technical expertise across multi-vendor platforms and applications to meet the enterprise-wide computing requirements of AViiON and open systems users. This portfolio of single-source professional services includes:

- o On-Site Consulting Services
- o Performance Analysis & Capacity Planning Services (SEPAC)
- o Network Services
- o Systems Integration

Ordering Guide

CONSULTING SERVICES

Consulting services include both custom consulting and several service packages. Consulting services include on-site software consulting, installation, and upgrades; operating system start-up and implementation services; office automation implementation services; software porting, conversion, and interoperability assistance; site audits; and help desk support.

CONSULTING SERVICES - PACKAGES

The following packaged services are available for AViiON workstations and servers: DG/UX Implementation Services, Trusted DG/UX Implementation Services, DG/UX Implementation Plus Services, and AV Office Implementation Services.

DG/UX Implementation Services

Model Q001AZX7AN	(Deskside Server)	Price	$3,600
Model P001AZY7AN	(Deskside Server)	Price	$3,600
Model Q001AZY7AN	(Server)	Price	$6,000
Model P001AZY7AN	(Server)	Price	$6,000

Features:

- o Incorporates DG/UX software installation, start-up, and implementation tailored to customer environment
- o On-site, single-price offering ensures smooth start-up
- o Addresses key DG/UX operational and system management topics

Prerequisite: DG/UX Q001 or DG/UX P001 license

Trusted DG/UX Implementation Services

Model Q011AZX7AN (C2) (Deskside Servers)	Price $4,800
Model Q011AZY7AN (C2) (Servers)	Price $7,200
Model Q012AZX7AN (B1) (Deskside Servers)	Price $6,000
Model Q012AZY7AN (B1) (Servers)	Price $8,400

Features:

- o Adds security consulting to DG/UX Implementation Services
- o Addresses password management, auditing, and mandatory access controls
- o On-site, single-price offering ensures smooth start-up

Prerequisite: DG/UX Q011 or DG/UX Q012 license

DG/UX Implementation Plus Services

Model P001AZX7SN (Deskside Servers)	Price: $ 8,235
Model Q001AZX7SN (Deskside Servers)	Price: $ 8,235
Model P001AZY7SN (Servers)	Price: $10,900
Model Q001AZY7SN (Servers)	Price: $10,900

Features:

- o Incorporates DG/UX Implementation Services with SEPAC performance services
- o Includes two sets of data collection/statistics reports at different time intervals, with follow-up on-site performance consulting

Prerequisite: DG/UX Q001 or DG/UX P001 license

AV Office Implementation Services

Service Offering	Model	Price
Baseline	A102AZN7AN	$ 2,400
Comprehensive	A102AZN7BN (1-32 users) A102AZN7CN (33-96 users) A102AZN7DN (96+ users)	$ 5,700 $11,400 $17,100
Checkup	A102AZN7EN	$ 9,120
Upgrade	A103AZN7AN	$ 2,400

Features:

AV Office Baseline Implementation Service -- Two-day service that includes AV/Office installation and customer Orientation Services, DG/UX customization for AV Office, and basic AV Office setup and planning

AV Office Comprehensive Implementation Service -- Incorporates Baseline Service, plus DG/UX setup for AV Office, and complete AV Office installation, planning, and setup, including grouping and setting up users, terminal and printer configuration, and development of detailed planning for security, backup, and training. This service is structured according to number of AV Office seats.

AV Office Checkup Service -- Four two-day on-site visits conducted quarterly during which DG consultant assesses the AV Office system, applies new software updates, reviews system performance, and consults with customers about system operation or new product information.

AV Office Upgrade Service -- Two-day service for customers migrating from Uniplex on an AViiON system to AV Office on an AViiON system. Includes: Update Uniplex from 7.00 to 7.01, installation of AV Office, AV Windows, and AV DOS, and explanations by DG consultant on product differences.

Ordering:

Use the Comet system, referencing model numbers above, to order appropriate DG/UX Implementation, Trusted DG/UX Implementation, DG/UX Implementation Plus and AV Office Implementation Service offerings.

ON-SITE CONSULTING SERVICES - CUSTOM

Features:

Includes assistance in modifying system software, monitoring and tuning systems, setting up procedures for proper system management and operations, system implementation, security consulting, consulting on internals, help desk support, software conversion, and work on any project requiring extraordinary expertise in a given area.

ON-SITE CONSULTING SERVICES - CUSTOM (Continued)

Standard Model 1068D rates apply, with some discounting available for large projects. Deviation from pricing or deviation from standard Terms and Conditions requires Policy Variation Request (PVR) approval.

Model	Price	Service Offering
1068D	$ 150	1 hour consulting
1068DP	$ 150	1 hour consulting (prepaid)
1068D6	$128,250	950 hours consulting
1068D6P	$128,250	950 hours consulting (prepaid)
1068D12	$255,000	2000 hours consulting
1068D12P	$255,000	2000 hours consulting (prepaid)

Ordering:

Contact the PSG Consulting Services Manager Mike Lesh at (201) 587-8700 (East) or Maxine Hands at (714) 724-3500 (West) to identify the opportunity. The Consulting Services Manager will work with you to further qualify the opportunity, help establish an action plan, and provide a quote. Use the Consulting Services Form to transmit a brief description of the opportunity. (This form is filed on all the FDC (Field Data Center) systems in the Sales folder in the Forms drawer.)

Note carefully: Consulting prices quoted here are for STANDARD HOURS ONLY, Monday to Friday, 8 a.m. - 5 p.m.
For holidays and non-standard hours, add a 20% premium.

All Time and Materials (T&M) work is under the DGC Software Engineering Agreement (Form 600) or under the GSA contract.

PERFORMANCE & CAPACITY ANALYSIS SERVICES (SEPAC)

DGC's System Evaluation & Performance Analysis Center (SEPAC) delivers performance analysis services for DG/UX revision 4.30 and later. The following services are available:

Service Offering	Model	Price
Stats Plus On-Site	U1367Q U1367X U1367Y	$2,875.00 $4,575.00 $5,800.00
Capacity Analysis Report	U1365Q U1365X U1365Y	$1,075.00 $1,875.00 $2,500.00
Statistics Package	U1364Q U1364X U1364Y	$ 475.00 $ 975.00 $1,300.00

Q=Workstations	AV1XX, AV2XX, AV3XX, AV4XX, AV5XX
X=Deskside Servers	AV3200, AV4XXX
Y=Servers	AV5XXX, AV6XXX, AV7000, AV8000

Features:

Statistics Plus On-site Service -- Includes the Statistics Package depicting system performance, evaluation by a SEPAC Performance Consultant, an on-site visit to review the analysis, and a report summarizing the evaluation and recommendations to optimize performance.

Capacity Analysis Service -- Includes Statistics Package, resource capacity analysis by a SEPAC Performance Consultant, and a Capacity Analysis Report summarizing system resource usage.

Statistics Package -- Is available for customers who want to analyze system performance, using summary reports and graphs. It does not include analysis by a SEPAC Performance Consultant.

Ordering:

Place orders directly with SEPAC. Complete and send a SEPAC Request Form via CEO to Pat Seiler. (This form is filed on all the FDC (Field Data Center) systems in the Systems folder in the Forms drawer.) For additional information contact SEPAC at 404-448-6072.

NETWORK SERVICES

Data General's Network Services -- a broad-based network integrator -- provides Data General customers with a comprehensive, single-source solution to designing, implementing, and integrating computer networks. Services are designed to facilitate the successful implementation and integration of workstations, servers, PCs, and mini-computers within a distributed or client/server computing environment. Services include: network planning and design consulting, cableplant installation management, network certification, and network implementation and integration management.

Ordering:

Contact your Network Services Manager Tony Scrimenti at (201) 587-8700 (East) or Pat Diamond at (714) 724-3500 (West) to identify the opportunity. The Network Services Manager will work with you to further qualify the opportunity and help establish a plan of action. They will handle all the order processing. Use the Network Services Form to transmit a description of the opportunity. (This form is filed on all the FDC (Field Data Center) systems in the Sales folder in the Forms drawer.)

All Time and Materials (T&M) work is performed under the DGC Agreement for Network Services --Form 801/L.

SYSTEMS INTEGRATION SERVICES

DG's Systems Integration (SI) Services provides one-stop SI shopping for your AViiON customers. By integrating off-the-shelf software packages, custom software applications, and hardware components, Systems Integration Services can help you add more AViiON servers, workstations, and PCs to your customer's open systems environment. Services include custom application design and development, application conversion and porting, client/server technology, 4th GL prototypes and re-implementations, special communications products, and consulting. State of the art expertise includes imaging, GIS, 4th GL/RDBMS, WINDOWS, and prototyping.

Priming of 3rd party products is available through Systems Integration Services.

DGC also offers facilities management for customers who want to outsource Information Technology (IT) management to Data General.

Ordering:

Contact the Systems Integration Services Manager Ben Zipperer at (404) 448-6072 (East) or Dick Johnson at (714) 724-3500 (West) to identify the opportunity. The Systems Integration Services Manager will work with you to further qualify the opportunity and help establish a plan of action.

All Time and Materials (T&M) work is provided under the DGC Software Engineering Agreement (Form 600) or under the GSA contract. Standard Model 1068D rates apply, with some discounting available for large projects. For deviation from pricing or deviation from standard Terms and Conditions, follow standard Policy Variation Request (PVR) approval.

Professional Services Group Consulting Services Summary
Quick Reference Table

Model	Price	Service Offering
1068D	$ 150	1 hour consulting *
1068DP	$ 150	1 hour consulting (prepaid) *
1068D6	$128,250	950 hours consulting *
1068D6P	$128,250	950 hours consulting (prepaid) *
1068D12	$255,000	2000 hours consulting *
1068D12P	$255,000	2000 hours consulting (prepaid) *
P001AZX7AN	$ 3,600	DG/UX Implementation (Deskside Server)
P001AZY7AN	$ 6,000	DG/UX Implementation (Server)
Q001AZX7AN	$ 3,600	DG/UX Implementation (Deskside Server)
Q001AZY7AN	$ 6,000	DG/UX Implementation (Server)
Q011AZX7AN	$ 4,800	Trusted DG/UX Implementation (C2)
Q011AZY7AN	$ 7,200	Trusted DG/UX Implementation (C2)
Q012AZX7AN	$ 6,000	Trusted DG/UX Implementation (B1)
Q012AZY7AN	$ 8,400	Trusted DG/UX Implementation (B1)
P001AZX7SN	$ 8,235	DG/UX Implementation Plus (Deskside)
P001AZY7SN	$ 10,900	DG/UX Implementation Plus (Server)
Q001AZX7SN	$ 8,235	DG/UX Implementation Plus (Deskside)
Q001AZY7SN	$ 10,900	DG/UX Implementation Plus (Server)
A102AZN7AN	$ 2,400	AV Office Baseline Implementation Service
A102AZN7BN	$ 5,700	AV Office Comprehensive Service (1-32 users)
A102AZN7CN	$ 11,400	AV Office Comprehensive Service (33-96 users)
A102AZN7DN	$ 17,100	AV Office Comprehensive Service (96+ users)
A102AZN7EN	$ 9,120	AV Office Checkup Service
A102AZN7AN	$ 2,400	AV Office Upgrade Service
U1367Q#	$ 2,875	Stats Plus On-Site
U1367X	$ 4,575	Stats Plus On-Site
U1367Y	$ 5,800	Stats Plus On-Site
U1365Q#	$ 1,075	Capacity Analysis Report
U1365X	$ 1,875	Capacity Analysis Report
U1365Y	$ 2,500	Capacity Analysis Report
U1364Q#	$ 475	Statistics Package
U1364X	$ 975	Statistics Package
U1364Y	$ 1,300	Statistics Package

* Note Carefully: Consulting prices quoted here are for STANDARD HOURS ONLY, Monday to Friday, 8 a.m. - 5 p.m.
For holidays and non-standard hours add a 20% premium

WHERE:

Q	=	Workstations	AV1XX, AV2XX, AV3XX, AV4XX, AV5XX
X	=	Deskside Servers	AV3200, AV4XXX
Y	=	Servers	AV5XXX, AV6XXX, AV7000, AV8000

AViiON Processors Section

AViiON PROCESSOR QUICK REFERENCE

WORKSTATION

WORKSTATION	CPU SPEED	NO. CPUs	MEMORY	MONO/COLOR	PARALLEL PRINTER	SERIAL PORTS	PACKAGE
AV 210	16MHz	1	28MB	MONO	NO	(1) RS422/RS232-C (1) RS232-C	DESKTOP
AV 310CD	20MHz	1	112MB	COLOR	NO	(1) RS422/RS232-C (1) RS232-C	DESKTOP
AV 410	20MHz	1	128MB	COLOR	1	(2) RS232-C	DESKSIDE
AV 530	33MHz	1	128MB	COLOR	1	(3) RS232-C	DESKSIDE

SERVER/MULTIUSER

PROCESSOR	CPU SPEED	NO. CPUs	MEMORY	VME SLOTS	PARALLEL PTR	SERIAL PORTS	PACKAGE
AV 4300	25MHz	1	128MB	2	1	(2) RS232-C	DESKSIDE
AV 4320	25MHz	2	128MB	2	1	(2) RS232-C	DESKSIDE
AV 4605	33MHz	1	128MB	2	1	(3) RS232-C	DESKSIDE
AV 4625	33MHz	2	128MB	2	1	(3) RS232-C	DESKSIDE
AV 5200+	25MHz	1	528MB	9	1	(1) RS232-C SYS CON (1) DIAG. MODEM	OFFICE
AV 5225+	25MHz	2	576MB	9	1	(1) RS232-C SYS CON (1) DIAG. MODEM	OFFICE
AV 5240+	25MHz	4	512MB	8	1	(1) RS232-C SYS CON (1) DIAG. MODEM	OFFICE
AV 6200	25MHz	1	784MB	9	1	(1) RS232-C SYS CON (1) DIAG. MODEM	RACKMOUNT
AV 6225-20	25MHz	2	832MB	19	1	(1) RS232-C SYS CON (1) DIAG. MODEM	RACKMOUNT (20-SLOT)
AV 6240-20	25MHz	4	768MB	18	1	(1) RS232-C SYS CON (1) DIAG. MODEM	RACKMOUNT (20-SLOT)
AV 6280-20	25MHz	8	768MB	11	1	(1) RS232-C SYS CON (1) DIAG. MODEM	RACKMOUNT (20-SLOT)
AV 7000+	25MHz	4	512MB	8	1	(1) RS232-C SYS CON (1) DIAG. MODEM	OFFICE
AV 8000	25MHz	4	768MB	18	1	(1) RS232-C SYS CON (1) DIAG. MODEM	RACKMOUNT (20-SLOT)
AV 8000-8	25MHz	8	768MB	11	1	(1) RS232-C SYS CON (1) DIAG. MODEM	RACKMOUNT (20-SLOT)

- Values listed are maximum where applicable.
- AV 4300, and AV 4600 series require that an RS232-C system console with cable be configured on the primary RS232-C port.
- RS232-C system console cable is included with AV 5200, AV 6200, AV 7000, AND AV 8000 series processors. Console should be ordered as -X (no cable).

AV 210 SYSTEMS

AV 210 processors, utilizing Data General's UNIX operating system (DG/UX), provide 32-bit standalone or distributed single-user processing in a desktop package. The AV 210 architecture is based on a 20MHz single system board that resides in a desktop chassis. AV 210 supports a monochrome monitor interface. Packaged Systems and Packaged Systems With Peripherals come configured with 16MB of memory. All magnetic storage is supported externally in a variety of available external peripheral housings.

Major Features:

- Connection for up to seven 4MB or 16MB memory daughter boards (112MB)
- Graphics monitor interface (monochrome)
- AT/AX compatible 101/102-key keyboard interface
- Mouse interface
- 1 x RS422/RS232-C w/modem control asynchronous port
- 1 x RS232-C w/modem control asynchronous port
- IEEE 802.3 ETHERNET LAN port
- SCSI port for support of up to seven external SCSI peripheral devices with a maximum bus length of 19.6 ft.
- All interface/power cables have connections on the processor chassis.
- CPU Class P or Q.

Software:

Operating System

CD-ROM Media:

- P001AAQ1BD DG/UX Operating System with X-Windows License and CD-ROM media
- M041AZN22N Documentation for DG/UX Operating System.

150MB QIC Tape Media:

- P001AAQ1CA DG/UX Operating System with X-Windows License, 150MB QIC tape media, and documentation

Notes:

- Model P001AAQ1-- includes a 2-user Right-To-Use license for DG/UX, GNU C, TCP/IP, ONC/NFS, X11 Windows, OSF/Motif, and a single-user Looking Glass license.
- An upgrade to support unlimited users is available. (P001ASQ9N)
- Additional product offerings and Software Support offerings are available in the AViiON and Industry Standard Software section.
- CD-ROM based DG/UX Operating System models are available without documentation. Documentation (M041AZN22N) should be ordered as a separate line item.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
PACKAGED SYSTEMS W/O PACKAGED PERIPHERALS								
Includes 20" monochrome monitor, 101/102 key AT/AX compatible keyboard, 3-button mouse, and all required cabling.								
G70556-!@	AV 210, 20MHz, 16MB	4,995	60	42	5	A	Note 1	DT
G70556-X@	AV 210, 20MHz, 16MB, no keyboard	4,885	58	41	5	A	Note 1	DT
PACKAGED SYSTEMS WITH PACKAGED PERIPHERALS								
Includes 20" monochrome monitor, 101/102 key AT/AX compatible keyboard, 3-button mouse, and all required cabling. Also includes a 520MB disk packaged in a desktop Peripheral Housing Unit, and 5 ft. external peripheral housing cable.								
G70557-!@	AV 210, 20MHz, 16MB, 520MB disk	7,495	79	56	5	A	Note 1	DT
PROCESSOR OPTIONS								
Memory								
7000	4MB expansion memory module	1,000	/NC	/NC	2	A	Note 1	1 SIMM
7014	16MB expansion memory module	3,200	/NC	/NC	2	A	Note 1	1 SIMM
Monitor								
G6486-@	20" monochrome monitor	1,995	28	19.50	2	F	Note 3	DT
Keyboard								
G6488-!	101/102-key PC-AT/AX compatible keyboard	110	2	1.50	6	F	Note 3	DT
Mouse								
4512	3-button optical mouse	105	1	0.70	2	F	Note 3	

Notes:

1. Replace Font Suffix (!) with:
   - Keyboard fonts ! = (A,B,C,D,G,I,N,Y)

   For further definition see Suffix listing in the Introduction.
2. Replace AC Power Suffix (@) with:

   (Blank) - 120V/60Hz
   (-1) - 100V/50 or 60Hz
   (-5,-6) - 240V/50Hz
   (-7,-8,-9,-0) - 220V/50Hz
2. (Continued)

   In addition to power requirements, these suffixes indicate line cord dependencies to specific country requirements. For further information, see "Standalone Power Cord Dependent Device Matrix" table in "Introduction" section.
3. A drop cable and transceiver are required for LAN connection.

Notes:

1. AV 210 packages support seven 4MB or 16MB SIMM memory daughter boards.
   - maximum memory support is 112MB

   AV 210 16MB packages are configured with 4 x 4MB memory modules. To reach memory support greater than 64MB, the 4MB modules must be replaced with 16MB modules.

   The following add-on memory combinations (72MB & 76MB) are **NOT ADDRESSABLE** and therefore **NOT SUPPORTED.** All other configurable memory increments to a maximum 112MB are supported.
2. Keyboard font (!) and AC power (@) suffixes are same as those available for packaged systems.
3. AV 210 packaged models contain monitor, keyboard, and mouse. These options are available on System Expansion Orders (SX) only.

EXTERNAL PERIPHERAL/COMMUNICATIONS SUPPORT

For a complete listing of supported products, see the following sections:

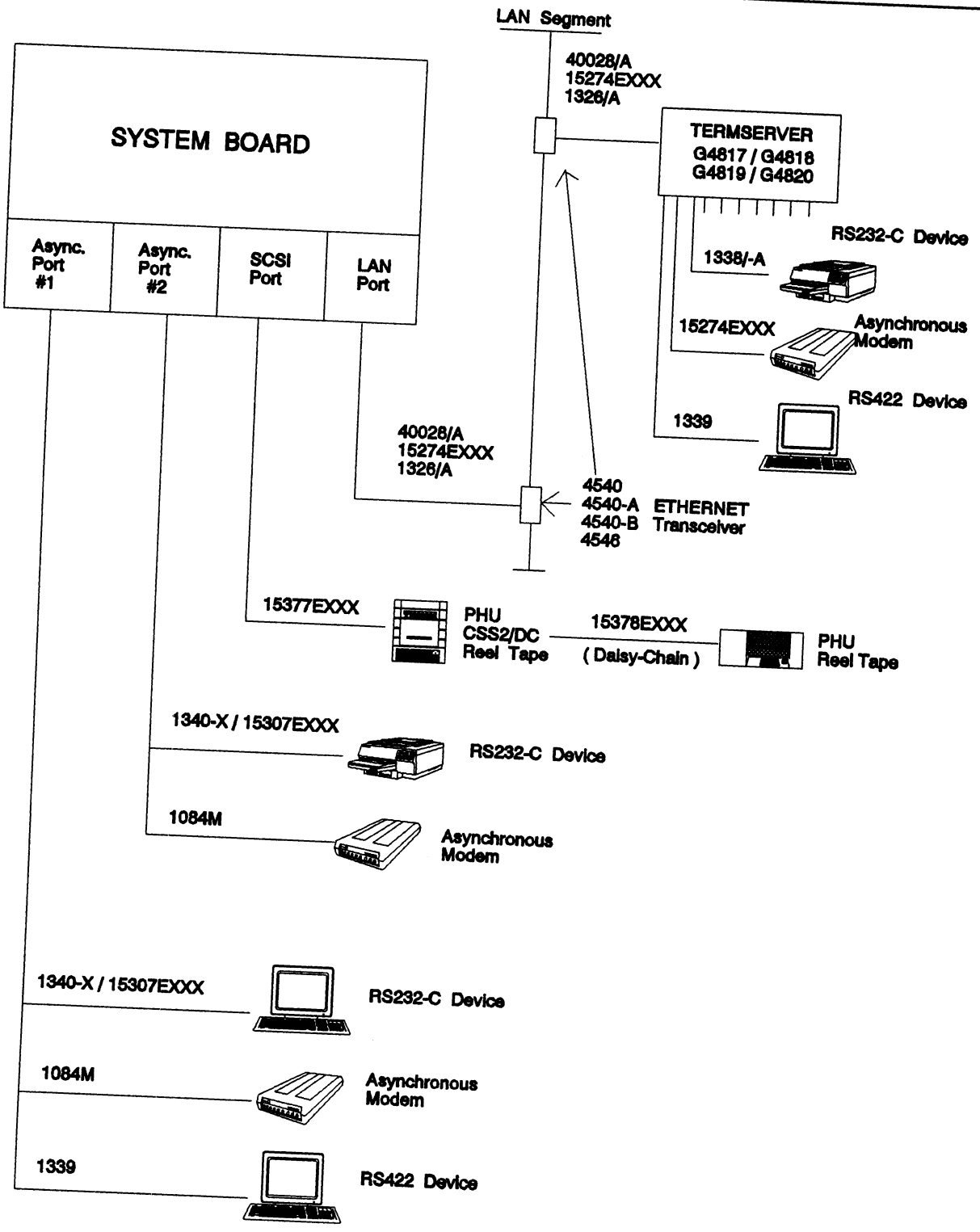
External Mass Storage

Communications

Hard Copy

Terminals

SYSTEM CABLING DIAGRAM



AV 310 CD SYSTEMS

AV 310 CD processors, utilizing DG's UNIX operating system (DG/UX), provide 32-bit standalone or distributed single-user processing in a desktop package. The AV 310 CD architecture is based on a single 20MHz system board that resides in a desktop chassis. AV 310CD supports a color graphics monitor interface. The packages come configured with a minimum of 16MB memory. All magnetic storage is supported externally in a variety of available external peripheral housings.

Major Features:

- Connection for up to seven 4MB or 16MB memory daughter boards
- Graphics monitor interface (color)
- AT/AX compatible 101/102-key keyboard interface
- Mouse interface
- Serial interface
  - (1) RS422/RS232 w/modem asynchronous port
  - (1) RS232 w/modem asynchronous port
- IEEE 802.3 ETHERNET LAN port
- SCSI port for support of up to seven external SCSI peripheral devices with a maximum bus length of 19.6 ft.
- All interface/power cables have connections on the processor chassis
- CPU Class L or Q

Software:

Operating System

CD-ROM Media:

- P001AAQ1BD DG/UX Operating System with X-Windows License and CD-ROM media
- M041AZN22N Documentation for DG/UX Operating System.

150MB QIC Tape Media:

- P001AAQ1CA DG/UX Operating System with X-Windows License, 150MB QIC tape media, and documentation

Notes:

- Model P001AAQ1-- includes a 2-user Right-To-Use license for DG/UX, GNU C, TCP/IP, ONC/NFS, X11 Windows, OSF/Motif, and a single-user Looking Glass license.
- An upgrade to support unlimited users is available. (P001ASQ9N)
- Additional product offerings and Software Support offerings are available in the AViiON and Industry Standard Software section.
- CD-ROM based DG/UX Operating System models are available without documentation. Documentation (M041AZN22N) should be ordered as a separate line item.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

PACKAGED SYSTEMS WITH PACKAGED PERIPHERALS

Packaged system includes desktop chassis, 20MHz system board, 16MB SIMM memory 101/102 AT compatible keyboard, 3-button mouse, and all required cabling. Each package also includes a 17" or 19" color monitor (1280 x 1024 high resolution). Mass storage is provided by a desktop peripheral housing unit (PHU) resident 520MB half-height disk. The PHU chassis is connected to the processor via 5ft. interface cable, and will support an additional two half-height (1 full-height) SCSI peripherals. A media load device should be ordered as a separate line item to complete the package. (See "Internal Mass Storage").

17" Color Monitor:

G70548	AV 310CD, 20MHz, 16MB, color, 520MB disk, **17" monitor**	11,995	79	55	2	A	DT
G70548-X	AV 310CD, 20MHz, 16MB, color, 520MB disk, **17" monitor, no keyboard**	11,870	77	54	2	A	DT

19" Color Monitor:

G70549	AV 310CD, 20MHz, 16MB, color, 520MB disk, **19" monitor**	12,995	110	77	2	A	DT
G70549-X	AV 310CD, 20MHz, 16MB, color, 520MB disk, **19" monitor, no keyboard**	12,870	108	76	2	A	DT

Notes:

1. Communication Interface
   The AV 310 CD supports:
   - (1) RS422/RS232 w/modem asynchronous port
   - (1) RS232 w/modem asynchronous port
   - Does NOT support a parallel printer connect
2. Replace Font Suffix (!) with:
   - Keyboard fonts ! = (A,B,C,D,G,I,N,Y)

   For further definition, see Suffix Listing in the Introduction.
3. Replace AC Power Suffix (@) with:

   (Blank) - 120V/60Hz
   (-1) - 100V/50 or 60 Hz
   (-5,-6) - 240V/50Hz
   (-7,-8,-9,-0) - 220V/50Hz

3. (Continued)

   In addition to power requirements, these suffixes indicate line cord dependencies to specific country requirements. For further information, see the "Standalone Power Cord Dependent Device Matrix" table in the "Introduction" section.
4. AV 310 CD supports 19.6ft bus length for configuration of external SCSI peripherals (CSS2 DC, PHU, Desktop Reel Tapes). Packages that include Peripheral Housing Unit have 12.1ft bus length remaining to support additional SCSI devices and daisy chain cables.
5. AV 310 CD requires a drop cable and transceiver for LAN connection.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
PROCESSOR OPTIONS								
Memory								
7000	4MB expansion memory module	1,000	/NC	/NC	2	A	Note 1	1 SIMM slot
7014	16MB expansion memory module	3,200	/NC	/NC	2	A	Note 1	1 SIMM slot
Monitor								
G6486-@	20" monochrome monitor	1,995	28	19.50	2	F	Notes 2, 3	
G7217-@	17" color monitor	2,450	14	10	2	A	Notes 3	
G6487-@	19" color monitor	3,450	45	31.50	2	F	Notes 3	
5587S-@	16" Sony Color Monitor	2,450	25	18	2	F	Notes 3	
5587N-@	19" Sony Color Monitor	4,450	45	32	2	F	Notes 3	
Keyboard								
G6488-!	101/102-key PC-AT/AX compatible	110	2	1.50	6	F	Notes 3	
Mouse								
4512	3-button optical mouse	105	1	0.70	2	F	Note 3	

Notes:

1. Memory Configuration:

   AV 310 CD packages support seven SIMM memory daughter boards.

   - Maximum memory support is 112MB (7 x 16MB SIMMS).
   - 4MB and 16MB memory boards may be mixed within the same system.
   - 16MB AV 310 CD packages are configured with 1 x 16MB SIMM memory.

   The following Add-On memory combinations (72MB & 76MB) are **NOT ADDRESSABLE** and therefore **NOT SUPPORTED.** All other configurable memory increments to a maximum 112MB are supported.

   16MB PACKAGED SYSTEMS:

Add-On SIMM Models 16MB	4MB		Memory Increment
3 x 7014	2 x 7000	=	72MB
3 x 7014	3 x 7000	=	76MB

2. Monitor Configuration:
   - Monochrome monitors are supported on color workstations. The resulting display is called "Greyscale".
3. AV 310 CD packaged models contain monitor, keyboard, and mouse. These options are available on System Expansion Orders (SX) only.
4. Keyboard font (!) and AC Power (@) suffixes are the same as those available for packaged systems.

EXTERNAL PERIPHERAL/COMMUNICATIONS SUPPORT

For a complete listing of supported products, see the following sections:

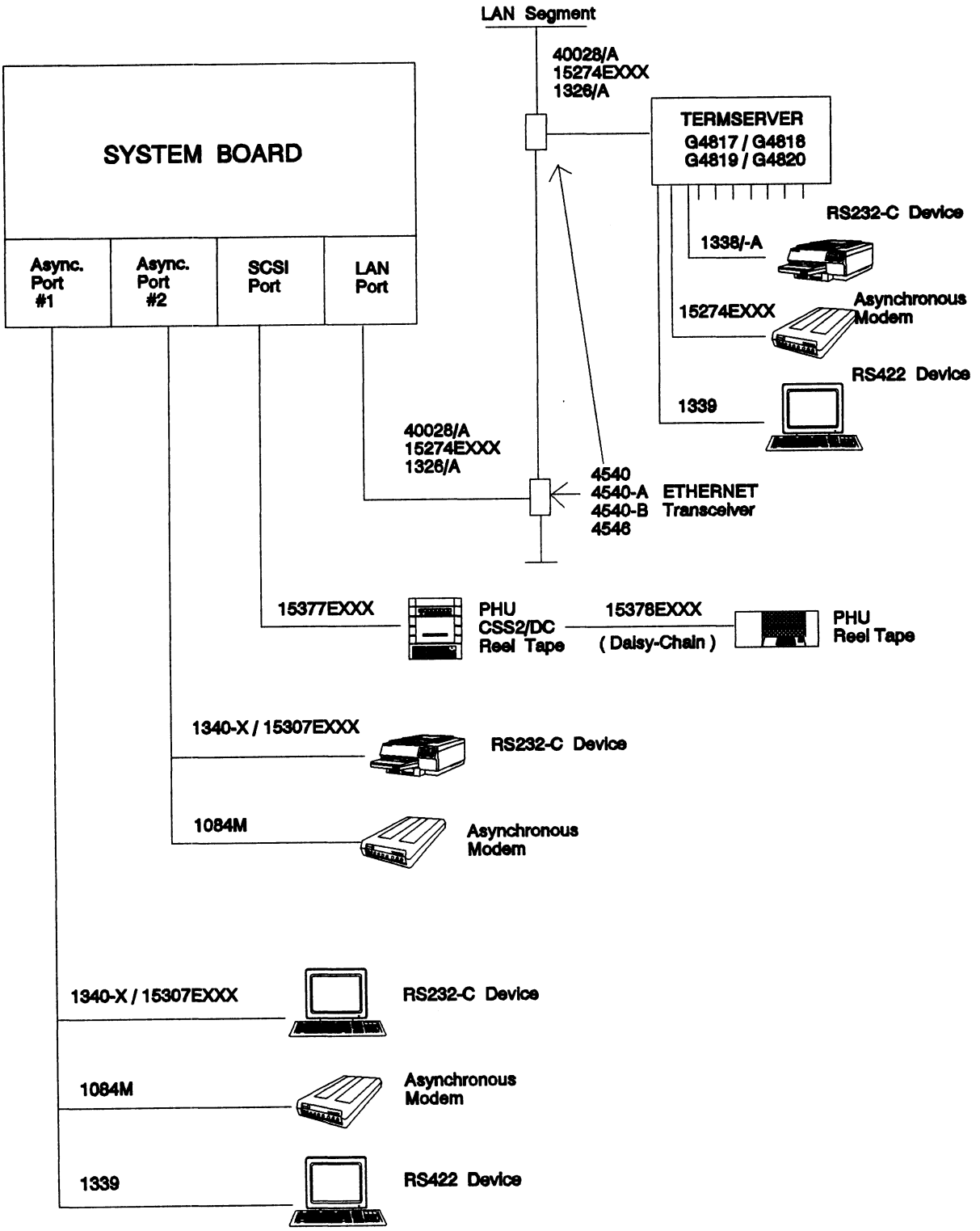
External Mass Storage

Communications

Hard Copy

Terminals

SYSTEM CABLING DIAGRAM



AV 410 SYSTEMS

AV 410 processors, utilizing Data General's UNIX operating system (DG/UX), provide 32-bit standalone or distributed single-user processing in a desktop package. The AV 410 features an integrated 20MHz system board housed in a deskside chassis. An optional second processor daughter board may be added. Mass storage devices may be configured internally and externally. Color graphics is supported by a 8-bit/pixel or 24-bit/pixel option card installed on the system board. An optional 24-bit Z-buffer board is also available.

Major Features:

System board:
- 20 MHz Motorola 88K RISC CPU
- Graphics monitor interface (color)
- AT/AX compatible 101/102-key keyboard interface
- Mouse interface
- Industry standard SCSI and ETHERNET LAN
- Two async (RS232-C/Modem) ports
- One Centronics parallel printer port
- Expandable memory to 128MB (8 x 16MB daughter boards)
- CPU Class R or Q

Deskside chassis:
- Industry standard VME bus
- 2-slot 6U form factor VME card cage
- Internal device support for up to 4 half-height, or 2 half-height and 1 full-height SCSI peripherals.

Software:

Operating System

CD-ROM Media:

- P001AAQ1BD DG/UX Operating System with X-Windows License and CD-ROM media
- M041AZN22N Documentation for DG/UX Operating System.

150MB QIC Tape Media:

- P001AAQ1CA DG/UX Operating System with X-Windows License, 150MB QIC tape media, and documentation

Notes:

- Model P001AAQ1-- includes a 2-user Right-To-Use license for DG/UX, GNU C, TCP/IP, ONC/NFS, X11 Windows, OSF/Motif, and a single-user Looking Glass license.
- An upgrade to support unlimited users is available. (P001ASQ9N)
- Additional product offerings and Software Support offerings are available in the AViiON and Industry Standard Software section.
- CD-ROM based DG/UX Operating System models are available without documentation. Documentation (M041AZN22N) should be ordered as a separate line item.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

BASE SYSTEM WITH PACKAGED PERIPHERALS

System includes a desktop chassis, single (AV 410) or dual (AV 412) processor 20MHz system board, 32MB SIMM memory, and a processor chassis resident 520MB half-height or 1.4GB full-height disk. A graphics package (or graphics card, monitor, mouse, and keyboard) and media load device should be ordered as separate line items to complete the package. (See "Graphics Support Packages" and "Internal Mass Storage").

AV 410, 20MHz, Single Processor:

G70551-@	AV 410, 20MHz, 32MB, 520MB disk	12,500	67	47	2	A	Note 1	DS
G70552-@	AV 410, 20MHz, 32MB, 1.4GB disk	16,500	108	76	2	A	Note 1	DS

AV 412, 20MHz, Dual Processor:

G70553-@	AV 410, 20MHz, 32MB, 520MB disk	14,500	83	58	2	A	Note 1	DS

Notes:

1. Base units must be ordered with one of the following:
   - A Graphics Support Package (See "GRAPHICS SUPPORT PACKAGES")
   - A color graphics card
     7202-@ (8-bit)
     7203A-@ (24-bit)
2. Replace AC Power Suffix (@) with:

(Blank)	-	120V/60Hz
(-1)	-	100V/50 or 60 Hz
(-5,-6)	-	240V/50Hz
(-7,-8,-9,-0)	-	220V/50Hz

2. (Continued)

   In addition to power requirements, these suffixes indicate line cord dependencies to specific country requirements. For further information, see the "Standalone Power Cord Dependent Device Matrix" table in the "Introduction" section.
3. AV 410 requires a drop cable and transceiver for LAN connection.

GRAPHICS SUPPORT PACKAGES

Includes 17" or 19" color monitor, 8-bit/pixel OR 24-bit/pixel color graphics daughter card, AT style keyboard, 3-button mouse, and mouse/keyboard extender cables.

G7212-!@	8-bit/pixel color graphics card, 17" monitor	3,495	24	17	2	A
G7212-X@	8-bit/pixel color graphics card, 17" monitor no keyboard	3,370	22	16	2	A
G7206-!@	8-bit/pixel color graphics card, 19" monitor	4,495	55	39	2	F
G7208A-!@	24-bit/pixel color graphics card, 19" monitor	8,595	60	42	2	F
G7208A-X@	24-bit/pixel color card, 19" monitor, (no keyboard)	8,470	58	41	2	F

Notes:

1. Replace Font Suffix (-!) with: (A,B,C,D,G,I,N,S,Y) For further definition see the "Introduction" section.
2. Replace AC Power Suffix (-@) with:

(Blank)	-	120V/60Hz
(-1)	-	100V/50 or 60 Hz
(-5,-6)	-	240V/50Hz
(-7,-8,-9,-0)	-	220V/50Hz

2. (Continued)

   In addition to power requirements, these suffixes indicate line cord dependencies to specific country requirements. For further information, see the "Standalone Power Cord Dependent Device Matrix" table in the "Introduction" section.

PROCESSOR OPTIONS

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
Memory								
7000	4MB expansion memory module	1,000	/NC	/NC	2	A		1 SIMM slot
7014	16MB expansion memory module	3,200	/NC	/NC	2	A		1 SIMM slot
2nd CPU								
7006	16MHz add-on CPU card	3,000	11	8	2	A	Note 2	
7008	20MHz add-on CPU card	4,000	16	11	2	A	Note 2	
Graphics								
7202-@	8-bit/pixel color graphics card	2,330	7	5	2	F		
7203A-@	24-bit/pixel color graphics card	6,330	12	9	2	F		
7204	24-bit/pixel Z-buffer card	4,000	4	3	2	F	Note 3	
Monitor								
G7217-@	17" color monitor	2,450	14	10	2	A		
G6487-@	19" color monitor	3,450	45	31.50	2	F		
5587S-@	16" Sony Color Monitor	2,450	25	18	2	F		
5587N-@	19" Sony Color Monitor	4,450	45	32	2	F		
Keyboard								
G6488-!	101/102-key PC-AT/AX compatible keyboard	110	2	1.50	6	F		
Mouse								
4512	3-button mouse	105	1	0.70	2	F		
Cables								
15357E005	5 ft. mouse extender cable	28	N/A	N/A		B		
15358E006	6 ft. keyboard extender cable	27	N/A	N/A		B		

Notes:

1. Memory Configuration:
   - Model 7000 is a 4MB SIMM memory daughter board
   - Model 7014 is a 16MB SIMM memory daughter board
   - AV 410 packages support eight SIMM memory daughter boards.
   - Maximum memory support is 128MB (8 x 16MB SIMMS)
   - 4MB and 16MB memory boards may be mixed within same system
   - 16MB AV 410 packages are configured with 1 x 16MB SIMM memory
2. CPU Configuration:

   There is a maximum of one add-on CPU daughter board.
   - AV 400 (7006) Supported on System Expansion orders ONLY, on existing 16MHz single processor AV 400 models.
   - AV 410 (7008) 20MHz 2nd CPU
3. Graphics Configuration:
   - There is a maximum of one 8-bit OR 24-bit graphics card per workstation.
   - A maximum of one 7204 Z-buffer is supported per workstation. It may be configured on either an 8-bit or 24-bit graphics card.
4. Font (!) and AC Power (@) Suffixes are the same as "Graphic Support Packages".

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
INTERNAL MASS STORAGE								
These mass storage devices are for installation in the processor chassis.								
Fixed Disk								
G6662-F	332MB (HH) internal disk add-in	3,500	38	27	2	A		1 HH
G6796-F	520MB (HH) internal disk add-in	2,600	20	14	2	A		1 HH
6554-F	662MB (FH) internal disk add-in	5,600	70	49	2	A		1 FH
G6685-F	1.0GB (FH) internal disk add-in	4,500	70	49	2	A		1 FH
G6716-F	1.4GB (FH) internal disk add-in	5,400	70	49	2	A		1 FH
Cartridge Tape								
G6577-F	150MB (HH) QIC tape add-in	1,895	13	9	2	A		1 HH
G6677-F	320/525MB (HH) QIC tape add-in	2,995	25	18	2	A		1 HH
G6591-F	2GB 8MM (FH) cartridge tape add-in	7,800	80	56	2	A		1 FH
G6762-F	4mm (HH) DAT add-in	5,500	40	28	2	A		1 HH
Floppy Diskette								
G6563-F	1.2MB 5.25" (HH) diskette w/SCSI converter board	395	6	5	2	A		1 HH
G6563-FX	1.2MB 5.25" (HH) diskette add-on drive	195	4	3	2	A	Note 2	1 HH
G6562-F	1.44MB 3.5" (HH) diskette w/SCSI converter board	345	6	5	2	A		1 HH
G6562-FX	1.44MB 3.5" (HH) diskette add-on drive	145	4	3	2	F	Note 2	1 HH
CD ROM								
G6629-F	600MB (HH) CD ROM add-in drive	995	25	18	2	A		1 HH

Notes:

1. Processor Chassis Mass Storage Configuration
   - The processor chassis contains four Half-Height (HH) apertures which support 4 HH devices, 2 Full-Height (FH) devices, OR 2HH and 1 FH device.
   - 2 HH apertures in the front of the chassis support media load and fixed disk devices.
   - 2 HH apertures in the rear of the chassis support 2 HH OR 1 FH fixed disk only.
2. Interface Converter Board Support:
   - Each floppy disk interface converter board supports two floppy drives and is counted as one SCSI device.
   - To support a -FX drive, the associated -F drive (drive with interface converter) must be configured. 1.44MB and 1.2MB floppy disks may be intermixed on DG/UX Revision 4.3 or greater.
3. AV 410 packages will have the bundled fixed disk configured in the rear section.
4. The 2GB 8mm cartridge tape, 4mm DAT, and diskette drives are not supported as cold boot devices. DG/UX is available on -A (150MB cartridge tape) and -D (CD-ROM) media. 150MB (6577) and 320/525MB (6677) QIC cartridge tape drives support -A media, and the 600MB CD-ROM drive (6629) supports -D media. If a cold boot device is not configured in the processor chassis, support should be configured in an external peripheral chassis. (Peripheral Housing Unit or Combined Storage Subsystem 2/DC).
5. Subtract apertures utilized by peripherals bundled under the packaged models, to determine remaining chassis space for support of add-in internal peripherals.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

UPGRADES

These upgrades are chassis and system board replacements. All upgrades retain existing memory, keyboard, mouse, internal, and external peripherals. Upgrades from monochrome AV 300 and 310 include new 19" color graphics monitor with the upgrade; AV 300C and 310C workstations retain existing color monitor. Upgrades include 8-bit/pixel color graphics card and mouse/keyboard extender cables.

AV 300 Series to AV 400 Series

Monochrome:

UW348N-@	AV 300/310 to AV 410	10,460	104	73	2	A	Notes 1,2,3	DS
UW348P-@	AV 300/310 to AV 412	14,460	120	84	2	A	Notes 1,2,3	DS

Color:

UW348Q-@	AV 300C/310C to AV 410	9,085	59	42	2	A	Notes 1,3	DS
UW348R-@	AV 300C/310C to AV 412	11,300	75	53	2	A	Notes 1,3	DS

Notes:

1. Upgrades require return of chassis, system board, memory, and license transfer per Form 507.

   Software license transfer policy:

   To properly license any software that will be used on an upgraded system, include the appropriate software model numbers in the upgrade order. A credit for any existing licenses will be applied to reduce the new license fee. To calculate the specific charges, complete Form 507 and submit it with each upgrade order. The specific charges are based on current pricing. Form 507 is required with all upgrade orders and is the only vehicle that enables customers to receive any credits for existing software.

   For password-protected software that is tied to the CPU serial number (i.e. FrameMaker), a new password is required for the upgraded system and should be obtained through the same avenue as the original for FrameMaker, see MAPS/Plus Volume III, for password information.

   For additional questions or issues, contact the 88K Tech Hot Line via CEO. (Hot Line is available for US and Canada only).

2. AV 300/310 monochrome upgrades require the return of the monochrome monitor.

3. When transferring external peripherals from an existing AV 200/300 series to an AV 400 series workstation, a new "workstation to device" cable must be ordered as a separate line item. If the cable currently configured is a 15377EXXX or 15324EXXX, order replacement cable 15378EXXX (XXX equals the existing length). If external peripheral chassis are daisy-chained "device to device" and the cable currently being utilized is a 15325EXXX, it should be replaced by model 15378EXXX ordered as a separate line item.

4. If a desired upgrade is not listed, a customized upgrade that meets a customer's specific requirements will be quoted by the Upgrade Product Line.

   If you have any questions or need a customized upgrade quote, please contact an Upgrade Product Line Marketing Specialist via CEO hotline UPGRADES or call 508-870-1400.

5. Replace AC Power Suffix (-@) with:

(Blank)	-	120V/60Hz
(-1)	-	100V/50 or 60Hz
(-5,-6)	-	240V/50Hz
(-7,-8,-9,-0)	-	220V/50Hz

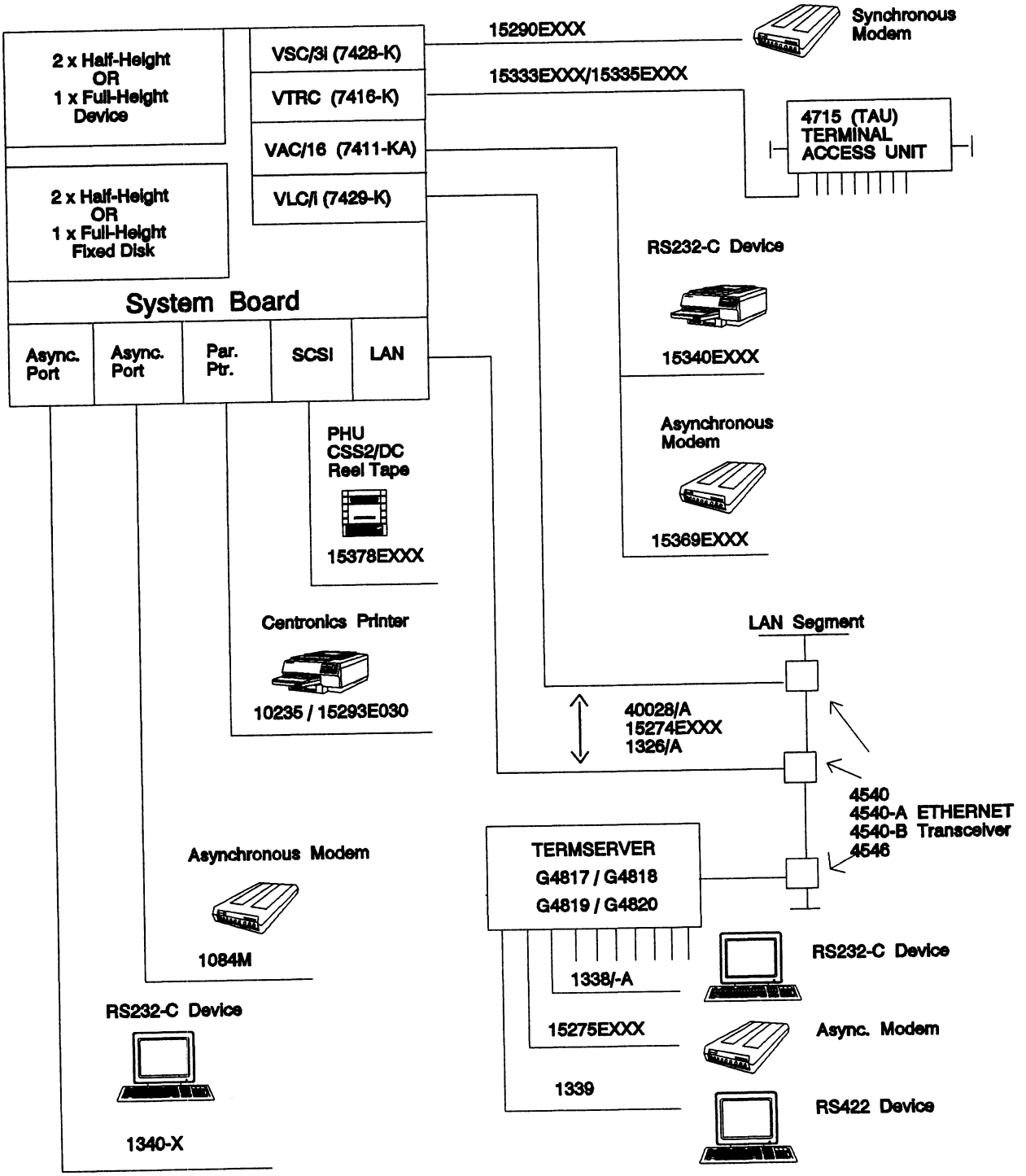
   In addition to power requirements, these suffixes indicate line cord dependencies to specific country requirements. For further information, see the "Power Cord Dependent Device Matrix" table in the "Introduction" section.

EXTERNAL PERIPHERAL/COMMUNICATIONS SUPPORT

For a complete listing of supported products, see the following sections:

External Mass Storage
Communications
Hard Copy
Terminals

SYSTEM CABLING DIAGRAM



AV 530 SYSTEMS

The AV 530 processor, utilizing Data General's UNIX operating system (DG/UX), provides 32-bit standalone or distributed single-user processing in a desktop package. The AV 530 features an integrated 33MHz system board housed in a deskside chassis. An optional second processor daughter board may be added to single processor models. Mass storage devices may be configured internally and externally. Color graphics is supported by a 8-bit/pixel or 24-bit/pixel option card installed on the system board. An optional 24-bit Z-buffer card is also available.

Major Features:

System board:
- 33MHz Motorola 88K RISC CPU
- Second CPU Option
- Graphics monitor interface (color)
- AT/AX compatible 101/102-key keyboard interface
- Mouse interface
- Industry standard SCSI and ETHERNET LAN
- Three RS232-C asynchronous ports, two with modem control
- Two RS232-C synchronous ports
- One Centronics parallel printer port
- Expandable memory to 128MB (8 x 16MB daughter boards)
- CPU Class R or Q

Deskside chassis:
- Industry standard VME bus
- 2-slot 6U form factor VME card cage
- Internal device support for up to 4 half-height, or 2 half-height and 1 full-height SCSI peripherals.

Software:

Operating System

150MB QIC Tape Media:

- P001AAQ1CA DG/UX Operating System with X-Windows License, 150MB QIC tape media, and documentation

CD-ROM Media:

- P001AAQ1BD DG/UX Operating System with X-Windows License and CD-ROM media
- M041AZN22N Documentation for DG/UX Operating System.

Notes:

- Model P001AAQ1-- includes a 2-user Right-To-Use license for DG/UX, GNU C, TCP/IP, ONC/NFS, X11 Windows, OSF/Motif, and a single-user Looking Glass license.
- An upgrade to support unlimited users is available. (P001ASQ9N)
- Additional product offerings and Software Support offerings are available in the AViiON and Industry Standard Software section.
- CD-ROM based DG/UX Operating System models are available without documentation. Documentation (M041AZN22N) should be ordered as a separate line item.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

BASE SYSTEM WITH PACKAGED PERIPHERALS

System includes a desktop chassis, single (AV 530) or dual (AV 532) processor 33MHz system board, 32MB or 64MB SIMM memory, processor chassis resident 520MB half-height or 1.4GB full-height disk, and a 320/525MB cartridge tape. A graphics package (or graphics card, monitor, mouse, and keyboard) should be ordered as separate line items to complete the package. (See "Graphics Support Packages").

AV 530 (33MHz, Single Processor:

G70496-@	AV 530, 33MHz, 32MB, 520MB disk, 525MB tape	17,500	137	96	2	A	Note 1	DS
G70554-@	AV 530, 33MHz, 32MB, 1.4GB disk, 525MB tape	21,500	158	111	2	A	Note 1	DS

AV 532 (33MHz, Dual Processor)

G70497-@	AV 532, 33MHz, Dual, 64MB, 520MB disk, 525MB tape	24,500	157	110	2	A	Note 1	DS

Notes:

1. Base systems must be ordered with one of the following:
   - A Graphics Support Package (See "GRAPHICS SUPPORT PACKAGES")
   - A color graphics card
     7202-@ (8-bit)
     7203A-@ (24-bit)
2. Supported under DG/UX minimum Revision 5.4.
3. System board RS232-C synchronous support requires DG/UX minimum revision 5.4.2.
4. Replace AC Power Suffix (@) with:

(Blank)	-	120V/60Hz
(-1)	-	100V/50 or 60 Hz
(-5,-6)	-	240V/50Hz
(-7,-8,-9,-0)	-	220V/50Hz

   In addition to power requirements, these suffixes indicate line cord dependencies to specific country requirements. For further information, see the "Standalone Power Cord Dependent Device Matrix" table in the "Introduction" section.
5. AV 530 requires a drop cable and transceiver for LAN connection.

GRAPHICS SUPPORT PACKAGES

Includes 17" or 19" color monitor, 8-bit/pixel OR 24-bit/pixel color graphics daughter card, AT style keyboard, 3-button mouse, and mouse/keyboard extender cables.

G7212-!@	8-bit/pixel color graphics card, 17" monitor	3,495	24	17	2	A
G7212-X@	8-bit/pixel color graphics card, 17" monitor (no keyboard)	3,370	22	16	2	A
G7206-!@	8-bit/pixel color graphics card, 19" monitor	4,495	55	39	2	F
G7208A-!@	24-bit/pixel color graphics card, 19" monitor	8,595	60	42	2	F
G7208A-X@	24-bit/pixel color card, 19" monitor, (no keyboard)	8,470	58	41	2	F

Notes:

1. Replace Font Suffix (-!) with: (A,B,C,D,G,I,N,S,Y) For further definition see the "Introduction" section.
2. Replace AC Power Suffix (-@) with:

(Blank)	-	120V/60Hz
(-1)	-	100V/50 or 60 Hz
(-5,-6)	-	240V/50Hz
(-7,-8,-9,-0)	-	220V/50Hz

   (Continued)

   In addition to power requirements, these suffixes indicate line cord dependencies to specific country requirements. For further information, see the "Standalone Power Cord Dependent Device Matrix" table in the "Introduction" section.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
PROCESSOR OPTIONS								
Memory								
7018	8MB expansion memory package	2,000	/NC	/NC	2	A		2 SIMM slots
7019	32MB expansion memory package	6,400	/NC	/NC	2	A		2 SIMM slots
2nd CPU								
7021	33MHz add-on CPU card	6,000	20	15	2	A		
Graphics								
7202-@	8-bit/pixel color graphics card	2,330	7	5	2	F		
7203A-@	24-bit/pixel color graphics card	6,330	12	9	2	F		
7204	24-bit/pixel Z-buffer card	4,000	4	3	2	F	Note 3	
Monitor								
G7217-@	17" color monitor	2,450	14	10	2	A		
G6487-@	19" color monitor	3,450	45	31.50	2	F		
5587S-@	16" Sony Color Monitor	2,450	25	18	2	F		
5587N-@	19" Sony Color Monitor	4,450	45	32	2	F		
Keyboard								
G6488-!	101/102-key PC-AT/AX compatible keyboard	110	2	1.50	6	F		
Mouse								
4512	3-button mouse	105	1	0.70	2	F		
Cables								
15357E005	5 ft. mouse extender cable	28	N/A	N/A		B		
15358E006	6 ft. keyboard extender cable	27	N/A	N/A		B		

Notes:

1. Memory Configuration:

   AV 530 packages support eight SIMM memory daughter boards.

   - SIMMS are packaged, and must be configured in pairs

     Model 7018 includes two 4MB SIMM memory daughter boards.

     Model 7019 includes two 16MB SIMM memory daughter boards.

   - Maximum memory support is 128MB (8 x 16MB SIMMS)

2. CPU Configuration:

   There is a maximum of one add-on CPU daughter board on AV 530 models.

3. Graphics Configuration:

   - There is a maximum of one 8-bit OR 24-bit graphics card per workstation.
   - A maximum of one 7204 Z-buffer is supported per workstation. It may be configured on either an 8-bit or 24-bit graphics card.

4. Font (!) and AC Power (@) Suffixes are the same as "Graphic Support Packages".

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
INTERNAL MASS STORAGE								
These mass storage devices are installed in the processor chassis.								
Fixed Disk								
G6662-F	332MB (HH) internal disk add-in	3,500	38	27	2	A		1 HH
G6796-F	520MB (HH) internal disk add-in	2,600	20	14	2	A		1 HH
6554-F	662MB (FH) internal disk add-in	5,600	70	49	2	A		1 FH
G6685-F	1.0GB (FH) internal disk add-in	4,500	70	49	2	A		1 FH
G6716-F	1.4GB (FH) internal disk add-in	5,400	70	49	2	A		1 FH
Cartridge Tape								
G6677-F	320/525MB (HH) QIC tape add-in	2,995	25	18	2	A		1 HH
G6591-F	2GB 8MM (FH) cartridge tape add-in	7,800	80	56	2	A		1 FH
G6762-F	4mm (HH) DAT add-in	5,500	40	28	2	A		1 HH
Floppy Diskette								
G6563-F	1.2MB 5.25" (HH) diskette w/SCSI converter board	395	6	5	2	A		1 HH
G6563-FX	1.2MB 5.25" (HH) diskette add-on drive	195	4	3	2	A	Note 2	1 HH
G6562-F	1.44MB 3.5" (HH) diskette w/SCSI converter board	345	6	5	2	A		1 HH
G6562-FX	1.44MB 3.5" (HH) diskette add-on drive	145	4	3	2	F	Note 2	1 HH
CD ROM								
G6629-F	600MB (HH) CD ROM add-in drive	995	25	18	2	A		1 HH

Notes:

1. Processor Chassis Mass Storage Configuration
   - The processor chassis contains four Half-Height (HH) apertures which support 4 HH devices, 2 Full-Height (FH) devices, OR 2HH and 1 FH device.
   - 2 HH apertures in the front of the chassis support media load and fixed disk devices.
   - 2 HH apertures in the rear of the chassis support 2 HH OR 1 FH fixed disk only.
2. Interface Converter Board Support:
   - Each floppy disk interface converter board supports two floppy drives and is counted as one SCSI device.
   - To support a -FX drive, the associated -F drive (drive with interface converter) must be configured. 1.44MB and 1.2MB floppy disks may be intermixed on DG/UX Revision 4.3 or greater.
3. AV 530 packages will have the bundled fixed disk configured in the rear section.
4. The 2GB 8mm cartridge tape, 4mm DAT, and diskette drives are not supported as cold boot devices. DG/UX is available on -A (150MB cartridge tape) and -D (CD-ROM) media. 150MB (6577) and 320/525MB (6677) QIC cartridge tape drives support -A media, and the 600MB CD-ROM drive (6629) supports -D media. If a cold boot device is not configured in the processor chassis, support should be configured in an external peripheral chassis. (Peripheral Housing Unit or Combined Storage Subsystem 2/DC).
5. Subtract apertures utilized by peripherals bundled under the packaged models, to determine remaining chassis space for support of add-in internal peripherals.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

UPGRADES

These upgrades are chassis, system board and memory replacements. The customer retains existing color monitor, keyboard, mouse, internal, and external peripherals. All Upgrades include 32MB memory. AV 200 and AV 300 upgrades include 8-bit/pixel color graphics card, mouse/keyboard extender cables and mounting brackets for one disk and one 150MB tape drive.

AV 200 Series to AV 530 33MHz Single Processor

UW253B-@	AV 200 to AV 530 32MB	17,260	140	98	2	A	Notes 1-4	DS

AV 300 Series to AV 530 33MHz Single Processor

Monochrome:

UW353B-@	AV 300 to AV 530 32MB	16,295	140	98	2	A	Notes 1-4	DS

Color:

UW353D-@	AV 300 to AV 530 32MB	14,250	140	98	2	A	Notes 1,3,4	DS

AV 400 Series to AV 530 33MHz Single Processor

UW453B-@	AV 400 to AV 530 32MB	12,365	140	98	2	A	Notes 1,4	DS

Notes:

1. AV 200, 300, and 400 upgrades require return of chassis, system board, memory, and license transfer per Form 507.

   Software license transfer policy:

   To properly license any software that will be used on an upgraded system, include the appropriate software model numbers in the upgrade order. A credit for any existing licenses will be applied to reduce the new license fee. To calculate the specific charges, complete Form 507 and submit it with each upgrade order. The specific charges are based on current pricing. Form 507 is required with all upgrade orders and is the only vehicle that enables customers to receive any credits for existing software.

   For password-protected software that is tied to the CPU serial number (i.e. FrameMaker), a new password is required for the upgraded system and should be obtained through the same avenue as the original for FrameMaker, see MAPS/Plus Volume III, for password information.

   For additional questions or issues, contact the 88K Tech Hot Line via CEO. (Hot Line is available for US and Canada only).

2. AV 200 and 300/310 monochrome upgrades require the return of the monochrome monitor.

3. When transferring external peripherals from an existing AV 200/300 series to an AV 400 series workstation, a new "workstation to device" cable must be ordered as a separate line item. If the cable currently configured is a 15377EXXX or 15324EXXX, order replacement cable 15378EXXX (XXX equals the existing length). If external peripheral chassis are daisy-chained "device to device" and the cable currently being utilized is a 15325EXXX, it should be replaced by model 15378EXXX ordered as a separate line item.

4. Any devices connected to the system board asynchronous ports will require replacement cables ordered as a separate line item. (XXX equals current cable length)

	AV 200/300/400	AV 530 Replacement
RS232-C	1340-X/15307EXXX	15340EXXX
RS232-C w/modem control	1084M/1084M-A	15369EXXX

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

Notes: (Continued)

5. If a desired upgrade is not listed, a customized upgrade that meets a customer's specific requirements will be quoted by the Upgrade Product Line.

   If you have any questions or need a customized upgrade quote, please contact an Upgrade Product Line Marketing Specialist via CEO hotline UPGRADES or call 508-870-1400.

6. Replace AC Power Suffix (-@) with:

(Blank)	-	120V/60Hz
(-1)	-	100V/50 or 60Hz
(-5,-6)	-	240V/50Hz
(-7,-8,-9,-0)	-	220V/50Hz

   In addition to power requirements, these suffixes indicate line cord dependencies to specific country requirements. For further information, see the "Power Cord Dependent Device Matrix" table in the "Introduction" section.

EXTERNAL PERIPHERAL/COMMUNICATIONS SUPPORT

For a complete listing of supported products, see the following sections:

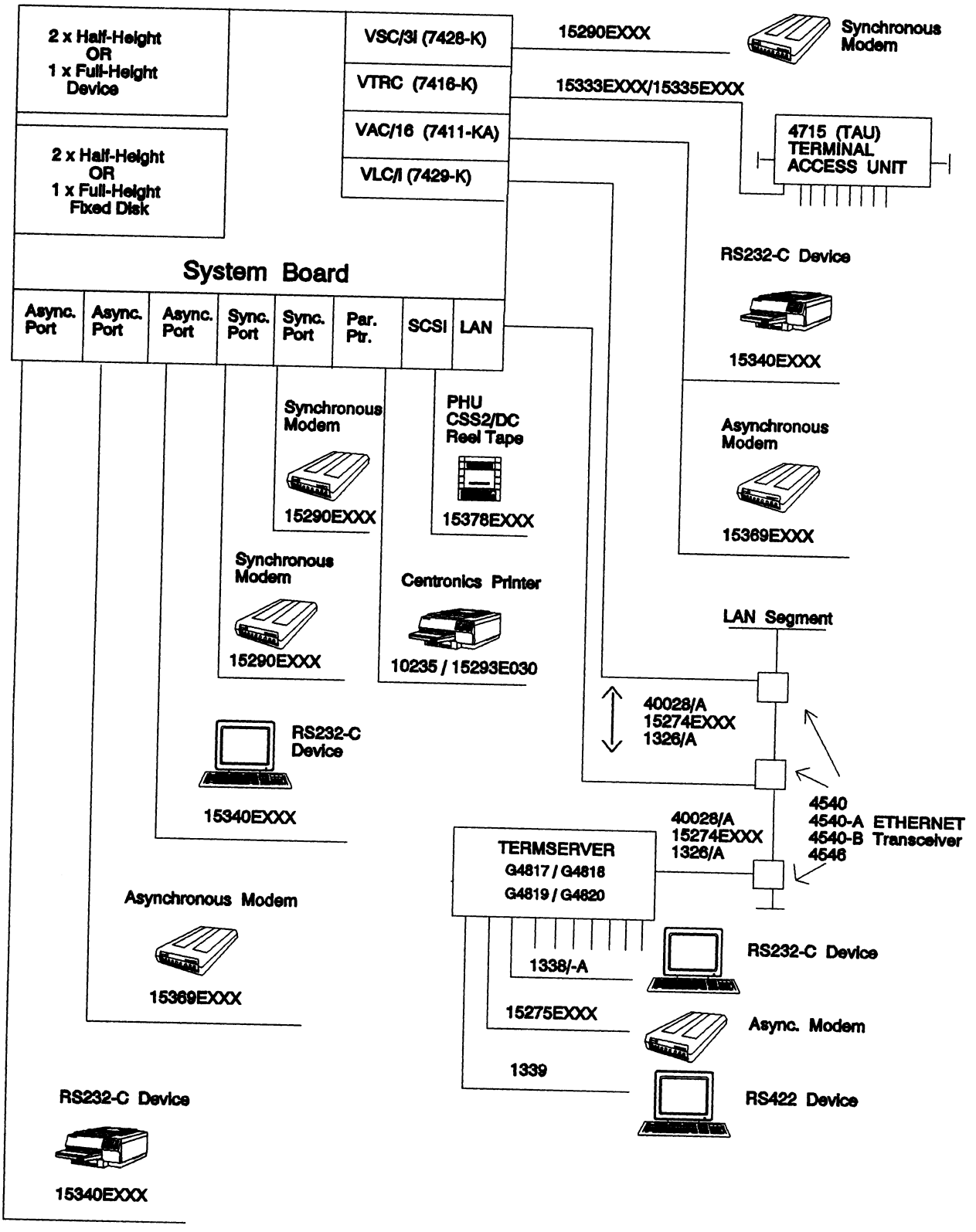
External Mass Storage

Communications

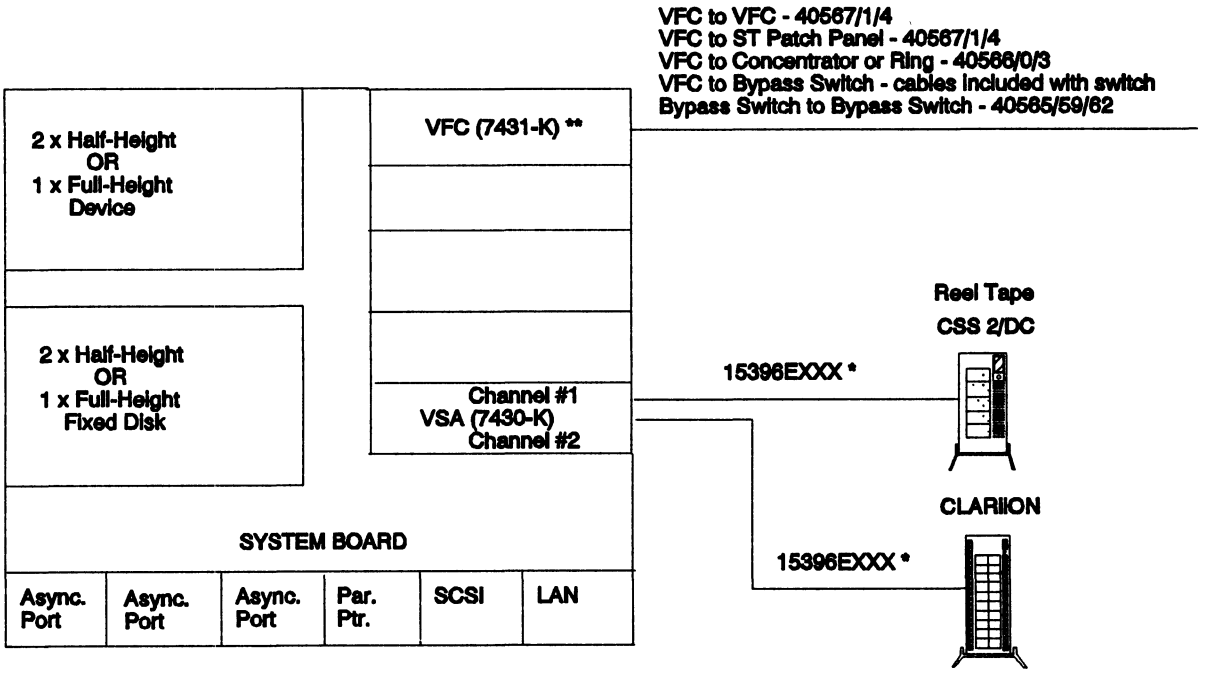
Hard Copy

Terminals

SYSTEM CABLING DIAGRAM



SYSTEM CABLING DIAGRAM



* The 15396EXXX cable series is "universal" and may be utilized for both single-ended and differential device connection. See the "Mass Storage Host Adapter" section for daisy-chain cable requirements.

** For Dual Attachment (DAS - Class A) two cable models should be configured. For Single Attachment (SAS - Class B) one cable model should be configured. See the "Fiber Distributed Data Interface" section in the Communications section for additional information.

AV 4300 SERIES SYSTEMS

The AV 4300 series servers offer RISC multiprocessor power in a small, compact package. Their range of performance and configurability and use of industry-standard I/O, mass storage and communications interfaces make these systems ideal for traditional time-sharing or server environments. Mass Storage devices are supported both internally and externally.

Major Features:

System board:

- 25MHz Motorola 88K RISC CPU
- Dual processor standard on AV 4320, optional on AV 4300
- Industry standard SCSI and ETHERNET LAN
- Two async (RS-232C/Modem) ports (One for system console connect)
- Integrated 255-Line Distributed Asynchronous Controller
- One Centronics parallel printer port
- Expandable memory to 128MB (8 x 16MB daughter boards)
- CPU Class X or S

Deskside chassis:

- Industry standard VME bus
- 2-slot 6U form factor VME card cage
- Internal device support for up to 4 half-height, or 2 half-height and 1 full-height SCSI peripherals.

Software:

Operating System:

CD-ROM Media:

- P001APX1BD DG/UX Operating System with X-Windows License and CD-ROM media
- M041AZN22N Documentation for DG/UX Operating System with X-Windows

- Q001APX1BD DG/UX Operating System License with X-Windows License, 150MB QIC tape media, and documentation
- M041AZN22N Documentation for DG/UX Operating System

150MB QIC Tape Media:

- P001APX1CA DG/UX Operating System with X-Windows License, 150MB QIC tape media, and documentation
- Q001APX1CA DG/UX Operating System License, 150MB QIC tape media, and documentation

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Notes:

- Model P001APX1-- includes a 16-user Right-to-Use for DG/UX, GNU C, TCP/IP, ONC/NFS, X11 WINDOWS, OSF/Motif, and a single-user Looking Glass license.

- Model Q001APX1-- includes a 16-user Right-to-Use for DG/UX, GNU C, TCP/IP, and NFS.

- Upgrades to include additional users are available for both DG/UX and Looking Glass.

- Additional product offerings and Software Support offerings are available in the AViiON Software section.

- CD-ROM based DG/UX Operating System models are available without documentation. Documentation (M041AZN22N) should be ordered as a separate line item.

PACKAGED SYSTEMS

Packages include deskside chassis, 25MHz system board, 16MB or 32MB SIMM memory, and internally mounted SCSI disk and tape.

AV 4300 SERIES QUICK REFERENCE

AV 4300 - 25MHz Single Processor
AV 4320 - 25MHz Dual Processor

PACKAGE MODEL NUMBER	# CPU'S	CPU SPEED	MEMORY	DISK			TAPE
				332MB	520MB	1.4GB	320/525MB
AV 4300							
G70421-@	1	25MHz	16MB	1			1
G70466-@	1	25MHz	16MB		1		1
* G70501-1@	1	25MHz	16MB		1		1
G70424-@	1	25MHz	16MB			1	1
G70467-@	1	25MHz	32MB		1		1
G70469-@	1	25MHz	32MB			1	1
AV 4320							
G70499-@	2	25MHz	32MB		2		1
* G70502-1@	2	25MHz	32MB		2		1

* These models are total system packages that have been developed based on user count requirements. (See "PREFERRED CONFIGURATIONS").

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

PREFERRED CONFIGURATIONS

The following system packages have been developed to address a total system configuration based on user count, that will allow single model ordering. Each configuration includes a processor, internal fixed disk and tape, system console and cable, asynchronous communication controller, cluster boxes, 25ft. cluster interface cables, and DG/UX license, media, and documentation to support the number of users specified. Other options, mass storage, communications hard copy, and terminals desired may be ordered as separate line items.

AV 4300 Single Processor, 16-User System

G70501-!@	AV 4300 16 User Packaged System (1) G70466-@ - AV 4300, 16MB, 520MB disk, 525MB tape (1) 7419S-@ - 16-line distributed cluster (1) 15338E025 - 25ft. cluster cable (1) 6693G-N!@ - D1400i console w/cable & keyboard (1) Q001APX1CA - DG/UX 16 user, license, media & doc.	14,685	128	90	2	A	DS

AV 4320 Dual Processor, 32-User System

G70502-!@	AV 4320 32-User Packaged System (1) G70499-@ - AV 4320, 32MB, 2 x 520MB disk, 525MB tape (2) 7419S-@ - 16-line distributed cluster (2) 15338E025 - 25ft. cluster cable (1) 6693G-N!@ - D1400i console w/cable & keyboard (1) Q001APX1CA - DG/UX 16 user, license, media & doc. (1) Q001AQX9JN - DG/UX 32 user upgrade	27,395	170	119	2	A	DS

Notes:

1. Replace Font Suffix (-!) with:

A	-	US ASCII
B	-	U.K.
C	-	French
D	-	German
G	-	Spanish
H	-	Danish
I	-	Italian
J	-	Swiss/German
M	-	Canadian (French)
N	-	Swedish/Finnish

   For further information see the "FONT SUFFIX DEFINITION" section in the Introduction.

2. Replace AC Power Suffix (-@) with:

(Blank)	-	120V/60Hz
(-1)	-	100V/50 or 60 Hz
(-5,-6)	-	240V/50Hz
(-7,-8,-9,-0)	-	220V/50Hz

   In addition to power requirements, these suffixes indicate line cord dependencies to specific country requirements. For further information, see the "Standalone Power Cord Dependent Device Matrix" table in the "Introduction".

3. Transceiver and drop cable required for connection to Ethernet LAN.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

PACKAGED SYSTEMS

Includes 25MHz system board installed in deskside chassis, with 16MB or 32MB memory, and internally mounted disk and tape. (System console cable is not included)

AV 4300 (25MHz, Single Processor)

G70421-@	AV 4300,25MHz,16MB,332MB disk,320/525MB tape	9,995	103	73	2	A		DS
G70466-@	AV 4300,25MHz,16MB,520MB disk,320/525MB tape	10,995	117	82	2	A		DS
G70424-@	AV 4300,25MHz,16MB,1.4GB disk,320/525MB tape	15,995	142	100	2	A		DS
G70467-@	AV 4300,25MHz,32MB,520MB disk,320/525MB tape	14,195	117	82	2	A		DS
G70469-@	AV 4300,25MHz,32MB,1.4GB disk,320/525MB tape	19,195	142	100	2	A		DS

AV 4320 (25MHz, Dual Processor)

G70499-@	AV 4320,2CPU,25MHz,32MB,2x520MB disks, 320/525MB tape	21,395	154	108	2	A		DS

Notes:

1. Server/Multi-User configurations require that an RS-232-C System console be installed on the first System Board asynchronous port.
2. Transceiver and drop cable required for connection to ETHERNET LAN.
3. Replace AC Power Suffix (-@) with:

(Blank)	-	120V/60Hz
(-1)	-	100V/50 or 60 Hz
(-5,-6)	-	240V/50Hz
(-7,-8,-9,-0)	-	220V/50Hz

In addition to power requirements, these suffixes indicate line cord dependencies to specific country requirements. For further information, see the "Standalone Power Cord Dependent Device Matrix" table in the "Introduction".

PROCESSOR OPTIONS

Memory

7018	8MB expansion memory package	2,000	/NC	/NC	2	A		2 SIMM slots
7019	32MB expansion memory package	6,400	/NC	/NC	2	A		2 SIMM slots

2nd CPU

7023	25MHz second CPU option	4,000	16	12	2	A	Note 2	

Notes:

1. Memory Configuration:

   AV 4300 packages support eight SIMM memory daughter boards.

   - SIMMS are packaged, and must be configured in pairs

     Model 7018 includes two 4MB SIMM daughter boards
     Model 7019 includes two 16MB SIMM daughter boards

   - 16MB AV 4300 models are configured with four 4MB SIMMs
     32MB AV 4300 models are configured with two 16MB SIMMs

   - Maximum memory support is 128MB (8 x 16MB SIMMS)

1. (Continued)

   AV 4300 models will require memory upgrade of the 4MB boards included in the package to reach the maximum memory supported.

   - Include model UMRR832 as a separate line item on the quote if memory configuration exceeding 80MB is required. Two of these upgrade models, which substitute two 4MB memories for two 16MB memories, are required to reach the 128MB maximum.

2. Second CPU option available on single processor models only.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
INTERNAL MASS STORAGE								
These mass storage devices are installed in the processor chassis.								
Fixed Disk								
G6662-F	332MB (HH) internal disk add-in	3,500	38	27	2	A		1 HH
G6796-F	520MB (HH) internal disk add-in	2,600	20	14	2	A		1 HH
6554-F	662MB (FH) internal disk add-in	5,600	70	49	2	A		1 FH
G6685-F	1.0GB (FH) internal disk add-in	4,500	70	49	2	A		1 FH
G6716-F	1.4GB (FH) internal disk add-in	5,400	70	49	2	A		1 FH
Floppy Diskette								
G6563-F	1.2MB 5.25" (HH) diskette w/SCSI converter board	395	6	5	2	A		1 HH
G6562-F	1.44MB 3.5" (HH) diskette w/SCSI converter board	345	6	5	2	A		1 HH
Cartridge Tape								
G6677-F	320/525MB (HH) QIC tape add-in	2,995	25	18	2	A		1 HH
G6762-F	4mm (HH) DAT add-in	5,500	40	28	2	A		1 HH
CD ROM								
G6629-F	600MB (HH) CD ROM	995	25	18	2	A		1 HH

Notes:

1. Processor Chassis Mass Storage Configuration:
   - The processor chassis contains four Half-Height (HH) apertures which support 4 HH devices, 2 Full-Height (FH) devices, OR 2HH and 1 FH device.
   - 2 HH apertures in the front of the chassis support media load and fixed disk devices.
   - 2 HH apertures in the rear of the chassis support 2 HH OR 1 FH fixed disk only.
   - Since all packages include 1 x HH tape, only 1 HH aperture remains for additional media load device support.
2. AV 4300 packages will have the bundled fixed disk configured in the rear section.
3. The 2GB 8mm cartridge tape, 4mm DAT, and diskette drives are not supported as cold boot devices. DG/UX is available on -A (150MB cartridge tape) and -D (CD-ROM) media. 150MB (6577) and 320/525MB (6677) QIC cartridge tape drives support -A media, and the 600MB CD-ROM drive (6629) supports -D media. If a cold boot device is not configured in the processor chassis, support should be configured in an external peripheral chassis. (Peripheral Housing Unit or Combined Storage Subsystem 2/DC).
4. Subtract apertures utilized by peripherals bundled under the packaged models to determine remaining chassis space for support of add-in internal peripherals.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

UPGRADES

These upgrades consist of complete chassis, system board, and memory replacement. Existing peripherals are retained and may be moved directly to the AV 4300 chassis.

US324G-@	AV 3200 to AV 4300, 25MHz, 16MB	7,120	68	48	2	A	Notes 1,2	DS
US446C-@	AV 4000/4100 to AV 4300, 25MHz, 16MB	7,120	68	48	2	A	Notes 1,2	DS

Notes:

1. Requires return of chassis, system board, and memory and license transfer per Form 507.

   Software license transfer policy:

   To properly license any software that will be used on an upgraded system, include the appropriate software model numbers in the upgrade order. A credit for any existing licenses will be applied to reduce the new license fee. To calculate the specific charges, complete Form 507 and submit it with each upgrade order. The specific charges are based on current pricing. Form 507 is required with all upgrade orders and is the only vehicle that enables customers to receive any credits for existing software.

   For password-protected software that is tied to the CPU serial number (i.e. FrameMaker), a new password is required for the upgraded system and should be obtained through the same avenue as the original for FrameMaker, see MAPS/Plus Volume III for password information.

   For additional questions or issues, contact the 88K Tech Hot Line via CEO. (Hot Line is available for US and Canada only).

2. Any devices connected to the system board asynchronous ports (system console, async. device) will require replacement cables ordered as a separate line item. (XXX equals current cable length)

2. (Continued)

	AV 3200/4000/4100	AV 4300 Replacement
RS232-C	1340-X/15307EXXX	15340EXXX
RS232-C w/modem control	1084M/1084M-A	15369EXXX

3. If a desired upgrade is not listed, a customized upgrade that meets a customer's specific requirements will be quoted by the Upgrade Product Line.

   If you have any questions or need a customized upgrade quote, please contact an Upgrade Product Line Marketing Specialist via CEO hotline UPGRADES or call 508-870-1400.

4. Replace AC Power Suffix (-@) with:

(Blank)	-	120V/60Hz
(-1)	-	100V/50 or 60Hz
(-5,-6)	-	240V/50Hz
(-7,-8,-9,-0)	-	220V/50Hz

   In addition to power requirements, these suffixes indicate line cord dependencies to specific country requirements. For further information, see the "Power Cord Dependent Device Matrix" table in the "Introduction" section.

EXTERNAL PERIPHERAL/COMMUNICATIONS SUPPORT

For a complete listing of supported products, see the following sections:

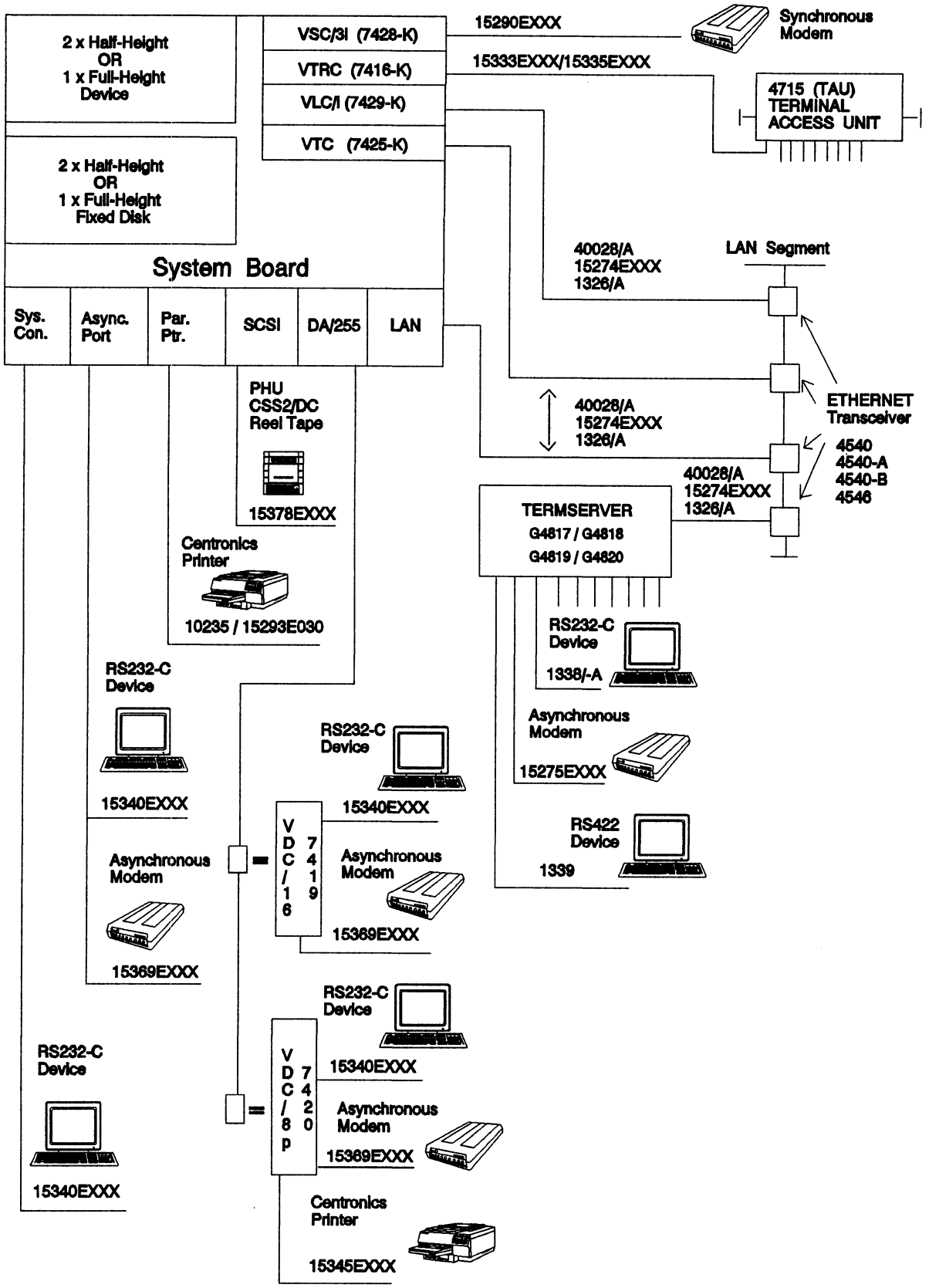
External Mass Storage

Communications

Hard Copy

Terminals

SYSTEM CABLING DIAGRAM



AV 4605/4625 SERIES SYSTEMS

The AV 4605/4625 series servers offer RISC multiprocessor power in a small, compact package. Their range of performance and configurability and use of industry-standard I/O, mass storage and communications interfaces make these systems ideal for traditional time-sharing or server environments. Mass Storage devices are supported both internally and externally. Optional second processor and second SCSI/ETHERNET LAN interface daughter cards are available. AV 4605 and AV 4625 CPU complexes each contain one 88100 CPU and six 88200 cache memory management units which lead to optimized system performance.

Major Features:

System board:

- 33MHz Motorola 88K RISC CPU
- Dual processor standard on AV 4625, optional on AV 4605
- Industry standard SCSI and ETHERNET LAN
- Three RS232-C asynchronous ports, two with modem control
- Two RS232-C synchronous ports
- One Centronics parallel printer port
- Expandable memory to 128MB (8 x 16MB daughter boards)
- CPU Class X or S

Deskside chassis:

- Industry standard VME bus
- 2-slot 6U form factor VME card cage
- Internal device support for up to 4 half-height, 2 full-height, or 2 half-height and 1 full-height SCSI peripherals.

Software:

Operating System:

150MB QIC Tape Media:

- P001APX1CA - DG/UX Operating System with X-Windows License, 150MB QIC tape media, and documentation

- Q001APX1CA - DG/UX Operating System License, 150MB QIC tape media, and documentation

CD-ROM Media:

- P001APX1BD - DG/UX Operating System with X-Windows License and CD-ROM media
- M041AZN22N - Documentation for DG/UX Operating System with X-Windows

- Q001APX1BD - DG/UX Operating System License and CD-ROM media
- M041AZN22N - Documentation for DG/UX Operating System

Notes:

- Model P001APX1-- includes a 16-user Right-to-Use for DG/UX, GNU C, TCP/IP, ONC/NFS, X11 WINDOWS, OSF/Motif, and a single-user Looking Glass license.

- Model Q001APX1-- includes a 16-user Right-to-Use license for DG/UX, GNU C, TCP/IP, NFS.

- Upgrades to include additional users are available for both DG/UX and Looking Glass.

- Additional product offerings and Software Support offerings are available in the AViiON Software section.

- CD-ROM based DG/UX Operating System models are available without documentation. Documentation (M041AZN22N) should be ordered as a separate line item.

PACKAGED SYSTEMS

Packages include deskside chassis, 33MHz system board, 32MB or 64MB SIMM memory, and internally mounted SCSI disk and tape.

AV 4605/4625 SERIES QUICK REFERENCE

AV 4605 - 33MHz Single Processor
AV 4625 - 33MHz Dual Processor

PACKAGE MODEL NUMBER	# CPU'S	CPU SPEED	MEMORY	DISK			TAPE	
				500MB	520MB	1.4GB	320/525MB	4mm DAT
AV 4605								
G70473-@	1	33MHz	32MB		1		1	
G70475-@	1	33MHz	32MB			1	1	
* G70513-1@	1	33MHz	32MB		2		1	
** G70558-@	1	33MHz	32MB	7			1	1
AV 4625								
G70500-@	2	33MHz	64MB		2		1	
* G70514-1@	2	33MHz	64MB		3		1	
** G70544-@	2	33MHz	64MB	7			1	1

* These models are total system packages that have been developed based on user count. (See "PREFERRED CONFIGURATIONS").

** The 525MB tape and 4mm DAT are installed in the processor chassis. The 7 x 500MB disks are configured in an external CLARiiON Disk Array subsystem.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

PREFERRED CONFIGURATIONS

The following system packages have been developed to address a total system configuration based on user count, that will allow single model ordering. Each configuration includes a processor, internal fixed disk and tape, system console and cable, asynchronous communication controller, cluster boxes, 25ft. cluster interface cables, and DG/UX license, media, and documentation to support the number of users specified. Other options desired may be ordered as separate line items on the order.

AV 4605 Single Processor, 32-User System

G70513-!@	AV 4605 32-User Packaged System	31,695	181	127	2	A
	(1) G70473-@ - AV4605, 32MB,520MB disk,525MB tape					
	(1) 6796-F - 520MB add-in disk drive					
	(1) 7424-K@ - 32-user distributed asynchronous package					
	(1) 255-line distributed adapter					
	(2) 16-line distributed cluster					
	(2) 15338E025 - 25ft. cluster cable					
	(1) 6693G-N!@ - D1400i console w/cable & keyboard					
	(1) Q001APX1CA - DG/UX 16-user license, media, & doc.					
	(1) Q001AQX9JN - DG/UX 32-user upgrade					

AV 4625 Dual Processor, 64-User System

G70514-!@	AV 4625 64-User Packaged System	53,915	239	168	2	A
	(1) G70500-@ - AV 4625, 64MB, 2 x 520 disks,525MB tape					
	(1) 6796-F - 520MB add-in disk drive					
	(1) 7424-K@ - 32-user distributed asynchronous package					
	(1) 255-line distributed adapter					
	(2) 16-line distributed cluster					
	(2) 7419-@ - 16-line distributed cluster					
	(4) 15338E025 - 25ft. cluster cable					
	(1) 6693G-N!@ - D1400i console w/cable & keyboard					
	(1) Q001APX1CA - DG/UX 16-user license, media, & doc.					
	(1) Q001ASX9RN - DG/UX unlimited user upgrade					

Notes:

1. Supported under DG/UX minimum Revision 5.4.1 System board RS232-C synchronous support requires DG/UX minimum revision 5.4.2.

2. AV 4600 was developed for Server/Multi-User applications. Graphics Options are not supported.

3. Certain maximum configurations of option boards, internal peripherals, and VME controllers may exhaust power available from the AV 4600 power supply. Run your configuration through "BVAL" in the Field Quote Generator/Configuration to ensure sufficient power is available.

4. Transceiver and drop cable required for connection to ETHERNET LAN.

5. Replace Font Suffix (-!) with:
   - A - US ASCII
   - B - U.K.
   - C - French
   - D - German
   - G - Spanish
   - H - Danish

5. Replace Font Suffix (-!) with: (Continued)
   - I - Italian
   - K - Swiss/French
   - J - Swiss/German
   - M - Canadian (French)
   - N - Swedish/Finnish

   For further information see the "FONT SUFFIX DEFINITION" section in the Introduction.

6. Replace AC Power Suffix (-@) with:

(Blank)	-	120V/60Hz
(-1)	-	100V/50 or 60 Hz
(-5,-6)	-	240V/50Hz
(-7,-8,-9,-0)	-	220V/50Hz

   In addition to power requirements, these suffixes indicate line cord dependencies to specific country requirements. For further information, see the "STANDALONE POWER CORD DEPENDENT DEVICE MATRIX" table in the Introduction.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

PACKAGED SYSTEMS

Includes 33MHz system board installed in deskside chassis, 32MB or 64MB memory, and internally mounted disk and tape. High Performance/High Availability packages are available, that includes a dual channel VME SCSI Adapter (VSA) and 2.5GB (5 x 500MB drives) CLARiiON Disk Array Subsystem. A 15340EXXX system console cable should be ordered as a separate line item.

AV 4605 (33MHz, Single Processor)

G70473-@	AV 4605,33MHz,32MB,520MB disk,525MB tape	19,995	137	96	2	A	Note 1,2	DS
G70475-@	AV 4605,33MHz,32MB,1.4GB disk,525MB tape	24,995	162	114	2	A	Note 1,2	DS

AV 4605 CLARiiON Disk Array Package

G70558-@	AV 4605 33MHZ,32MB,525MB QIC tape, 4mm DAT, 3.5GB CLARiiON disk array subsystem w/10ft. cable (1) AV 4605 base system, 32MB (1) G6677-F - 320/525MB cartridge tape for AV 4600 (1) G6762-F - 4mm DAT for AV 4600 (1) 7430-K - Dual port VSA SCSI 2 HBA (1) 7907-A@ - 2.5GB CLARiiON disk array subsystem (2) 7908-ZA - Add-in 500MB CLARiiON disk drive (1) 15396E010 - Universal SCSI cable (1) 1340 - 25ft. array console cable	56,000	202	142	2	A	Note 1,2	DS

AV 4625 (33MHz, Dual Processor)

G70500-@	AV 4625,33MHz,64MB,2x520MB disk, 525MB tape	36,595	178	125	2	A	Note 1,2	DS

AV 4625 CLARiiON Disk Array Package

G70544-@	AV 4625, 33MHz, 64MB, 525MB QIC tape, 4mm DAT, 3.5GB CLARiiON disk array subsystem w/10ft. cable (1) AV 4625 base system, 32MB (1) 7019 - 32MB expansion memory package (1) G6677-F - 320/525MB cartridge tape for AV 4600 (1) G6762-F - 4mm DAT for AV 4600 (1) 7430-K - Dual port VSA SCSI 2 HBA (1) 7907-A@ - 2.5GB CLARiiON disk array subsystem (2) 7908-ZA - Add-in 500MB CLARiiON disk drive (1) 15396E010 - Universal SCSI cable (1) 1340 - 25ft. array console	65,600	233	/NQ	2	A	Note 1,2,7	DS

Notes:

1. Supported under DG/UX minimum Revision 5.4.1. CLARiiON support requires DG/UX minimum revision 5.4.2.

   System board RS232-C synchronous support requires DG/UX minimum revision 5.4.2.

2. Server/Multi-User configurations require that an RS232-C System console be installed on the first System Board asynchronous port. A 15340EXXX system console cable must be configured.

3. AV 4605/4625 was developed for Server/Multi-User applications. Graphics Options are not supported.

4. Certain maximum configurations of option boards, internal peripherals, and VME controllers may exhaust power available from the AV 4605/4625 power supply. Run your configuration through "BVAL" in the Field Quote Generator/Configuration to ensure sufficient power is available.

5. Transceiver and drop cable required for connection to ETHERNET LAN.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

PACKAGED SYSTEMS (Continued)

Notes:

6. Replace AC Power Suffix (-@) with:

   (Blank) - 120V/60Hz
   (-1) - 100V/50 or 60 Hz
   (-5,-6) - 240V/50Hz
   (-7,-8,-9,-0) - 220V/50Hz

   In addition to power requirements, these suffixes indicate line cord dependencies to specific country requirements. For further information, see the "STANDALONE POWER CORD DEPENDENT DEVICE MATRIX" table in the Introduction.

7. Packages that contain CLARiiON subsystems require configuration of an array console connected to the Storage-control Processor (SP) for access to the array's configuration and real time status displays. This console (Dasher ASCI D413, D462E, D/463 or D1400i) is connected to the array via an array console port located on the SP. If one of these terminals is selected as a

7. (Continued)

   System Console, the SP may be connected to the terminals secondary (auxiliary) port. The following adapter cables are included with each CLARiiON Subsystem to insure array console connection.

   D/413, D462E, D/463: adapter model 15282D

   D1400i: adapter models 15282D and 15388B006

   See CLARiiON section for specific terminal adapter requirements.

   In dual SP configurations, both SPs may be dual ported to one array console. The add-on SP model 7427 will utilize the adapters included with the CLARiiON subsystem. For each additional CLARiiON subsystem or add-on 7427 SP configured, an array console connection must be supplied. Each CLARiiON subsystem and add-on SP model includes a 1340 25' array console cable.

PROCESSOR OPTIONS

Memory

7018	8MB expansion memory package	2,000	/NC	/NC	2	A		2 SIMM slots
7019	32MB expansion memory package	6,400	/NC	/NC	2	A		2 SIMM slots

2nd CPU

7926	33MHz second CPU option for AV 4605	8,000	20	14	2	A	Note 2	

2nd SCSI/ETHERNET LAN Interface

7423	SCSI/ETHERNET LAN interface	1,500	3	2	2	A	Note 3	

Notes:

1. Memory Configuration:

   - Model 7018 is two 4MB SIMM memory daughter boards.
   - Model 7019 is two 16MB SIMM memory daughter boards.

     AV 4605/4625 packages support eight SIMM memory daughter boards.
   - Memory boards must be configured in pairs.
   - Maximum memory support is 128MB (8 x 16MB SIMMS).
   - 4MB and 16MB memory boards may be mixed within same system.

1. (Continued)

   - 32MB AV 4605 series packages are configured with 2 x 16MB SIMM memories.
   - 64MB AV 4625 series packages are configured with 4 x 16MB SIMM memory.

2. Second CPU option available on single processor models only.

3. Maximum add-on SCSI/ETHERNET LAN daughter board support is one.

   - SCSI interface supports 18.7 ft external SCSI bus length.
   - ETHERNET LAN interface requires drop cable and transceiver for network connection.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
INTERNAL MASS STORAGE								
These mass storage devices are installed in the processor chassis.								
Fixed Disk								
G6662-F	332MB (HH) internal disk add-in	3,500	38	27	2	A		1 HH
G6796-F	520MB (HH) internal disk add-in	2,600	20	14	2	A		1 HH
6554-F	662MB (FH) internal disk add-in	5,600	70	49	2	A		1 FH
G6685-F	1.0GB (FH) internal disk add-in	4,500	70	49	2	A		1 FH
G6716-F	1.4GB (FH) internal disk add-in	5,400	70	49	2	A		1 FH
Cartridge Tape								
G6677-F	320/525MB (HH) QIC tape add-in	2,995	25	18	2	A		1 HH
G6762-F	4mm (HH) DAT add-in	5,500	40	28	2	A		1 HH
Floppy Diskette								
G6563-F	1.2MB 5.25" (HH) diskette w/SCSI converter board	395	6	5	2	A		1 HH
G6562-F	1.44MB 3.5" (HH) diskette w/SCSI converter board	345	6	5	2	A		1 HH
CD ROM								
G6629-F	600MB (HH) CD ROM	995	25	18	2	A		1 HH

Notes:

1. Processor Chassis Mass Storage Configuration:
   - The processor chassis contains 4 x Half-Height (HH) apertures which support 4 HH devices, , 2 Full-Height (FH) devices, OR 2 HH and 1 FH device.
   - 2 HH apertures in the front of the chassis support media load and fixed disk devices.
   - 2 HH apertures in the rear of the chassis support 2 HH OR 1 FH fixed disk only.
   - Since all packages include 1 x HH tape, only 1 HH aperture remains for additional media load device support.
2. AV 4605/4625 packages will have the bundled fixed disk configured in the rear section.
3. The 2GB 8mm cartridge tape, 4mm DAT, and diskette drives are not supported as cold boot devices. DG/UX is available on -A (150MB cartridge tape) and -D (CD-ROM) media. 150MB (6577) and 320/525MB (6677) QIC cartridge tape drives support -A media, and the 600MB CD-ROM drive (6629) supports -D media. If a cold boot device is not configured in the processor chassis, support should be configured in an external peripheral chassis. (Peripheral Housing Unit or Combined Storage Subsystem 2/DC).
4. Subtract apertures utilized by peripherals bundled under the packaged models to determine remaining chassis space for support of add-in internal peripherals.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

UPGRADES

Upgrades are available to move from existing AV 4000, 4100, 4300, and 4600 to the AV 4605/4625 series processors. AV 4000/4100 are chassis level upgrades, and AV 4300/4600 are system board level upgrades. For AV 4000/4100 upgrades all existing peripherals are retained and may be transferred directly to the new chassis. All AV 4000/4100 upgrades include 32MB (2 x 16MB) SIMM memory. Existing memory is incompatible with the AV 4605/4625 and will be returned as part of the upgrade. AV 4300 system board upgrades also include 32MB SIMM memory and require return of existing 4MB SIMMS.

Chassis Level Upgrade:

US446G-@	AV 4000/4100 to AV 4625, 32MB	21,620	108	76	2	A	Notes 1,2	DS

Board Level Upgrade:

US446K-@	AV 4300 to AV 4625, 32MB	20,190	120	84	2	A	Notes 1,2	DS
US446L-@	AV 4320 to AV 4625, 32MB	18,850	120	84	2	A	Notes 1,2	DS
US446H-@	AV 4600 to AV 4625	12,450	40	28	2	A	Notes 1,2	DS
US446J-@	AV 4620 to AV 4625	8,420	40	28	2	A	Notes 1,2	DS

Notes:

1. Chassis level upgrades require return of chassis, system board, and memory. System board upgrades require return of system board and 4MB memory. All upgrades require license transfer per Form 507.

   Software license transfer policy:

   To properly license any software that will be used on an upgraded system, include the appropriate software model numbers in the upgrade order. A credit for any existing licenses will be applied to reduce the new license fee. To calculate the specific charges, complete Form 507 and submit it with each upgrade order. The specific charges are based on current pricing. Form 507 is required with all upgrade orders and is the only vehicle that enables customers to receive any credits for existing software.

   For password-protected software that is tied to the CPU serial number (i.e. FrameMaker), a new password is required for the upgraded system and should be obtained through the same avenue as the original for FrameMaker, see MAPS/Plus Volume III for password information.

   For additional questions or issues, contact the 88K Tech Hot Line via CEO. (Hot Line is available for US and Canada only).

2. Any devices connected to the AV 4000/4100 system board asynchronous ports (system console, asynch. device) will require replacement cables ordered as a separate line item. (XXX equals current cable length)

2. (Continued)

	AV 4000/4100	AV 4625 Replacement
RS232-C	1340-X/15307EXXX	15340EXXX
RS232-C w/modem control	1084M/1084M-A	15369EXXX

3. If a desired upgrade is not listed, a customized upgrade that meets a customer's specific requirements will be quoted by the Upgrade Product Line.

   If you have any questions or need a customized upgrade quote, please contact an Upgrade Product Line Marketing Specialist via CEO hotline UPGRADES or call 508-870-1400.

4. Replace AC Power Suffix (-@) with:

   (Blank) - 120V/60Hz
   (-1) - 100V/50 or 60Hz
   (-5,-6) - 240V/50Hz
   (-7,-8,-9,-0) - 220V/50Hz

   In addition to power requirements, these suffixes indicate line cord dependencies to specific country requirements. For further information, see the "Power Cord Dependent Device Matrix" table in the "Introduction" section.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

EXTERNAL PERIPHERAL/COMMUNICATIONS SUPPORT

For a complete listing of supported products, see the following sections:

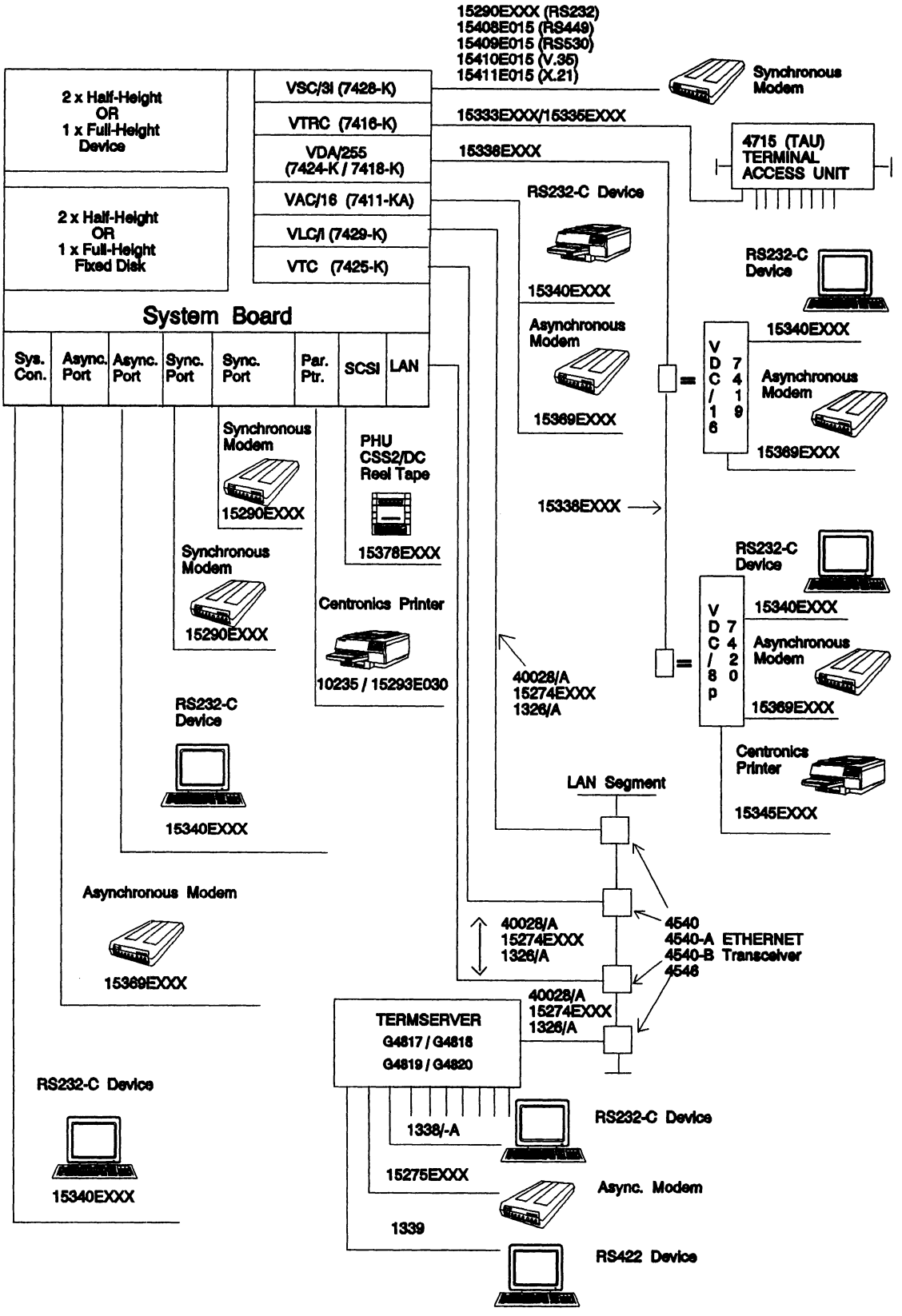
External Mass Storage

Communications

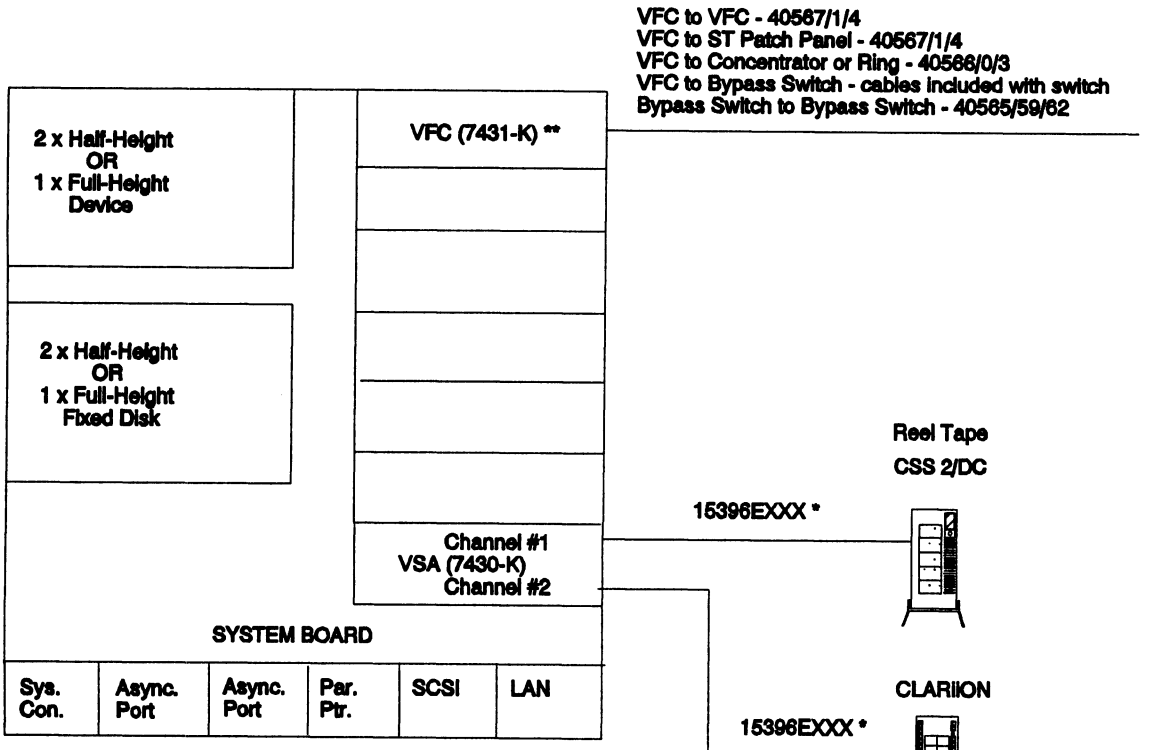
Hard Copy

Terminals

SYSTEM CABLING DIAGRAM



SYSTEM CABLING DIAGRAM



* The 15396EXXX cable series is "universal" and may be utilized for both single-ended and differential device connection. See the "Mass Storage Host Adapter" section for daisy-chain cable requirements.

** For Dual Attachment (DAS - Class A) two cable models should be configured. For Single Attachment (SAS - Class B) one cable model should be configured. See the "Fiber Distributed Data Interface" section in the Communications section for additional information.

AV 5200+/7000+ SERIES SYSTEMS

AV 5200+/7000+ series processors offer the same high end 88k UNIX-based Server/Multi-User system capabilities as it's predecessor, the AV 5200 Series. The AV 5200+/7000+ offers expanded internal mass storage device support, and greater flexibility in configuration of VME mass storage and communication interfaces. Enhanced performance is now available with the introduction of the CLARiiON Disk Array subsystem. The AV 5200+ series is available in single, dual, and quad processor versions.
AV 7000+ is the high end AViiON office system and consists of a quad processor CPU, 128MB memory, and CLARiiON Disk Array subsystem.

Major Features:

System board:

- 16MB on board memory (AV 5200+)
- 64MB on board memory (AV 5225+)
- Single, dual, or quad 25MHz Motorola 88100 processors
- Single and double precision IEEE hardware FPU
- (2) RS232 w/modem asynchronous ports for system console and remote service terminal/modem support
- Centronics parallel printer interface
- CPU Class U (single, dual), V (quad), or Y (office package)

Office Chassis:

- Industry standard VME bus
- 10-slot 9U form factor backplane
- Internal device support for up to 3 Full-height disks, or up to 1 Full Height or 4 Half Height media load devices (All configuration maxima not available simultaneously).
- Expansion memory to:
  784MB (AV 5200+)
  832MB (AV 5225+)
  768MB (AV 5240+/7000+)
- VME communication/mass storage controller support
- 750 Watt power supply

Software:

Operating System:

150MB QIC Tape Media:

- P001APY1CA - DG/UX Operating System with X-Windows License, 150MB QIC tape media, and documentation

- Q001APY1CA - DG/UX Operating System License, 150MB QIC tape media, and documentation

CD-ROM Media:

- P001APY1BD - DG/UX Operating System with X-Windows License and CD-ROM media
- M041AZN22N - Documentation for DG/UX Operating System

- Q001APY1BD - DG/UX Operating System License and CD-ROM media
- M041AZN22N - Documentation for DG/UX Operating System

Notes:

- Model P001APY1-- includes a 16-user Right-to-Use for DG/UX, GNU C, TCP/IP, ONC/NFS, X11 WINDOWS, OSF/Motif, and a single-user Looking Glass license.

- Model Q001APY1-- includes a 16-user Right-to-Use license for DG/UX, GNU C, TCP/IP, NFS.

- Upgrades to include additional users are available for both DG/UX and Looking Glass.

- Additional product offerings and Software Support offerings are available in the AViiON Software section.

- CD-ROM based DG/UX Operating System models are available without documentation. Documentation (M041AZN22N) should be ordered as a separate line item.

PACKAGED SYSTEMS

Packages include deskside office chassis, single, dual, or quad processor 25MHz system board, and system memory. AV 5200+ models include 16MB of system board resident memory. AV 5225+ models include 64MB of system board resident memory. AV 5240+ and AV 7000+ models do not include system board resident memory and are configured with a 128MB 9u memory board.

Packaged models are configured with a 7430 dual channel, SCSI host bus adapter (HBA). One channel of the HBA, configured for single-ended SCSI is utilized to support all internal devices. The internal bus ports to the processor bulkhead and will allow configuration of one externally configured Reel Tape. Packaged models that include the CLARiiON Disk Array subsystem utilize the second channel, configured for differential interface.

A 25ft. system console cable is included with each packaged model.

AV 5200+ SERIES QUICK REFERENCE

AV 5200+ - Single Processor
AV 5225+ - Dual Processor
AV 5240+ - Quad Processor
AV 7000+ - Quad Processor

MODEL NUMBER	# CPU'S	MEMORY	DISK				TAPE		
			500MB	520MB	1.0GB	1.2GB	525MB	2GB/8mm	4mm DAT
AV 5200+									
G70443-M@	1	16MB			2 *		1	1	
AV 5225+									
G70528-@	2	64MB		2 **			1		
G70515-@	2	64MB	7***				1		1
G70559-@	2	64MB				7***	1		1
AV 5240+									
G70527-@	4	64MB		2 **			1		
AV 7000+									
G70516-@	4	128MB	6***				1		1
G70560-@	4	128MB				7***	1		1

* This package is configured with two differential SCSI host adapters (7422), which support two CSS 2/DC Chassis, each configured with a 1.0GB disk. Two 6709 CSS 2/DC add-on power supplies are included for future expansion. This package also comes configured with a 7405 VME LAN controller (VLC). Tape support is processor chassis internal.

** Disk drives and tape drives are AV 5200+ chassis resident.

*** These packages are configured with a CLARiiON Disk Array Subsystem (disk drives are CLARiiON 500MB or 1.2GB drives). Tape support is processor chassis internal.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
PACKAGED SYSTEMS								
SINGLE PROCESSOR:								
G70443-M@	AV 5200+, 25MHz single processor, 16MB, 2 x 1.0GB CSS 2/DC subsystems, 525MB tape, 2GB 8mm tape, Ethernet controller (1) AV 5200+ 25MHz single processor, 16MB, dual-channel SCSI 2 HBA, base system (1) G6677-I - Add-in 525MB QIC tape (1) G6590-I - Add-in 2GB 8mm tape (2) 7422 - Differential SCSI Host Bus Adapter (2) G6741-A@ - Differential CSS 2/DC chassis w/1.0GB disk (2) 6709 - CSS 2/DC supplementary power supply (2) 15325E015 - 15ft. differential SCSI cable (1) 7405 - VME Ethernet LAN Controller	74,485	454	/NQ	3	A	Note 1	DS
DUAL PROCESSOR:								
Standard Configuration:								
G70528-@	AV 5225+, 25MHz dual processor, 64MB, 2 x 520MB disks, 525MB QIC tape (1) AV 5225+ 25MHz dual processor, 64MB, dual-channel SCSI 2 HBA, base system (2) 6796-I - Add-in 520MB disk for AV 5200+ (1) G6677-I - Add-in 525MB QIC tape for AV 5200+	43,500	309	/NQ	3	A	Note 1	DS
CLARiiON Disk Array Configuration:								
G70515-@	AV 5225+, 25MHz dual processor, 64MB, **3.5GB CLARiiON subsystem**, 525MB QIC tape, 4mm DAT (1) AV 5225+ 25MHz dual processor, 64MB, dual-channel SCSI 2 HBA, base system **(1) G7907-@ - 2.5GB (5 x 500MB) CLARiiON disk subsystem** **(2) 7908-ZA - 500MB add-in drive for CLARiiON** (1) 15396E010 - 10ft. universal SCSI cable (1) G6677-I - Add-in 525MB QIC tape for AV 5200+ (1) G6762-I - Add-in 4mm DAT for AV 5200+	69,500	364	/NQ	3	A	Note 1,7	DS
G70559-@	AV 5225+, 25MHz dual processor, 64MB, **8.4GB CLARiiON disk subsystem**, 525MB QIC tape, 4mm DAT (1) AV 5225+ 25MHz dual processor, 64MB, dual-channel SCSI 2 HBA, base system **(1) G7911-@ - 6.0GB (5 x 1.2GB) CLARiiON disk subsystem** **(2) 7916-ZA - 1.2GB add-in disk for CLARiiON** (1) 15396E010 - 10ft. universal SCSI cable (1) G6677-I - Add-in 525MB QIC tape for AV 5200+ (1) G6762-I - Add-in 4mm DAT for AV 5200+	90,095	375	/NQ	3	A	Note 1	DS

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
QUAD PROCESSOR:								
Standard Configuration:								
G70527-@	AV 5240+, 25MHz quad processor, 64MB, 2 x 520MB disk, 525MB QIC tape (1) AV 5240+ 25MHZ quad processor, dual-channel SCSI 2 HBA, base system (1) 7015 - 64MB memory (2) 6796-I - Add-in 520MB disk for AV 5200+ (1) G6677-I - Add-in 525MB QIC tape for AV 5200+	68,600	570	/NQ	3	A	Note 1	DS
CLARiiON Disk Array Configuration:								
G70516-@	AV 7000+, 25MHz quad processor, 128MB, **3.0GB CLARiiON subsystem**, 525MB QIC tape, 4mm DAT (1) AV 7000+ 25MHz quad processor, dual-channel SCSI 2 HBA, base system (1) 7016 - 128MB memory **(1) G7907-@ - 2.5GB (5 x 500MB) CLARiiON disk subsystem** **(1) 7908-ZA - Add-in 500MB CLARiiON Disk drive** (1) 15396E010 - 10ft. universal SCSI cable (1) G6677-I - Add-in 525MB QIC tape for AV 5200+ (1) G6762-I - Add-in 4mm DAT for AV 5200+	99,700	715	/NQ	3	A	Note 1,7	DS
G70560-@	AV 7000+, 25MHz quad processor, 128MB, **8.4GB CLARiiON disk subsystem**, 525MB QIC tape, 4mm DAT (1) AV 7000+ 25MHz quad processor, dual-channel SCSI 2 HBA, base system (1) 7016 - 128MB memory **(1) G7911-@ - 6.0GB (5 x 1.2GB) CLARiiON disk subsystem** **(2) 7916-ZA - 1.2GB Add-in disk for CLARiiON** (1) 15396E010 - 10ft. universal SCSI cable (1) G6677-I - Add-in 525MB QIC tape for AV 5200+ (1) G6762-I - Add-in 4mm DAT for AV 5200+	123,695	745	/NQ	3	A	Note 1	DS

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

Notes:

1. The processors internal SCSI bus terminates at the bulkhead. Remaining SCSI bus length will allow configuration of a desktop Reel Tape drive. SCSI cable 15378E005 is the only cable available to support this configuration.

2. AV 5200+ has 16MB of system board resident memory. AV 5225+ has 64MB of system board resident memory. AV 5240+/7000+ has memory configured as a separate 9u board.

3. AV 5200+/7000+ series systems require a LAN controller, drop cable, and transceiver for LAN connection. This is not a requirement for order validation.

4. A 25ft. system console cable is included with the system package. Order RS232-C ANSI System Console as -X (no cable).

5. Replace AC Power Suffix (-@) with:

   (Blank) - 120V/60Hz
   (-1) - 100V/50 or 60 Hz
   (-5,-6) - 240V/50Hz
   (-7,-8,-9,-0) - 220V/50Hz

   These suffices are line cord dependent as to specific country requirements. For further information see "Power Cord Dependent Device Matrix" in the Introduction.

6. Packages that contain CLARiiON subsystems require configuration of an array console connected to the Storage-control Processor (SP) for access to the array's configuration and real time status displays. This console (Dasher ASCI D413, D462E, D/463 or D1400i) is connected to the array via an array console port located on the SP. If one of these terminals is selected as a System Console, the SP may be connected to the terminals secondary (auxiliary) port. The following adapter cables are included with each CLARiiON subsystem to insure array console connection.

   D/413, D462E, D/463: adapter model 15282D

   D1400i: adapter models 15282D and 15388B006

   In dual SP configurations, both SPs may be dual ported to one array console. The add-on SP model 7427 will utilize the adapters included with the CLARiiON subsystem, for secondary port connection. For each additional CLARiiON subsystem or add-on 7427 SP configured, an array console connection must be supplied. Each CLARiiON subsystem and add-on SP model includes a 1340 25' array console cable.

MEMORY

Initial System Order Models:

7017S	192MB memory board	28,800	48	/NQ	2	A	Note 1,2	1 VME slot
7016S	128MB memory board	19,200	32	/NQ	2	A	Note 2	1 VME slot
7015S	64MB memory board	9,600	/NC	/NQ	2	A	Note 2	1 VME slot

Standard Memory Models:

7017	192MB memory board	48,000	96	/NQ	2	A	Note 1	1 VME slot
7016	128MB memory board	32,000	64	/NQ	2	A		1 VME slot
7015	64MB memory board	16,000	32	/NQ	2	A		1 VME slot

Notes:

1. Total number of memory boards configurable is 4.
   - maximum memory on single processor models is 784MB.
   - maximum memory on dual processor models is 832MB.
   - maximum memory on quad processor models is 768MB.

   Maximum memory figures are computed utilizing 4 x 192 MB boards.

2. Models ending in "S" are specially priced and may be included on initial systems orders only. Order "Standard Memory Models" on system expansion orders.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
MASS STORAGE VME HOST BUS ADAPTER								

Model 7430 VSA is a dual channel, Fast/Narrow (10MB/sec, 8bit), VME SCSI 2 Host Bus Adapter (HBA) that supports two SCSI 2 channels. Each channel may be selected to support single-ended OR differential interface. If a single-ended interface is selected all devices/chassis configured on the channel MUST be single-ended models. The same holds true for differential configuration. Single-ended and differential components may not be supported on the same bus.
A 7430 VSA host bus adapter is included with each AV 5200+/7000+ system. One channel is configured for single-ended SCSI and supports the host's internal peripheral bus. The second channel is available for add-on mass storage chassis configuration. Packages that include a CLARiiON subsystem utilize the second channel for disk array connect.

DUAL CHANNEL SCSI 2 HOST BUS ADAPTER:

7430	Dual Channel VME SCSI 2 host bus adapter (VSA)	1,995	5	/NQ	2	A	Note 1,2,3	1 VME Slot
15396E005	5 ft. Universal VSA to peripheral chassis cable	100	N/A	N/A		B	Note 4	
15396E010	10 ft. Universal VSA to peripheral chassis cable	125	N/A	N/A		B	Note 4	
15396E020	20 ft. Universal VSA to peripheral chassis cable	150	N/A	N/A		B	Note 4	
15396E040	40 ft. Universal VSA to peripheral chassis cable	190	N/A	N/A		B	Note 4	

PERIPHERAL CHASSIS TO PERIPHERAL CHASSIS DAISY-CHAIN CABLES:

Single-ended:

15378E003	3 ft. Single-ended SCSI interface/daisy cable	104	N/A	N/A		B	Note 4	
15378E005	5 ft. Single-ended SCSI interface/daisy cable	111	N/A	N/A		B	Note 4,5	

Differential SCSI:

15325E005	5 ft. Differential SCSI cable	90	N/A	N/A		B	Note 4	
15325E010	10 ft. Differential SCSI cable	115	N/A	N/A		B	Note 4	
15325E020	20 ft. Differential SCSI cable	165	N/A	N/A		B	Note 4	
15325E040	40 ft. Differential SCSI cable	255	N/A	N/A		B	Note 4	

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

Notes:

1. Total SCSI HBA support, including early model SCSI HBAs (7421/7422, 7404/7415), based on channels supported is:

   AV 5200+/7000+ - 6 CHANNELS-Any combination of available HBAs equaling 6 channels

2. An external SCSI cable is required for each host bus adapter channel configured.
   7430 VSA - 15396EXXX series cable

3. The 15396EXXX VSA to peripheral cable family is "universal", and may be utilized to support both differential AND single-ended interface connection. At this time this universal cable type is ONLY supported on the 7430 VSA, and only for processor to 1st device chassis connect.
   Any daisy chaining will require cable family 15378EXXX for single-ended and 15325EXXX for differential configuration to connect peripheral chassis to peripheral chassis.

4. All components of the SCSI channel (device chassis, add-in peripheral device models, and daisy-chain cables), must be either single-ended OR differential. The two interfaces may not be mixed on any single channel.

5. Single-ended SCSI Bus Length Restrictions:

   Single ended SCSI has limiting bus length restrictions (19.6') which require supported chassis to be located in close proximity to the processor chassis.

   The sum bus length of external cables configured, and internal bus length associated with the peripheral chassis configured must be less than or equal to available bus length.

5. (Continued)

   - The SCSI channel utilized to support the AV 5200+/7000+ internal devices allows ONE external Reel Tape to be configured. The only SCSI cable available to support this configuration is the 15378E005, which must be ordered as a separate line item.

   - If configuring a single-ended SCSI peripheral chassis from a 7430 VSA channel you have 16.0' available external SCSI bus.

   Single-ended peripheral chassis internal bus lengths:
   Combined Storage Subsystem 2/DC - 4.9'
   6580 Series Reel Tapes - .5'

   For complete list of "legal" AV 5200+/7000+ single-ended SCSI configurations, see the deskside configuration tables in the "External Mass Storage (General Information)" section.

6. Differential SCSI Configuration

   For large disk count requirements, configure a differential SCSI interface and differential CLARiiON Disk Array subsystem or CSS 2/DC

   The extended bus range (81') associated with differential SCSI will allow support of two differential CLARiiON or CSS2/DC chassis per channel.

   Differential peripheral chassis internal bus lengths:
   CLARiiON Disk Array - 8' (1 SP), 15' (2 SP)
   Combined Storage Subsystem 2/DC - 4.9'

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
INTERNAL MASS STORAGE								
These add-in mass storage devices are for installation in the Processor chassis								
Fixed Disk:								
G6796-I	520MB (HH) internal disk add-in	2,600	20	14	2	A		1 HH
G6554-I	662MB (FH) internal disk add-in	5,600	70	49	2	A		1 FH
G6685-I	1.0GB (FH) internal disk add-in	4,500	70	/NQ	2	A		1 FH
G6716-I	1.4GB (FH) internal disk add-in	5,400	70	/NQ	2	A		1 FH
Cartridge Tape:								
G6590-I	2GB 8MM (FH) cartridge tape add-in	7,800	80	/NQ	2	A		1 FH
G6762-I	4mm (HH) DAT add-in	5,500	40	28	2	A		1 HH
G6677-I	525MB (HH) QIC tape add-in	2,995	25	18	2	A		1 HH
Floppy Disk:								
G6562-I	1.44MB 3.5" (HH) floppy disk add-in with (HH) SA/450 converter	345	5	/NQ	2	A		2 HH
G6562-IX	1.44MB 3.5" (HH) floppy disk add-in w/o SA/450 converter	145	3	/NQ	2	A		1 HH
G6563-I	1.2MB 5.25" (HH) floppy disk add-in with (HH) SA/450 converter	395	5	/NQ	2	A		2 HH
G6563-IX	1.2MB 5.25" (HH) floppy disk add-in w/o SA/450 converter	195	3	/NQ	2	A		1 HH
CD ROM:								
G6629-I	600MB (HH) CD ROM drive add-in	995	25	/NQ	2	A		1 HH
Optical Disk:								
G6627-I	590MB (FH) R/W optical disk add-in with (HH) SA/450 converter	5,895	60	/NQ	2	A		1 FH/1 HH

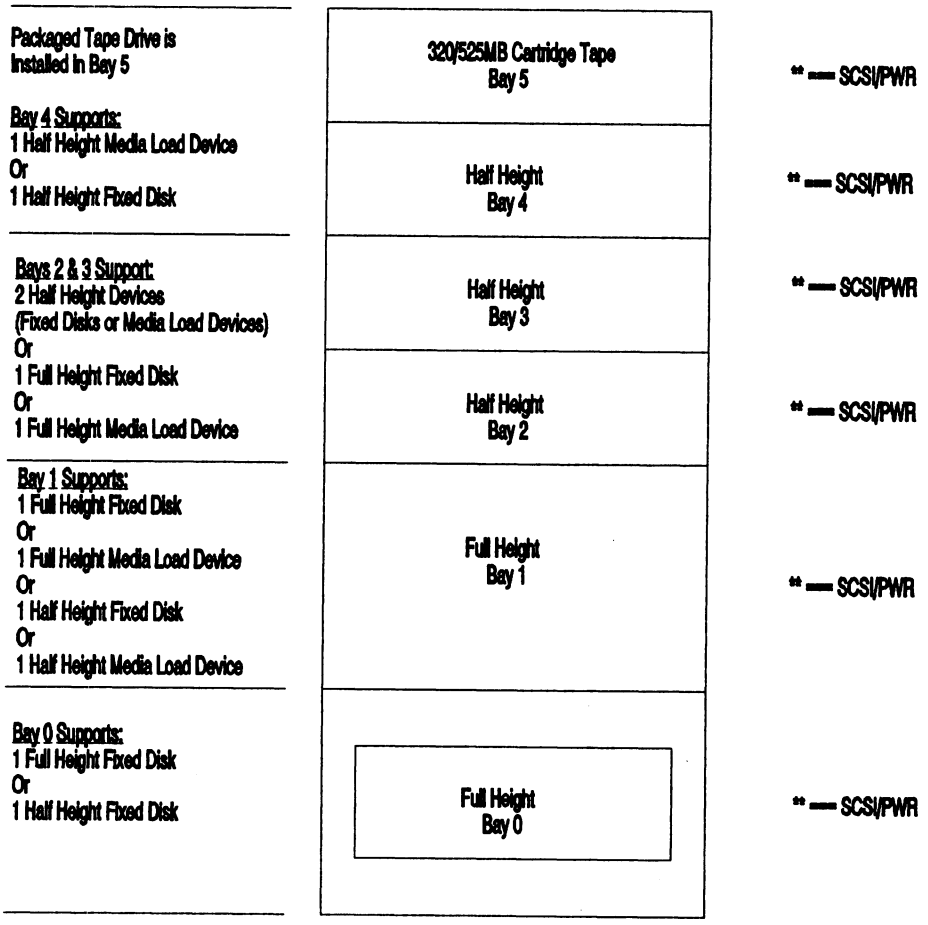
Notes:

1. Processor Chassis Mass Storage Configuration:
   - Half-height (HH) fixed disk support is limited to new 3.5" format drives.
   - Chassis contains 1 Full-Height (FH) aperture located behind the front faceplate of the chassis to support 1 FH or HH 3.5" fixed disk.
   - Additionally there are 4 Half-Height (HH) and 1 Full Height (FH) apertures available in the front of the chassis for installation of media load devices and/or 2 additional FH or 4 HH 3.5" fixed disks.

1. (Continued)
   - (-IX) Floppy Disk models are add-on drives, that require a drive model that includes a converter board (G6562-I), G6563-I) to be configured. Each converter supports a maximum two drives. 1.2MB and 1.44MB drives may be mixed on one converter board.
   - Devices that include interface converter boards require an additional Half Height (HH) slot and SCSI power connect for board installation.
2. Subtract apertures utilized by peripherals bundled under the package models to determine remaining chassis space for support of additional add-in internal peripherals.

INTERNAL MASS STORAGE DIAGRAM

The AV 5200+ series supports a wide range of internal mount Mass Storage Device configurations. A maximum of six devices may be installed internally. SCSI devices that require an interface converter board will utilize an additional Half Height bay and SCSI DC Power connect. The internal SCSI bus driven by one channel of the packaged 7430 host bus adapter, terminates on the processor bulkhead and will allow connection of an external reel tape. Half Height (HH) fixed disk support is limited to 3.5" format drives.



Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

UPGRADES

AV 5200 to AV 5200+

These are complete chassis/system board upgrades. Existing internal and external peripherals are retained. Upgrades include 7430 dual channel SCSI 2 host bus adapter, internal mount 320/525MB QIC tape, and required Field Engineering installation.

US5225C	AV 5200 to AV 5200+ Chassis Only	9,415	N/A	N/A	3	A	Notes 1-3	
US5225D	AV 5200 to AV 5225+, 64MB	30,160	N/A	N/A	3	A	Notes 1-3	
US5225E	AV 5220 to AV 5225+, 64MB	24,115	N/A	N/A	3	A	Notes 1-3	
US5240D	AV 5200 to AV 5240+, 128MB	73,160	N/A	N/A	3	A	Notes 1-3	
US5240E	AV 5220 to AV 5240+, 128MB	67,115	N/A	N/A	3	A	Notes 1-3	
US5240F	AV 5225 to AV 5240+, 128MB	71,165	N/A	N/A	3	A	Notes 1-3	

AV 5200 to AV 7000+

These are complete chassis/system board upgrades. Upgrades include 128MB memory, 7430 dual-channel SCSI 2 host bus adapter, a 3.5GB CLARiiON disk array subsystem, internal mount 320/525MB QIC tape, and required Field Engineering installation. Existing internal and external peripherals are retained.

US7000D	AV 5200 to AV 7000+, 128MB	83,875	787	/NQ	3	A	Notes 1-3	
US7000E	AV 5220 to AV 7000+, 128MB	77,830	787	/NQ	3	A	Notes 1-3	
US7000F	AV 5225 to AV 7000+, 128MB	81,880	787	/NQ	3	A	Notes 1-3	

Notes:

1. There are complete chassis/system board upgrade. Existing internal and external peripherals are retained. All upgrades include required Field Engineering pre-site inspection, de-installation, and installation.

2. AV 5200+ series chassis does not support the 150MB cartridge tape. The 520MB fixed disk is the only half-height disk drive supported in the AV 5200+ series chassis.

3. Requires return of system board and/or chassis and license transfer per Form 507.

   Software license transfer policy:

   To properly license any software that will be used on an upgraded system, include the appropriate software model numbers in the upgrade order. A credit for any existing licenses will be applied to reduce the new license fee. To calculate the specific charges, complete Form 507 and submit it with each upgrade order.

   The specific charges are based on current pricing. Form 507 is required with all upgrade orders and is the only vehicle that enables customers to receive any credits for existing software.

3. (Continued)

   For password-protected software that is tied to the CPU serial number (i.e. FrameMaker), a new password is required for the upgraded system and should be obtained through the same avenue as the original. For FrameMaker, see MAPS/Plus Volume III, p. 341-129 through -130 for password information.

   For additional questions or issues, contact the 88K Tech Hot Line via CEO. (Hot Line is available for US and Canada only).

4. If a desired upgrade is not listed a customized upgrade that meets a customer's specific requirements will be quoted by the Upgrade Product line.

   If you have any questions or need a customized upgrade quote, please contact an Upgrade Product Line Marketing Specialist via CEO hotline UPGRADES or call 508-870-1400.

MEMORY

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
UMA1632	16MB (7001) to 32MB (7002) memory upgrade	18,020	/NC	/NQ	2	A		
UMA1664	16MB (7001) to 64MB (7015) memory upgrade	15,470	32	/NQ	2	A		
UMA16128	16MB (7001) to 128MB (7016) memory upgrade	31,470	64	/NQ	2	A		
UMA16192	16MB (7001) to 192MB (7017) memory upgrade	47,470	96	/NQ	2	A	Note 3	
UMA64128	64MB (7015) to 128MB (7016) memory upgrade	29,455	64	/NQ	2	A		
UMA64192	64MB (7015) to 192MB (7017) memory upgrade	45,455	N/A	N/A	2	A	Note 3	
UMA128192	128MB (7016) to 192MB (7017) memory upgrade	42,770	96	/NQ	2	A	Note 3	

Notes:

1. These are board level upgrades which require return of the old memory board. All upgrades include Field Engineering installation, deinstallation, and shipping to return removed equipment.
2. These memory upgrade model numbers only represent a small portion of the available combinations. However, to limit the number of upgrade model numbers, only upgrades from 16MB memory boards are being created for now. If you need a memory upgrade other than what is listed above or in the blue pages, contact UPL Marketing. If a large demand is seen for particular memory upgrades, model number(s) will be created.
3. 192MB memory configuration is planned for support in Q1/93.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

EXTERNAL PERIPHERAL/COMMUNICATIONS SUPPORT

For a complete listing of supported products, see the following sections:

External Mass Storage

Communications

Hard Copy

Terminals

CHASSIS BULKHEAD

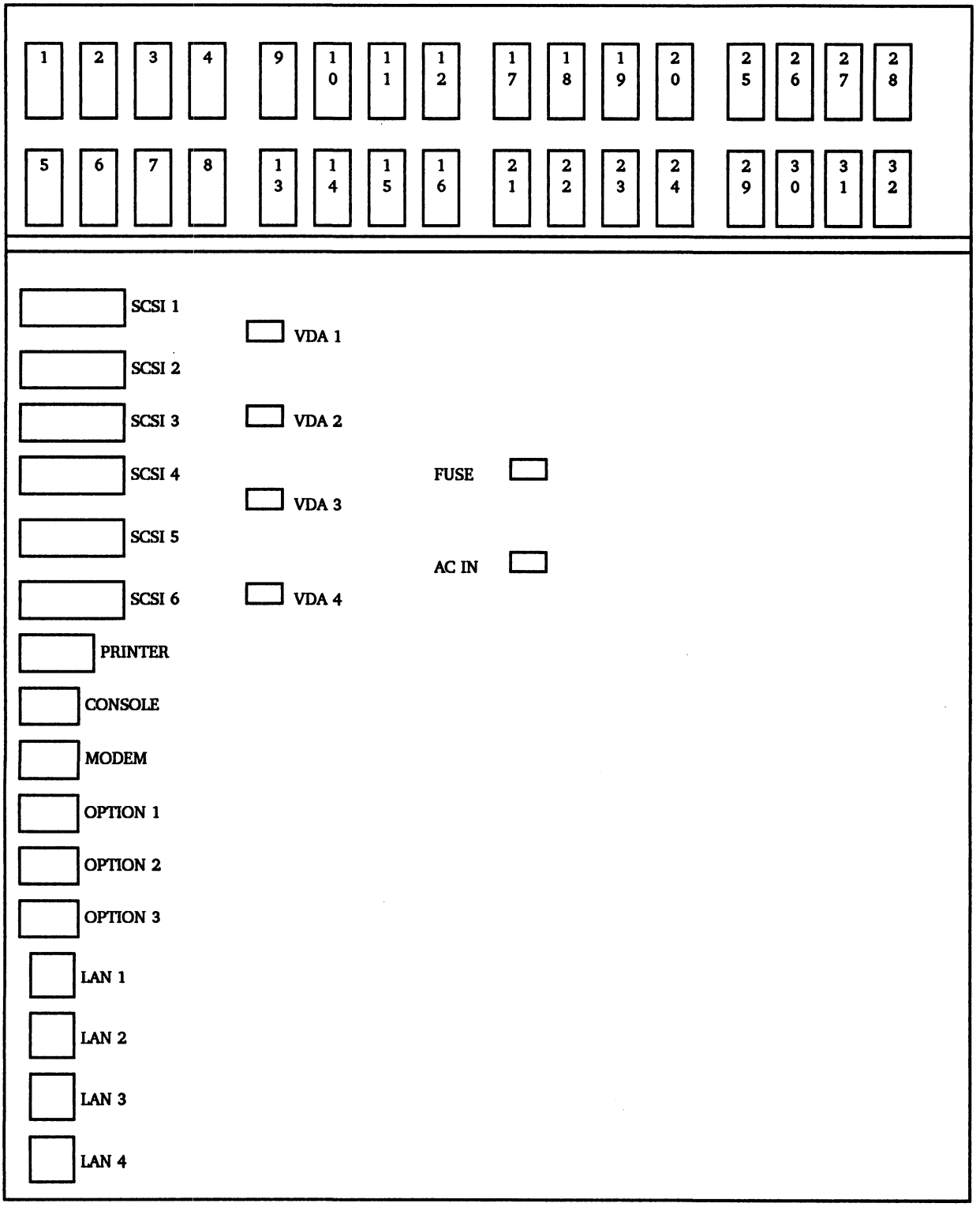
External connections to the processor chassis are limited to the amount of bulkhead connects available. Review controllers ordered to ensure that bulkhead ports available are not exhausted.

- (2) System board RS232-C asynchronous connects (DB-25 Female)
  (System Console/Remote/Modem diagnostic console)
- (1) System board Centronics parallel printer connect(36-Pin Champ Female)
- (4) LAN connects (DB-15/DB-9 Female)

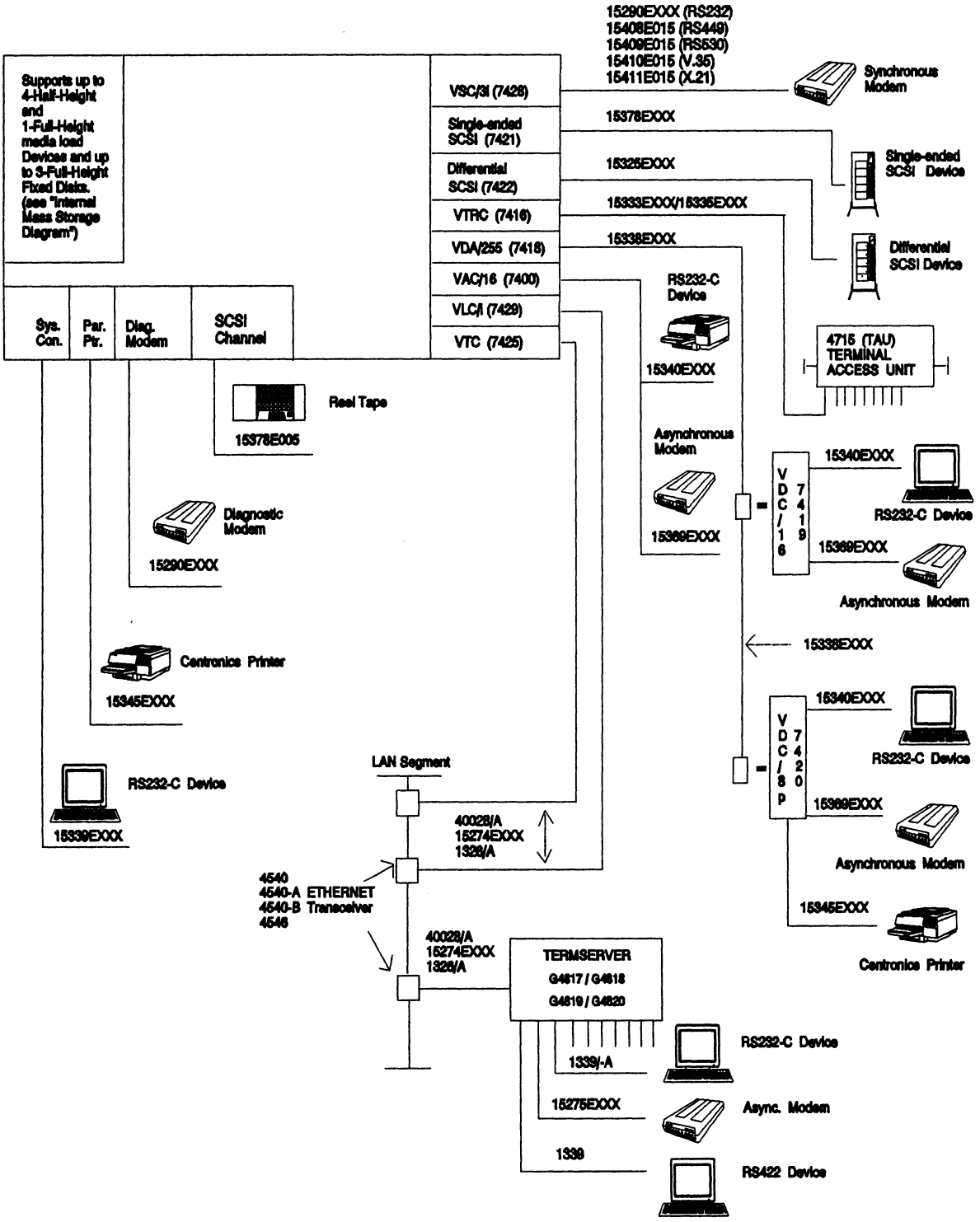
  VLC/i (7429) Ethernet LAN controller (4 max)
  VTC (7425) Ethernet Term controller (4 max)
  VTRC (7416) Token Ring LAN controller (2 max)
- (4) VDA/255 communications controller connects (RG62 Female)
- (6) SCSI host bus adapter connects (DB-50 Female)

  2 are utilized by the a 7430 VME SCSI 2 adapter included in the package.
- (32) General Purpose Ports:
  - VSC/3i 3-line synchronous controller connects (DB-25 Female)
    (3 connects per controller)
  - VFC fiber-optic controller (2 x ST and 1 x DIN connector) (requires 3 General Purpose ports per controller)
  - If two VAC/16's are configured, only one VSC/3i or VFC may be configured. The VSC/3i or VFC will be cabled to the "Option 1-3" ports on the processor bulkhead.
  - VAC/16 16-line asynchronous controller connects (DB-25 Female)
    (16 connects per controller)

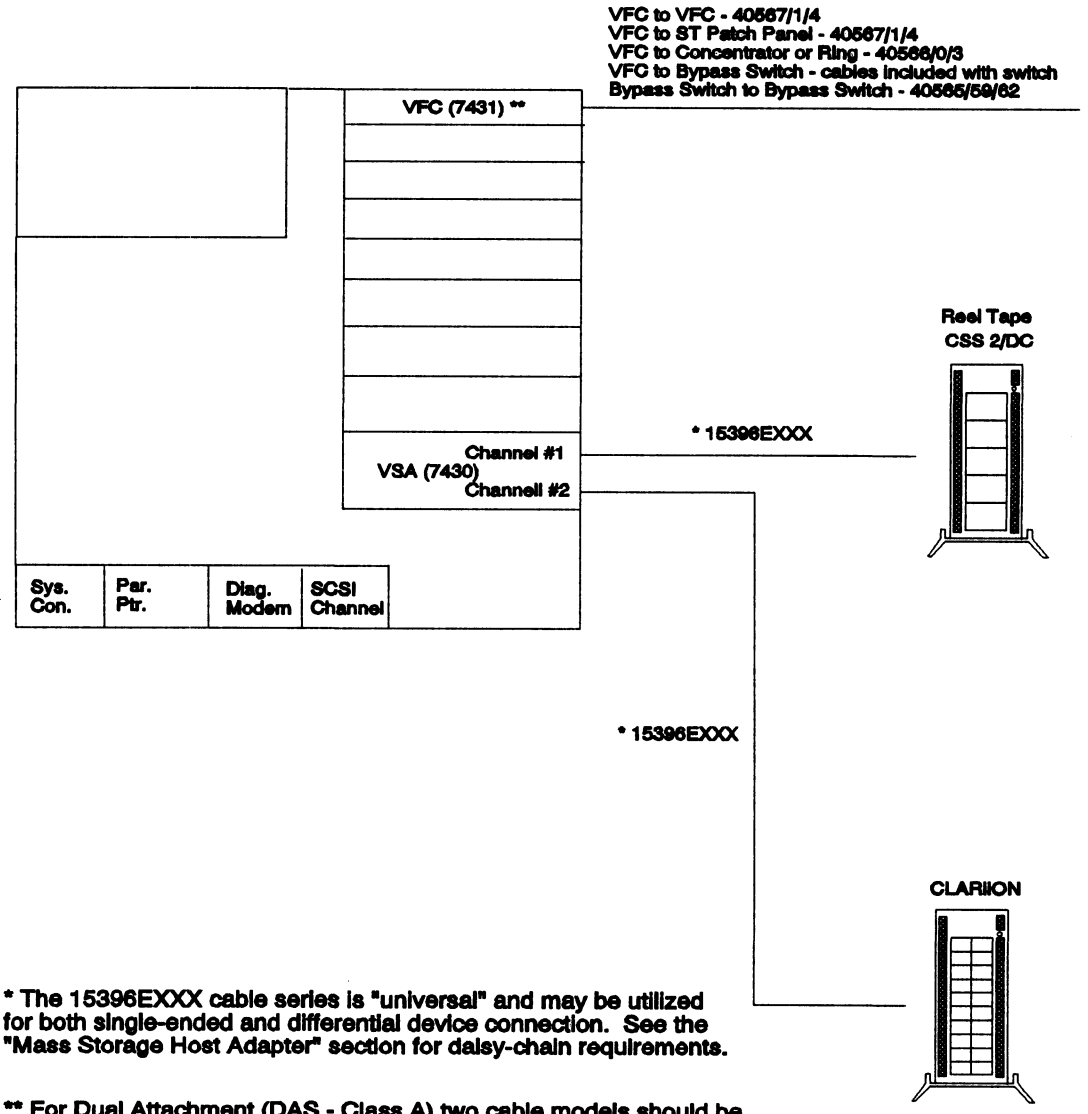
CHASSIS BULKHEAD



SYSTEM CABLING DIAGRAM



SYSTEM CABLING DIAGRAM (Continued)



* The 15396EXXX cable series is "universal" and may be utilized for both single-ended and differential device connection. See the "Mass Storage Host Adapter" section for daisy-chain requirements.

** For Dual Attachment (DAS - Class A) two cable models should be configured. For Single Attachment (SAS - Class B) one cable model should be configured. See the "Fiber Distributed Data Interface" section in the Communications section for additional information.

AV 6200/6200-20/8000 SERIES SYSTEMS

AV 6200/6200-20 series processors comprise Data General's high end 88K UNIX based Server/Multi-User systems. The AV 6200 25MHz single board, single processor is available housed in a 10-slot rackmount chassis. AV 6200-20 architecture is based on a 25MHz single board dual or quad-processor, or octal-processor board set, that resides in a 20-slot rack mount chassis.

AV 8000 series packaged systems consist of quad and octal processor versions of the AV 6200-20 (20-slot) rackmount processors configured with a CLARiiON Disk Array Subsystem. High availability features such as uninterruptible power supplies, redundant host bus adapters, Storage-control processors, and DC power supplies, may be configured.

The CLARiiON Disk Array Subsystem is housed in a rack mountable 14" chassis that offers a maximum 24GB of data storage (20 x 1.2GB drives), and high availability features. See the "CLARiiON Disk Array" chapter in the "MASS STORAGE" section of this catalog for additional information.

Major Features:

Single, Dual, Quad-Processor System Board:

- 16MB on board memory (AV 6200)
- 64MB on board memory (AV 6225)
- Single, dual, or quad 25MHz Motorola 88100 processors
- Single and double precision IEEE hardware FPU
- (2) RS232 w/modem asynchronous ports for system console and remote service terminal/modem support
- Centronics parallel printer interface
- CPU Class U (single, dual), V (quad), or Y (server)

Octal-Processor System Board Set:

- Octal-processor version consists of a four CPU board set, each containing two 25MHz Motorola 88100 processors
- A fifth board, the VME I/O board (VIO), supports intelligent interrupt steering which shares interrupt load across all CPUs
- Dual memory busses increase memory bandwidth
- Single and double precision IEEE hardware FPU
- (2) RS232 w/modem asynchronous ports for system console and modem/remote service terminal support
- Centronics parallel printer interface
- CPU Class V or Y (Server)

Rack Mount Chassis:

- Industry standard VME bus

- 10-slot 9U form factor backplane
  8 I/O expansion slots available

- 20-slot 9U form factor backplane
  Dual and Quad-processor has 18 I/O expansion slots available
  Octal-Processor has 11 I/O expansion slots available

- Expansion memory to:

Single Processor	-	784MB (16MB system board, 4 x 192MB boards)
Dual Processor	-	832MB (64MB system board, 4 x 192MB boards)
Quad & Octal Processor	-	768MB (4 x 192MB boards)

- VME communication/magnetic peripheral host adapter support

- 527 Watt power supply (10-slot)
  1,080 Watt power supply (Dual and Quad processor 20-slot)
  1,750 Watt power supply (Octal processor 20-slot)

Power Cabinet:

- 59" processor/peripheral bay (G11211-G7 - domestic, G11213-F7 - export)

- Cabinet supplies rackspace and power for bundled CSS 2 chassis and CLARiiON disk array (if included).

CLARiiON Disk Array Subsystem:

- Customer hot repair and automatic rebuild

- Continued operation during single disk failure/repair

- Large capacity

- Fault tolerance

- High Availability

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

AV 6200/6200-20/8000 SERIES PACKAGED SYSTEMS

AV 6200/6200-20/8000 series packaged systems include a 25MHz single board single, dual, or quad-processor, or octal-processor board set, housed in a rackmount chassis, and system memory. All packages include a rackmount Combined Storage Subsystem 2 configured for disk/tape or tape support. Some 20-slot versions are available packaged with a rackmount CLARiiON Disk Array Subsystem. All processors and peripherals included with the package come installed in a 59" 11200 series processor/peripheral cabinet (10-slot also available in 71" cabinet). All required cabling is included. 10-slot packages include an Ethernet LAN controller (7405). All other packages must have the LAN controller ordered as a separate line item, if desired.

AV 6200 SINGLE PROCESSOR PACKAGES:

G70383-MB@	AV 6200,25MHz single processor, 10-slot 16MB, Ethernet LAN controller, 2 x differential CSS 2 chassis w/1.0GB disk, 1 x single-ended CSS 2 chassis w/525MB and 2GB 8mm tape drives, 59" 11200 series cabinet (1) AV 6200, 25MHz single processor, 16MB (1) 7405 - Ethernet LAN controller (2) 7422-V - Differential SCSI host bus adapter (2) G6740-A@ - Differential CSS 2 w/1.0GB disk (2) 6709 - Supplemental CSS 2 power supply (2) 15325E010 - 10ft. differential SCSI cable (1) 7421-V - Single-ended SCSI host bus adapter (1) G6754-A@ - Single-ended w/525MB QIC tape (1) G6590-G - Add-in 2GB 8mm tape for CSS 2 (1) 6709 - Supplemental CSS 2 power supply (1) 15378E005 - 5ft. single-ended SCSI cable (1) G1121X-@ - 59" processor/peripheral cabinet (1) 15339E025 - System Console cable	94,320	454	/NQ	3	A		40.25"
G70383-MC@	AV 6200,25MHz single processor, 10-slot 16MB, Ethernet LAN controller, 2 x differential CSS 2 chassis w/1.0GB disk, 1 x single-ended CSS 2 chassis w/525MB and 2GB 8mm tape drives, 71" 11200 series cabinet (1) AV 6200, 25MHz single processor, 16MB (1) 7405 - Ethernet LAN controller (2) 7422-V - Differential SCSI host bus adapter (2) G6740-A@ - Differential CSS 2 w/1.0GB disk (2) 6709 - Supplemental CSS 2 power supply (2) 15325E010 - 10ft. differential SCSI cable (1) 7421-V - Single-ended SCSI host bus adapter (1) G6754-A@ - Single-ended w/525MB QIC tape (1) G6590-G - Add-in 2GB 8mm tape for CSS 2 (1) 6709 - Supplemental CSS 2 power supply (1) 15378E005 - 5ft. single-ended SCSI cable (1) G1122X-@ - 71" processor/peripheral cabinet (1) 15339E025 - System Console cable	94,920	454	/NQ	3	A		40.25"

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
AV 6225-20 DUAL PROCESSOR PACKAGES:								
Standard Configuration:								
G70530-@	AV 6225-20, 25MHz dual processor, 20-slot **64MB, CSS 2 w/1.4GB disk** and 525MB tape 59" 11200 series processor/peripheral cabinet (1) AV 6225-20, 25MHz dual-processor, 64MB,base system **(1) 7430 - Dual-Channel SCSI 2 host bus adapter** (1) G6724-A@ - CSS 2 w/1.4GB disk (1) 6724-G - CSS 2 w/1.4GB disk (1) G6677-G - Add-in 525MB tape for CSS 2 (1) 6709 - CSS 2 add-in power supply (1) 15396E005 - 5ft. single-ended SCSI cable (1) G1121X-@ - 59" processor/peripheral cabinet (1) 15339E025 - System Console cable	68,700	357	/NQ	3	A		36.75 RM
G70529-@	AV 6225-20, 25MHz dual processor, 20-slot **128MB, CSS 2 w/2 x 1.4GB disks** and 525MB tape 59" 11200 series processor/peripheral cabinet (1) AV 6225-20, 25MHz dual-processor, 64MB,base system **(1) 7015 - 64MB memory** (1) 7430 - Dual-Channel SCSI host bus adapter (1) G6724-A@ - CSS 2 w/1.4GB disk **(1) 6716-G - Add-in 1.4 GB disk for CSS 2** (1) G6677-G - Add-in 525MB tape for CSS 2 (1) 6709 - CSS 2 add-in power supply (1) 15396E005 - 5ft. single-ended SCSI cable (1) G1121X-@ - 59" processor/peripheral cabinet (1) 15339E025 - System Console cable	84,500	414	/NQ	3	A		36.75 RM
CLARiiON Disk Array Configuration:								
G70521-@	AV 6225-20, 25MHz dual processor, 20-slot 128MB, **CLARiiON 3.5GB subsystem**, CSS 2 w/525MB tape and 4mm DAT, 59" 11200 series processor/peripheral cabinet (1) AV 6225-20, 25MHz dual-processor, 64MB,base system (1) 7015 - 64MB memory (1) 7430 - Dual-channel SCSI 2 host bus adapter **(1) 7906-@ - 2.5GB CLARiiON (5 x 500MB) subsystem** **(2) 7908-ZA - Add-in 500MB disk for CLARiiON** (1) 15396E010 -10ft. universal SCSI cable (1) 1340 - 25ft. Array Console cable (1) G6754-A@ - CSS 2 w/525MB tape (1) G6762-G - Add-in 4mm DAT for CSS 2 (1) 15396E005 - 5ft. universal SCSI cable (1) G1121X-@ - 59" processor/peripheral cabinet (1) 15339E025 - System Console cable	111,100	392	/NQ	3	A	Note 5	50.75 RM

Software:

Operating System:

CD-ROM Media:

- P001APY1BD - DG/UX Operating System with X-Windows License and CD-ROM media
- M041AZN22N - Documentation for DG/UX Operating System

- Q001APY1BD - DG/UX Operating System License and CD-ROM media
- M041AZN22N - Documentation for DG/UX Operating System

150MB QIC Tape Media:

- P001APY1CA - DG/UX Operating System with X-Windows License, 150MB QIC tape media, and documentation

- Q001APY1CA - DG/UX Operating System License, 150MB QIC tape media, and documentation

Notes:

- Model P001APY1-- includes a 16-user Right-to-Use for DG/UX, GNU C, TCP/IP, ONC/NFS, X11 WINDOWS, OSF/Motif, and a single-user Looking Glass license.

- Model Q001APY1-- includes a 16-user Right-to-Use license for DG/UX, GNU C, TCP/IP, NFS.

- Upgrades to include additional users are available for both DG/UX and Looking Glass.

- Additional product offerings and Software Support offerings are available in the AViiON Software section.

- CD-ROM based DG/UX Operating System models are available without documentation. Documentation (M041AZN22N) should be ordered as a separate line item.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

PACKAGED SYSTEMS WITH PACKAGED PERIPHERALS

Packages include a single, dual, quad or octal-processor installed in a rackmount chassis, rackmount mass storage subsystem/s, cabinetry, and all associated cabling. A 25' system console cable is included with package.

AV 6200/6200-20/8000 SERIES PACKAGED SYSTEM QUICK REFERENCE

MODEL NUMBER	CHASSIS	# CPU's	MEMORY	DISK				MEDIA LOAD/BACKUP			
				500MB	1.0GB	1.2GB	1.4GB	525MB	4mm DAT	2GB/8mm	CD-ROM
AV 6200											
! G70383-MB@	10-slot	1	16MB		2			1		1	
! G70383-MC@	10-slot	1	16MB		2			1		1	
AV 6225-20											
* G70530-@	20-slot	2	64MB				1	1			
* G70529-@	20-slot	2	128MB				2	1			
** G70521-@	20-slot	2	128MB	7				1	1		
** G70561-@	20-slot	2	128MB			7		1	1		
AV 6240-20											
* G70532-@	20-slot	4	64MB				1	1			
* G70531-@	20-slot	4	128MB				2	1			
** G70523-@	20-slot	4	128MB	7				1	1		
AV 6280-20											
* G70537-@	20-slot	8	256MB				1	1			1
* G70538-@	20-slot	8	384MB				1	1			1
AV 8000											
** G70524-@	20-slot	4	256MB	12				1	1		
** G70534-@	20-slot	4	256MB			7		1	1		
** G70543-@	20-slot	4	384MB	12				1	1		
** G70562-@	20-slot	4	384MB			7		1	1		
AV 8000-8											
** G70539-@	20-slot	8	256MB	12				1	1		1
** G70540-@	20-slot	8	256MB			7		1	1		1
** G70541-@	20-slot	8	384MB	12				1	1		1
** G70542-@	20-slot	8	384MB			7		1	1		1

! System Configuration Includes:
- 2 x 1.0GB CSS 2 Differential SCSI Disk Subsystems (2 x 7422-V HBAs)
- 1 x CSS 2 Single Ended SCSI Tape Subsystem (1 x 7421-V HBA)

* System Configuration Includes:
1 x CSS 2 Single Ended SCSI Subsystem for support of both disks and tapes (1 x 7430 HBA)

** System Configuration Includes:
- 1 x 3.5GB or 12.0GB (500MB drives) or 8.4GB (1.2GB drives) CLARiiON Subsystem
- 1 x CSS 2 Single Ended SCSI Subsystem for support of packaged 525MB QIC tape, 4mm DAT, or CD-ROM
- Both CLARiiON and CSS 2 subsystems are supported by a single 7430 dual channel VSA.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
CLARiiON Disk Array Configuration: (Continued)								
G70561-@	AV 6225-20, 25MHz dual processor, 20-slot 128MB, **CLARiiON 8.4GB subsystem**, CSS 2 w/525MB tape and 4mm DAT, 59" 11200 series processor/peripheral cabinet (1) AV 6225-20, 25MHz dual-processor, 64MB,base system (1) 7015 - 64MB memory (1) 7430 - Dual-channel SCSI 2 host bus adapter **(1) 7910-@ - 6.0GB (5 x 1.2GB) CLARiiON subsystem** **(2) 7916-ZA - 1.2GB add-in disk for CLARiiON** (1) 15396E010 -10ft. universal SCSI cable (1) 1340 - 25ft. Array Console cable (1) G6754-A@ - CSS 2 w/525MB tape (1) G6762-G - Add-in 4mm DAT for CSS 2 (1) 15396E005 - 5ft. universal SCSI cable (1) G1121X-@ - 59" processor/peripheral cabinet (1) 15339E025 - System Console cable	132,190	392	/NQ	3	A		50.75 RM
AV 6240-20 QUAD PROCESSOR PACKAGES:								
Standard Configuration:								
G70532-@	AV 6240-20, 25MHz dual processor, 20-slot **64MB, CSS 2 w/1.4GB disk** and 525MB tape 59" 11200 series processor/peripheral cabinet (1) AV 6240-20, 25MHz quad-processor, base system **(1) 7015 - 64MB memory** (1) 7430 - Dual-Channel SCSI II host bus adapter (1) G6724-A@ - CSS 2 w/1.4GB disk (1) 6777-G - Add-in 525MB disk for CSS 2 (1) 6709 - CSS 2 add-in power supply (1) 15396E005 - 5ft. universal SCSI cable (1) G1121X-@ - 59" processor/peripheral cabinet (1) 15339E025 - System Console cable	92,600	688	/NQ	3	A		36.75 RM
G70531-@	AV 6240-20, 25MHz quad processor, 20-slot **128MB, CSS 2 w/2 x 1.4GB disks** and 525MB tape 59" 11200 series processor/peripheral cabinet (1) AV 6240-20, 25MHz quad-processor, base system **(1) 7016 - 128MB memory** (1) 7430 - Dual-Channel SCSI host bus adapter (1) G6724-@ - CSS 2 w/1.4GB disk **(1) G6716-G - Add-in 1.4GB disk for CSS 2** (1) G6677-G - Add-in 525MB tape for CSS2 (1) 6709 - CSS 2 add-in power supply (1) 15396E005 - 5ft. single-ended SCSI cable (1) G1121X-@ - 59" processor/peripheral cabinet (1) 15339E025 - System Console cable	106,700	777	/NQ	3	A		36.75 RM

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
CLARiiON Disk Array Configuration:								
G70523-@	AV 6240-20, 25MHz quad processor, 20-slot 128MB, CLARiiON 3.5GB subsystem, CSS 2, 525MB tape and 4mm DAT, 59" 11200 series processor/peripheral cabinet (1) AV 6225-40, 25MHz quad-processor, base system (1) 7016 - 128MB memory (1) 7430 - Dual channel SCSI 2 host bus adapter (1) 7906-@ - 2.5GB CLARiiON (5 x 500MB) subsystem (2) 7908-ZA - Add-in 500MB disk for CLARiiON (1) 15396E010 - 10ft. universal SCSI cable (1) 1340 - 25ft. Array Console cable (1) G6754-A@ - CSS 2 w/525MB tape (1) G6762-G - Add-in 4mm DAT for CSS2 (1) 15396E005 - 5ft. universal SCSI cable (1) G1121X-@ - 59" processor/peripheral cabinet (1) 15339E025 - System Console cable	134,700	755	/NQ	3	A	Note 5	50.75 RM
AV 6280-20 OCTAL PROCESSOR PACKAGES:								
G70537-@	AV 6280-20, 25MHz octal processor, 20-slot **256MB**, CSS 2 w/1 x 1.4GB disk, CD-ROM, and 525MB QIC tape, 59" 11200 series processor/peripheral cabinet (1) AV 6280-20, 25MHz octal-processor, base system **(2) 7016 - 128MB memory** (1) 7430 - Dual-channel SCSI 2 host bus adapter (1) G6724-A@ - CSS 2 w/1.4GB disk (1) G6629-G - CD-ROM add-in for CSS 2 (1) G6677-G - Add-in 525MB tape for CSS 2 (1) 6709 - CSS 2 add-in power supply (1) 15396E005 - 5ft. single-ended SCSI cable (1) G1121X-@ - 59" processor/peripheral cabinet (1) 15339E025 - System Console cable	220,065	1,007	/NQ	3	A		36.75 RM
G70538-@	AV 6280-20, 25MHz octal processor, 20-slot **384MB**, CSS 2 w/1 x 1.4GB disk, CD-ROM, and 525MB QIC tape, 59" 11200 series processor/peripheral cabinet (1) AV 6280-20, 25MHz octal-processor, base system **(2) 7017 - 192MB memory** (1) 7430 - Dual-channel SCSI 2 host bus adapter (1) G6724-A@ - CSS 2 w/1.4GB disk (1) G6629-G - CD-ROM add-in for CSS 2 (1) G6677-G - Add-in 525MB tape for CSS 2 (1) 6709 - CSS 2 add-in power supply (1) 15396E005 - 5ft. single-ended SCSI cable (1) G1121X-@ - 59" processor/peripheral cabinet (1) 15339E025 - System Console cable	239,265	1,039	/NQ	3	A		36.75 RM

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
AV 8000 QUAD PROCESSOR PACKAGES:								
G70524-@	AV 8000, 25MHz quad-processor, **256MB memory, CLARiiON 6.0GB subsystem,** CSS 2 w/525MB tape and 4mm DAT, 59" 11200 series processor/peripheral cabinet (1) AV 6240, 25MHz quad-processor, base system **(2) 7016 - 128MB memory** (1) 7430 - Dual-channel SCSI 2 host bus adapter **(1) 7906-@ - 2.5GB (5 x 500MB) CLARiiON subsystem** **(1) 7908-A - 2.5GB (5 x 500MB) disk group for CLARiiON** **(2) 7908-ZA - 500MB add-in disk for CLARiiON** (1) 15396E010 - 10ft. universal SCSI cable (1) 1340 - 25ft. Array Console cable (1) G6754-A@ - CSS 2 chassis w/525MB QIC tape (1) G6762-G - 4mm DAT add-in for CSS 2 (1) 15396E005 - 5ft. universal SCSI cable (1) G1121X-@ - 59" processor/peripheral cabinet (1) 15339E025 - System Console cable	171,600	825	/NQ	3	A	Note 5	50.75" RM
G70534-@	AV 8000, 25MHz quad-processor, **256MB memory, CLARiiON 8.4 GB subsystem,** CSS 2 w/525MB tape and 4mm DAT, 59" 11200 series processor/peripheral cabinet (1) AV 6240, 25MHz quad-processor, base system **(2) 7016 - 128MB memory board** (1) 7430 - Dual-channel SCSI 2 host bus adapter **(1) 7910-@ - 6.0GB (5 x 1.2GB) CLARiiON subsystem** **(2) 7916-ZA - 1.2GB Add-in disk for CLARiiON** (1) 15396E010 - 10ft. universal SCSI cable (1) 1340 - 25ft. Array console cable (1) G6754-A@ - CSS 2 chassis w/525MB QIC tape (1) G6762-G - 4mm DAT add-in for CSS 2 (1) 15396E005 - 5ft. universal SCSI cable (1) G1121X-@ - 59" processor/peripheral cabinet (1) 15339E025 - System Console cable	173,100	810	/NQ	3	A	Note 5	50.75" RM
G70543-@	AV 8000, 25MHz quad-processor, **384MB memory, CLARiiON 6.0GB subsystem,** CSS 2 w/525MB tape and 4mm DAT, 59" 11200 series processor/peripheral cabinet (1) AV 6240, 25MHz quad-processor, base system **(2) 7017 - 192MB memory** (1) 7430 - Dual-channel SCSI 2 host bus adapter **(1) 7906-@ - 2.5GB (5 x 500MB) CLARiiON subsystem** **(1) 7908-A - 2.5GB (5 x 500MB) disk group for CLARiiON** **(2) 7908-ZA - 500MB add-in disk for CLARiiON** (1) 15396E010 - 10ft. universal SCSI cable (1) 1340 - 25ft. Array Console cable (1) G6754-A@ - CSS 2 chassis w/525MB QIC tape (1) G6762-G - 4mm DAT add-in for CSS 2 (1) 15396E005 - 5ft. universal SCSI cable (1) G1121X-@ - 59" processor/peripheral cabinet (1) 15339E025 - System Console cable	186,800	857	/NQ	3	A	Note 5	50.75" RM

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

AV 8000 QUAD PROCESSOR PACKAGES: (Continued)

G70562-@	AV 8000, 25MHz quad processor, 20-slot **384MB memory, CLARiiON 8.4GB subsystem**, CSS 2 w/525MB tape and 4mm DAT, 59" 11200 series processor/peripheral cabinet (1) AV 6240, 25MHz quad-processor, base system **(2) 7017 - 192MB memory board** (1) 7430 - Dual-channel SCSI 2 host bus adapter **(1) 7910-@ - 6.0GB (5 x 1.2GB) CLARiiON subsystem** **(2) 7916-ZA - 1.2GB add-in disk for CLARiiON** (1) 15396E010 -10ft. universal SCSI cable (1) 1340 - 25ft. Array Console cable (1) G6754-A@ - CSS 2 w/525MB tape (1) G6762-G - Add-in 4mm DAT for CSS 2 (1) 15396E005 - 5ft. universal SCSI cable (1) G1121X-@ - 59" processor/peripheral cabinet (1) 15339E025 - System Console cable	191,500	842	/NQ	3	A	Note 5	50.75 RM

AV 8000-8 Octal Processor Packages:

G70539-@	AV 8000-8, 25MHz octal processor, **256MB memory, 6.0GB CLARiiON disk subsystem,** CSS 2 w/CD-ROM, 525MB QIC tape, and 4mm DAT, 59" 11200 series processor/peripheral cabinet (1) AV 6280, 25MHz octal-processor, base system **(2) 7016 - 128MB memory board** (1) 7430 - Dual-channel VME SCSI 2 adapter **(1) 7906-@ - 2.5GB (5 x 500MB) CLARiiON subsystem** **(1) 7908-A - 2.5GB (5 x 500MB) disk group for CLARiiON** **(2) 7908-ZA - 500MB add-in disk for CLARiiON** (1) 15396E010 - 10ft. universal SCSI cable (1) 1340 - Array Console cable (1) G6754-A@ - CSS 2 chassis w/525MB QIC tape (1) G6629-G - 600MB CD-ROM add-in for CSS 2 (1) G6762-G - 4mm DAT add-in for CSS 2 (1) 15396E005 - 5ft. universal SCSI cable (1) G1121X-@ - 59" processor/peripheral cabinet	270,065	1,160	/NQ	3	A	Note 5	50.75" RM
G70540-@	AV 8000-8, 25MHz octal processor, **256MB memory, 8.4GB CLARiiON disk subsystem,** CSS 2 w/CD-ROM, 525MB QIC tape, and 4mm DAT, 59" 11200 series processor/peripheral cabinet (1) AV 6280, 25MHz octal-processor, base system **(2) 7016 - 128MB memory board** (1) 7430 - Dual-channel VME SCSI 2 adapter **(1) 7910-@ - 6.0GB (5 x 1.2GB) CLARiiON subsystem** **(2) 7916-ZA - 1.2GB add-in disk for CLARiiON** (1) 15396E010 - 10ft. universal SCSI cable (1) 1340 - Array Console cable (1) G6754-A@ - CSS 2 chassis w/525MB QIC tape (1) G6629-G - 600MB CD-ROM add-in for CSS 2 (1) G6762-G - 4mm DAT add-in for CSS 2 (1) 15396E005 - 5ft. universal SCSI cable (1) G1121X-@ - 59" processor/peripheral cabinet	275,665	1,160	/NQ	3	A	Note 5	50.75" RM

AV 8000-8 Octal Processor Packages: (Continued)

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
G70541-@	AV 8000-8, 25MHz octal processor, **384MB memory, 6.0GB CLARiiON disk subsystem,** CSS 2 w/CD-ROM, 525MB QIC tape, and 4mm DAT, 59" 11200 series processor/peripheral cabinet (1) AV 6280, 25MHz octal-processor, base system **(2) 7017 - 192MB memory board** (1) 7430 - Dual-channel SCSI 2 host bus adapter **(1) 7906-@ - 2.5GB (5 x 500MB) CLARiiON subsystem** **(1) 7908-A - 2.5GB (5 x 500MB) disk group for CLARiiON** **(2) 7908-ZA - 500MB add-in disk for CLARiiON** (1) 15396E010 - 10ft. universal SCSI cable (1) 1340 - Array Console cable (1) G6754-A@ - CSS 2 chassis w/525MB QIC tape (1) G6629-G - 600MB CD-ROM add-in for CSS 2 (1) G6762-G - 4mm DAT add-in for CSS 2 (1) 15396E005 - 5ft. universal SCSI cable (1) G1121X-@ - 59" processor/peripheral cabinet	289,265	1,192	/NQ	3	A	Note 5	50.75" RM
G70542-@	AV 8000-8, 25MHz octal processor, **384MB memory, 8.4GB CLARiiON disk subsystem,** CSS 2 w/CD-ROM, 525MB QIC tape, and 4mm DAT, 59" 11200 series processor/peripheral cabinet (1) AV 6280, 25MHz octal-processor, base system **(2) 7017 - 192MB memory board** (1) 7430 - Dual-channel SCSI 2 host bus adapter **(1) 7910-@ - 6.0GB (5 x 1.2GB) CLARiiON subsystem** **(2) 7916-ZA - 1.2GB add-in disk for CLARiiON** (1) 15396E010 - 10ft. universal SCSI cable (1) 1340 - Array Console cable (1) G6754-A@ - CSS 2 chassis w/525MB QIC tape (1) G6629-G - 600MB CD-ROM add-in for CSS 2 (1) G6762-G - 4mm DAT add-in for CSS 2 (1) 15396E005 - 5ft. universal SCSI cable (1) G1121X-@ - 59" processor/peripheral cabinet	294,865	1,192	/NQ	3	A		50.75" RM

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

Notes:

1. Replace (@) suffix with AC power:

   For AV 6200 models G70383-MB and G70383-MC:
   (-B specifies a 60" bay, -C specifies a 71" bay)

   Power Suffix (@):

   no suffix - 120V/60Hz
   1 - 100V/50/60Hz
   2 - 220V/50Hz
   4 - 240V/50Hz

   Cabinet Included With Package

   (59" bay - G11212-G7, 71" bay G11222-G7)
   (59" bay - G11212-G7, 71" bay G11222-G7)
   (59" bay - G11213-F7, 71" bay G11223-F7)
   (59" bay - G11213-F7, 71" bay G11223-F7)

   For AV 6225-20, AV 6240-20, AV 8000 models:

Power Suffix (@):			Cabinet Included:
E	-	120V/60Hz	(59" bay - G11211-G7)
F1	-	200V/50/60Hz	(59" bay - G11211-G7)
F2	-	220V/50Hz	(59" bay - G11213-F7)
F4	-	240/50Hz	(59" bay - G11213-F7)

   For AV 6280-20, AV 8000-8 models:

Power Suffix (@):			Cabinet Included:
F	-	240V/60Hz	(59" bay - G11211-G7)
F1	-	200V/50/60Hz	(59" bay - G11211-G7)
F2	-	220V/50Hz	(59" bay - G11211-F7)
F4	-	240V/50Hz	(59" bay - G11213-F7)

2. To determine mounting space remaining in packaged cabinet subtract value listed in the "Space" column from 50.75" for the 59" bays, and from 63" for the 71" bays. CLARiiON packages exhaust all available package cabinet space. Any additional peripheral chassis will require configuration of another cabinet.

3. AV 6225-20, 6240-20, 6280-20, 8000, and 8000-8 series processors require a controller, drop cable, and transceiver for LAN connection. This is not a requirement for validation.

4. A 25' system console cable included with processor. Order RS232-C system console as -X (no cable).

5. Packages that contain CLARiiON subsystems require configuration of an array console connected to the Storage-control Processor (SP) for access to the array's configuration and real time status displays. This console (Dasher ASCI D413, D462E, D/463 or D1400i) is connected to the array via an array console port located on the SP. If one of these terminals is selected as a System Console, the SP may be connected to the terminals secondary (auxiliary) port. The following adapter cables are included with each CLARiiON Subsystem to insure array console connection.

   D/413, D462E, D/463: adapter model 15282D

   D1400i: adapter models 15282D and 15388B006

   In dual SP configurations, both SPs may be dual ported to one array console. The add-on SP model 7427 will utilize the adapters included with the CLARiiON subsystem. For each additional CLARiiON subsystem or add-on 7427 SP configured, an array console connection must be supplied.
   Each CLARiiON subsystem and add-on SP model includes a 1340 25' array console cable.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

MEMORY

AV 6200 family single processors contain 16MB system board resident memory. Dual processor versions contain 64MB system board resident memory. Quad and Octal processor versions include one or more of the 9u form factor memory boards listed below. The following expansion memory boards are supported on all AV 6200/6200-20/8000 series processors. A maximum of four memory boards are supported per system. Single, dual, and quad processor versions support 4 Mem/I/O slots. Octal processors (AV 6280-20/8000-8) have 4 dedicated memory only slots, and require memory to be configured in "like" pairs, to support their dual memory bus architecture. Models ending in "S" are supported on initial "system" orders at a reduced price.

Special Initial System Order Models:

7017S	192MB memory board	28,800	48	/NQ	2	A	Note 2,3	1 VME slot
7016S	128MB memory board	19,200	32	/NQ	2	A	Note 2,3	1 VME slot
7015S	64MB memory board	9,600	/NC	/NQ	2	A	Note 2,3	1 VME slot

Standard Memory Models:

7017	192MB memory board	48,000	96	/NQ	2	A	Note 2	1 VME slot
7016	128MB memory board	32,000	64	/NQ	2	A	Note 2	1 VME slot
7015	64MB memory board	16,000	32	/NQ	2	A	Note 2	1 VME slot

Notes:

1. Total number of memory boards supported is 4.
   - Maximum memory on single processor models is 784MB.
   - Maximum memory on dual processor models is 832MB.
   - Maximum memory on quad and octal processor models is 768MB.
2. For AV 6280-20 and AV 8000-8:
   - Memory boards must be configured in "like pairs". (2 x 64MB, 2 x 128MB, 2 x 192MB)
   - Two "like" pairs are supported in any combination for a maximum memory configuration of 768MB (2 x 192MB, 2 x 192MB)
2. (Continued)

   Early model 16MB, 32MB, and 48MB memory boards are not supported on AV 6280-20 and AV 8000-8 octal processors.
3. Model numbers ending in "S" are specially priced and may be included on initial system orders only. Order "Standard Memory Models" on system expansion (SX) orders.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

MASS STORAGE VME SCSI HOST ADAPTERS

The VME SCSI 2 Host Bus Adapter (VSA) supports all external mass storage configuration on AV 6200/6200-20/8000 series processors. Model 7430 VSA is a dual channel, Fast/Narrow (10MB/sec, 8 bit), VME SCSI 2 Host Bus Adapter (HBA) that supports two SCSI 2 channels, and is supported in both the 10-slot and 20-slot chassis. Each channel may be selected to support single-ended OR differential interface.

If a single-ended interface is selected, all devices/chassis configured on the channel MUST be single-ended models. The same holds true for differential configuration. Single-ended and differential components may not be supported on the same bus.

DUAL CHANNEL SCSI 2 HOST BUS ADAPTER:

7430	Dual Channel SCSI 2 host bus adapter (VSA)	1,995	5	/NQ	2	A	Note 1	1 VME slot

7430 VSA to 1st Peripheral Chassis Cables:

15396E005	5 ft. Universal VSA to peripheral chassis cable	100	N/A	N/A		B	Note 3
15396E010	10 ft. Universal VSA to peripheral chassis cable	125	N/A	N/A		B	Note 3
15396E020	20 ft. Universal VSA to peripheral chassis cable	150	N/A	N/A		B	Note 3
15396E040	40 ft. Universal VSA to peripheral chassis cable	190	N/A	N/A		B	Note 3

PERIPHERAL CHASSIS TO PERIPHERAL CHASSIS DAISY-CHAIN CABLES:

Single-ended SCSI:

15378E003	3ft. Single-ended SCSI cable	104	N/A	N/A		B	
15378E005	5ft. Single-ended SCSI cable	111	N/A	N/A		B	

Differential SCSI:

15325E005	5 ft. Differential SCSI cable	90	N/A	N/A		B	
15325E010	10 ft. Differential SCSI cable	115	N/A	N/A		B	
15325E010	20 ft. Differentail SCSI cable	115	N/A	N/A		B	

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

Notes:

1. Total SCSI HBA support, including dual-channel HBA (7430), and early model single channel SCSI HBAs (7421/7422, 7407/7415), based on channels supported is:

AV 6200	6 HBA's - any combination of available HBAs equaling 6.
AV 6200-20/8000	8 HBA's - any combination of available HBAs equaling 8.

   AV 6280-20 and AV 8000-8 series processors do not support early model 7407 or 7415 SCSI host bus adapters.

2. An external SCSI cable is required for each host bus adapter channel configured.

   7430 HBA - 15396EXXX series cables

3. The 15396EXXX HBA to peripheral cable family is "universal", and may be utilized to support both differential AND single-ended interface connection. At this time this universal cable type is ONLY supported on the 7430 HBA, and only for processor to 1st device chassis connect.

   Daisy-chain configurations require a different cable to support the interface selected (15325EXXX for differential, 15378EXXX for single ended).

4. All components of the SCSI channel (device chassis, add-in peripheral device models, and daisy-chain cables), must be either single-ended OR differential. The two interfaces may not be mixed on any single channel.

5. Single-ended SCSI Bus Configuration:

   Single ended SCSI has limiting bus length restrictions (19.6ft.) which require supported chassis to be located in close proximity to the processor chassis. Tape support subsystems or combination of disk/tape that can be installed within your main processor bay may utilize Single Ended SCSI.

5. Single-ended SCSI Bus Configuration (Continued):

   The sum of the bus length of external cables configured, and internal bus length associated with the peripheral chassis, configured must be less than or equal to available bus length.

   - If configuring a single-ended SCSI peripheral chassis from a 7430 HBA channel you have 16.6 ft. available external SCSI bus.

   Single-ended peripheral chassis internal bus lengths:
   Combined Storage Subsystem 2 - 4.9 ft.
   6580 Series Reel Tapes - .5 ft.

   For a complete list of legal AV 6200/6200-20 single-ended SCSI configurations, see the "Legal Single-ended SCSI Configuration Tables (Rackmount)" in the "External Mass Storage (General Information)" section.

6. Differential SCSI Bus Configuration:

   At this time DGC supports fixed disks only on the differential interface. When supporting disk only subsystems, configure a channel on the dual channel HBA (7430) for differential interface. The extended bus range (81ft.) associated with differential SCSI will allow greater flexibility in daisy-chaining peripheral chassis, dual porting of any single SCSI channel, and peripheral chassis placement in multiple bay configurations.

   Differential peripheral chassis internal bus lengths:
   High Availability Disk Array II - 8ft. (1 SP), 15ft. (2 SP)
   Combined Storage Subsystem 2 - 4.9'.

   Note: CLARiiON is only supported by the 7430 dual-port HBA. The SCSI channel must be set for differential interface.

7. See the "External Mass Storage" section for additional information.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

20-SLOT BULKHEAD EXPANSION SUBPANELS

These expansion subpanels should be ordered when System Expansion requirements exceed 20-slot bulkhead connects available. To determine availability, follow the procedure listed in the notes below.

7611-W	2 SCSI connector small subpanel	50	N/A	N/A	5	A	1 S subpanel
7612-W	12 SCSI connector large subpanel	100	N/A	N/A	5	A	1 L subpanel
7613-W	4 DB-25 connector small subpanel	50	N/A	N/A	5	A	1 S subpanel
7614-W	16 DB-25/2 SCSI connector large subpanel	100	N/A	N/A	5	A	1 L subpanel

Notes:

1. SUBPANEL CONFIGURATION

The following process should be followed when determining 20-slot chassis expansion subpanel requirements:

For Existing Configurations:

- Reference current "20-Slot Bulkhead Site Log" diagram (next page) .
- All SCSI and synchronous host adapters include a small subpanel when booked on a "System Expansion" (SX) order.
- The only time you will be required to order subpanels as a separate line item is when all three supported small subpanels are configured, and you have SCSI or synchronous communication needs that require addition of a large Subpanel.
- When configuring an early model High Availability Disk Array Subsystem, a Large Subpanel (7612-W), included with the host adapter is installed. When configured for support of a HADA Subsystem, the entire Large Subpanel will be utilized.

For New Installations:

- All host adapters on a "System Order" will be configured at the factory utilizing all available "non-subpanel" bulkhead ports first.
- If migrating existing 10-slot host adapters to a 20-slot chassis, call Upgrade Marketing at (508) 870-1400.
- A bulkhead diagram should be drawn to identify the factory configured ports on the new "System Order". Determine if subpanels must be ordered to support the addition of migrating host adapters.

2. CHASSIS/SUBPANEL CONNECTION

The Base Bulkhead supplies:

- 5 VDA/255 asynchronous connects
- 12 VSC/3, VFC DB-25 connects
- 8 LAN controller connects
- 4 SCSI host bus adapter "channel" connects
- System Console, Remote diagnostic modem, and Centronics parallel printer connects to support system board interface.
- 7612-W 12-port SCSI subpanel

There are 3 small subpanels and 2 large subpanels configurable.

Subpanel/Host Adapter Configuration:

SCSI Host Bus Adapter (7430)
- One small subpanel is included with each host adapter on System Expansion (SX) orders.
- Provides support for two SCSI channel connects.

VSC/3i Synchronous Controller (7428-W)
- One small subpanel is included with each host adapter on System Expansion (SX) orders.
- Provides support for three synchronous connects.

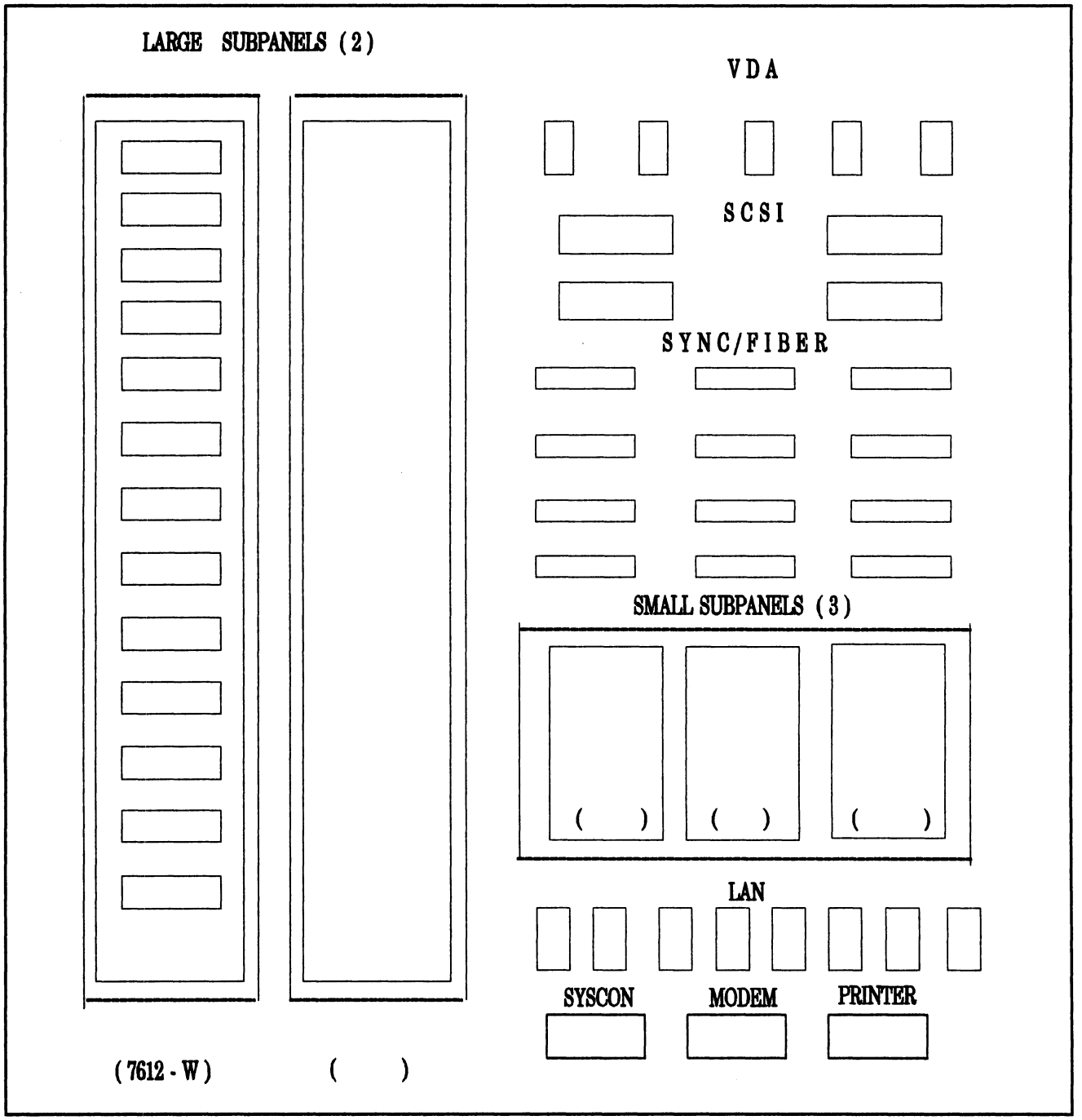
VFC Fiber Optic Controller (7431-W)
- One small subpanel is included with each controller on System Expansion (SX) orders.
- One Controller supported.
- Requires 3 x DB-25 ports for connection.

The Large Subpanels supply:
- (7612-W) - 12 SCSI ports
- (7614-W) - 16 DB-25 ports, 2 SCSI ports

The Small Subpanels supply:
- (7611-W) - 2 SCSI ports
- (7613-W) - 4 DB-25 ports

20-SLOT BULKHEAD SITE LOG

Use this diagram as a reference to define configuration at the customer site or for new system planning.



Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

UPGRADES

PROCESSORS

System board upgrades are available to increase processor performance. Upgrades to the quad processor include one memory board. Chassis upgrades are also available. Octal Processor upgrades come packaged in a 59" 11200 series processor/peripheral cabinet.

Board Level Upgrades:

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
20MHz Single to 25MHz Dual								
USTG12C	20MHz AV 6100 to 25MHz AV 6225	21,000	252	/NQ	3	A	Notes 3,4	
Single to Dual								
USTG12D	25MHz AV 6200 to 25MHz AV 6225	17,500	259	/NQ	3	A	Notes 3,4	
Single to Quad								
USTG14B	Upg 1 to 4 proc AV 6240 w/64MB mem	41,580	602	/NQ	3	A	Notes 2,4	1 VME Slot
USTG14C	Upg 1 to 4 proc AV 6240 w/128MB mem	50,980	634	/NQ	3	A	Notes 2,4	1 VME Slot
USTG14D	Upg 1 to 4 proc AV 6240 w/192MB mem	59,980	666	/NQ	3	A	Notes 2,4	1 VME Slot
Dual to Quad								
USTG24B	Upg 2 to 4 proc AV 6240 w/64MB mem	26,200	602	/NQ	3	A	Notes 2,4	1 VME Slot
USTG24C	Upg 2 to 4 proc AV 6240 w/128MB mem	35,600	634	/NQ	3	A	Notes 2,4	1 VME Slot
USTG24D	Upg 2 to 4 proc AV 6240 w/192MB mem	44,600	666	/NQ	3	A	Notes 2,4	1 VME Slot

Chassis Level Upgrades:

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
10-Slot Chassis Upgrades:								
UZSBH	Upg AV 6000 to AV 6200 10-slot chassis bulkhead	500	N/A	N/A	2	A	Notes 5,8	
UZAC12	Upg AV 6000 series 10-slot to 20-slot chassis	10,000	259	/NQ	5		Notes 5-7	28" RM
Octal Processor Upgrades								
US6262A	AV 6200-20 to AV 6280-20	150,610	900	/NQ	3	A	Notes 3-5,7	28" RM
US6262B	AV 6225-20 to AV 6280-20	141,985	900	/NQ	3	A	Notes 3-5,7	28" RM
US6262C	AV 6240-20 to AV 6280-20	117,590	900	/NQ	3	A	Notes 3-5,7	28" RM

Notes:

1. System board upgrades require the return of old system board. Upgrade includes required Field Engineering installation.
2. Quad processor upgrades include a memory board. Before ordering, ensure that existing system has available chassis slots to support an additional memory board.
3. DG/UX Revision 5.4.2 is required for AV 6280-20 support.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

UPGRADES (Continued)

Notes: (Continued)

4. Requires license transfer per Form 507.

   To properly license any software that will be used on an upgraded system, include the appropriate software model numbers in the upgrade order. A credit for any existing licenses will be applied to reduce the new license fee. To calculate the specific charges, complete Form 507 and submit it with each upgrade order. The specific charges are based on current pricing.

   Form 507 is required with all upgrade orders and is the only vehicle that enables customers to receive any credits for existing software.

   For password-protected software that is tied to the CPU serial number (i.e. FrameMaker), a new password is required for the upgraded system and should be obtained through the same avenue as the original. For FrameMaker, see MAPS/Plus Volume III for password information.

   For additional questions or issues, contact the 88K Tech Hot Line via CEO. (Hot Line is available for US and Canada only).

5. Chassis upgrades include a pre-site inspection in the list price. Due to the nature of these upgrades, the pre-site inspection is required. The inspection will be done to determine if existing cabling, adapters, and/or controllers need to be up-reved. If new cables, adapters, and/or bulkhead cover plates are required, they will be added to the chassis prior to testing; these required parts must be specified via a CCIS. Controllers under an existing DGC maintenance contract will be up-reved at no cost; customers will be charged for any additional items.

5. (Continued)

   Cables are not covered under maintenance contracts and will be priced as separate line items with the upgrade order.

6. Special Systems 20-slot chassis (E,G55082) does not support the quad-processor due to chassis incompatibilities. These chassis are not upgradeable and therefore, customers wishing to upgrade from E,G55082 to AV/6240-20 system will be required to return chassis and processor as part of the upgrade. (See General Upgrade Notes on how to receive a customized upgrade quote).

7. The new 20-slot chassis does not support SMD disk drives; therefore, these disks cannot be transferred into the new chassis.

8. This Upgrade replaces the early model AV 6000 series 10-slot bulkhead with updated AV 6200 series bulkhead.

9. All upgrade prices include installation, de-installation, and shipping to return removed equipment back to Data General.

10. For other AViiON upgrades, see applicable AViiON Catalog section for processor you are upgrading to.

    If a desired upgrade is not listed, a customized upgrade that meets a customer's specific requirements will be quoted by the Upgrade Product Line.

    If you have any questions or need a customized upgrade quote, please contact an Upgrade Product Line Marketing Specialist via CEO hotline UPGRADES or call 508-870-1400.

MEMORY

	UMA1664	16MB (7001) to 64MB (7015) memory	15,470	32	/NQ	2	A	
	UMA16128	16MB (7001) to 128MB (7016) memory	31,470	64	/NQ	2	A	
	UMA16192	16MB (7001) to 192MB (7017) memory	47,470	96	/NQ	2	A	
	UMA64128	64MB (7015) to 128MB (7016) memory	29,455	64	/NQ	2	A	
	UMA64192	64MB (7015) to 192MB (7017) memory	45,455	N/A	N/A	2	A	
	UMA128192	128MB (7016) to 192MB (7017) memory	42,770	96	/NQ	2	A	

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

MEMORY (Continued)

Notes:

1. These are board level upgrades which require return of the old memory board. All upgrades include Field Engineering installation, deinstallation, and shipping to return removed equipment.

2. These memory upgrade model numbers only represent a small portion of the available combinations. However, to limit the number of upgrade model numbers, only upgrades from 16MB memory boards are being created for now. If you need a memory upgrade other than what is listed above or in the blue pages, contact UPL Marketing. If a large demand is seen for particular memory upgrades, model number(s) will be created.

EXTERNAL PERIPHERAL/COMMUNICATIONS SUPPORT

For a complete listing of supported products, see the following sections:

External Mass Storage

Communications

Hard Copy

Terminals

CHASSIS BULKHEADS

External connections to the processor chassis are limited to the amount of bulkhead connects available. Reference the following diagrams in review of host adapters ordered to ensure that bulkhead ports available are not exhausted.

10-SLOT BULKHEAD:

- (2) System board RS232-C Asynchronous connects (DB-25 Female)
  (System/Remote diagnostic console)

- (1) System board Centronics parallel printer connect(36-Pin Champ Female)

- (2) LAN connects (DB-15 Female)
  VLCi (7429) Ethernet LAN controller
  VTC (7425) Ethernet Term Controller
  VTRC (7416) Token Ring LAN Controller

- (5) VDA/255 (7418) host adapter connects (RG62 Female)

- (31) General distribution connects (DB-50/DB-25 knockouts)

  Dual Channel SCSI (7430) host bus adapters utilize 2

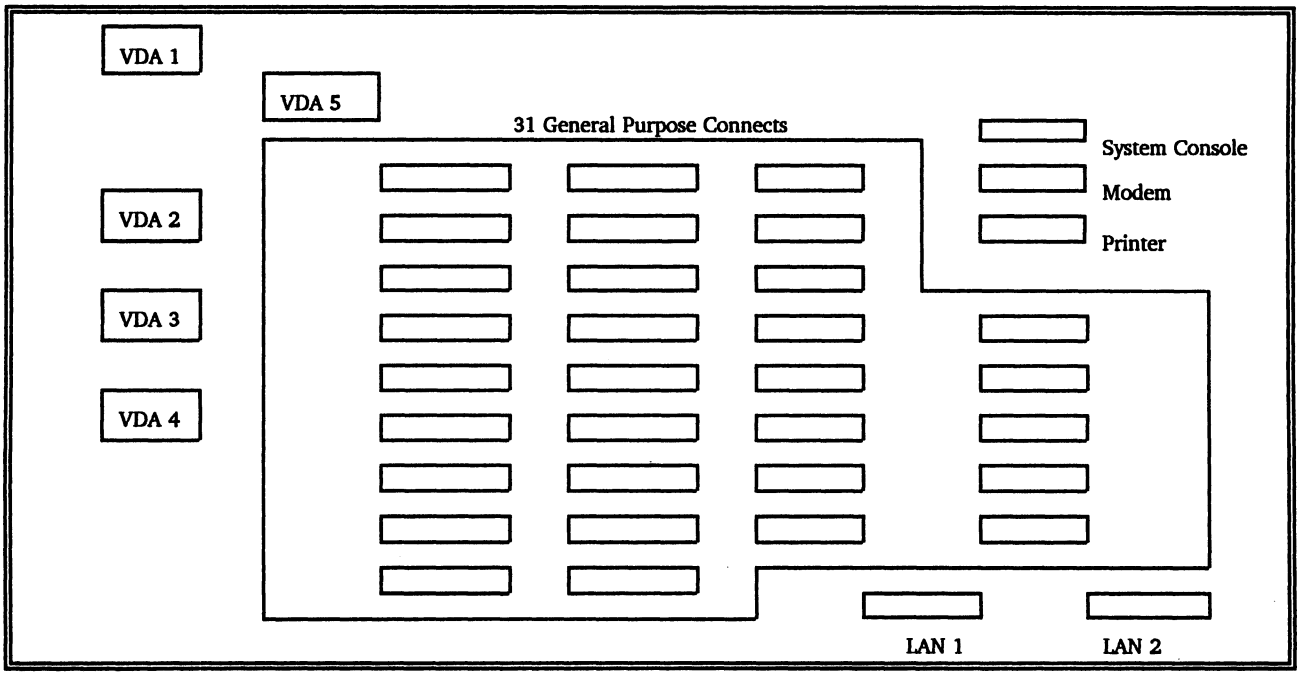
  Single Channel SCSI (7421-V,7422-V) host bus adapters utilize 1

  VSC/3i (7428) synchronous controllers utilize 3

  LAN connects utilize 1

  VFC connects utilize 3

STANDARD 10-SLOT BULKHEAD



20-SLOT BULKHEAD

Standard Bulkhead Configuration:

- (2) System board RS232-C Asynchronous connects (DB-25 Female)
  (System/Remote diagnostic console)

- (1) System board Centronics parallel printer connect(36-Pin Champ Female)

- (8) LAN connects (DB-15 Female)
  VLC/i (7429-W) Ethernet LAN controller
  VTC (7425-W) Ethernet Term Controller
  VTRC (7416-W) Token Ring LAN Controller

- (5) Distributed Asychronous Controller connects (RG62 Female) VDA/255 (7418-W)

- (4) Dedicated SCSI host adapter connects (DB-50 Female)
  Dual channel SCSI 2 (7430) host bus adapter utilizes 2
  Single channel SCSI (7421-W/7422-W) host adapters utilize 1

- (12) VSC/3i or VFC controller connects (DB-25 Female)
  (VSC/3i 7428-W, VFC 7431-W).

- AV 6280-20 and 8000-8 series processors come standard with a 7612-W large mass storage subpanel configured.

Optional Bulkhead Expansion Subpanels:
Utilized when communication/mass storage requirements exceed dedicated bulkhead ports available - base models have blank subpanels installed. System orders will have subpanels automatically installed as required.
Site visit should be planned to ensure appropriate subpanel is ordered, if required, on System Expansion (SX) orders.

- (2) Large Subpanels available to support:

Mass Storage (7612-W)

(12) SCSI host bus adapter channel connects
  Dual channel SCSI 2 (7430) host bus adapter utilizes 2
  Early model Single channel SCSI (7421-W/7422-W) host bus adapters utilize 1
  OR
(1) H.A.D.A. IOP host adapter (7417-W)

Communications/Mass Storage (7614-W)

(4) VSC/3i or VFC controller (7428-W, 7431-W)
  AND
(2) SCSI host adapter channel connects
  Dual channel SCSI 2 (7430) host bus adapter utilizes 2
  Early model Single channel SCSI (7421-W/7422-W) host bus adapters utilize 1

- (3) Small Subpanels available to support:

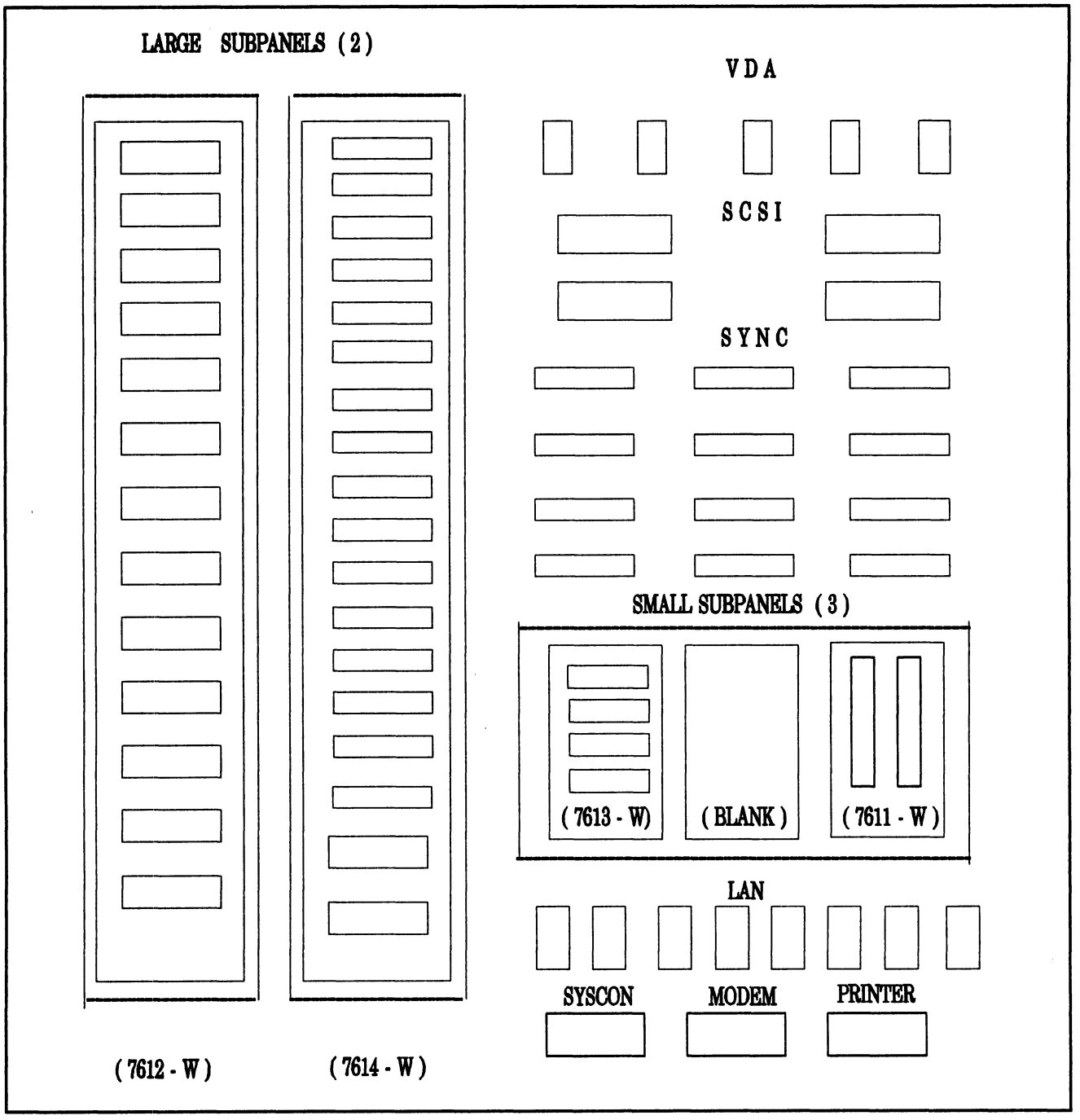
Mass Storage (7611-W)

(2) SCSI host adapters channel connects
  Dual channel SCSI 2 (7430) host bus adapter utilizes 2
  Early model Single channel SCSI (7421-W/7422-W) host bus adapters utilize 1

Communications (7613-W)

(1) VSC/3i or VFC controller (7428-W, 7431-W)

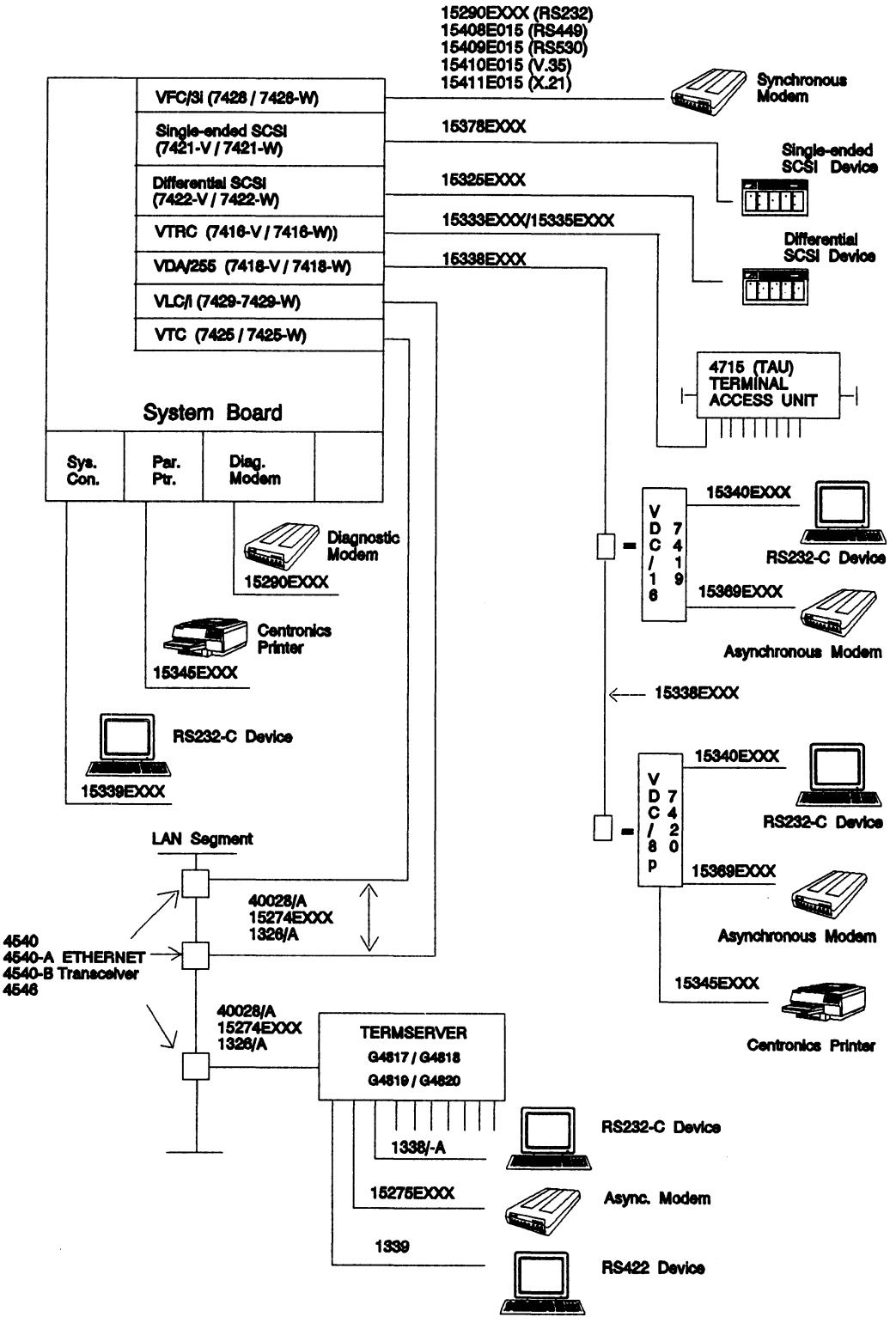
20-SLOT BULKHEAD



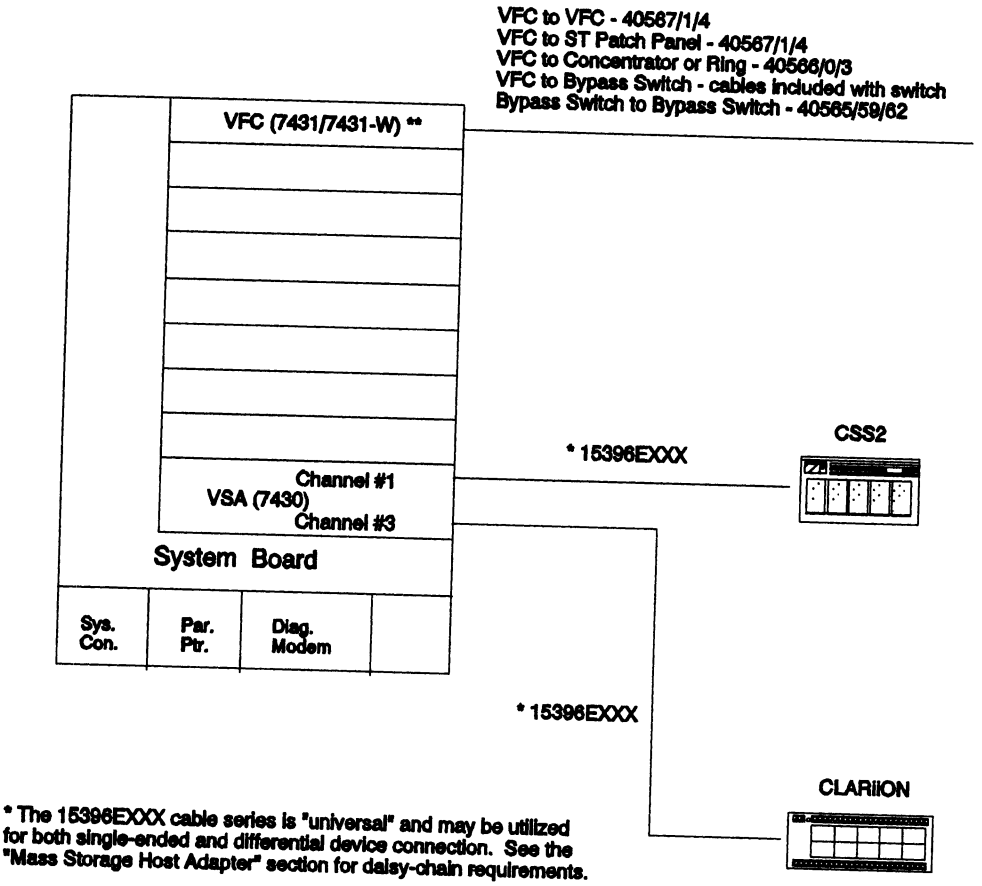
Notes:

- Bulkhead is standard with blank subpanels.
- Available expansion subpanels (7611/7612/7613/7614-W) are shown.
- 1 x 7612-W is configured on all 20-slot bulkheads to support additional SCSI channel connection.
- See previous page for subpanel description.

SYSTEM CABLING DIAGRAM



SYSTEM CABLING DIAGRAM (Continued)



* The 15396EXXX cable series is "universal" and may be utilized for both single-ended and differential device connection. See the "Mass Storage Host Adapter" section for daisy-chain requirements.

** For Dual Attachment (DAS - Class A) two cable models should be configured. For Single Attachment (SAS - Class B) one cable model should be configured. See the "Fiber Distributed Data Interface" section in the Communications section for additional information.

AViiON External Mass Storage Section

EXTERNAL MASS STORAGE SUPPORT QUICK REFERENCE

PROCESSOR/EXTERNAL PERIPHERAL CROSS-REFERENCE

PROCESSOR	CLARiiON	CSS2	PHU	6586/88/88-TA REEL TAPES	6587/89/89-TA REEL TAPES
AV 200		X*	X		X
AV 300		X*	X		X
AV 400		X*	X		X
AV 530	X	X*	X		X
AV 4300		X*	X		X
AV 4600	X	X*	X		X
AV 5200+	X	X*			X
AV 6200	X	X		X	
AV 6200-20	X	X		X	
AV 7000+	X	X *			X
AV 8000	X	X		X	

Notes:

1. Select processor type from left column and read across to identify supported external peripheral products.
2. Products listed with (*) are deskside tower versions.
3. All SCSI peripherals require external/daisy-chain cables be ordered as a separate line item.
4. As a general rule rackmount processors support rackmount peripherals and desktop/deskside processors support desktop/deskside peripherals.

   The Differential interface with it's extended bus length (81ft.) will allow a mix of deskside and rackmount chassis if required. (CLARiiON, CSS 2, CSS 2/DC).

GENERAL INFORMATION

MASS STORAGE PERIPHERAL INTERFACES

The AViiON product line utilizes the Small Computer System Interface (SCSI), for support of magnetic peripherals.

SMALL COMPUTER SYSTEM INTERFACE (SCSI)

The SCSI interface is available in two versions, Single-ended and Differential. The functional difference between these two interfaces is the bus length supported. There are specific peripherals and chassis associated with each of these interfaces. Components of differential subsystems may not be mixed with components of single ended subsystems. Each SCSI interface may support up to seven mass storage peripheral devices.

Single-ended

- Single-ended SCSI supports bus lengths to 19.6 ft. This is the interface of choice for desktop and deskside system support. It's limited bus length does not lend itself to extended rackmount configuration. Rackmount support should be limited to combination disk/tape or tape only subsystems. Placement is limited when attempting to configure Single-ended SCSI chassis outside of the processor bay.

Differential

- Differential SCSI supports bus lengths to 81.2 ft. This is the interface of choice for rackmount disk subsystem support. AV 200, 300, and 400 series processors do not support Differential SCSI.

  All other AViiON processors support differential SCSI via add-in VME Host Bus Adapter (7430, 7430-K).

SCSI SUPPORT GUIDELINES

These guidelines have been assembled to assist in defining SCSI configurations.

AV 200, 300, 400, 530, 4300, 4600

- Each of these processors include one system board resident Single-ended SCSI interface.
- AV 200, and 300 support external Single-ended SCSI devices ONLY.
  19.6' BUS LENGTH AVAILABLE FOR SUPPORT OF EXTERNAL SINGLE-ENDED SCSI DEVICES.
- AV 400, 530, and 4000 series support a mixture of internal and external Single-ended SCSI devices on the system board resident bus.
  4.75' BUS LENGTH IS UTILIZED TO SUPPORT INTERNAL MOUNT SINGLE-ENDED SCSI DEVICES.
  15.1' BUS LENGTH IS AVAILABLE FOR SUPPORT OF EXTERNAL SINGLE-ENDED SCSI DEVICES.
- AV 4600 supports an additional single-ended SCSI Bus by configuring Model 7423 SCSI/LAN interface. This model is a daughter card that connects to the system board.
  0.9' BUS LENGTH IS UTILIZED FOR INTERNAL CABLE
  18.7' BUS LENGTH IS AVAILABLE FOR SUPPORT OF EXTERNAL SINGLE-ENDED SCSI DEVICES.
- AV 530 and 4600 series also support the configuration of a single 7430-K dual-channel VME SCSI 2 host bus adapter (VSA). Each channel may be configured for single-ended OR differential interface.
  19.6' BUS LENGTH AVAILABLE FOR SUPPORT OF EXTERNAL SINGLE-ENDED SCSI DEVICES.
  81.2' BUS LENGTH AVAILABLE FOR SUPPORT OF EXTERNAL DIFFERENTIAL SCSI DEVICES.

AV 5200+, 7000+

- These processor models utilize one channel of a 7430 dual channel SCSI 2 host bus adapter, installed in a VME chassis slot, to support internal mount single-ended SCSI devices. In all configurations the internal channel terminates on the processor bulkhead for support of a single reel tape when configured with a 15378E005 external SCSI cable.
  The 7430 dual-channel host bus adapter which to supports the internal bus utilizes the remaining channel, which is connected to the chassis bulkhead, for single-ended or differential device connection.

  Internal Bus:
  13.7' BUS LENGTH IS UTILIZED TO SUPPORT INTERNAL MOUNT SINGLE-ENDED SCSI DEVICES.
  5.9' BUS LENGTH AVAILABLE FOR SUPPORT OF REEL TAPE ONLY.

  7430 Dual-Channel HBA (2nd Channel)
  16.6' BUS LENGTH AVAILABLE FOR SUPPORT OF EXTERNAL SINGLE-ENDED SCSI DEVICES.
  78.2' BUS LENGTH AVAILABLE FOR SUPPORT OF EXTERNAL DIFFERENTIAL SCSI DEVICES.

AV 6200 (10-Slot)

- The Dual-channel host bus adapter (7430) supplies SCSI support to AV 6200 series 10-slot chassis configurations. All SCSI support is external.

  7430 Dual-Channel HBA (Both Channels):
  16.6' BUS LENGTH IS AVAILABLE FOR SUPPORT OF EXTERNAL SINGLE-ENDED SCSI DEVICES.
  78.2' BUS LENGTH IS AVAILABLE FOR SUPPORT OF EXTERNAL DIFFERENTIAL SCSI DEVICES.

AV 6200-20, 8000 (20-Slot)

- The Dual-channel host bus adapter (7430) supplies SCSI support to AV 6200-20/8000 series 20-slot chassis configurations. All SCSI support is external.

  7430 Dual-Channel HBA (Both Channels):
  16.6' BUS LENGTH IS AVAILABLE FOR SUPPORT OF EXTERNAL SINGLE-ENDED SCSI DEVICES.
  78.2' BUS LENGTH IS AVAILABLE FOR SUPPORT OF EXTERNAL DIFFERENTIAL SCSI DEVICES.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

SINGLE-ENDED SCSI BUS CONFIGURATION

Some AViiON processors have an integral internal SCSI bus. This internal bus length, any external cabling, and internal SCSI peripheral bus length, must remain within the 19.6ft. bus limitation. Up to seven SCSI peripheral device targets are supported (combined internal and external). External modular peripherals are supported in the Combined Storage Subsystem 2, 2/DC, and Peripheral Housing Unit. Internal SCSI bus length associated with all AViiON processors and peripheral chassis are listed below.

PROCESSOR/DEVICE INTERNAL SCSI BUS LENGTHS

Processors:

AV 200, 300	-	No associated internal SCSI length.
AV 400, 530, 4300, 4600	-	4.75 ft.
AV 530	-	No associated internal SCSI bus length for add-on 7430 dual-channel SCSI host bus adapter
AV 4600	-	0.9 ft. for optional 7423 add-on SCSI interface.
	-	No associated internal SCSI bus length for add-on 7430 dual-channel SCSI host bus adapter
AV 5200+, 7000+	-	13.7 ft. for the primary SCSI host adapter included with system packaged model (supports internal devices, and external Reel Tape drive only).
	-	5.0 ft. for early model add-on 7421 SCSI host bus adapter
	-	3.0 ft. for add-on 7430 dual-channel SCSI host bus adapter
AV 6200	-	5.4 ft. for each early model 7421-V host bus adapter configured
	-	3.0 ft. for add-on 7430 dual-channel SCSI host bus adapter
AV 6200-20/8000	-	3.6 ft. for each early model 7421-W host bus adapter configured
	-	3.0 ft. for add-on 7430 dual-channel SCSI host bus adapter

Peripherals:

Combined Storage Subsystem 2, 2/DC	- 4.9 ft.
Peripheral Housing Unit	- 2.5 ft.
Reel Tape Drives	- .5 ft.

SINGLE-ENDED SCSI CABLES

A SCSI cable is required for every SCSI peripheral chassis configured.

SINGLE-ENDED SCSI CABLE CONFIGURATION MATRIX

FROM/TO	CSS2	CSS2/DC	PHU	6586/88/88-TA	6587/89/89-TA
AV 100 AV 200 AV 300	N/A	15377EXXX	15377EXXX	N/A	15377EXXX
AV 400 AV 530 AV 4100 AV 4300 AV 4600	N/A	15378EXXX	15378EXXX	N/A	15378EXXX
7421	N/A	15378EXXX	N/A	N/A	15378EXXX
7421-V/-W	15378EXXX	N/A	N/A	15378EXXX	N/A
7430	15396EXXX	15396EXXX	15396EXXX	15396EXXX	15396EXXX
7430-K	N/A	15396EXXX	15396EXXX	N/A	15396EXXX
CSS 2	N/A	N/A	N/A	15378EXXX	N/A
CSS 2/DC	N/A	N/A	15378EXXX	N/A	15378EXXX
PHU	N/A	N/A	15378EXXX	N/A	15378EXXX
6586-A 6588-A 6588-TA	N/A	N/A	N/A	15378EXXX	N/A
6587-A 6589-A 6589-TA	N/A	N/A	N/A	N/A	15378EXXX

This matrix should be utilized to select external/daisy-chain cables required for your particular configuration. Select the processor, host bus adapter, or device you are cabling FROM in the left column. Move across matrix to column that contains the device you are cabling to.
Remember, total SCSI bus length must remain within 19.6 ft.

Cables:

AV 100/200/300 to 1st SCSI chassis: (DB-50 to CHAMP-50)

15377E003 - 3 ft. Single Ended SCSI Cable
15377E005 - 5 ft. Single Ended SCSI Cable
15377E010 - 10 ft. Single Ended SCSI Cable
15377E015 - 15 ft. Single Ended SCSI Cable

7430 Dual-channel Host Bus Adapter to 1st SCSI chassis: (P&S-50 to CHAMP-50)

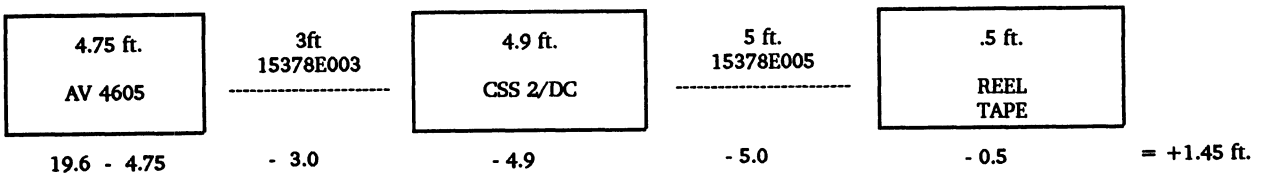
15396E005 - Universal SCSI Cable
15396E010 - Universal SCSI Cable

AV 400/530/4300/4600/5200+/7000+ (internal bus) to 1st SCSI chassis, early model 7421-V/-W Host Bus Adapter, and all SCSI device chassis to chassis daisy-chain cables: (CHAMP-50 to CHAMP-50)

15378E001 - 1.3 ft. Single Ended SCSI Cable
15378E003 - 3 ft. Single Ended SCSI Cable
15378E005 - 5 ft. Single Ended SCSI Cable
15378E010 - 10 ft. Single Ended SCSI Cable
15378E015 - 15 ft. Single Ended SCSI Cable

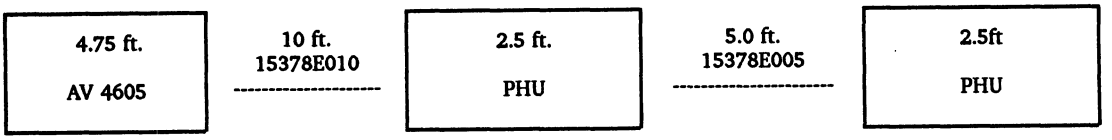
SCSI SINGLE-ENDED BUS CONFIGURATION EXAMPLES

EXAMPLE #1 (LEGAL)



19.6 - 4.75 - 3.0 - 4.9 - 5.0 - 0.5 = +1.45 ft.

EXAMPLE #2 (ILLEGAL)



19.6 - 4.75 - 10.0 - 2.5 - 5.0 - 2.5 = - 5.65 ft.

To determine whether your configuration is legal, add up all associated bus lengths and subtract from 19.6 ft. If remainder is positive, then the configuration is legal. This is true for office and rackmount systems.

For a listing of all legal Single-Ended SCSI bus configurations based on AViiON processor type, see Legal SCSI Configuration tables in this section.

LEGAL SINGLE-ENDED SCSI CONFIGURATION TABLES

Each row defines a legal configuration. Locate the row that mirrors the required processor/peripheral chassis mix, and add the cables listed to your order. Care should be taken to ensure cable lengths listed will conform to the customer's installation requirements.

DESKTOP

PROCESSOR	PROCESSOR TO DEVICE INTERFACE CABLE	1ST SCSI PERIPHERAL CHASSIS	DEVICE TO DEVICE DAISY-CHAIN CABLE	2ND SCSI PERIPHERAL CHASSIS
AV 100, 200, 300	15377E005	CSS 2/DC		
AV 100, 200, 300	15377E005	CSS 2/DC	15378E003	CSS 2
AV 100, 200, 300	15377E005	CSS 2/DC	15378E005	PHU
AV 100, 200, 300	15377E005	CSS 2/DC	15378E005	REEL TAPE **
AV 100, 200, 300	15377E010	CSS 2/DC		
AV 100, 200, 300	15377E005	PHU	15378E001	PHU *
AV 100, 200, 300	15377E005	PHU	15378E003	REEL TAPE **
AV 100, 200, 300	15377E005	PHU	15378E001	PHU *
AV 100, 200, 300	15377E005	PHU	15378E003	REEL TAPE **
AV 100, 200, 300	15377E010	PHU		
AV 100, 200, 300	15377E003	REEL TAPE		
AV 100, 200, 300	15377E003	REEL TAPE	15378E003	REEL TAPE **
AV 100, 200, 300	15377E005	REEL TAPE		
AV 100, 200, 300	15377E005	REEL TAPE	15378E003	REEL TAPE **
AV 100, 200, 300	15377E010	REEL TAPE		
AV 100, 200, 300	15377E010	REEL TAPE	15378E003	REEL TAPE **

* **A third PHU may be added by configuring an additional 15378E001 daisy-chain cable.**
A Reel Tape may be added by configuring an additional 15378E003 daisy-chain cable.

** **A Reel Tape may be added by configuring an additional 15378E003 daisy-chain cable.**

LEGAL SINGLE-ENDED SCSI CONFIGURATION TABLES (Continued)

RACKMOUNT

PROCESSOR –> INTERFACE	INTERFACE –> CABLE	1ST SCSI –> CHASSIS	DAISY-CHAIN –> CABLE	2ND SCSI CHASSIS
DUAL-CHANNEL HOST BUS ADAPTER: (20-Slot and 10-Slot Chassis)				
7430 HBA 7430 HBA 7430 HBA **	15396E005 15396E005 15396E010	CSS2 CSS2 CSS3	15378E005	REEL TAPE
7430 HBA 7430 HBA 7430 HBA **	15396E005 15396E005 15396E010	REEL TAPE REEL TAPE REEL TAPE	15378E005	REEL TAPE
EARLY MODEL SINGLE-CHANNEL HOST BUS ADAPTER: **20-Slot Chassis:**				
7421-W HBA 7421-W HBA 7421-W HBA *	15378E005 15378E005 15378E010	CSS2 CSS2 CSS2	15378E005	REEL TAPE
7421-W HBA 7421-W HBA 7421-W HBA *	15378E005 15378E005 15378E010	REEL TAPE REEL TAPE REEL TAPE	15378E005	REEL TAPE
10-Slot Chassis:				
7421-V HBA 7421-V HBA 7421-V HBA *	15378E005 15378E005 15378E010	CSS2 CSS2 CSS2	15378E003	REEL TAPE
7421-V HBA 7421-V HBA 7421-V HBA **	15378E005 15378E005 15378E010	REEL TAPE REEL TAPE REEL TAPE	15378E003	REEL TAPE

* SHOULD ONLY BE ORDERED FOR SYSTEM EXPANSION ORDERS THAT WILL REQUIRE THE CSS2 CHASSIS TO BE MOUNTED IN A BAY ADJACENT TO THE PROCESSOR BAY. IF POSSIBLE, CSS 2 CHASSIS SHOULD ONLY SUPPORT NON-MEDIA LOAD DEVICE CONFIGURATIONS DUE TO PLACEMENT OF THE CHASSIS (NOT THE MOST USER FRIENDLY POSITION).

** REEL TAPES SHOULD BE SUPPORTED IN THE PROCESSOR BAY. A 10ft. CABLE MAY BE UTILIZED TO SUPPORT ADJACENT BAY CONFIGURATION OF A STAND-ALONE DRIVE, BUT DRIVE WILL NOT BE PLACED IN THE MOST USER FRIENDLY POSITION.

LEGAL SINGLE-ENDED SCSI CONFIGURATION TABLES (Continued)

Each row defines a legal configuration. Locate the row that mirrors the required processor/peripheral chassis mix, and add the cables listed to your order. Care should be taken to ensure cable lengths listed will conform to the customer's installation requirements.

DESKSIDE
(AV 400/530/4300/4600)

PROCESSOR	PROCESSOR TO DEVICE INTERFACE CABLE	1ST SCSI PERIPHERAL CHASSIS	DEVICE TO DEVICE DAISY-CHAIN CABLE	2ND SCSI PERIPHERAL CHASSIS
AV 400, 530, 4300, 4600	15378E003	CSS2/DC		
AV 400, 530, 4300, 4600	15378E003	CSS2/DC	15378E005	REEL TAPE
AV 400, 530, 4300, 4600	15378E005	CSS2/DC		
AV 400, 530, 4300, 4600	15378E010	CSS2/DC		
AV 400, 530, 4300, 4600	15378E005	PHU	15378E001	PHU **
AV 400, 530, 4300, 4600	15378E005	PHU	15378E003	REEL TAPE **
AV 400, 530, 4300, 4600	15378E010	PHU		
AV 400, 530, 4300, 4600	15378E005	REEL TAPE		
AV 400, 530, 4300, 4600	15378E005	REEL TAPE	15378E003	REEL TAPE
AV 400, 530, 4300, 4600	15378E010	REEL TAPE		
AV 400, 530, 4300, 4600	15378E010	REEL TAPE	15378E003	REEL TAPE
Add-On 7423				
AV 4600	15378E003	CSS2/DC		
AV 4600	15378E003	CSS2/DC	15378E003	CSS2/DC
AV 4600	15378E003	CSS2/DC	15378E005	PHU **
AV 4600	15378E003	CSS2/DC	15378E005	REEL TAPE **
AV 4600	15378E005	CSS2/DC		
AV 4600	15378E005	CSS2/DC	15378E003	CSS2/DC
AV 4600	15378E005	CSS2/DC	15378E005	PHU
AV 4600	15378E005	CSS2/DC	15378E005	REEL TAPE **
AV 4600	15378E010	CSS2/DC		
AV 4600	15378E005	PHU		
AV 4600	15378E005	PHU	15378E001	PHU *
AV 4600	15378E005	PHU	15378E003	REEL TAPE **
AV 4600	15378E010	PHU		
AV 4600	15378E010	PHU	15378E001	PHU
AV 4600	15378E010	PHU	15378E003	REEL TAPE
AV 4600	15378E015	PHU		
AV 4600	15378E005	REEL TAPE		
AV 4600	15378E005	REEL TAPE	15378E003	REEL TAPE **
AV 4600	15378E010	REEL TAPE		
AV 4600	15378E010	REEL TAPE	15378E003	REEL TAPE **
AV 4600	15378E015	REEL TAPE		

* **A third PHU may be added by configuring an additional 15378E001 daisy-chain cable.**
A Reel Tape may be added by configuring an additional 15378E003 daisy-chain cable.

** **A Reel Tape may be added by configuring an additional 15378E003 daisy-chain cable.**

Note: 1. "Add-On 7423" specifies an add-on 2nd SCSI interface option ordered as a separate line item.

LEGAL SINGLE-ENDED SCSI CONFIGURATION TABLES (Continued)

AV 530, AV 4600 7430-K DUAL CHANNEL VME SCSI 2 ADAPTER

PROCESSOR INTERFACE	INTERFACE CABLE	1ST SCSI CHASSIS	DAISY-CHAIN CABLE	2ND SCSI CHASSIS
7430-K	15396E005	CSS2/DC		
7430-K	15396E005	CSS2/DC	15378E003	CSS2/DC
7430-K	15396E005	CSS2/DC	15378E005	PHU
7430-K	15396E005	CSS2/DC	15378E005	REEL TAPE **
7430-K	15396E010	CSS2/DC		
7430-K	15396E005	PHU	15378E001	PHU *
7430-K	15396E005	PHU	15378E003	REEL TAPE **
7430-K	15396E010	PHU		
7430-K	15396E005	REEL TAPE		
7430-K	15396E005	REEL TAPE	15378E003	REEL TAPE
7430-K	15396E010	REEL TAPE		
7430-K	15396E010	REEL TAPE	15378E003	REEL TAPE

* **A third PHU may be added by configuring an additional 15378E001 daisy-chain cable. (3.8')**
A Reel Tape may be added by configuring an additional 15378E003 daisy-chain cable. (3.5')

** **A Reel Tape may be added by configuring an additional 15378E003 daisy-chain cable. (3.5')**

LEGAL SINGLE-ENDED SCSI CONFIGURATION TABLES (Continued)

Each row defines a legal configuration. Locate the row that mirrors the required processor/peripheral chassis mix, and add the cables listed to your order. Care should be taken to ensure cable lengths listed will conform to the customer's installation requirements.

DESKSIDE
(AV 5200+/7000+)

PROCESSOR -->	INTERFACE --> CABLE	1ST SCSI --> CHASSIS	DAISY-CHAIN --> CABLE	2ND SCSI CHASSIS
Internal/External Channel provided by bundled 7430 HBA				
AV 5200+	15378E005	REEL TAPE		
AV 7000+	15378E005	REEL TAPE		
Add-On 7430 or 2nd Channel of bundled 7430				
7430	15396E005	CSS 2/DC		
7430	15396E005	CSS 2/DC	15378E005	REEL TAPE
7430	15396E010	CSS 2/DC		
7430	15396E005	REEL TAPE		
7430	15396E005	REEL TAPE	15378E003	REEL TAPE
7430	15396E010	REEL TAPE		
7430	15396E010	REEL TAPE	15378E003	REEL TAPE
Early Model 7421				
7421	15378E005	CSS 2/DC		
7421	15378E005	CSS 2DC	15378E005	REEL TAPE
7421	15378E010	CSS 2/DC		
7421	15378E005	REEL TAPE		
7421	15378E005	REEL TAPE	15378E003	REEL TAPE
7421	15378E010	REEL TAPE		
7421	15378E010	REEL TAPE	15378E003	REEL TAPE

MODULAR PERIPHERAL SUPPORT

Data General offers a wide variety of modular mass storage peripherals that may be installed in a processor chassis or in an available external peripheral chassis. These devices will require an available Half-Height (HH) or Full-Height (FH) chassis slot. Some of these peripherals utilize adapter boards as interface converters. Adapter boards may utilize a HH device slot, depending on where the peripheral device is configured.

* Modular peripherals are driven by a system board resident or VME host adapter SCSI interface. Two versions of this interface are available. (Single-ended SCSI and Differential SCSI)

* Modular peripherals are available packaged in Add-On external peripheral chassis, or as Add-In modules to existing external peripheral and processor chassis.

* The following table defines the model suffix scheme used to identify the Add-In peripheral/chassis relationship. The peripheral model includes the necessary mounting hardware to install device in the specified chassis.

PROCESSOR CHASSIS MOUNT

PROCESSOR	DEVICE SUFFIX
AV 5200, 5200+, 7000, 7000+	- I
AV 400, 530, 3200, 4000, 4300, 4600	- F

PERIPHERAL CHASSIS MOUNT

PERIPHERAL CHASSIS	DEVICE SUFFIX
CLARiiON Subsystem	-ZA
Combined Storage Subsystem 2/2DC	-G
Peripheral Housing Unit (PHU)	-E

Example:

G6677-F - 525MB Cartridge Tape for installation in an AV 530 Deskside Workstation.

G6677-G - 525MB Cartridge Tape for installation in a Combined Storage Subsystem 2 or 2/DC.

SINGLE-ENDED SCSI ADD-IN DEVICE MATRIX

Select Drive model from left column and assign suffix applicable to the Processor/Peripheral where it will be installed. Where a single suffix is listed, all associated peripherals are supported. Winchester Disks may require a G (color) prefix depending on application.

ADD-IN PERIPHERAL	AV 400	AV 530	AV 3200, AV 4000	AV 4300, AV 4600	AV 5200+, AV 7000+	PHU	CSS2/2DC
WINCHESTER DISKS:							
1.4GB FH (6716)		-F		-F	-I		
1.0GB FH (6685)		-F		-F	-I		
662MB FH (6554)	-F	-F	-F	-F	-I	-E	-G
520MB HH (6796)		-F		-F	-I		
332MB HH (6662)		-F		-F	N/A		
179MB HH (6539)		N/A		N/A	N/A		
DISKETTE DRIVES:							
1.44MB HH (G6562)	-F/-FX	-F/-FX	-F	-F	-I/-IX	-E/-EX	-G/-GX
1.2MB HH (G6563)							
TAPE DRIVES:							
525MB HH (G6677)	-F	-F	-F	-F	-I	-E	-G
150MB HH (G6577)	-F	N/A	-F	N/A	N/A	-E	-G
2GB 8mm FH (G6591)	-F	-F	N/A	N/A	N/A	-E	N/A
2GB 8mm FH (G6590)	N/A	N/A	N/A	N/A	-I	N/A	-G
4mm DAT HH (G6762)	-F	-F	-F	-F	-I	-E	-G
CD ROM:							
600MB HH (G6629)	-F	-F	-F	-F	-I	-E	-G
OPTICAL DISK:							
600MB FH (G6627)	N/A	N/A	N/A	N/A	-I	-E	-G/-GX

CLARiiON 2000 DISK ARRAY/AV

The CLARiiON 2000 Disk Array Subsystem is housed in a 14" high rackmount (R) or 25" high deskside (D) chassis. Each chassis supports a maximum of twenty 3.5" Winchester disks. Communication with the processor is accomplished via a host resident 7430 or 7430-K Dual-Channel Differential, Fast Narrow (10MB/sec, 8 bit) VME SCSI 2 Host Bus Adapter (VSA), which interfaces with the disk array subsystem resident Storage-control Processor (SP).

The 7430/7430-K VSA has two fast SCSI 2 channels available that may be selected for either single-ended or differential SCSI bus support. Each bus on the dual port VSA host bus adapter (HBA), that interfaces with CLARiiON must be configured for differential SCSI interface support. Model 7430 has a 9u format and may be configured on AV 5200+, AV6200, AV 6200-20, AV 7000+, and AV 8000 series processors. Model 7430-K has a 6u format for configuration in the AV 530 and AV 4600 series systems.

The disk array chassis resident Storage-control Processor (SP) which interfaces with the subsystem disks, appears as one of seven possible SCSI targets to the host resident VSA. Two SPs may be configured per array subsystem chassis. The SPs may be daisy-chained for support on a single SCSI 2 bus or accessed separately (recommended configuration) by two separate SCSI 2 channels. Access to the disk drives within the chassis will be divided between the two SPs. A maximum of two disk array subsystem chassis (4 SPs maximum) may be connected on any single SCSI channel.

All disk drives contain repair under power capabilities which allow them to be replaced by the user while the system is under power and operational. A single drive in each array group may fail without operational impact or loss of data in a RAID 3/5 group or RAID 1 mirrored pair configuration. The disk array subsystem offers optional redundant configuration for SP, HBA, and DC power components.

The subsystem, if configured with two SPs, allows hot failover in the case of a single SP failure. Three DC power supplies are included to support power requirements of the chassis, and to allow for a single supply failure. The cooling system has built in redundancy allowing for a 50% fan failure. The SP, fan/s, or failing DC supply may be replaced on-line with no operational impact and are all customer installable.

Access to the array subsystem's configuration and real time status displays requires configuration of an array console. This console (Dasher D/413, D/462E, D/463, or D/1400i) is connected to the array subsystem via an array console port located on each SP. Two SPs may be dual ported to one array console via connection to the console's auxiliary port. If the configuration contains only one SP, the auxiliary port on the "System Console" may be utilized. Alternatively, the console port on the SP may be interfaced through a termserver in a distributed processing environment.

CLARiiON/AV is supported on AV 530, AV 4600, AV 5200+, AV 6200, AV 6200-20, AV 7000+, and AV 8000 series processors.

Major Features

- High performance commercial application-oriented storage
- High availability features
- Scalable storage
- Flexible configuration
- SCSI 2 interface
- Customer replaceable components
- Small footprint
- Low cost of ownership

SOFTWARE

- Supported under DG/UX minimum revision 5.4.2
- Requires AV P.M.I. (Peripheral Microcode Installer). Initial microcode is installed in EPROM on each, and a copy (R057AZN27A) is shipped with each subsystem/model. R057AZN48A Microcode Subscription Service model is recommended, renewable on a yearly basis.

STEP 1 ARRAY CONFIGURATION

Determine type and number of disk storage configurations (array groups, individual units) required to support customer's applications. Specify drive size (500MB or 1.2MB) that should be utilized to build the required array configuration/s. For high performance users with less concern for total subsystem capacity, 500MB drives offer the best performance alternative for a given capacity. For users concerned more with maximum total capacity, the 1.2GB drives provide the best alternative. Both 500MB and 1.2GB disks may be supported within the same CLARiiON chassis, but may not be mixed within the same array group.

CLARiiON subsystem performance is dependent on the configuration of the host system, CLARiiON subsystem, workload, database characteristics and/or application.

Array Configuration:

RAID 5 - The hardware writes to or reads from multiple modules (5 drives recommended) simultaneously. The hardware maintains parity information on all disks, and in the event of a single disk failure, has the ability to continue operation and rebuild information without operational impact. Each drive in the array is able to perform read requests on its own, increasing the number of simultaneous I/O operations. Since data and parity information is written on separate disks in separate operations, applications which involve heavy amounts of write operations will experience degradation in performance with RAID 5. However, the drives in the array not being written to can still perform read operations, contributing to overall I/O performance of the array group.

Recommended for applications:

- that require high data availability **(See Note 1)**
- where large volumes of data will be stored
- where many random read and write operations will occur for small data blocks (intensive, small block transfers where writes are approximately 33% or less of all I/O transfers)

RAID 3 - The hardware writes to or reads from multiple modules (4 drives) in parallel bytes. The fifth module is utilized strictly for parity information. One operation (read or write) is performed at a time, with all disks involved in the transaction.

Recommended for applications:

- that require high data availability **(See Note 1)**
- that support large contiguous block transfers

RAID 1 - The hardware writes the same information on each of two modules. (hardware mirrored pair)

Recommended for applications:

- that require high data availability **(See Note 1)**
- where speed of write access is important
- where total database size is small

RAID 0 - The hardware writes to or reads from multiple disk modules (3 to 16 drives) simultaneously. Parity information is not captured as in RAID 5.

Recommended for applications:

- where high data availability is not critical **(See Note 2)**
- where the best overall performance is required

Individual Unit - one module is bound as an individual unit

Recommended for applications:

- where high data availability is not critical **(See Note 2)**
- where speed of write access is important
- where lowest cost per MB of user storage is desired

Notes:

1. Drive Level High Availability:
   In RAID 1,3,and 5 configurations system operation will continue with the failure of a single drive within the array or mirror. The array/mirror will also handle a single internal SCSI bus failure if each drive in the array is bound to an independent internal SCSI channel.

2. Software Mirroring
   On these configurations "drive level" high availability may be supported via software mirroring. The software controls writing identical information to two modules (Individual Units) or disk stripes (RAID 0).

   A striped disk array (RAID 0), that is software mirrored, provides the best combination of performance and availability, but at the highest cost per Mbyte of data.

   Software mirroring allows the mirror to be broken so that one individual unit or disk group may be accessed for backup, while the other supports the live application. Hardware mirroring does not allow this operation.

   A disk array is usually more suitable than a disk mirror (hardware or software) for applications where high data availability, good performance, and efficient disk space usage are all of relatively equal importance.

STEP 2 SUBSYSTEM CONFIGURATION

RECOMMENDED CONFIGURATIONS:

The following CLARiiON disk array subsystem configurations are recommended.

These configurations are supported as defined in the MAPS/PLUS Vol.II, CLARiiON Disk Array section (pg.239-1).

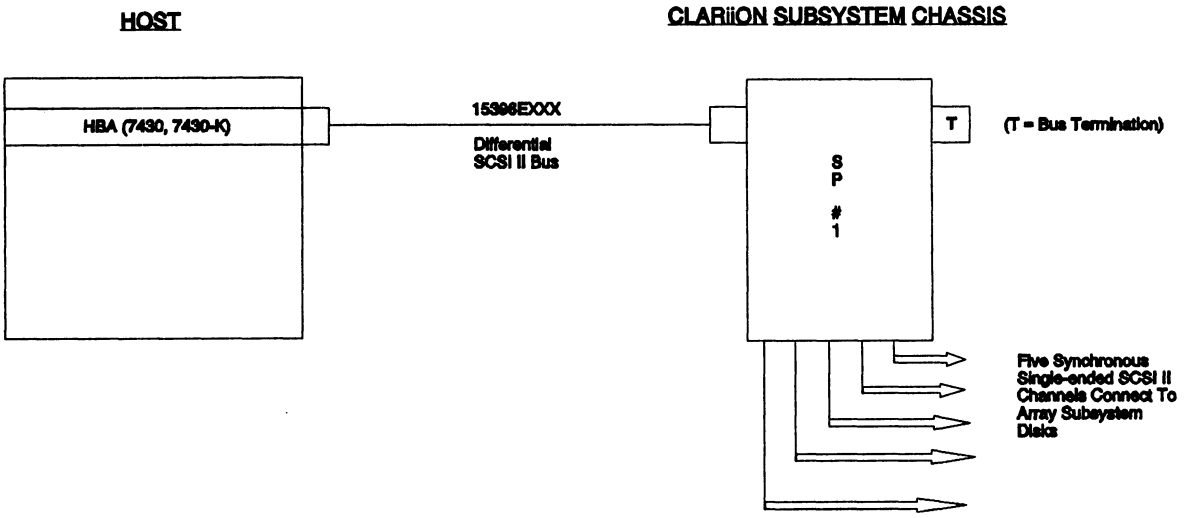
- The diagrams deal with one array subsystem chassis although actual configuration is not limited to two Storage-control Processors (SPs). Configuration of one chassis per channel, and one SP per channel is recommended.
- It is recommended that the SCSI channel be dedicated to CLARiiON disk array subsystem configuration only.
- The "T" in the following diagrams defines the point of SCSI bus termination.

Any configuration outside of these guidelines will require a Customer Configuration Instruction Sheet (CCIS). Contact your Sales Administrator for details on the CCIS process.

SINGLE HOST:

BASIC CONFIGURATION:
- single host
- single SCSI 2 channel (HBA)
- single SP

High Availability Components:
- drives
- fans
- DC power supplies



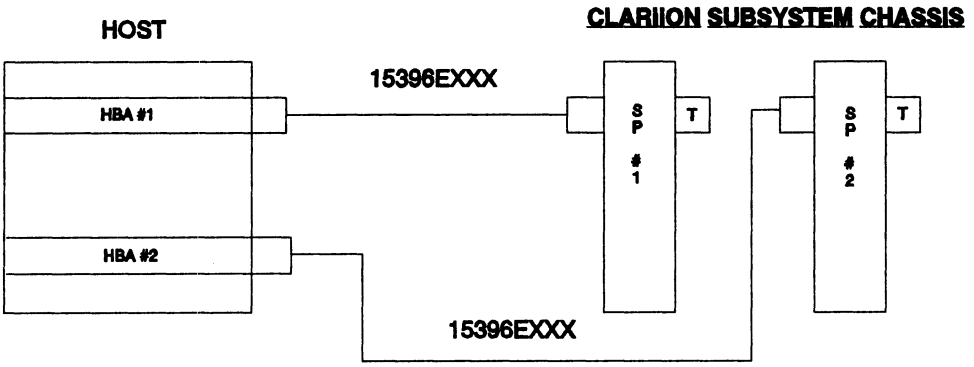
Note: AViiON packaged systems are available that include the basic subsystem components outlined above.

SINGLE HOST: (continued)

ENHANCED CONFIGURATION #1:
- single host
- two SCSI 2 channels (2 HBAs)
- two SPs

Failover:
- operator initiated for HBA
- and/or SP

High Availability Components:
- drives
- fans
- DC power supplies
- host bus adapter (HBA)
- storage-control processor (SP)



- Order Basic Subsystem components to support your disk array requirements.
- In addition, order models:

7427	-	Storage-control Processor (SP)
7430 or 7430-K	-	SCSI 2 host bus adapter
15396EXXX	-	External SCSI interface cable (order same length as "Basic Subsystem" cable)

DUAL HOST:

Dual Host Configuration Requirements:

- It is recommended that each host in the configuration be mounted in it's own 11200 series cabinet. Configuration issues may arise in support of additional rack mounted peripherals (Single-ended SCSI chassis in particular) if both host processors are installed in the same cabinet.

- In accordance with multiple host ordering guidelines, a separate release must be created for each host processor. Include the components of the basic disk array subsystem and the components identified in the "ENHANCED CONFIGURATION" section configuration diagrams as "primary host", on the primary host's release.

  Include the components identified in the "ENHANCED CONFIGURATION" section configuration diagrams as "secondary host", on the secondary host's release.

  Include a Customer Configuration Instruction Sheet (CCIS) to outline the desired system cabinet configuration. Include any existing peripheral equipment that will be migrated to the new system. Contact your Sales Administrator for CCIS procedures.

  A "SHIP AND CONFIGURE TEXT" must be added to all associated releases to insure correct dual host configuration.

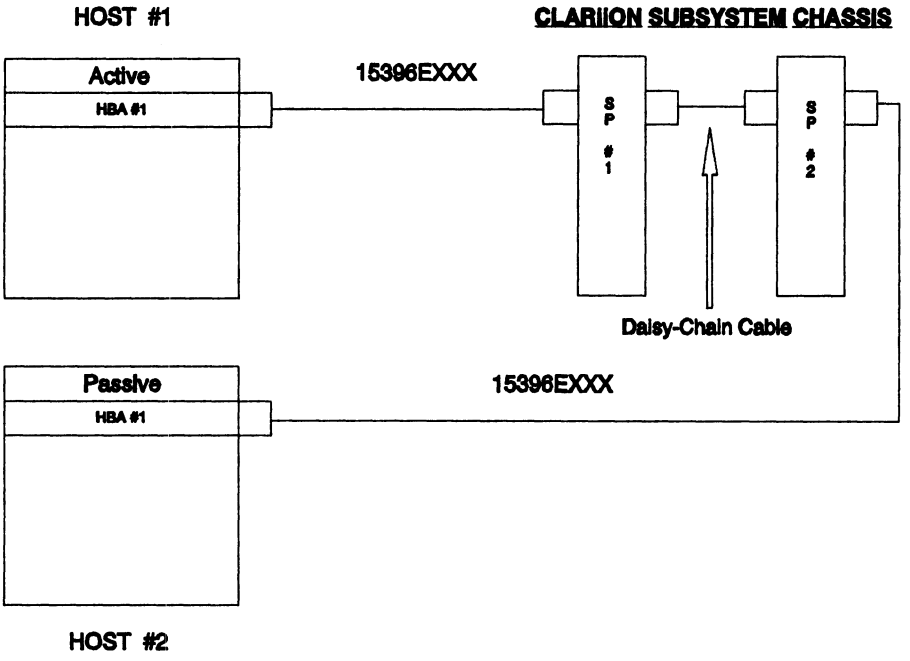
- Dual host configurations do not support servicing of a disabled host while the second host is active and attached to the disk array.

DUAL HOST CONFIGURATIONS:

ENHANCED CONFIGURATION #2:
- two host processors
- one dual initialed SCSI 2 channel
- two SPs

Failover:
- operator initiated for host, HBA, and SPs (Rev. 5.4.2)

High Availability Components:
- drives
- fans
- DC power supplies
- host bus adapter (HBA)
- storage-control processor (SP)
- host bus adapter (HBA)



- Primary Host - order the "Basic Subsystem" components.
- Secondary Host - order the following components on the release containing the secondary host.

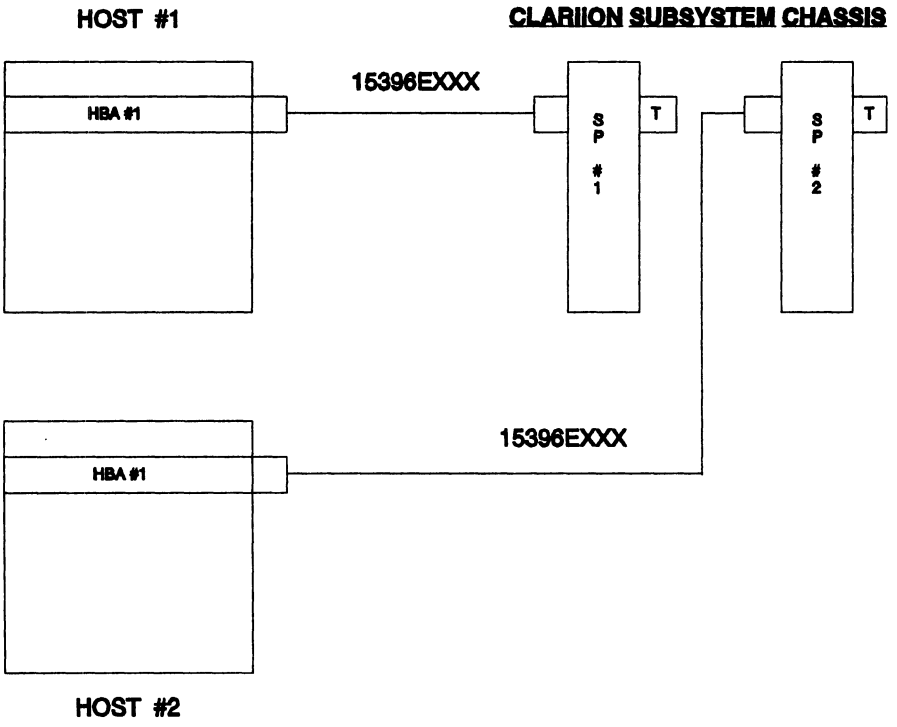
7427	-	Storage-control Processor (SP)
7430 or 7430-K	-	SCSI 2 host bus adapter
15396EXXX	-	External SCSI interface cable (order length required to support secondary host to CLARiiON subsystem connect).

DUAL HOST: (Continued)

ENHANCED CONFIGURATION #3:
- two host processors
- two SCSI 2 channels (1 channel per host)
- two SPs

Failover:
- operator intervention required for host, HBA, and SP failure

High Availability Components:
- drives
- fans
- DC power supplies
- host bus adapter (HBA)
- storage-control processor (SP)



- Primary Host - order the "Basic Subsystem" components.
- Secondary Host - order the following components on the release containing the secondary host.

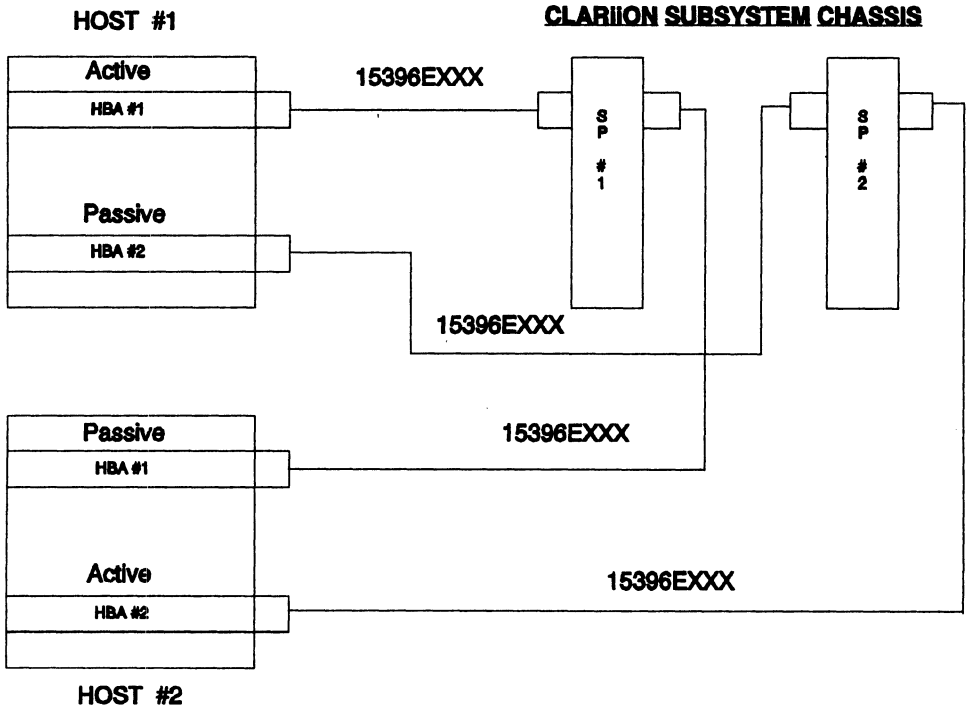
7427	-	Storage-control Processor (SP)
7430 or 7430-K	-	SCSI 2 host bus adapter
15324EXXX	-	External SCSI interface cable (order length required to support secondary host to CLARiiON subsystem connect)

DUAL HOST: (Continued)

ENHANCED CONFIGURATION #4:
- two host processors
- two dual initiated SCSI 2 channels (two channels per host)
- two SPs

High Availability Components:
- drives
- fans
- DC power supplies
- host bus adapter (HBA)
- storage-control processor (SP)

Failover:
- only one host on each SCSI channel may be active at any one time
- operator intervention required for host, HBA, and SP failure



- Primary Host - order the "Basic Subsystem" components.
  - In addition, order models:

7430	-	SCSI-2 host bus adapter
15396EXXX	-	External SCSI interface cable (order same length as "Basic Subsystem" cable)

- Secondary Host - order the following components on the release containing the secondary host.

7427	-	Storage-control Processor (SP)
(Qty 2) 7430	-	SCSI 2 host bus adapter
(Qty 2) 15396EXXX	-	External SCSI interface cable (order length required to support secondary host to CLARiiON subsystem connect)

SAMPLE CONFIGURATION

STEP 1: ARRAY CONFIGURATION

Requirements:

	Storage Requirement	Array Configuration	Drive Count	Model #/Qty
Arrays:				
Array #1:	2.0GB storage	RAID 5	5 x 500MB	7906-E (1)
Array #2:	4.8GB storage	RAID 3	5 x 1.2GB	7916-A (1)
Array #3:	1.2GB storage	RAID 1	2 x 1.2GB	7916-ZA(2)
Array #4:	1.5GB storage	RAID 0	3 x 500MB	7908-ZA(3)
Individual Units:				
Unit #1:	1.2GB storage		1 x 1.2GB	7916-ZA(1)

STEP 2: SUBSYSTEM CONFIGURATION

An AV 6200-20 CLARiiON Enhanced Configuration #2 subsystem with the above storage configuration requirements would include the following models:

Qty	Model	Description
Fast SCSI 2 Host Bus Adapter (HBA)		
(1)	7430	- Differential SCSI 2 host bus adapter
CLARiiON Disk Array Subsystem		
(1)	7906-@	- CLARiiON 2000R subsystem rackmount chassis, single SP, and 2.5GB (5 x 500MB) hot repair disk drives, 25ft. array console cable and adapter kit
Additional Disk Array Subsystem Components		
(1)	7916-A	- 6.0GB hot repair disk array group (5 x 1.2GB drives)
(3)	7916-ZA	- 1.2GB add-in hot repair disk drive
(3)	7908-ZA	- 500MB add-in hot repair disk drive
Secondary Subsystem-control Processor (SP)		
(1)	7427	- Add-In Subsystem-control Processor, 25ft. array console cable
HBA To CLARiiON Subsystem External Cable		
(2)	15396E010	- External SCSI bus cable
Disk Array Subsystem Array Console		
(1)	G6693G-AX@	- Dasher/D1400i intelligent display terminal, no cable

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

CLARiiON DISK ARRAY SUBSYSTEM COMPONENTS

To configure the basic CLARiiON Disk Subsystem a Fast, Narrow (10MB/sec, 8 bit) Dual Channel VME SCSI 2 host bus adapter (VSA), SCSI external cable, and desired packaged subsystem chassis must be ordered as separate line items.

DUAL BUS, VME, FAST SCSI 2 ADAPTER (VSA)

A minimum of one 7430 or 7430-K VME Fast SCSI 2 Host Bus Adapter (VSA) per host, is required for CLARiiON chassis connection. Model 7430-K is for use on AV 530 and AV 4600 series systems, and model 7430 supports AV 5200+, AV 6200, AV 6200-20, AV 7000+, and AV 8000 series systems. The VSA supports two SCSI 2 channels. Each channel may be selected to support single-ended OR differential interface. If the single-ended interface is selected all devices/chassis configured on the channel MUST be single-ended models. The same holds true for differential configuration. Any channel supporting CLARiiON SP connection must be configured for differential SCSI.

It is recommended that in high availability configuration, only one channel on the VSA be utilized to support CLARiiON SP connection. In order to minimize a single point of failure, a second VSA may be configured, if supported. Additional SCSI channels available may be utilized to support other SCSI peripherals.

SCSI external cable/cables must be ordered as a separate line item to support connection to the CLARiiON chassis resident Storage-Control Processor (SP).

7430	Dual channel VME SCSI 2 Adapter for (AV 5200+/6200/6200-20/7000+/8000)	1,995	5	/NQ	2	A	Note 1	1 VME slot
7430-K	Dual channel VME SCSI 2 Adapter for (AV 4600, AV 530)	1,995	5	4	2	A	Note 1	1 VME slot

Notes:

1. Maximum Dual channel VME, SCSI 2 Adapter Support:

AV 4600, AV 530	-	1 HBA, 2 channels
AV 5200+/7000+	-	3 HBAs, 5 channels**
AV 6200	-	6 HBAs, 12 channels
AV 6200-20/8000	-	8 HBAs, 16 channels

   ** One dual channel VSA is included with all AV 5200+ models. One channel is utilized to support the host's internal SCSI bus.

   Total SCSI Host Bus Adapter (HBA)support, including single bus SCSI HBAs (7421/7422) and early model SCSI HBAs (7404/7415) is:

2. (Continued)

AV 4600	- 4	CHANNELS - one system board resident, one from 7423 add-on SCSI/LAN option, and 2 from the dual port channel HDA (AV 4600 does not support any other HBAs)
AV 530	- 3	CHANNELS - one system board resident, and two from the Dual channel HBA.
AV 5200+/7000+	- 6	CHANNELS - dual channel 7430 HBA bundled in package for support of internal device, and any combination of available HBAs equaling 4 channels.
AV 6200	- 6	HBAs - any combination of available HBAs.
AV 6200-20/8000	- 8	HBAs - any combination of available HBAs.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

CLARiiON STORAGE SUBSYSTEM

CLARiiON Storage Subsystems include a 20-Drive 3.5" differential SCSI disk array chassis, available in rackmount or deskside versions, configured with a five drive (500MB or 1.2GB drives) array group. Each package includes a CLARiiON resident 7427 SP with current revision of SP microcode installed (2 configurable), which interfaces with a host resident 7430/7430-K Dual Bus VME SCSI II Adapter (VSA). Any channel supporting SP connection must be configured for differential SCSI interface. VSA, and SCSI interface cables, must be ordered as separate line items.

1.2GB Drive Configuration (6.0GB):

Rack Mount

7910-@	CLARiiON rackmount chassis with (5) 1.2GB 3.5" hot repair disk drives (6.0GB), 7427 array SP	46,000	57.50	23.50	2	C	Note 5	14" RM

Deskside:

7911-@	CLARiiON deskside chassis with (5) 1.2GB 3.5" hot repair disk drives (6.0GB), 7427 array SP	46,000	57.50	23.50	2	C	Note 5	DS

500MB Drive Configuration (2.5GB):

Rack Mount:

7906-@	CLARiiON rackmount chassis with (5) 500MB 3.5" hot repair disk drives (2.5GB), 7427 array SP	28,000	40	16	2	C	Note 5	14" RM

Deskside:

7907-@	CLARiiON deskside chassis with (5) 500MB 3.5" hot repair disk drives (2.5GB), 7427 array SP	28,000	40	16	2	C		DS

Notes:

1. In general, rackmount processors should utilize the rackmount chassis, and desktop/deskside processors should utilize the deskside chassis. However, due to the flexibility allowed by the 81ft. bus length supported by the differential SCSI interface, configuration of rack mount chassis on desktop style systems, and deskside chassis on rackmount style systems is allowed. Care must still be taken to insure that SCSI bus length is not exceeded, and that cable lengths are adequate to support processor to CLARiiON chassis connection.
2. Each CLARiiON subsystem chassis will support a maximum of twenty 3.5" disk drives.
3. The base CLARiiON subsystem models will support a maximum of two (one add-on) 7427 SPs.
4. A maximum of two CLARiiON subsystem chassis (four possible SPs) per VSA is recommended. It is also recommended that the SCSI channel be dedicated to CLARiiON subsystem configuration. Any configuration outside of these limits will require a Customer Configuration Instruction Sheet (CCIS). Contact your Sales Administrator for details on the CCIS process.
5. In RAID (Redundant Array of Inexpensive Disks) configurations, all storage capacity in each array does not count towards "usable customer storage" Some storage space is utilized to support parity check data which allows rebuild of failed disk without operational impact.
6. Replace AC Power Suffix (-@) with:

   For Rackmount Versions:

   (-E) - 120V/60Hz
   (-E1) - 100V/50 or 60Hz
   (-F2) - 220V/50Hz
   (-F4) - 240/50Hz

   For further information see the "NEW MODEL COMPONENT/CABINET AC POWER MATRIX" in the Introduction.

   For Deskside Versions:

   (Blank) - 120V/60Hz
   (-1) - 100V/50 or 60Hz
   (-5,-6) - 240V/50Hz
   (-7,-8,-9,-0) - 220V/50Hz

   In addition to power requirements, these suffixes indicate line cord dependencies to specific country requirements. For further information see the "POWER CORD DEPENDENT DEVICE MATRIX" in the Introduction.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

CLARiiON DUAL CHANNEL VSA SCSI INTERFACE CABLES

An external SCSI cable (15396EXXX) is required for each 7430/7430-K VME SCSI Adapter to array subsystem SP connection. If there is a requirement for the CLARiiON chassis to be located at an extended distance from the processor bay, a 40ft. cable length is available. Keep in mind that total bus length may not exceed 81ft. If configuration of two subsystem chassis on the same bus is desired (SP in chassis #1 to SP in chassis #2) a 15325EXXX daisy-chain cable must be ordered.

The 7430/7430-K VSA host to peripheral cable (15396EXXX) is "universal", and may be utilized to support both differential AND single-ended interface connection. Peripheral chassis to chassis daisy-chain cables however, still require a different cable to support each interface (15325EXXX for differential, 15378EXXX for single ended). As always all other components of any SCSI channel (VSA interface, peripheral chassis, add-in peripheral device models, and daisy-chain cables), must be either single-ended OR differential. The two interfaces may not be mixed on any single channel.

VSA to SP Interface Cables:

15396E005	5ft. universal SCSI cable	100	N/A	N/A	B	Note 1	
15396E010	10ft. universal SCSI cable	125	N/A	N/A	B	Note 1	
15396E020	20ft. universal SCSI cable	150	N/A	N/A	B	Note 1	
15396E040	40ft. universal SCSI cable	190	N/A	N/A	B	Note 1	

CLARiiON Chassis to Chassis Daisy-Chain Cables:

15325E005	5ft. differential SCSI cable	90	N/A	N/A	B	Note 1	
15325E010	10ft. differential SCSI cable	115	N/A	N/A	B	Note 1	
15325E020	20ft. differential SCSI cable	165	N/A	N/A	B	Note 1	
15325E040	40ft. differential SCSI cable	255	N/A	N/A	B	Note 1	

Notes:

1. If daisy-chaining CLARiiON chassis (two maximum), or dual porting SPs, total supported bus length may be a factor. Differential SCSI supports bus lengths to 81ft. Total bus length, including VSA internal cable, subsystem chassis internal cable length (8ft. for single SP and 15ft. for dual SP configuration), external VSA to array subsystem cable (15396EXXX), and 15325EXXX daisy-chain cable if configured, must not exceed 81ft.

1. (Continued)

   If the array subsystem bus is dual ported, the secondary VSA's internal cable and external cable (15396EXXX), must also be included.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

ADD-IN ARRAY DISK DRIVES

Includes 500MB or 1.2GB disk drives and repair-under-power modules.

5-Drive Array Group:

500MB Drives:

7908-A	(5) 500MB hot repair disk drive modules (2.5GB) for installation in the deskside or rackmount disk array chassis	20,000	37.50	15.50	2	C		

1.2GB Drives:

7916-A	(5) 1.2GB hot repair disk drive modules (6.0GB) for installation in the deskside or rackmount disk array chassis	34,000	50	20	2	C	Note 2	

Single Drive:

7908-ZA	500MB hot repair disk drive and module	4,000	7.50	3.30	2	C		
7916-ZA	1.2GB hot repair disk drive and module	6,800	10	4.20	2	C	Note 2	

Notes:

1. Each CLARiiON subsystem chassis supports a maximum of 20 disk drives.
2. When upgrading existing CLARiiON subsystems with 1.2GB drives, insure that the subsystem chassis contains a full compliment of 3 VSC power supplies (7620), and that Disk Array Microcode Loader (R057AZNXXX) is at revision 4.61 or greater.

SYSTEM-CONTROL PROCESSOR

Each CLARiiON storage subsystem model includes a System-control Processor (SP) for primary VME SCSI adapter (VSA) to CLARiiON subsystem connection. An additional SP may be configured within each array chassis. Additional SPs may be configured in conjunction with additional VSA channels, to support single or dual host Extended Configurations. VSA to SP external SCSI cables (15396EXXX), and primary array subsystem chassis to secondary array subsystem chassis daisy-chain cables (15325EXXX) if required, must be ordered as separate line items. The SP includes a 25ft RS232 cable (1340), for array console connection, and a daisy-chain cable for counting SP's within the same chassis.

7427	CLARiiON System-control Processor	7,500	30	21	2	C		

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

ARRAY CONSOLE:

Access to the array's configuration and real time status displays requires configuration of an array console. This console (Dasher ASCI D413, D462E, D/463, or D1400i) is connected to the array via an array console port located on the SP. In dual SP configurations, both SPs may be dual ported to one array console. Models 6683, 6684, and 6504 include a 6348 CEO style keyboard, model 6693 includes a 6448 PC/AT compatible keyboard. A 1340 25ft. array console cable is included with each CLARiiON subsystem and add-on SP model ordered to insure array console connection. For additional information on these models see the "TERMINALS" chapter.

Array Console:

6683A-X1@	D/413 intelligent display terminal, amber phosphor, no cable	545	6	4	6	F		
6683G-X1@	D/413 intelligent display terminal, green phosphor, no cable	545	6	4	6	F		
6684A-X1@	D/463 intelligent graphics display terminal, amber phosphor, no cable	995	7	4	6	F		
6684G-X1@	D/463 intelligent graphics display terminal, green phosphor, no cable	995	7	4	6	F		
6504W-X1@	D/462 DIN-compliant graphics display terminal, white phosphor, no cable	1,375	29	18	6	F		
6693G-X1@	D1400i Green Phosphor display terminal, no cable	525	6	4.50	6	F		
6693A-X1@	D1400i Amber Phosphor display terminal, no cable	525	6	4.50	6	F		
6693W-X1@	D1400i White Phosphor display terminal, no cable	525	6	4.50	6	F		

Array Console Cables:

1340-T	15ft. RS232-C serial interface cable	25	N/A	N/A	1	B		
1340	25ft. RS232-C serial interface cable	30	N/A	N/A		B		
1340-A	50ft. RS232-C serial interface cable	40	N/A	N/A		B		

Notes:

1 One console may be utilized for dual SP configurations. The array console cables (1340) are connected to the two available terminal ports.

Console Connection Scheme:

6683, 6684, 6504

The console's **primary asynchronous port** is a 25-pin female connector. 1340 series cables support this connection.

1. (Continued)

A **secondary asynchronous port,** (25-pin male connector), is available for secondary SP connection. This port requires a male to female adapter (15282D), to allow connection of the 1340 series cable. This adapter is included with each CLARiiON subsystem model ordered to insure secondary SP connectivity.

6693:

The console's **primary asynchronous port** is a 25-pin female connector. 1340 series cables support this connection.

A secondary asynchronous port (9-pin male connector), is available for secondary SP connection. This port requires a 9-pin to 25-pin adapter (15388B006) and a male to female adapter (15282D), to allow connection of the 1340 series cable. These adapters are included with each CLARiiON subsystem model ordered to insure secondary SP connectivity.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

ARRAY CONSOLE: (Continued)

Notes:

3. Suffixes:

   Font (!) = A,B,C,D,G,H,I,J,K,L,M,N,O,R

   For Font suffix definition see the Introduction or "Ordering Guidelines" in the Terminals chapter. Not all Font/Power combinations are available. See the Terminals chapter for additional information.

3. (Continued)

   AC Power (@)

   (Blank) - 120V/60Hz
   (-5,-6) - 240V/50Hz
   (-7,-8,-9,-0) - 220V/50Hz

   In addition to power requirements, these suffixes indicate line cord dependencies to specific country requirements. For further information see the "Power Cord Dependent Device Matrix" in the Introduction.

COMBINED STORAGE SUBSYSTEM 2 (CSS2)

Combined Storage Subsystem 2 consists of a rackmount chassis with 10 available Half-Height slots (or 5 Full-Height slots) that support up to 7 SCSI mass storage devices. Both Single-ended and Differential SCSI packages are available. CSS2 is supported on AV 6200, 6200-20 and AV 8000 rackmount processors.

SMALL COMPUTER SYSTEM INTERFACE (SCSI)

The SCSI interface is available in two versions, Single-ended and Differential. The functional difference between these two interfaces is the bus length supported. There are specific peripherals and cables associated with each of these interfaces. Components of differential subsystems may not be mixed with components of Single-ended Subsystems. Each SCSI interface may support up to seven mass storage peripheral devices. To support the CSS2 rackmount chassis, the AV 6200, 6200-20, and 8000 series processors utilize a VME dual channel SCSI 2 Host Bus Adapter (VSA). This host bus adapter (7430) has two Fast SCSI 2 channels available. Each channel may be selected to support either single-ended or differential interface. The Host Bus Adapter (HBA) resides in a processor VME chassis slot.

Major Features:

- Industry standard SCSI interface (Single-ended or Differential)
- Mass storage device configuration flexibility within a small package
- Asynchronous and synchronous mode SCSI bus support

CSS2 PACKAGE QUICK REFERENCE

Define storage requirement by matching disk, tape, and interface columns. Models listed in the "CSS2 PACKAGE MODEL #" column supply CSS2 chassis and associated SCSI peripheral.

CSS2 PACKAGE MODEL #	INTERFACE TYPE	DISK BASED					TAPE BASED			
		332MB	520MB	662MB	1.0GB	1.4GB	150MB	525MB	2GB 8mm	4mm DAT
Disk Based										
G6712-A@	Single-ended	X								
G6797-A@	Single-ended		X							
G6722-A@	Single-ended			X						
G6720-A@	Single-ended				X					
G6724-A@	Single-ended					X				
G6800-A@	Differential		X							
G6740-A@	Differential				X					
G6718-A@	Differential					X				
Tape Based										
G6750-A@	Single-ended						X			
G6754-A@	Single-ended							X		
G6758-A@	Single-ended								X	
G6763-A@	Single-ended									X

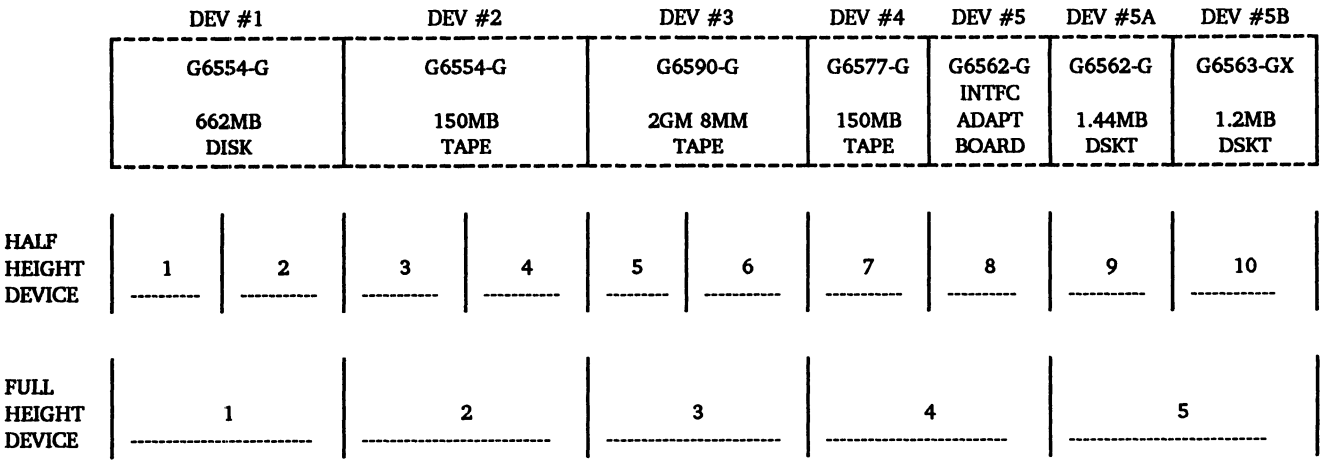
CSS2 ADD-IN DEVICE QUICK REFERENCE

These models are add-in SCSI peripherals for installation in an existing CSS2 chassis. Determine add-in peripherals required, and read to left. Order model listed in the "CSS2 ADD-IN MODEL #" column.

(FH) - Full-height Device (HH) - Half-Height Device

CSS2 ADD-IN MODEL #	INTERFACE TYPE	DISK					TAPE				FLOPPY		OPTICAL	CD ROM
		332MB	520MB	662MB	1.0GB	1.4GB	150MB	525MB	2.0GB 8mm	4mm DAT	1.44MB	1.2MB	600MB	600MB
Fixed Disk														
G6662-G (HH)	Single-ended	X												
G6796-G (HH)	Single-ended		X											
G6554-G (FH)	Single-ended			X										
G6685-G (FH)	Single-ended				X									
G6716-G (FH)	Single-ended					X								
G6799-G	Differential		X											
G6740-G (FH)	Differential				X									
G6718-G (FH)	Differential					X								
Tape														
G6577-G (HH)	Single-ended						X							
G6677-G (HH)	Single-ended							X						
G6590-G (FH)	Single-ended								X					
G6762-G (HH)	Single-ended									X				
Floppy Disk														
G6562-G (2xHH)	Single-ended										X			
G6562-GX (HH)	Single-ended										X			
G6563-G (2xHH)	Single-ended											X		
G6563-GX (HH)	Single-ended											X		
Optical Disk														
G6627-G(FH/HH)	Single-ended												X	
G6627-GX (FH)	Single-ended												X	
CD ROM														
G6629-G (HH)	Single-ended													X

CSS2 RACKMOUNT CHASSIS DIAGRAM



Notes:

1. CSS2 chassis can support any combination of Half-Height and Full-Height devices. In this example, Devices 1, 2, and 3 are Full-Height and Devices 4, 5, 5A, and 5B are Half-Height.
2. Device Number 5 is an interface adapter board required for support of floppy disk drives (5A and 5B). The combination of 2 drives and adapter board are counted as one SCSI device (target).

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

ORDERING GUIDELINES

Step 1 - Configure VME dual-channel SCSI host bus adapter.

- 7430 (AV 6200, 6200-20, 8000)

Step 2 - Configure the "Universal" SCSI interface cable required (15396EXXX).

Step 3 - Configure a Single-ended or Differential CSS2 SCSI Package

Step 4 - Configure additional Single-ended or Differential SCSI add-in mass storage devices required.

MASS STORAGE VME HOST BUS ADAPTER (VSA)

Model 7430 is a dual channel Fast, Narrow/VME (10MB/sec, 8 bit) SCSI 2 Adapter (HBA) that supports two SCSI 2 channels, and is supported in the 10-slot and 20-slot chassis. Each channel may be selected to support single-ended OR differential interface.

If a single-ended interface is selected all devices/chassis configured on the channel MUST be single-ended models. The same holds true for differential configuration. Single-ended and differential components may not be supported on the same bus.

DUAL CHANNEL VME SCSI 2 ADAPTER:

7430	Dual channel VME SCSI 2 adapter (VSA)	1,995	5	/NQ	2	A	Note 1,2	1 VME slot

7430 VSA to 1st Peripheral Chassis Cables:

15396E005	5ft. Universal HBA to peripheral chassis cable	100	N/A	N/A		B	Note 3
15396E010	10ft. Universal HBA to peripheral chassis cable	125	N/A	N/A		B	Note 3
15396E020	20ft. Universal HBA to peripheral chassis cable	150	N/A	N/A		B	Note 3
15396E040	40ft. Universal HBA to peripheral chassis cable	190	N/A	N/A		B	Note 3

PERIPHERAL CHASSIS TO PERIPHERAL CHASSIS DAISY-CHAIN CABLES:

Single-ended SCSI:

15378E003	3ft. Single-ended SCSI cable	104	N/A	N/A		B
15378E005	5ft. Single-ended SCSI cable	111	N/A	N/A		B

Differential SCSI:

15325E005	5ft. Differential SCSI cable	90	N/A	N/A		B
15325E010	10ft. Differential SCSI cable	115	N/A	N/A		B
15325E020	20ft. Differential SCSI cable	165	N/A	N/A		B

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

Notes:

1. Total SCSI HBA support, including dual-channel HBA (7430), and early model single channel SCSI HBAs (7421/7422, 7404/7415), based on channels supported is:

AV 6200	-	6 host bus adapters -	any combination of available HBAs
AV 6200-20/ 8000	-	8 host bus adapters -	any combination of available HBAs

   * AV 6280-20 and AV 8000-8 series octal processors do not support early model 7407 and 7415 SCSI host bus adapters.

2. An external SCSI cable is required for each host bus adapter channel configured.

7430 HBA	-	15396EXXX series cables
7421 HBA	-	15378EXXX series cables
7422 HBA	-	15325EXXX series cables

3. The 15396EXXX HBA to peripheral cable family is "universal", and may be utilized to support both differential AND single-ended interface connection. At this time this universal cable type is ONLY supported on the 7430 VSA, and only for processor to 1st device chassis connect.

   If the SCSI channel is being driven by the 7430 VSA, peripheral chassis to chassis daisy-chain configurations require a different cable to support the interface selected (15325EXXX for differential, 15378EXXX for single ended).

4. All components of the SCSI channel (device chassis, add-in peripheral device models, and daisy-chain cables), must be either single-ended OR differential. The two interfaces may not be mixed on any single channel.

5. Single-ended SCSI Bus Configuration:

   Single ended SCSI has limiting bus length restrictions (19.6 ft.) which require supported chassis to be located in close proximity to the processor chassis. Tape support subsystems or combination of disk/tape that can be installed within your main processor bay may utilize Single Ended SCSI.

5. (Continued)

   The sum bus length of external cables configured, and internal bus length associated with the peripheral chassis configured must be less than or equal to available bus length.

   - If configuring a single-ended SCSI peripheral chassis from a 7430 HBA channel you have 16.6' available external SCSI bus.
   - If configuring a single-ended SCSI peripheral chassis from a 7421-V (10-slot) HBA you have 14.2 ft. available external SCSI bus.
   - If configuring a single-ended SCSI peripheral chassis from a 7421-W (20-slot) HBA you have 16.0 ft. available external SCSI bus.

   Single-ended peripheral chassis internal bus length:
   Combined Storage Subsystem 2 - 4.9 ft.
   6580 Series Reel Tapes - .5 ft.

   For a complete list of legal AV 6200/6200-20/8000 single-ended SCSI configurations, see the "Legal Single-ended SCSI Configuration Tables (Rackmount)" in the "External Mass Storage (General Information)" section.

6. Differential SCSI Bus Configuration

   At this time DGC supports fixed disks only on the differential interface. When supporting disk only subsystems, configure a channel on the dual-port HBA (7430) for differential interface. The extended bus range (81ft.) associated with differential SCSI will allow greater flexibility in daisy-chaining peripheral chassis, dual porting of any single SCSI channel, and peripheral chassis placement in multiple bay configurations.

   Differential peripheral chassis internal bus lengths:
   CLARiiON disk array - 8ft. (1 IOP), 15ft. (2 IOP)

   Combined Storage Subsystem 2 - 4.9'

   Note: CLARiiON is only supported by the 7430 dual-port HBA.
   The SCSI channel must be set for differential interface.

7. See the "External Mass Storage" section for additional information.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
SINGLE-ENDED SCSI PACKAGES								
Includes Single-ended CSS2 rackmount chassis and one mass storage peripheral.								
Disk Packages:								
G6712-A@	CSS2 rackmount chassis, 332MB (HH) disk	5,000	46	/NQ	2	A	Note 1,3	8.75" RM
G6797-A@	CSS2 rackmount chassis, 520MB (HH) disk	5,100	28	20	2	A	Note 1,3	8.75" RM
G6722-A@	CSS2 rackmount chassis, 662MB (FH) disk	8,500	78	/NQ	2	A	Note 1,3	8.75" RM
G6720-A@	CSS2 rackmount chassis, 1.0GB (FH) disk	7,000	78	/NQ	2	A	Note 1,3	8.75" RM
G6724-A@	CSS2 rackmount chassis, 1.4GB (FH) disk	7,900	78	/NQ	2	A	Note 1,3	8.75" RM
Tape Packages:								
G6750-A@	CSS2 rackmount chassis, 150MB (HH) tape	4,395	21	/NQ	2	A	Note 1,3	8.75" RM
G6754-A@	CSS2 rackmount chassis, 320/525 (HH) tape	5,895	33	/NQ	2	A	Note 1,3	8.75" RM
G6758-A@	CSS2 rackmount chassis, 2GB 8MM (FH) tape	9,400	80	/NQ	2	A	Note 1,3	8.75" RM
G6763-A@	CSS2 rackmount chassis, 4mm (HH) DAT	8,000	48	34	2	A	Note 1,3	8.75" RM
DIFFERENTIAL SCSI PACKAGES								
Includes Differential CSS2 rackmount chassis and one disk.								
G6800-A@	CSS2 rackmount chassis, 520MB (HH) disk	5,100	28	20	2	A	Note 1,3	8.75" RM
G6740-A@	CSS2 rackmount chassis, 1.0GB (FH) disk	7,000	78	/NQ	2	A	Note 1,3	8.75" RM
G6718-A@	CSS2 rackmount chassis, 1.4GB (FH) disk	7,900	78	/NQ	2	A	Note 1,3	8.75" RM

Notes:

1. Each CSS2 Package requires a SCSI Host Adapter interface cable.

2. Chassis Configuration:

   10 Half-Height (HH) apertures and 9 DC connects are available for SCSI device support.
   - Full-height (FH) devices utilize 2 HH apertures (1 DC connect).
   - Interface converter/adapter boards (associated with floppy and optical disks) utilize 1 HH aperture (1 DC connect).
   - Devices listed in the "CSS2 Add-in Device Quick Reference" table in this section have size (FH,HH) listed.

   Interface Converter board support
   - Each floppy disk interface converter board supports TWO floppy drives and is counted as ONE SCSI device.
   - Each optical disk interface converter board supports TWO drives and is counted as ONE SCSI device.

3. Power Supply Configuration:

   There is a maximum of 5 QIC tape drives configured per chassis. An integral power supply supports the first 4 HH chassis slots.

3. (Continued)

   An additional power supply (6709) must be ordered when:
   - More than 4 HH (2 FH) slots are configured.
   - More than 2 QIC tape drives (6577/6677) are configured.

4. Replace AC Power suffix (@) with:

   (-E) - 120V/60Hz
   (-E1) - 100V/50or60Hz
   (-F2) - 220V/50Hz
   (-F4) - 240V-50Hz

   For further definition, see the "Introduction" section.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
SINGLE-ENDED SCSI ADD-IN DRIVES								
Mass storage peripherals for use with Single-ended CSS2 and CSS2/DC chassis.								
Fixed Disks:								
G6662-G	332MB (HH) add-in disk drive	2,500	38	27	2	A		1 HH
G6796-G	520MB (HH) add-in disk drive	2,600	20	14	2	A		1 HH
G6554-G	662MB (FH) add-in disk drive	5,600	70	49	2	A		1 FH
G6685-G	1.0GB (FH) add-in disk drive	4,500	70	/NQ	2	A		1 FH
G6716-G	1.4GB (FH) add-in disk drive	5,400	70	/NQ	2	A		1 FH
Cartridge Tapes:								
G6577-G	150MB (HH) add-in QIC tape drive	1,895	13	9	2	A		1 HH
G6677-G	320/525MB (HH) add-in QIC tape drive	2,995	25	18	2	A		1 HH
G6590-G	2GB 8mm (FH) add-in tape drive	7,800	80	/NQ	2	A		1 FH
G6762-G	4mm (HH) add-in DAT	5,500	40	28	2	A		1 HH
Floppy Disks:								
G6562-G	1.44MB (2xHH) floppy w/converter	345	6	5	2	A		2 HH
G6562-GX	1.44MB (HH) floppy w/o converter	145	4	3	2	A	Note 2	1 HH
G6563-G	1.2MB (2xHH) floppy w/converter	395	6	5	2	A		2 HH
G6563-GX	1.2MB (HH) floppy w/o converter	195	4	3	2	A	Note 2	1 HH
Optical Disks:								
G6627-G	600MB (1FH/1HH) optical disk w/converter	5,895	60	42	2	A		1FH/1HH
G6627-GX	600MB (FH) optical disk w/o converter	5,395	55	39	2	A		1 FH
CD ROM:								
G6629-G	600MB (HH) CD ROM disk drive	995	25	18	2	A		1 HH
DIFFERENTIAL SCSI ADD-IN DRIVES								
For use with Differential SCSI CSS2 and CSS2/DC chassis ONLY.								
G6799-G	520MB (HH) add-in disk drive	2,600	20	14	2	A		1 HH
G6740-G	1.0GB (FH) add-in disk drive	4,500	70	/NQ	2	A		1 FH
G6718-G	1.4GB (FH) add-in disk drive	5,400	70	/NQ	2	A		1 FH

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

Notes:

1. Chassis Configuration:

   10 Half-Height (HH) apertures and 9 DC connects are available for SCSI device support.

   - Full-height (FH) devices utilize 2 HH apertures (1 DC connect).
   - Interface converter/adapter boards (associated with floppy and optical disks) utilize 1 HH aperture (1 DC connect).
   - Devices listed in the "CSS2 Add-in Device Quick Reference" table in this section have size (FH,HH) listed.

2. Interface Converter board support

   - Each floppy disk interface converter board supports two floppy drives and is counted as one SCSI device.
   - Each optical disk interface converter board supports two drives and is counted as one SCSI device.
   - To support a -GX drive, the associated -G drive (with the interface converter) must be configured.
   - 1.44MB and 1.2MB floppy disks may be intermixed on DG/UX Revision 4.3 or greater.

CSS2 OPTIONS

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
6706	Mounting kit for CSS2 peripherals	200	/NC	/NC	2	F		
6709	CSS2 expansion power supply	500	5	4	2	A		

COMBINED STORAGE SUBSYSTEM 2/DC (CSS2/DC)

Combined Storage Subsystem 2/DC consists of a deskside chassis with 10 available half-height slots (or 5 full-height) that support up to 7 SCSI mass storage devices. Both Single-ended and Differential SCSI packages are available. CSS2/DC is supported on AV 100, 200, 300, 400, 530, 4300, 4600, 5200+, and 7000+ desktop and deskside processors.

SMALL COMPUTER SYSTEM INTERFACE (SCSI)

The SCSI interface is available in two versions, Single-ended and Differential. The functional difference between these two interfaces is the bus length supported. There are specific peripherals and cables associated with each of these interfaces. Components of differential subsystems may not be mixed with components of single ended subsystems. Each SCSI interface may support up to seven mass storage peripheral devices. To support the CSS2/DC chassis, the AV 5200+, 7000+ series processors utilize a VME dual channel SCSI 2 Host Bus Adapter (VSA). This host bus adapter (7430) has two fast SCSI 2 channels available. Each channel may be selected to support single-ended or differential interface. The Host Bus Adapters (HBAs) reside in a processor VME chassis.

AV 100, 200, 300, 400, 530, 4300, and 4600 have a Single-ended SCSI interface located on the system board. This interface does not support differential SCSI device configuration. Optionally, the AV 530 and AV 4600 can be configured with a VME dual channel SCSI 2 host bus adapter (7430-K). A system board resident add-on single ended SCSI/LAN interface daughter board (7423), is also supported on the AV 4600. The 7430-K HBA has the same configurability as the 7430 defined above.

Major Features:

- Industry standard SCSI interfaces (Single-ended and Differential)
- Mass storage device configuration flexibility within a small package
- Asynchronous and synchronous mode SCSI bus support

CSS2/DC PACKAGE QUICK REFERENCE

Package models listed in the left column include one CSS2/DC chassis and one SCSI peripheral. Define storage requirement by matching disk, tape, and interface columns. The model listed in the "CSS2/DC PACKAGE MODEL #" column will satisfy these requirements.

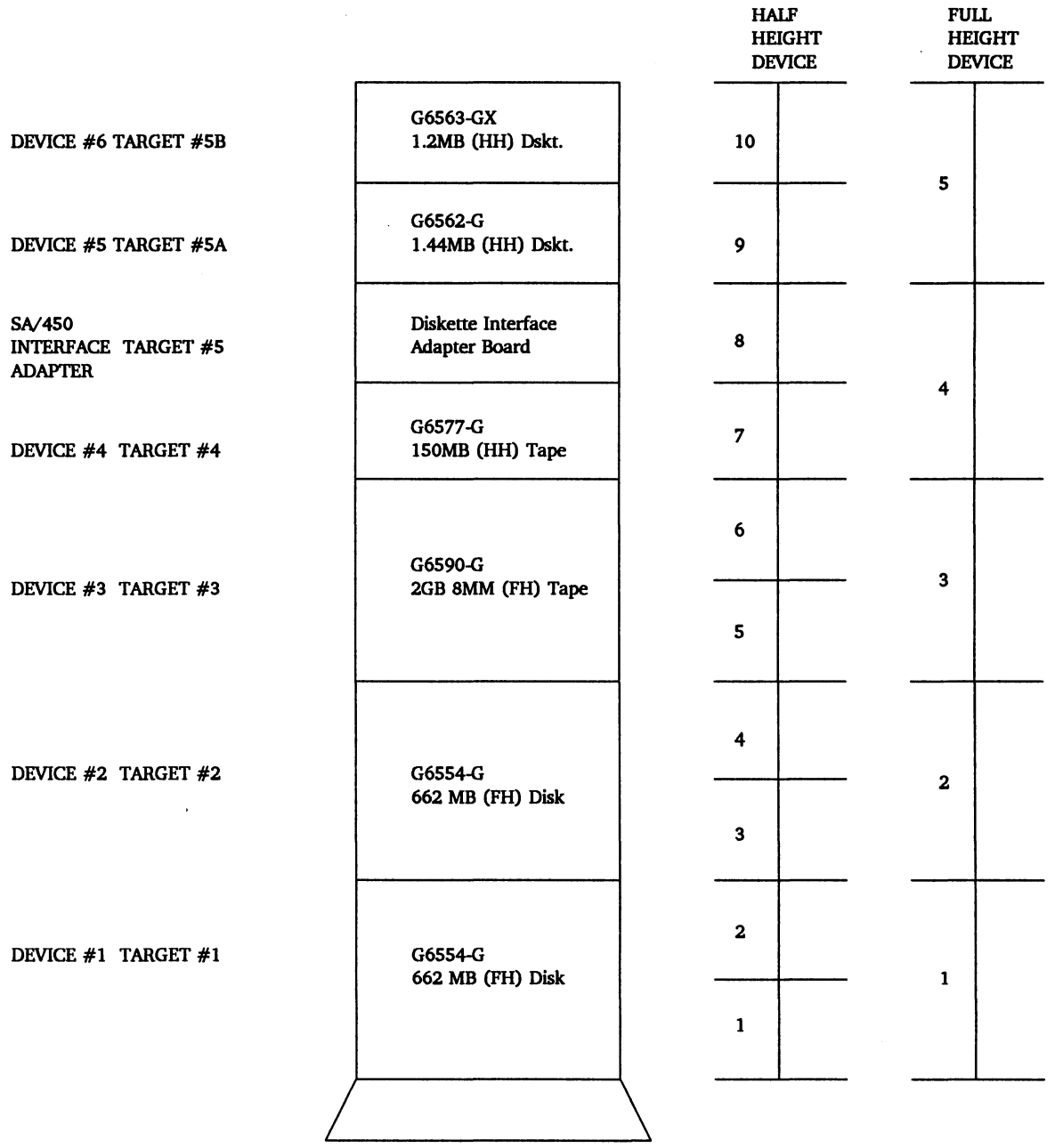
CSS2/DC PACKAGE MODEL #	INTERFACE TYPE	DISK BASED					TAPE BASED			
		332MB	520MB	662MB	1.0GB	1.4GB	150MB	525MB	2GB 8mm	4mm DAT
Disk Based										
G6713-A@	Single-ended	X								
G6798-A@	Single-ended		X							
G6723-A@	Single-ended			X						
G6721-A@	Single-ended				X					
G6717-A@	Single-ended					X				
G6801-A@	Differential		X							
G6741-A@	Differential				X					
G6719-A@	Differential					X				
Tape Based										
G6751-A@	Single-ended						X			
G6755-A@	Single-ended							X		
G6759-A@	Single-ended								X	
G6764-A@	Single-ended									X

CSS2/DC ADD-IN DEVICE QUICK REFERENCE

Models listed in the left column are add-in SCSI peripherals for installation in an existing CSS2/DC package. Determine the add-in peripherals required and read to left. Order the model number listed in the "CSS2/DC ADD-IN MODEL #" column. (FH - Full-height Device, HH - Half-height Device)

CSS2/DC ADD-IN MODEL #	INTERFACE TYPE	DISK					TAPE				FLOPPY		OPTICAL	CD ROM
		332MB	520MB	662MB	1.0GB	1.4GB	150MB	525MB	2.0GB 8mm	4mm DAT	1.44MB	1.2MB	600MB	600MB
Fixed Disk														
G6662-G (HH)	Single-ended	X												
G6796-G (HH)	Single-ended		X											
G6554-G (FH)	Single-ended			X										
G6685-G (FH)	Single-ended				X									
G6716-G (FH)	Single-ended					X								
G6799-G (HH)	Differential		X											
G6740-G (FH)	Differential				X									
G6718-G (FH)	Differential					X								
Tape														
G6577-G (HH)	Single-ended						X							
G6677-G (HH)	Single-ended							X						
G6590-G (FH)	Single-ended								X					
G6762-G (HH)	Single-ended									X				
Floppy Disk														
G6562-G (2xHH)	Single-ended										X			
G6562-GX (HH)	Single-ended										X			
G6563-G (2xHH)	Single-ended											X		
G6563-GX (HH)	Single-ended											X		
Optical Disk														
G6627-G(FH/HH)	Single-ended												X	
G6627-GX (FH)	Single-ended												X	
CD ROM														
G6629-G (HH)	Single-ended													X

CSS2/DC DESKSIDE TOWER CHASSIS DIAGRAM



Notes:

1. CSS2/DC chassis can support any combination of Half-Height and Full-Height devices. In this example, Devices 1, 2, and 3 are Full-Height and Devices 4, 5, 5A, and 5B are Half-Height.
2. Device Number 5 is an interface adapter board required for support of floppy disk drives (5A and 5B). The combination of 2 drives and adapter board are counted as one SCSI device (target).

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

ORDERING GUIDELINES

Step 1 - Configure associated Single-ended or Differential SCSI interface.

AV 100, 200, 300, 400, 530, 4300, and 4600 have system board resident SCSI Interface.

AV 5200+/7000+ models include a 7430 dual channel HBA.

7430-K (AV 530, AV 4600). 7430, (AV 5200+, AV7000+)

Step 2 - Configure Single-ended or Differential SCSI Package

Step 3 - Configure associated Single-ended or Differential SCSI interface cable.

Step 4 - Configure additional Single-ended or Differential SCSI add-in mass storage devices.

MASS STORAGE VME HOST BUS ADAPTERS (VSA)

Model 7430 is a dual channel fast VME SCSI 2 Adapter (HBA), that supports two SCSI 2 channels. Each channel may be selected to support single-ended OR differential interface. If a single-ended interface is selected all devices/chassis configured on the channel MUST be single-ended models. The same holds true for differential configuration. Single-ended and differential components may not be supported on the same bus.

AV 100, 200, 300, 400, 530, 4300, and 4600 have a single-ended SCSI interface located on the system board. This interface does not support differential SCSI device configuration. Optionally, the AV 4600 can be configured with a VME dual channel SCSI 2 host bus adapter (7430-K). This HBA has the same configurability as the 7430 defined above.

DUAL CHANNEL VME SCSI 2 ADAPTER:

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
7430	Dual Channel VME SCSI 2 Adapter (VSA) for AV 5200+ and AV 7000+	1,995	5	/NQ	2	A	Note 1,2	1 VME slot
7430-K	Dual Channel VME SCSI 2 Adapter (VSA) for AV 530 and AV 4600	1,995	5	4	2	A	Note 1,2	1 VME slot

VSA Host Adapter to 1st Device Cable:

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
15396E005	5ft. Universal VSA to peripheral chassis cable	100	N/A	N/A		B	Note 3	
15396E010	10ft. Universal VSA to peripheral chassis cable	125	N/A	N/A		B	Note 3	
15396E020	20ft. Universal VSA to peripheral chassis cable	150	N/A	N/A		B	Note 3	
15396E040	40ft. Universal VSA to peripheral chassis cable	190	N/A	N/A		B	Note 3	

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

PERIPHERAL CHASSIS TO PERIPHERAL CHASSIS DAISY-CHAIN CABLES:

These cables are utilized when daisy-chaining peripheral chassis, regardless of the interface (system board, or dual channel HBA) configured.

Single-ended SCSI:

15378E001	1.5ft. Single-ended SCSI cable	99	N/A	N/A		B	
15378E003	3ft. Single-ended SCSI cable	104	N/A	N/A		B	
15378E005	5ft. Single-ended SCSI cable	111	N/A	N/A		B	

Differential SCSI:

15325E005	5ft. Differential SCSI cable	90	N/A	N/A		B	
15325E010	10ft. Differential SCSI cable	115	N/A	N/A		B	
15325E020	20ft. Differential SCSI cable	165	N/A	N/A		B	
15325E040	40ft. Differential SCSI cable	255	N/A	N/A		B	

Notes:

1. Total SCSI HBA support, including the dual channel HBA (7430) and early model SCSI HBAs (7421/7422, 7404/7415), based on channels supported is:

   AV 5200+/7000+ - 6 CHANNELS - Any combination of available HBAs equaling 6 channels **

   AV 530/4600 - Only one 7430-K dual-channel SCSI 2 HBA is supported.

2. An external SCSI cable is required for each host bus adapter channel configured.

   System Board Connect:
   AV 100/200/300 - 15377EXXX series cable
   AV 400/530/4300/4600 - 15378EXXX series cable

   Host Bus Adapter Connect:
   7430/7430-K HBA - 15396EXXX series cable
   7421 HBA - 15378EXXX series cable
   7422 HBA - 15325EXXX series cable

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

Notes:

3. The 15396EXXX VSA to peripheral cable family is "universal", and may be utilized to support both differential AND single-ended interface connection. At this time this universal cable type is ONLY supported on the 7430/7430-K HBA, and only for processor to 1st device chassis connect.

4. All components of the SCSI channel (device chassis, add-in peripheral device models, and daisy-chain cables), must be either single-ended OR differential. The two interfaces may not be mixed on any single channel.

5. As a rule the minimum cable configured for support of a CSS 2/DC chassis from a DESKTOP processor (AV 100/200/300) is 5ft. A 5ft. cable minimum is also required if daisy-chaining a DESKTOP Peripheral Housing Unit or Reel Tape from a CSS 2/DC chassis.

6. Single-ended SCSI Bus Length Restrictions:

   Single ended SCSI has limiting bus length restrictions (19.6') which require supported chassis to be located in close proximity to the processor chassis.

   The sum bus length of external cables configured, and internal bus length associated with the peripheral chassis configured must be less than or equal to available bus length.

   On AV 100/200/300:

   - If configuring a single-ended SCSI peripheral chassis from the system board you have 19.6 ft. available external SCSI bus.

   On AV 4600:

   - If configuring a single-ended SCSI peripheral chassis from the system board you have 14.85 ft. available external SCSI bus.

6. (Continued)

   - If configuring a single-ended SCSI peripheral chassis from the optional 7423 SCSI/LAN daughter board you have 18.7 ft. available external SCSI bus.

   - If configuring a single-ended SCSI peripheral chassis from a 7430 VSA channel you have 19.6 ft. available external SCSI bus.

   On AV 5200+ and 7000+:

   - If configuring a single-ended SCSI peripheral chassis from the host bus adapter included with the system to drive internal devices, you have 5.9 ft. available external SCSI bus. This will allow configuration of a Reel Tape when configuring the minimum allowable 5.0 ft. interface cable (15378E005).

   - If configuring a single-ended SCSI peripheral chassis from a 7430 VSA channel you have 16.0 ft. available external SCSI bus.

   - If configuring SCSI peripheral chassis from an add-on 7421 host adapter you have 14.6 ft. available external SCSI bus.

   Single-ended peripheral chassis internal bus lengths:
   Combined Storage Subsystem 2/DC - 4.9 ft.
   Peripheral Housing Unit - 2.5 ft.
   6580 Series Reel Tapes - .5 ft.

   For a complete list of "legal" AV 5200+/7000+ single-ended SCSI configurations, see the deskside configuration tables in the "External Mass Storage (General Information)" section.

7. Differential SCSI Configuration

   For large disk count requirements, configure a differential SCSI host adapter and differential CLARiiON disk array or CSS 2/DC.

   Differential peripheral chassis internal bus lengths:
   CLARiiON disk array - 8 ft. (1 IOP), 15 ft. (2 IOP)
   Combined Storage Subsystem 2/DC - 4.9 ft.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
SINGLE-ENDED PACKAGES								
Includes Single-ended CSS2/DC deskside tower and one mass storage peripheral.								
Disk Packages:								
G6713-A@	CSS2/DC office tower, 332MB (HH) disk	5,000	46	/NQ	2	A	Note 1	DS
G6798-A@	CSS2/DC office tower, 520MB (HH) disk	5,100	28	20	2	A	Note 1	DS
G6723-A@	CSS2/DC office tower, 662MB (FH) disk	8,500	78	/NQ	2	A	Note 1	DS
G6721-A@	CSS2/DC office tower, 1.0GB (FH) disk	7,000	78	/NQ	2	A	Note 1	DS
G6717-A@	CSS2/DC office tower, 1.4GB (FH) disk	7,900	78	/NQ	2	A	Note 1	DS
Tape Packages:								
G6751-A@	CSS2/DC office tower, 150MB (HH) tape	4,395	21	/NQ	2	A	Note 1	DS
G6755-A@	CSS2/DC office tower, 320/525MB (HH) tape	5,895	33	/NQ	2	A	Note 1	DS
G6759-A@	CSS2/DC office tower, 2GB 8MM (FH) tape	9,400	80	/NQ	2	A	Note 1	DS
G6764-A@	CSS2/DC office tower, 4mm (HH) DAT	8,000	48	34	2	A	Note 1	DS
DIFFERENTIAL SCSI PACKAGES								
Includes Differential CSS2/DC deskside tower and one disk.								
G6801-A@	CSS2/DC deskside tower, 525MB (HH) disk	5,100	28	20	2	A	Note 1	DS
G6741-A@	CSS2/DC deskside tower, 1.0GB (FH) disk	7,000	78	/NQ	2	A	Note 1	DS
G6719-A@	CSS2/DC deskside tower, 1.4GB (FH) disk	7,900	78	/NQ	2	A	Note 1	DS

Notes:

1. Each CSS2/DC package requires an interface daisy-chain cable.

   SCSI interface for support of CSS2/DC chassis must be present.

   - AV 100, 200, 300, 400, 530, 4300, and 4600 have the SCSI interface integrated on the system board.
     AV 4600 also supports single-ended and/or differential SCSI via configuration of a 7430-K VME SCSI 2 Host Bus Adapter (VSA).
   - A VSA dual channel SCSI host bus adapter is included with AV 5200+ and AV 7000+ package systems.

2. Chassis Configuration:

   10 Half-height (HH) apertures are available for SCSI device support.

2. (Continued)

   - Full-height (FH) devices utilize 2 HH apertures.
   - Interface converter/adapter boards (associated with floppy and optical disks) utilize 1 HH aperture.
   - Devices listed in "ADD-IN" section have size (FH,HH) listed.

   There is a maximum of 5 QIC tape drives configured per chassis.

Interface Converter board support

- Each floppy disk interface converter board supports TWO floppy drives and is counted as ONE SCSI device.
- Each optical disk interface converter board supports TWO drives and is counted as ONE SCSI device.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

Notes:

3. Power Supply Configuration:

   An integral power supply supports the first 4 HH chassis slots. An additional power supply (6709) must be ordered when:

   - More than 4 HH (2 FH) slots are configured.
   - More than 2 QIC tape drives (6577/6677) are configured.

4. Replace AC Power Suffix (-@) with:

(Blank)	-	120V/60Hz
(-1)	-	100V/50or60Hz
(-5,-6)	-	240V/50Hz
(-7,-8,-9,-0)	-	220V/50Hz

   In addition to power requirements, these suffixes indicate line cord dependencies to specific country requirements. For further information, see the "Standalone Power Cord Dependent Device Matrix" table in the "Introduction" section.

SINGLE-ENDED SCSI ADD-IN DRIVES

Add-in peripherals for use with Single-ended CSS2 and CSS2/DC.

Fixed Disks:								
G6662-G	332MB (HH) add-in disk drive	2,500	38	27	2	A	Note 4	1 HH
G6796-G	520MB (HH) add-in disk drive	2,600	20	14	2	A		1 HH
G6554-G	662MB (FH) add-in disk drive	5,600	70	49	2	A		1 FH
G6685-G	1.0GB (FH) add-in disk drive	4,500	70	/NQ	2	A		1 FH
G6716-G	1.4GB (FH) add-in disk drive	5,400	70	/NQ	2	A		1 FH
Tapes:								
G6577-G	150MB (HH) add-in QIC tape drive	1,895	13	9	2	A		1 HH
G6677-G	320, 525MB (HH) add-in QIC tape drive	2,995	25	18	2	A		1 HH
G6590-G	2.0GB 8mm (FH) add-in tape drive	7,800	80	/NQ	2	A		1 FH
G6762-G	4mm (HH) DAT	5,500	40	28	2	A		1 FH
Floppy Disks:								
G6562-G	1.44MB (2xHH) floppy w/converter	345	6	5	2	A		2 HH
G6562-GX	1.44MB (HH) floppy w/o converter	145	4	3	2	A	Note 2	1 HH
G6563-G	1.2MB (2xHH) floppy w/converter	395	6	5	2	A		2 HH
G6563-GX	1.2MB (2xHH) floppy w/o converter	195	4	3	2	A	Note 2	1 HH
Optical Disk:								
G6627-G	600MB (1FH/1HH) optical disk w/converter	5,895	60	42	2	A		1FH/1HH
G6627-GX	600MB (1FH) optical disk w/o converter	5,395	55	39	2	A	Note 2	1 FH
CD ROM:								
G6629-G	600MB (HH) ROM disk drive	995	25	18	2	A		

DIFFERENTIAL SCSI ADD-IN DRIVES

For use with Differential SCSI CSS2 and CSS2/DC chassis ONLY.

G6799-G	520MB (HH) add-in disk drive	2,600	20	14	2	A	1 HH
G6740-G	1.0GB (FH) add-in disk drive	4,500	70	/NQ	2	A	1 FH
G6718-G	1.4GB (FH) add-in disk drive	5,400	70	/NQ	2	A	1 FH

Notes:

1. Chassis Configuration:

   10 Half-Height (HH) apertures and 9 DC connects are available for SCSI device support.

   - Full-height (FH) devices utilize 2 HH apertures (1 DC connect).
   - Interface converter/adapter boards (associated with floppy and optical disks) utilize 1 HH aperture (1 DC connect).
   - Devices listed in the "CSS2 Add-in Device Quick Reference" table in this section have size (FH, HH) listed.

2. Interface Converter board support:

   - Each floppy disk interface converter board supports two floppy drives and is counted as one SCSI device.
   - Each optical disk interface converter board supports two drives and is counted as one SCSI device.
   - To support a -GX drive, the associated -G drive (with the interface converter) must be configured.
   - 1.44MB and 1.2MB floppy disks may be intermixed on DG/UX Revision 4.3 or greater.

CSS2/DC OPTIONS

6706	Mounting kit for CSS2 peripherals	200	/NC	/NC	2	F
6709	CSS2 expansion power supply	500	5	4	2	A

PERIPHERAL HOUSING UNIT (PHU)

The Peripheral Housing Unit is a compact desktop chassis which is used to house SCSI peripheral devices. The PHU provides a powered/cooled enclosure for SCSI peripheral configuration. Two chassis types are available. A single-device chassis is available, configured with one half-height SCSI device. A multi-device chassis is also available which can support one Full Height (FH) and one Half Height (HH) OR three Half Height SCSI peripheral devices. The multi-device PHU is offered both as a package that includes peripherals or as a stand-alone chassis. The single-device PHU always includes an integrated SCSI device.

SMALL COMPUTER SYSTEM INTERFACE (SCSI)

Each SCSI interface can support seven mass storage peripheral devices. To support the PHU chassis, the AV 100, 200, 300, 400, 530, 4300, and 4600 have a Single Ended SCSI interface located on the system board. This interface does not support differential SCSI device configuration. Optionally, the AV 4600 can be configured with an additional SCSI/LAN interface (7423). The AV 530 and AV 4600 can be configured with a VME dual channel SCSI 2 host bus adapter (7430-K).

Major Features:

- Industry standard SCSI interface
- Mass storage device configuration flexibility within a small package
- Asynchronous and synchronous mode SCSI bus support

PHU PACKAGE QUICK REFERENCE

Package models listed in left column include PHU chassis and SCSI peripherals. Define storage requirements by matching disk and tape columns. Order the model number listed in the "PHU PACKAGE MODEL #" column.

Multi-Device PHU

PHU PACKAGE MODEL #	INTERFACE TYPE	DISK BASED					TAPE BASED		
		332MB	520MB	662MB	1.0GB	1.4GB	150MB	2GB/ 8mm	4mm/DAT
Disk Based									
G6662-A@	Single-ended	X							
G6608-A@	Single-ended		X						
G6605-@	Single-ended			X					
G6686-A@	Single-ended				X				
G6607-A@	Single-ended					X			
G6609-A@	Differential		X						
Tape Based									
G6602-@	Single-ended						X		
G6591-A@	Single-ended							X	
G6610-A@	Single-ended								X

Single-Device PHU

PHU PACKAGE MODEL #	Interface Type	Tape Based	
		320/525MB	CD-ROM
G6690-@	Single-ended		X
G6691-@	Single-ended	X	

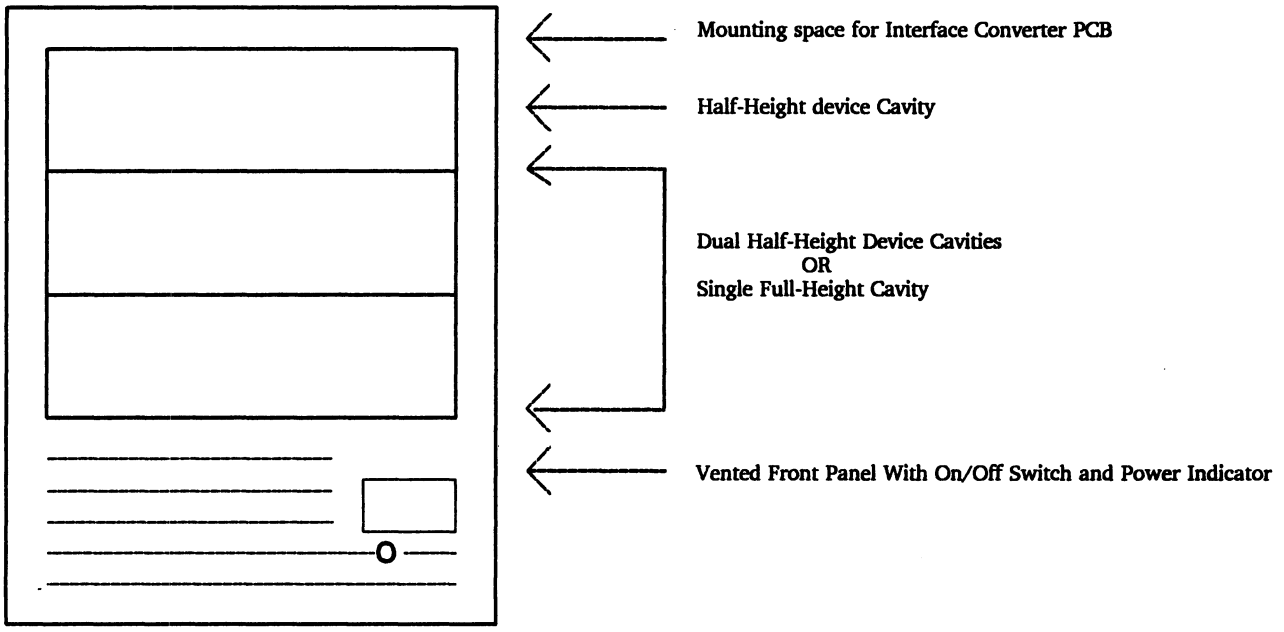
PHU ADD-IN DEVICE QUICK REFERENCE

Models listed in the left column are add-in SCSI peripherals for installation in an existing Multi-Device PHU package. Determine add-in peripherals required and read to left. Order model number listed in the "PHU Add-in Model #" column. (FH - Full-height Device, HH - Half-height Device)

PHU ADD-IN MODEL #	INTERFACE TYPE	DISK					TAPE				FLOPPY		OPTICAL	CD ROM
		332MB	520MB	662MB	1.0GB	1.4GB	150MB	525MB	2.0GB 8mm	4mm DAT	1.44MB	1.2MB	600MB	600MB
Fixed Disk														
G6662-E (HH)	Single-ended	X												
G6796-E	Single-ended		X											
6554-E (FH)	Single-ended			X										
G6686-E (FH)	Single-ended				X									
G6716-E (FH)	Single-ended					X								
G6799-E (HH)	Differential		X											
Tape														
G6577-E (HH)	Single-ended						X							
G6677-E (HH)	Single-ended							X						
G6591-E (FH)	Single-ended								X					
G6762-E (HH)	Single-ended									X				
Floppy Disk														
G6562-E (HH)*	Single-ended										X			
G6562-EX (HH)	Single-ended										X			
G6563-E (HH)*	Single-ended											X		
G6563-EX (HH)	Single-ended											X		
Optical Disk														
G6627-E(FH) *	Single-ended												X	
CD ROM														
G6629-E (HH)	Single-ended													X

* These devices include an interface converter board. There is one dedicated slot in the top of each chassis for support of these boards.

DESKTOP PERIPHERAL HOUSING UNIT DIAGRAM (Multi-Device)



Notes:

1. The chassis supports three Half-height devices or one Full-height and one Half-height device.
2. The chassis will support one add-in peripheral device that includes an interface converter board.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

ORDERING GUIDELINES

Step 1 - AV 100, 200, 300, 400, 530, 4300, and 4600 have system board resident Single-ended SCSI Interface.

The AV 4600 also supports single-ended or differential PHU connection via the 7430-K VME SCSI 2 Adapter (VSA).

Step 2 - Configure Peripheral Housing Package, or chassis.

Step 3 - Configure associated SCSI interface cable.

Step 4 - Configure additional SCSI add-in mass storage devices.

MASS STORAGE SCSI INTERFACE

AV 100, 200, 300, 400, 530, 4300, and 4600 have a single-ended SCSI interface located on the system board. This interface does not support differential SCSI device configuration. Optionally, the AV 530 and AV 4600 can be configured with a VME dual channel SCSI 2 host bus adapter (7430-K). Each channel may be selected to support single-ended or differential interface.

DUAL CHANNEL VME SCSI 2 HOST BUS ADAPTER (VSA):

7430-K	Dual Channel VME SCSI 2 Adapter (VSA) for AV 530 and AV 4600	1,995	5	4	2	A	Note 1	1 VME slot

VSA to 1st Peripheral Chassis Cables:

15396E005	5ft. Universal HBA to peripheral chassis cable	100	N/A	N/A		B	Note 2
15396E010	10ft. Universal HBA to peripheral chassis cable	125	N/A	N/A		B	Note 2
15396E020	20ft. Universal HBA to peripheral chassis cable	150	N/A	N/A		B	Note 2
15396E040	40ft. Universal HBA to peripheral chassis cable	190	N/A	N/A		B	Note 2

PERIPHERAL CHASSIS TO PERIPHERAL CHASSIS DAISY-CHAIN CABLES:

These cables are utilized when daisy-chaining peripheral chassis, regardless of the interface (system board or HBA) configured.

Single-ended:

15378E001	1.3ft. Single-ended SCSI cable	99	N/A	N/A		B	Note 2
15378E003	3ft. Single-ended SCSI cable	104	N/A	N/A		B	Note 2
15378E005	5ft. Single-ended SCSI cable	111	N/A	N/A		B	Note 2

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

Notes:

1. An external SCSI cable is required for each host bus adapter channel configured.

   System Board Connect:
   AV 100/200/300 - 15377EXXX series cable
   AV 400/530/4300/4600 - 15378EXXX series cable

   Host Bus Adapter Connect:
   7430/7430-K HBA - 15396EXXX series cable
   7421 HBA - 15378EXXX series cable
   7422 HBA - 15325EXXX series cable

2. The 15396EXXX HBA to peripheral cable family is "universal", and may be utilized to support both differential AND single-ended interface connection. At this time this universal cable type is ONLY supported on the 7430/7430-K HBA, and only for processor to 1st device chassis connect.

   Peripheral chassis to chassis daisy-chain configurations require a different cable to support the interface selected (15325EXXX for differential, 15378EXXX for single ended).

3. As a rule the minimum cable configured for support of a PHU chassis from a DESKSIDE processor (AV 400/530/4300/4600) is 5 ft. A 5 ft. cable minimum is also required if daisy-chaining a DESKTOP PHU or Reel Tape from a CSS 2/DC chassis.

4. Single-ended SCSI Bus Length Restrictions:

   Single ended SCSI has limiting bus length restrictions (19.6") which require supported chassis to be located in close proximity to the processor chassis.

   The sum bus length of external cables configured, and internal bus length associated with the peripheral chassis configured must be less than or equal to available bus length.

4. (Continued)

   On AV 100/200/300:

   - If configuring a single-ended SCSI peripheral chassis from the system board you have 19.6 ft. available external SCSI bus.

   On AV 400/530/4300:

   - If configuring a single-ended SCSI peripheral chassis from the system board you have 14.85 ft. available external SCSI bus.

   On AV 4600:

   - If configuring a single-ended SCSI peripheral chassis from the system board you have 14.85 ft. available external SCSI bus.
   - If configuring a single-ended SCSI peripheral chassis from the optional 7423 SCSI/LAN daughter board you have 18.7 ft. available external SCSI bus.
   - If configuring a single-ended SCSI peripheral chassis from a 7430 VSA channel you have 19.6 ft. available external SCSI bus.

   PHU Chassis Internal Bus Length:

   Multi-Device chassis - 2.5ft.

   Single Device chassis:

   320/525MB Tape - 1ft.
   600MB CD-ROM - .5ft.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
PERIPHERAL HOUSING UNIT PACKAGES								
Packages include a PHU chassis and one or two magnetic peripherals.								
MULTI-DEVICE CHASSIS:								
Fixed Disk:								
G6662-A@	332MB (HH) disk, PHU	3,950	42	29	2	A	Note 1	DT
G6608-A@	520MB (HH) disk, PHU	3,100	39	28	2	A	Note 1	DT
G6605-@	662MB (FH) disk, PHU	6,800	74	52	2	A	Note 1	DT
G6686-A@	1.0GB (FH) disk, PHU	5,000	74	54	2	A	Note 1	DT
G6607-A@	1.4GB (FH) disk, PHU	5,900	74	52	2	A	Note 1	DT
G6609-A@	520MB (HH) disk, PHU (differential)	3,100	39	28	2	A	Note 1,5	DT
Cartridge Tapes:								
G6602-@	150MB (HH) tape drive, PHU	2,500	17	12	2	A	Note 1	DT
G6591-A@	2GB 8MM (FH) tape, PHU	8,600	84	/NQ	2	A	Note 1	DT
G6610-A@	4mm (HH) DAT	6,000	44	31	2	A	Note 1	DT
Single Ended Multi-Device chassis (No Peripherals):								
G10565-@	Single Ended Peripheral Housing Unit (PHU)	800	4	3	2	A	Note 1	DT
SINGLE-DEVICE CHASSIS:								
Cartridge Tape:								
G6691-@	320/525MB QIC-tape, single-device chassis	3,095	29	20	2	A		DT
CD-ROM:								
G6690-@	600MB CD-ROM, single-device chassis	1,299	29	20	2	A		DT

Notes:

1. Three Half-Height (HH) devices, OR one Full-Height and two Half-Height (HH) devices are supported per Multi-device PHU chassis.
2. Only one interface converter/adapter board is supported per Multi-device PHU. The converter board is installed in a dedicated slot at the top of the chassis.
3. Each floppy Interface Converter Board supports TWO diskette drives and is counted as ONE SCSI device. To support 2 drives, order second as -EX.
4. Replace AC Power Suffix (-@) with:
   - (Blank) - 120V/60Hz
   - (-1) - 100V/50 or 60Hz
   - (-5,-6) - 240V/50Hz
   - (-7,-8,-9,-0) - 220V/50Hz
5. The 6609-A differential PHU is only supported on the AV 530 and AV 4600 utilizing the 7430-K dual channel VME SCSI 2 Adapter. Differential and Single-ended devices/chassis may not be mixed on the same SCSI Channel.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
PERIPHERAL HOUSING ADD-IN DEVICES								
These are add-in mass storage peripherals for installation in a Multi-Device PHU chassis.								
Fixed Disk:								
G6662-E	332MB (HH) add-in disk	2,500	38	27	2	A		1 HH
G6796-E	520MB (HH) add-in disk	2,600	20	14	2	A		1 HH
6554-E	662MB (FH) add-in disk	5,600	70	49	2	A		1 FH
G6686-E	1.0GB (FH) add-in disk	4,500	70	50	2	A		1 FH
G6716-E	1.4GB (FH) add-in disk	5,400	70	49	2	A		1 FH
G6799-E	520MB (HH) add-in disk (differential)	2,600	20	14	2	A	Note 2	1 FH
Cartridge Tapes:								
G6577-E	150MB (HH) add-in tape drive	1,895	13	9	2	A		1 HH
G6677-E	320/525MB (HH) add-in tape drive	2,995	25	18	2	A		1 HH
G6591-E	2GB 8MM (FH) add-in tape drive	7,800	80	/NQ	2	A		1 FH
G6762-E	4mm (HH) DAT	5,500	40	28	2	A		1 HH
Floppy Disks:								
G6562-E	1.44MB (HH) floppy w/converter	345	6	5	2	A		1 HH
G6562-EX	1.44MB (HH) floppy w/o converter	145	4	3	2	A	Note 1	1 HH
G6563-E	1.2MB (HH) floppy w/converter	395	6	5	2	A		1 HH
G6563-EX	1.2MB (HH) floppy w/o converter	195	4	3	2	A	Note 1	1 HH
Optical Disk:								
G6627-E	600MB (FH) optical disk w/converter	5,895	60	42	2	A		1 FH
CD ROM:								
G6629-E	600MB (HH) CD ROM	995	25	18	2	A		1 HH

Notes:

1. Interface Converter board support
   - Each floppy disk interface converter board supports two floppy drives and is counted as one SCSI device.
   - To support a -EX drive, the associated -E drive (with the interface converter) must be configured.
   - 1.44MB and 1.2MB floppy disks may be intermixed on DG/UX Revision 4.3 or greater.
2. The 6799-E differential add-in disk for PHU is only supported on the AV 530 and AV 4600 utilizing the 7430-K dual channel VME SCSI 2 Adapter. Differential and Single-ended devices/chassis may not be mixed on the same SCSI Channel.

REEL TAPES

Data General offers a complete line of Reel Tape drives. Available models support Single or Multi-Density (6250/1600/800BPI) ANSI standard modes of operation. These drives come in rackmount versions for support on AV 6200 and AV 8000 and in desktop versions for support on other AViiON deskside/desktop systems. All Reel Tapes are supported by the Single-ended SCSI interface.

SMALL COMPUTER SYSTEM INTERFACE (SCSI)

Each SCSI interface can support seven mass storage peripheral devices. To support Reel Tape drives, the AV 5200+, 7000+, 6200, and 8000 series processors utilize a dual channel VME SCSI 2 host bus adapter (HBA) that resides in a processor chassis I/O slot. AV 100, 200, 300, 400, 530, 4300, and 4600 have a Single-ended SCSI interface located on the system board. Optionally, the AV 4600 can be configured with an additional SCSI/LAN interface (7423). The AV 530 and AV 4600 can be configured with a VME dual channel SCSI 2 host bus adapter (7430-K).

Major Features:

- Industry standard SCSI interface.
- ANSI, IBM 6250, and 1600BPI 1/2" tape reel compatible.
- Streaming operation.
- Data buffering.
- Handles any standard 1/2" size reel from 6" to 10.5".

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

ORDERING GUIDELINES

Step 1 - Configure associated Single-ended SCSI interface.

AV 100, 200, 300, 400, 530, 4300, and 4600 have a system board resident SCSI Interface.

7430 (AV 5200+, 7000+, 6200, 6200-20, 8000)
7430-K (AV 530, AV 4600)

Step 2 - Configure associated Single-ended SCSI interface cable.

Step 3 - Configure Rackmount or Desktop Tape Drive.

MASS STORAGE VME SCSI 2 HOST BUS ADAPTER (VSA)

Model 7430 is a dual channel fast VME SCSI 2 Adapter (VSA), that supports two SCSI 2 channels. Each channel may be selected to support single-ended OR differential interface. If a single-ended interface is selected all devices/chassis configured on the channel MUST be single-ended models. The same holds true for differential configuration. Single-ended and differential components may not be supported on the same bus. The SCSI channel must be single-ended to support Reel Tapes.

AV 100, 200, 300, 400, 530, 4300, and 4600 have a single-ended SCSI interface located on the system board. This interface does not support differential SCSI device configuration. Optionally, the AV 530 and AV 4600 can be configured with a VME dual channel SCSI 2 host bus adapter (7430-K). This HBA has the same configurability as the 7430 defined above.

DUAL CHANNEL VME SCSI 2 ADAPTERS:

7430	Dual Channel VME SCSI 2 Adapter (VSA) for AV 5200+, 7000+, 6200, 6200-20, 8000	1,995	5	/NQ	2	A	Note 1,2	1 VME slot
7430-K	Dual Channel VME SCSI 2 Adapter (VSA) for AV 530 and AV 4600	1,995	5	4	2	A	Note 1,2	1 VME slot

Host to 1st Peripheral Chassis Cables:

15396E005	5ft. Universal HBA to peripheral chassis cable	100	N/A	N/A		B	Note 3
15396E010	10ft. Universal HBA to peripheral chassis cable	125	N/A	N/A		B	Note 3

PERIPHERAL CHASSIS TO PERIPHERAL CHASSIS DAISY-CHAIN CABLES:

These cables are utilized when daisy-chaining peripheral chassis, regardless of the interface (system board or HBA) configured.

Single-ended:

15378E003	3ft. Single-ended SCSI cable	104	N/A	N/A		B	Note 3
15378E005	5ft. Single-ended SCSI cable	111	N/A	N/A		B	Note 3

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

MASS STORAGE VME HOST BUS ADAPTERS (Continued)

Notes:

1. Total SCSI HBA support, including the dual channel SCSI HBA (7430) and early model SCSI HBAs (7421/7422, 7404/7415), based on channels supported is:

   AV 6200-20/8000 - 8 HBAs - Any combination of available HBAs.

   AV 6200 - 6 HBAs - Any combination of available HBAs.

   AV 5200+/7000+ - 6 CHANNELS - Any combination of available HBAs equaling 6 channels **

   AV 530/4600 - Only one 7430-K dual-channel SCSI 2 HBA is supported.

2. An external SCSI cable is required for each host bus adapter channel configured.

   System Board Connect:
   AV 100/200/300/ - 15377EXXX series cable
   AV 400/530/4300/4600 - 15378EXXX series cable

   Host Bus Adapter Connect:
   7430/7430-K HBA - 15396EXXX series cable
   7421 HBA - 15378EXXX series cable
   7422 HBA - 15325EXXX series cable

3. The 15396EXXX HBA to peripheral cable family is "universal", and may be utilized to support both differential AND single-ended interface connection. At this time this universal cable type is ONLY supported on the 7430/7430-K HBA, and only for processor to 1st device chassis connect.

   Peripheral chassis to chassis daisy-chain configurations require a different cable to support the interface selected (15325EXXX for differential, 15378EXXX for single ended).

4. All components of the SCSI channel (device chassis, add-in peripheral device models, and daisy-chain cables), must be either single-ended OR differential. The two interfaces may not be mixed on any single channel.

5. As a rule the minimum cable configured for support of a desktop reel tape chassis from a deskside processor (AV 410/530/4300/4600/5200+/7000+) is 5 ft. A 5 ft. cable minimum is also required if daisy-chaining a deskside Peripheral Housing Unit or Reel Tape from a CSS 2/DC chassis.

6 Single-ended SCSI Bus Length Restrictions:

   Single ended SCSI has limiting bus length restrictions (19.6') which require supported chassis to be located in close proximity to the processor chassis.

   The sum bus length of external cables configured, and internal bus length associated with the peripheral chassis configured must be less than or equal to available bus length.

   On AV 100/200/300:

   - If configuring a single-ended SCSI peripheral chassis from the system board you have 19.6 ft. available external SCSI bus.

   On AV 400/530/4300:

   - If configuring a single-ended SCSI peripheral chassis from the system board you have 14.85 ft. available external SCSI bus.

   On AV 4600:

   - If configuring a single-ended SCSI peripheral chassis from the system board you have 14.85 ft. available external SCSI bus.
   - If configuring a single-ended SCSI peripheral chassis from the optional 7423 SCSI/LAN daughter board you have 18.7 ft. available external SCSI bus.
   - If configuring a single-ended SCSI peripheral chassis from a 7430-K VSA channel you have 19.6 ft. available external SCSI bus.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

MASS STORAGE VME HOST BUS ADAPTERS (Continued)

Notes:

6. (Continued)

On AV 5200+ and 7000+

- If configuring a single-ended SCSI peripheral chassis from the host bus adapter included with the system to drive internal devices, you have 5.9 ft. available external SCSI bus. This will allow configuration of a Reel Tape when configuring the minimum allowable 5.0 ft. interface cable (15378E005).
- If configuring a single-ended SCSI peripheral chassis from a 7430 VSA channel you have 16.6 ft. available external SCSI bus.
- If configuring SCSI peripheral chassis from an add-on 7421 host adapter you have 14.6 ft. available external SCSI bus.

Single-ended peripheral chassis internal bus lengths:
Combined Storage Subsystem 2/DC - 4.9 ft.
Peripheral Housing Unit - 2.5 ft.
6580 Series Reel Tapes - .5 ft.

6. (Continued)

On AV 6200, 6200-20, 8000

- If configuring a single-ended SCSI peripheral chassis from a 7430 HBA channel you have 16.6 ft. available external SCSI bus.
- If configuring a single-ended SCSI peripheral chassis from a 7421-V (10-slot) HBA you have 14.2 ft. available external SCSI bus.
- If configuring a single-ended SCSI peripheral chassis from a 7421-W (20-slot) HBA you have 16.0 ft. available external SCSI bus.

For a complete list of "legal" single-ended SCSI configurations, see the deskside configuration tables in the "External Mass Storage (General Information)" section.

REEL TAPE DRIVES

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
Rackmount:								
G6586-A@	1600BPI rackmount tape drive	7,950	83	/NQ	2	A	Note 1	8.75" RM
G6588-A@	6250/1600 BPI rackmount tape drive	21,950	162	/NQ	2	A	Note 1	8.75" RM
G6588-TA@	6250/1600/800 BPI rackmount tape drive	24,950	172	/NQ	2	A	Note 1	8.75" RM
Desktop:								
G6587-A@	1600BPI desktop tape drive	8,550	83	/NQ	2	A	Note 1	DT
G6589-A@	6250BPI/1600BPI desktop tape drive	22,550	162	/NQ	2	A	Note 1	DT
G6589-TA@	6250BPI/1600/800BPI desktop tape drive	25,550	172	/NQ	2	A	Note 1	DT

Notes:

1. Replace AC Power Suffix (-@) with:

   For G6586-A@ and G6587-A@:

   (Blank) - 120V/60Hz
   (-1) - 100V/50 or 60Hz
   (-2) - 220V/50Hz **
   (-4) - 240V/50Hz **

   ** Model G6587-A will ship with a 6-15P plug on export models. Specific country requirements may require Field Engineering to configure a different plug at installation.

   For further information, see the "Early Model Power Matrix" in the "Introduction" section.

1. (Continued)

   For G6588-A@ or G6588-TA@:

   (-E) - 120V/60Hz
   (-E1) - 100V/50 or 60Hz
   (-F2) - 220V/50Hz
   (-F4) - 240V/50Hz

   For further information, see the "New Model Power Matrix" in the "Introduction" section.

   For G6589-A@ and G6589-TA@

   (Blank) - 120V/60Hz
   (-1) - 100V/50 or 60Hz
   (-5,-6) - 240V/50Hz
   (-7,-8,-9,-0) - 220V/50Hz

   In addition to power requirements, these suffixes indicate line cord dependencies to specific country requirements. For further information see the "Power Cord Dependent Device Matrix" in the Introduction.

AViiON Communications Section

AViiON COMMUNICATION QUICK REFERENCE

The following table lists the available interfaces for asynchronous, synchronous, and LAN support. The values in ( ) define the number of connections or VME controllers supported by the associated processor. All RS232-C asynchronous ports support modem control. See the applicable section in this chapter for further product definition and configuration information.

AViiON COMMUNICATION QUICK REFERENCE MATRIX

AViiON PROCESSOR	SYSTEM BOARD		VME CONTROLLER						
	ASYNC	LAN ***	ASYNC		SYNC	LAN *****			
			VAC/16	VDA/255	VSC/3i	VTC	VLC/i	VTRC	VFC
WORKSTATIONS:									
AV 100	Y (2) *	Y	N	N	N	N	N	N	N
AV 210	Y (2) *	Y	N	N	N	N	N	N	N
AV 310CD	Y (2) *	Y	N	N	N	N	N	N	N
AV 410	Y (2)	Y	7411-KA(2)	N	7428-K(1)	N	7429-K(2)	7416-K(2)	N
AV 530	Y (3)	Y	7411-KA(2)	N	7428-K(1)	N	7429-K(2)	7416-K(2)	7431-K(1)
SERVERS/ MULTI-USER:									
AV 4300 ****	Y (2) **	Y	N	N	7428-K(2)	7425-K(2)	N	7416-K(2)	N
AV 4600	Y (3) **	Y	7411-KA(2)	7418-K(1) 7424-K(1)	7428-K(2)	7425-K(2)	7429-K(2)	7416-K(2)	7431-K(1)
AV 5200+	SYS CON	N	7400 (2)	7418 (4)	7428 (6)	7425 (4)	7429 (4)	7416 (2)	7431 (1)
AV 6200	SYS CON	N	N	7418 (5)	7428 (6)	7425 (5)	7429 (4)	7416 (2)	7431 (1)
AV 6200-20	SYS CON	N	N	7418-W(5)	7428-W(6)	7425-W(8)	7429-W(8)	7416-W(2)	7431-W(1)
AV 7000+	SYS CON	N	7400 (2)	7418 (4)	7428 (6)	7425 (4)	7429 (4)	7416 (2)	7431 (1)
AV 8000	SYS CON	N	N	7418-W(5)	7428-W(6)	7425-W(8)	7429-W(8)	7416-W(2)	7431-W(1)

Notes:

* One asynchronous port supports RS232-C/RS422, the other supports RS232-C.
** One port required for system console connection.
*** Supplies a single IEEE 802.3/3b ETHERNET LAN interface.
**** In addition to the two asynchronous ports, the AV 4300 has a 255-line distributed adapter integrated on the system board. Device connection is supplied by distributed cluster box (VDC/16, VDC/8p) configuration.
***** Values in ( ) define maximum controller support per processor. Total combined LAN controller support is defined below.
AV 410/530/4300/4600 = 2 LAN controllers.
AV 5200+/7000+ = 4 LAN controllers.
AV 6200 = 6 LAN controllers.
AV 6200-20/8000 = 8 LAN controllers.

ASYNCHRONOUS COMMUNICATION

AViiON family systems support asynchronous serial device connection via System Board and VME communication controller interfaces. Local "CPU bulkhead" connect and distributed Cluster Box or TermServer solutions are offered. Termserver support requires connection to an Ethernet network via a System Board resident LAN interface, VME Terminal Controller (VTC), or VME Ethernet LAN Controller (VLCi). A drop cable and transceiver are required for network connection. The matrix listed below defines specific AViiON processor support for these products. The following sections define the asynchronous connect solutions listed.

ASYNCHRONOUS DEVICE/INTERFACE SUPPORT MATRIX

PROCESSOR	SYSTEM BOARD	VAC/16 (RS232-C)	CLUSTER,VDA/255 (RS232-C)	TERMSERVER (3) (RS232-C/RS422)
WORKSTATIONS:				
AV 100	2 X RS232-C/RS422 (1)	NO	NO	YES
AV 210	2 X RS232-C/RS422 (1)	NO	NO	YES
AV 310CD	2 X RS232-C/RS422 (1)	NO	NO	YES
AV 410	2 X RS232-C	YES	NO	YES
AV 530	2 X RS232-C	YES	NO	YES
SERVERS/ MULTI-USER:				
AV 4300	2 X RS232-C (2)	NO	YES (4)	YES
AV 4600	2 X RS232-C (2)	YES	YES	YES
AV 5200+	SYSTEM CONSOLE	YES	YES	YES
AV 6200	SYSTEM CONSOLE	NO	YES	YES
AV 6200-20	SYSTEM CONSOLE	NO	YES	YES
AV 7000+	SYSTEM CONSOLE	NO	YES	YES
AV 8000	SYSTEM CONSOLE	NO	YES	YES

Notes:

(1). One port available as RS232-C/RS422, the other RS232-C only.

(2). One port required for system console connect.

(3). Ethernet LAN connection to the System Board resident Ethernet interface, VME Terminal Controller (VTC), or VME LAN Controller (VLCi) is required for TermServer support. See "LAN COMMUNICATION" later in this section for further information.

(4). Distributed Cluster connect supported by System Board integrated 255-line distributed adapter. The VDA/255 is not supported on AV 4300.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

VME ASYNCHRONOUS CONTROLLER/16

This VME Controller supports 16 RS232-C/modem serial connects. There are two connection schemes supported. AV 410, 530, and 4600 series processors support device connection via two 8-line terminal connection boxes and 5 ft. cables. AV 5200+ support connection directly to the processor bulkhead.

VAC/16 VME Controller

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
AV 410, 530, 4600:								
7411-KA	VAC/16 16-line asynchronous controller, two 8-line TCB's, and 5ft. cables	2,000	15	11	2	A	Note 1	1 VME slot
AV 5200+:								
7400	VAC/16 16-line asynchronous controller	2,750	41	/NQ	2	A	Note 1	1 VME slot

Notes:

1. Processor Maximums:

   AV 410, 530, 4600, 5200+, and 7000+ support TWO VAC/16's.

2. Modem control signals supported on all lines.

VME DISTRIBUTED ADAPTER/255, VDC DISTRIBUTED CLUSTERS

This VME Distributed Adapter (VDA/255) supports up to 255 asynchronous serial connects via segments of RG62 coaxial cable, connecting to 8-line and 16-line Distributed Cluster Boxes (VDC/8p, VDC/16). These cluster boxes accept RS232-C/modem serial device connect. The 8-line cluster box supplies one Centronics parallel printer connect. AV 4300 has a 255-line distributed adapter integrated on the system board. Although it does not support the VDA/255 controller, device connection is accomplished by the same distributed cluster scheme.

VDA/255 VME Controller

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
AV 4600:								
7418-K	VDA/255 distributed adapter	3,000	7	5	2	A	Note 1	1 VME slot
7424-K@	VDA/255 with two 7419 16-line cluster boxes, no cables	5,000	17	12	2	A	Note 1-3	1 VME slot
AV 5200+, AV 6200, AV 7000+:								
7418	VDA/255 distributed adapter	3,000	7	/NQ	2	A	Note 1	1 VME slot
AV 6200-20, AV 8000:								
7418-W	VDA/255 distributed adapter	3,000	7	/NQ	2	A	Note 1	1 VME slot

VME DISTRIBUTED ADAPTER/255, VDC DISTRIBUTED CLUSTERS (Continued)

VDC Cluster Boxes:

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
7419-@	VDC/16 distributed cluster box	2,500	5	/NQ	2	A	Note 2	
7419S-@	VDC/16 distributed cluster box (system)	1,750	5	4	2	A	Note 2,4	
7420-@	VDC/8p distributed cluster box	1,500	5	/NQ	2	A	Note 2	

Cluster Box Cables:

15338E010	10 ft. VDA/255 to Cluster box, cluster to cluster	35	N/A	N/A		B		
15338E025	25 ft. VDA/255 to Cluster box, cluster to cluster	60	N/A	N/A		B		
15338E050	50 ft. VDA/255 to Cluster box, cluster to cluster	78	N/A	N/A		B		
15338E100	100 ft. VDA/255 to Cluster box, cluster to cluster	115	N/A	N/A		B		
15271D	Packages (5) RG62 barrel connectors	25	N/A	N/A		B		

Notes:

1. VDA/255

   - Processor Maximums:

     AV 4600 supports **ONE**.
     AV 5200+, and AV 7000+ support **FOUR**.
     AV 6200, AV 6200-20, and AV 8000 support **FIVE**.

   - The VDA/255 is supported under DG/UX revision 4.32 or greater.

   - The early model VDA/128 is not supported on AV 6280-20 and AV 8000-8 octal processor.

2. VDC/8p, VDC/16

   - Each cluster box ordered requires that a 15338EXXX cable be ordered as a separate line item (available at XXX = 010/025/100ft).

   - Maximum bus length is 1000ft. for cable length requirements that exceed 100ft. Order model 15271D (pkg. of 5 barrel connectors), which will allows connection of cable segments.

   - A site visit should be planned to determine cable lengths necessary to support customer requirements.

2. (Continued)

   - Revision 4.32 of DG/UX is required to mix cluster boxes supported on VDA/128 with cluster boxes supported on VDA/255.

   - Replace AC Power Suffix (-@) with:

     (Blank) - 120V/60Hz
     (-1) - 100V/50 or 60 Hz
     (-5,-6) - 240V/50Hz
     (-7,-8,-9,-0) - 220V/50Hz

     In addition to power requirements, these suffixes indicate line cord dependencies to specific country requirements. For further information see the "Standalone Power Cord Dependent Device Matrix" in the "Introduction" section.

3. Model 7424-K requires that TWO 15338EXXX cluster cables be ordered as a separate line item to support cluster boxes included within the bundled model.

4. Model 7419S is available for support on AV 4300 **ONLY**.

   Model 7419S is available on initial system orders only. A maximum of two 7419S models may be ordered. Any additional VDC/16 Cluster Box requirements will require model 7419.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

TERMSERVER

TCP/IP software allows communication with 10-line TermServers distributed over an 802.3 ETHERNET LAN. TermServers are available in both RS232-C/Modem and RS422 versions. TermServer 2100 includes a floppy diskette which allows TermServer software to be loaded locally. TermServer 2000 requires software to be downloaded from a TermManager. Connection is required via drop cable and transceiver from the host resident VME ETHERNET LAN interface (AV 100, 210, 310CD, 410, 530, 4300, 4600), VME LAN Controller (VLCi), or VME Terminal Controller (VTC), to the network.

RS232-C

G4817-@	10-line RS232-C TermServer 2000 (No Disk)	2,300	33	24	4	F	Note 3
G4819-@	10-line RS232-C TermServer 2100 (Floppy Disk)	2,700	38	27	4	F	Note 4

RS422

G4818-@	10-line RS422 TermServer 2000 (No Disk)	2,300	33	24	4	F	Note 3
G4820-@	10-line RS422 TermServer 2100 (Floppy Disk)	2,700	38	27	4	F	Note 4

Notes:

1. TermServer support requires TCP/IP processor software installation. (P001A---A)

2. TermServer support requires that a processor IEEE 802.3 LAN interface [System board, VME LAN Controller (VLCi), VME Terminal Controller (VTC)] be present. This interface requires a drop cable and transceiver to connect to the LAN.

3. 4817/4818 TermServers require the following:

   - Each TermServer ordered requires a TCP/IP software license (30071-A10N). On system orders, a minimum of one copy TCP/IP media and documentation (30071-20U) must be ordered to support software load from a TermManager.
   - Software Subscription Service (SSS) (30071-A40U), which includes media and documentation (30071-20U) is recommended. If configured, one copy of SSS must be ordered per TermServer.
   - Each TermServer requires a drop cable and transceiver for connection to the LAN.
   - These TermServers require that a TermManager be present on the network to download software.

4. 4819/4820 TermServer requires the following:

   - Each TermServer ordered requires a TCP/IP software license (30102-A10N). On system orders, a minimum of one copy TCP/IP media and documentation (30102-20I) must be ordered. Be aware that each TermServer requires its own media to boot and that ordering one copy will require that diskette be moved from unit to unit on initialization.
   - Software Subscription Service (SSS) (30102-A40I), which includes media and documentation (30102-20I) is recommended. If configured, one copy of SSS must be ordered per TermServer.
   - Each TermServer requires a drop cable and transceiver for connection to the LAN.
   - This TermServer loads TCP/IP software via a diskette included with the unit. Models 4819 and 4820 do not require a TermManager be present on the Network.

5. Replace AC Power Suffix (-@) with:

   (Blank) - 120V/60Hz
   (-1) - 100V/50 or 60Hz
   (-5,-6) - 240V/50Hz
   (-7,-8,-9,-0) - 220V/50Hz

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

ASYNCHRONOUS COMMUNICATION CABLES

The cables listed are for connection of asynchronous devices to AViiON family asynchronous interfaces. For specific device cable requirements reference the "HARD COPY" and "TERMINAL" sections of this catalog.

SYSTEM BOARD CONNECT

AV 100, 210, 310CD, 410:

RS232-C Device Connection

1340S	RS232 (5ft) workstation to RS232 async. device	20	N/A	N/A		B		
1340-T	RS232 (15ft) workstation to RS232 async. device	25	N/A	N/A	1	B		
1340	RS232 (25ft) workstation to RS232 async. device	30	N/A	N/A		B		
1340-A	RS232 (50ft) workstation to RS232 async. device	40	N/A	N/A		B		
15307E025	RS232 (25ft) software busy	40	N/A	N/A		B		

RS422 Device Connection (AV 100, 210, 310CD, Only)

1339	RS422 (25ft) TermServer to RS422 async. device	30	N/A	N/A		B		
1339-A	RS422 (50ft) extension cable	50	N/A	N/A		B		
1339-B	RS422 (100ft) extension cable	75	N/A	N/A		B		

RS232-C Modem Connection

1084M	Modem Control (25ft) workstation to modem	50	N/A	N/A		B		
1084M-A	Modem Control (10ft) workstation to modem	40	N/A	N/A		B		

AV 530, 4300, 4600:

RS232-C Device Connection

15340E010	10 ft. RS232 device cable	43	N/A	N/A		B		
15340E015	15 ft. RS232 device cable	50	N/A	N/A		B		
15340E025	25 ft. RS232 device cable	60	N/A	N/A		B		

RS232-C Modem Connection

15369E010	10 ft. RS232-C modem cable	35	N/A	N/A		B		
15369E015	15 ft. RS232-C modem cable	40	N/A	N/A		B		
15369E025	25 ft. RS232-C modem cable	45	N/A	N/A		B		

VAC/16, VDC/16, VDC/8p CONNECT

RS232-C Device Connection

15340E010	10 ft. RS232-C device cable	43	N/A	N/A		B		
15340E015	15 ft. RS232-C device cable	50	N/A	N/A		B		
15340E025	25 ft. RS232-C device cable	60	N/A	N/A		B		

RS232-C Device Connection

15369E010	10 ft. RS232-C modem cable	35	N/A	N/A		B		
15369E015	15 ft. RS232-C modem cable	40	N/A	N/A		B		
15369E025	25 ft. RS232-C modem cable	45	N/A	N/A		B		

ASYNCHRONOUS COMMUNICATION CABLES (Continued)

TERMSERVER CONNECT

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
RS232-C Connection								
1338-A	5 ft. RS232-C device cable	35	N/A	N/A		B		
1338	25 ft. RS232-C device cable	40	N/A	N/A		B		
RS422 Connection								
1339	25 ft. RS422 device cable	30	N/A	N/A		B		
1339-A	50 ft. RS422 extension cable	50	N/A	N/A		B		Note 3
1339-B	100 ft. RS422 extension cable	75	N/A	N/A		B		Note 3
RS232-C Modem Connection								
15275E025	25 ft. RS232-C modem cable	35	N/A	N/A		B		

AV 5200+, 6200, 6200-20, 7000+, 8000 SYSTEM CONSOLE CONNECT

15339E010	10 ft. RS232-C system console cable	43	N/A	N/A		B		
15339E015	15 ft. RS232-C system console cable	50	N/A	N/A		B		
15339E025	25 ft. RS232-C system console cable	60	N/A	N/A		B		

Notes:

1. See "HARD COPY" and "TERMINALS" sections for specific model/cable requirements and ordering guidelines.
2. For asynchronous devices that include cabling, insure that the cable lengths meet customer needs. If a different cable length is required, order printer/terminal as -X (no cable), and order cable length required as a separate line item.
3. 1339-A and 1339-B RS422 extension cables are used to extend an existing 1339 cable. These cables may not be used for direct interface to device connection.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

SYNCHRONOUS COMMUNICATION

AViiON family systems support synchronous device connection via 3-line VME synchronous communication controllers (VSC/3i). Each line may be selected to support RS232-C, RS449, RS530, V.35, or X.21 interface via hardware jumpering. AV 530 and AV 4600 have two RS232-C synchronous ports integrated on the system board (See note 5).

VSC/3i VME CONTROLLER

AV 410, 530, 4300, 4600:								
7428-K	3-line synchronous controller	2,995	8	6	2	A	Notes 1,2,4	1 VME slot
AV 5200+, 7000+, 6200 (10-slot):								
7428	3-line synchronous controller	2,995	8	/NQ	2	A	Notes 1,2,4	1 VME slot
AV 6200-20, 8000 (20-slot):								
7428-W	3-line synchronous controller	2,995	8	/NQ	2	A	Notes 1-4	1 VME slot

SYNCHRONOUS CABLES

RS232:						
15290E006	6 ft. RS232 synchronous cable	38	N/A	N/A		B
15290E015	15 ft. RS232 synchronous cable	44	N/A	N/A		B
15290E025	25 ft. RS232 synchronous cable	51	N/A	N/A		B
RS449:						
15408E015	15ft. RS449 synchronous cable	95	N/A	N/A		B
RS530:						
15409E015	15ft. RS530 synchronous cable	95	N/A	N/A		B
V.35:						
15410E015	15ft. V.35 synchronous cable	95	N/A	N/A		B
X.21:						
15411E015	15ft. X.21 synchronous cable	95	N/A	N/A		B

Notes:

1. VSC/3i Processor Maximums:

   AV 410, 530, 4100, 4300, 4600 support **two.**
   AV 5200+, 7000+, support **six.**
   AV 6200 (10-slot) supports **six.**
   AV 6200-20/8000 (20-slot) support **six.**

2. The VSC/3i requires DG/UX minimum revision 5.4.2.

   AV 530 and AV 4600 system board synchronous support requires DG/UX minimum revision 5.4.2.

3. Model 7428-W, when ordered on a System Expansion order, will include Small Subpanel model 7613-W.

4. The VSC/3i is shipped with all three lines set for RS232-C.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

LOCAL AREA NETWORK COMMUNICATION

AViiON family systems support Local Area Network (LAN) connection via system board resident ETHERNET LAN interface (AV 100, 210, 310CD, 410, 530, 4300, 4600), VME ETHERNET LAN Controller (VLCi), VME ETHERNET Terminal Controller (VTC), VME Token Ring Controller (VTRC), and VME Fiber Distributed Data Interface Controller (VFC).

ETHERNET LAN COMMUNICATION (IEEE 802.3, 802.3b)

ETHERNET LAN connection is accomplished by configuring a drop cable from the host interface, to a transceiver installed on a Thick ETHERNET (802.3) or Thin ETHERNET (802.3b) LAN.

VME LAN CONTROLLER (VLCi)

The VME LAN Controller (VLCi) is an ETHERNET communications controller that has been specifically designed to support high throughput in both single and multi-LAN configurations, via all major DG LAN protocols.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
AV 410, 530, 4600:								
7429-K	VME ETHERNET LAN controller	2,995	14	10	2	A	Notes 1,2,4	1 VME slot
AV 5200+, 6200, 7000+:								
7429	VME ETHERNET LAN controller	2,995	14	/NQ	2	A	Notes 1,2,3	1 VME slot
AV 6200-20, 8000:								
7429-W	VME ETHERNET LAN controller	2,995	14	/NQ	2	A	Notes 1,2,3	1 VME slot

Notes:

1. Processor Maximums:

   AV 410, 530, 4600 supports **TWO**.
   AV 5200+, 7000+ support **TWO**.
   AV 6200 (10-slot) supports **FOUR**.
   AV 6200-20, 8000 (20-slot) supports **EIGHT**.

   AV 4300 does not support the VLCi.

2. Requires DG/UX minimum revision 5.4.2 for support.

3. Combined VME LAN support (VLCi, VTC, VTRC):

   AV 5200+ and AV 7000+ support a total mix of **FOUR** VME LAN controllers.
   AV 6200 (10-slot) supports a total mix of **FIVE** VME LAN controllers.
   AV 6200-20, 8000 (20-slot) supports a total mix of **EIGHT** VME LAN controllers.

4. AV 530 and AV 4600 series hosts must have the system board (005-37864) at a minimum revision level of 34 (ECO 32075A).

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

VME TERMINAL CONTROLLER (VTC)

The VME Terminal Controller (VTC) is an ETHERNET communications controller that primarily supports asynchronous device connect via ETHERNET LAN based TermServers. See the "TERMSERVER" portion of the "ASYNCHRONOUS COMMUNICATION" section for available TermServer models and configuration information. Because the VTC uses TCP/IP Telnet protocol, it can support PC's and workstations connected directly to the LAN.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
AV 4300, 4600:								
7425-K	VME ETHERNET Terminal controller	4,000	20	14	2	A	Note 1	1 VME slot
AV 5200+, 6200 (10-slot), 7000+:								
7425	VME ETHERNET Terminal controller	5,000	20	/NQ	2	A	Note 1,2	1 VME slot
AV 6200-20, 8000 (20-slot):								
7425-W	VME ETHERNET Terminal controller	5,000	20	/NQ	2	A	Note 1,2	1 VME slot

Notes:

1. Processor Maximums:

   AV 4300, 4600 supports **TWO** VTC's.
   AV 5200+, 7000+ supports **FOUR** VTC's.
   AV 6200 (10-slot) supports **FIVE** VTC's.
   AV 6200-20, 8000 (20-slot) supports **EIGHT** VTC's.

2. Combined VME LAN support (VLC, VTC, VTRC):

   AV 5200+ and AV 7000+ support a total mix of **FOUR** VME LAN controllers.
   AV 6200 (10-slot) supports a total mix of **FIVE** VME LAN controllers.
   AV 6200-20, 8000 (20-slot) supports a total mix of **EIGHT** VME LAN controllers.

3. The VTC is supported under DG/UX revision 5.41 (or greater).

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
TRANSCEIVERS AND DROP CABLES								
TRANSCEIVERS								
Thick ETHERNET								
4540	XCVR for thick ETHERNET LAN (N-Tap)	350	6	4	4	F		
4540-B	XCVR for thick ETHERNET LAN (Vampire Tap)	350	6	4	4	F	Note 1	
15322D	4540-B installation kit	50	N/A	N/A		B		
4619-@	Eight port ETHERNET XCVR	1,495	13	10	4	F	Note 2	
Thin ETHERNET								
4540-A	XCVR for thin ETHERNET LAN (BNC-Tap)	350	7	5	4	F		
CABLES								
Drop Cables								
40028	1 meter ETHERNET drop cable	50	N/A	N/A	5	B	Note 3	
40028A	3 meter ETHERNET drop cable	55	N/A	N/A	5	B	Note 3	
15274E005	5 meter ETHERNET drop cable	65	N/A	N/A		B	Note 3	
15274E020	20 meter ETHERNET drop cable	110	N/A	N/A		B	Note 3	
1326	5 meter Teflon ETHERNET drop cable	110	N/A	N/A		B	Note 3	
1326A	20 meter Teflon ETHERNET drop cable	160	N/A	N/A		B	Note 3	
Thin ETHERNET								
15269E003	3 meter Thin ETHERNET cable segment	28	N/A	N/A		B	Note 4	
15269E010	10 meter Thin ETHERNET cable segment	35	N/A	N/A		B	Note 4	
15269E015	15 meter Thin ETHERNET cable segment	40	N/A	N/A		B	Note 4	
15270D	Thin ETHERNET terminators (2)	24	N/A	N/A			Note 4	
15271D	Thin ETHERNET barrel connectors (5)	25	N/A	N/A		B	Note 4	
15272D	Thin ETHERNET insulating boot	8	N/A	N/A		F	Note 4	
Termscrew								
15310D	Screws for connecting drop cable to TermServer	10	N/A	N/A		B	Note 3	

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

Notes:

1. 4540-B requires 15322D Vampire Tap installation kit.

2. 4619-@ requires a drop cable and XCVR (4540, or 4540-B) if connected to a coax LAN, or a drop cable if utilized in a standalone mode.

3. Cables:

   There are three drop cable series available for Thick ETHERNET (802.3) and Thin ETHERNET (802.3b) Host to Transceiver LAN connect (40028, 15274EXXX, and 1326). Each series have design characteristics which define their selection. In actuality, one may be substituted for another providing the cable lengths support the application. All cables utilize a latching method of connection. For configuration ease, choose the cable that best suits the customer requirements. ETHERNET drop cabling should not exceed a distance of 50 meters.

   The following cables should be utilized when:

   40028/40028A - application does not require long distance connection between host and LAN. This cable is flexible for ease of configuration. Cable attachment problems that may be associated with other ETHERNET cables should not be an issue. These cables should not be daisy-chained at distances exceeding 3 meters.

   15274E005/020 - application requires greater distance between host and LAN. This cable is less flexible than the 40028, but is able to support distances to 45 meters.

3. (Continued)

   1326/1326A - application requires cable runs up or through enclosed wall partitions or within air plenums or ceiling air spaces. (Plenum Grade, NEC-CL2P) (Teflon). Use of this cable should be restricted to these situations since cable has reduced flexibility. These are the only cables available to support this application.

   Termscrew Kit - Kit consisting of hardware necessary to replace slide latches with screws. This kit is only available for use on 15274E005/020 and 1326/1326A cables attaching to TermServer units.

4. Thin ETHERNET cables (15269EXXX) may be daisy-chained to connect nodes on the network. Cables may be daisy-chained via 15271D barrel connectors for a maximum total network segment length of 185 meters (607 ft.).

   The segment may have a maximum of 30 nodes connected, and is terminated at both ends by model 15270D terminators. Connection to the network from the node may be accomplished by drop cable and Thin ETHERNET transceiver (where transceiver is not built into node interface), or by connection to node via a BNC "T" connector (where transceiver is an integral part of the node interface). The use of an insulating boot (15272D) to protect each connector/terminator is recommended.

5. Replace AC Power Suffix (@) with:

   (Blank) - 120V/60Hz
   (-5, -6) - 240V/50Hz
   (-7, -8, -9, -0) - 220V/50Hz

   In addition to power requirements, these suffixes indicate line cord dependencies to specific country requirements. For further information, see the "Standalone Power Cord Dependent Device Matrix" table in the "Introduction" section.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
TOKEN RING LAN COMMUNICATION (IEEE 802.5)								
There are three primary components of a Token Ring configuration (node, lobe cable, TAU). Token Ring connection is accomplished by configuring shielded or unshielded cables (lobe cables) from the AViiON processor (node) via the VME Token Ring Controller (VTRC), to a Trunk Access Unit (TAU). Each TAU provides physical and electrical interconnection between nodes (AViiON, Eclipse MV, or PC processors) on the network. Up to eight nodes may be supported per TAU. For larger networks, each TAU is then attached via its ring in/ring out ports to another within the wiring closet or to a Token Ring trunk cable.								
VME TOKEN RING CONTROLLER (VTRC)								
AV 410, 530, 4300, 4600:								
7416-K	VME Token Ring controller	2,500	12	9	2	A	Notes 1,2	1 VME slot
AV 5200+, 6200 (10-slot), 7000+:								
7416	VME Token Ring controller	2,500	12	/NQ	2	A	Notes 1,2	1 VME slot
AV 6200-20, 8000 (20-slot):								
7416-W	VME Token Ring controller	2,500	12	/NQ	2	A	Notes 1,2	1 VME slot
TRUNK ACCESS UNIT (TAU)								
4715	Token Ring TAU	650	7	5	4	F		1.75" RM
TOKEN RING CABLES								
Shielded Twisted Pair Cable								
15333E003	2.5 ft. adapter cable	55	N/A	N/A		B	Note 4	
15333E016	16 ft. adapter cable	70	N/A	N/A		B	Note 4	
15333E065	65 ft. adapter cable	140	N/A	N/A		B	Note 4	
15332E008	8 ft. extension/patch cable	65	N/A	N/A		B	Note 4	
15332E030	30 ft. extension/patch cable	100	N/A	N/A		B	Note 4	
15332E075	75 ft. extension/patch cable	135	N/A	N/A		B	Note 4	
15332E150	150 ft. extension/patch cable	175	N/A	N/A		B	Note 4	
Unshielded Twisted Pair Cable								
15335E008	8 ft. cable w/media filter, RJ-11 coupler	75	N/A	N/A		B	Note 4	
15334E008	8 ft. extension/patch cable	25	N/A	N/A		B	Note 4	
15334E030	30 ft. extension/patch cable	35	N/A	N/A		B	Note 4	
15334E075	75 ft. extension/patch cable	40	N/A	N/A		B	Note 4	
15334E150	150 ft. extension/patch cable	60	N/A	N/A		B	Note 4	
CONVERTER								
15347D	Type3/IBM Converter	35	N/A	N/A			Note 4	

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

TOKEN RING LAN COMMUNICATION (IEEE 802.5) (Continued)

Notes:

1. Processor Support:

   AV 410, 530, 4300, 4600, 5200+, 6200, 6200-20, 7000+, 8000 support TWO VTRC's under DG/UX 5.4.

   - Only one VTRC per protocol is supported

2. Combined VME LAN support (VLC, VTC, VTRC);

   AV 5200+, AND 7000+ support a total mix of **FOUR** VME LAN controllers.
   AV 6200 (10-slot) supports a total mix of **FIVE** VME LAN controllers.
   AV 6200-20, 8000 (20-slot) supports a total mix of **EIGHT** VME LAN controllers.

3. Trunk Access Unit (TAU)

   - Not a required component if the site has an IBM Media Access Unit (MAU) model 8228 installed. Cabling to the IBM MAU will follow the same guidelines as connection to the 4715.

5. Cabling

   - Shielded Twisted Pair Connection (STP)
     (4mbps & 16mbps environments)

     - Maximum distance between VTRC and TAU is 100 meters.

     - Configure:

       15333EXXX - Adapter cable to attach VTRC to TAU

       15332EXXX - Patch cable (type 6) to extend adapter cable (15333EXXX) to TAU where available adapter cable lengths do not suffice, or for TAU to TAU connection.

4. (Continued)

   - Unshielded Twisted Pair Connection (UTP)
     (4mbps environments only)

   - Maximum distance between VTRC and TAU is 45 meters.

   - If distance between VTRC and TAU does not exceed 8 ft., configure:

     15335E008 - Media filter with 8 ft. cable, RJ-11 coupler. Connects VTRC to Type 3/IBM converter (model 15347D)

     15347D - Type3/IBM converter. Connects media filter/8 ft. cable to TAU.

   - If distance between VTRC and TAU exceeds 8 ft., configure:

     15335E008 - Media filter with 8 ft. cable, RJ-11 coupler

     15334EXXX - Extension/patch cable; connects media filter/8 ft. cable to Type3/IBM converter

     15347D - Type3/IBM converter; connects extension/patch cable to TAU

   - TAU to TAU connection

     15332EXXX - patch cable (type 6) for TAU to TAU connection

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

FIBER DISTRIBUTED DATA INTERFACE (ANSI X3T9.5)

The VME Fiber Distributed Data Interface Controller (VFC) supports connection directly to high speed fiber optic networks, or to concentrators attached to the FDDI ring. FDDI (ANSI X3t9.5) is a token passing, counter-rotating, dual ring network that may be utilized to solve problems due to traffic congestion on the LAN, or to address higher speed and greater bandwidth requirements of direct host connect. The VFC supports connection to an optional optical bypass relay. This bypass switch allows information to pass through, circumventing a disabled host on the FDDI ring. The bypass switch includes a set of integrated 2 meter cables for attachment to the VFC controller. Three fiber optic cable types are available supporting two standard connector schemes. An ST connector type is utilized on the cable end attaching to the VFC. A Media Interface Connector (MIC) type connector or an ST connector may be utilized by other FDDI devices (router, server, workstation, patch panel, etc.).

VME FIBER DISTRIBUTED DATA CONTROLLER (VFC)

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
AV 530, 4600:								
7431-K	VME FDDI controller	10,500	80	56	2	A	Notes 1,2	1 VME slot
AV 5200+, 7000+, 6200 (10-slot):								
7431	VME FDDI controller	10,500	80	/NQ	2	A	Notes 1,2,3	1 VME slot
AV 6200-20, 8000 (20-slot):								
7431-W	VME FDDI controller	10,500	80	/NQ	2	A	Notes 1,2,3	1 VME slot

OPTICAL BYPASS SWITCH

7432	Optical bypass switch for VFC w/2 meter cables	1,322	/NC	/NC	2	A		

FIBER OPTIC CABLES

ST to ST Connection:								
40567	5 meter ST to ST fiber optic cable	160	N/A	N/A		B	Note 4,5	
40561	10 meter ST to ST fiber optic cable	245	N/A	N/A		B	Note 4,5	
40564	20 meter ST to ST fiber optic cable	325	N/A	N/A		B	Note 4,5	
ST to MIC Connection:								
40566	5 meter ST to MIC fiber optic cable	235	N/A	N/A		B	Note 4,5	
40560	10 meter ST to MIC fiber optic cable	275	N/A	N/A		B	Note 4,5	
40563	20 meter ST to MIC fiber optic cable	355	N/A	N/A		B	Note 4,5	
MIC to MIC Connection:								
40565	5 meter MIC to MIC fiber optic cable	270	N/A	N/A		B	Note 4,5	
40559	10 meter MIC to MIC fiber optic cable	310	N/A	N/A		B	Note 4,5	
40562	20 meter MIC to MIC fiber optic cable	390	N/A	N/A		B	Note 4,5	

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

FIBER DISTRIBUTED DATA INTERFACE (ANSI X3T9.5) (Continued)

Notes:

1. At this time **ONE** VFC controller is supported.
2. The VFC requires DG/UX minimum revision 5.4.2.
3. Configuration of the VFC on AV 5000, 7000, 6000, and 8000 series systems requires three adjacent DB-25 bulkhead cutouts.
4. Cable Configuration:
   For dual attachment (DAS - Class A) two cable models should be configured. For single attachment (SAS - Class B) one cable model will be configured.
   - VFC to VFC (no bypass switch) - "ST to ST".
   - VFC to optical bypass switch - cables included with bypass switch.
   - VFC to ST patch panel - "ST to ST".
   - VFC to concentrator or ring - "ST to MIC".
   - Optical bypass switch to bypass switch, concentrator, or ring - "MIC to MIC".
5. For information on network components and their cabling requirements contact the Network Services Group.

AViiON Hard Copy Section

HARD COPY

Hard Copy devices listed in this section are segregated by printing method:

CHARACTER PRINTER - prints one character at a time, typically Dot Matrix.
LINE PRINTER - prints a complete line at a time, typically Band or Line Dot Matrix.
PAGE PRINTER - prints entire page at a time, typically Laser.

AViiON SERIAL/PARALLEL CONNECT QUICK REFERENCE

PROCESSOR	SERIAL PORTS	PARALLEL PRINTER
AV 100 AV 210 AV 310CD	(1) RS422/RS232-C (1) RS232-C	N/A
AV 410 AV 3200 AV 4100 AV 4300	(2) RS232-C One utilized for System Console connect	1
AV 530 AV 4600	(3) RS232-C Two with modem control	1
AV 5200+ AV 6200 AV 6200-20 AV 7000+ AV 8000	(1) RS232-C SYS CON (1) REMOTE MODEM	1
VAC/16 VDC/16	(16) RS232-C	N/A
VDC/8p	(8) RS232-C	1
TermServer	(10) RS232-C or (10) RS422 per TermServer	N/A

Note: Except where noted, all RS232-C connects support modem control.

ORDERING GUIDELINES

The following guidelines should be followed for all Hard Copy model ordering. Depending on the model scheme some of these devices will require that certain suffixes be included to define interface/cable, font, band, requirements etc. See applicable model description for suffixes required.

1. Determine customer cabling needs:

   Determine what interface (RS232-C or Centronics) the customer desires for the particular application.

   RS232-C SERIAL ASYNCHRONOUS CONNECT:

   Determine where the customer wants to configure Hard Copy devices.

   - On AV 100, 200, 300:
     Depending on printer model structure order printer with suffix (-N = RS232-C) or, for those printers that do not supply models that include cabling (see specific printer description), see "Hard Copy Printer Cables" at the end of this section.

   - On AV 400:

     If printer is to be configured on an AV 400 system board serial port:
     Depending on printer model structure order printer with suffix (-N = RS232-C) or, for those printers that do not supply models that include cabling (see specific printer description), see "Hard Copy Printer Cables" at the end of this section.

     If printer is to be configured on a VAC/16 or VDC/8p/16:
     Order printer as -X (no cable), and order required cable as a separate line item.

     If printer is to be configured on a Termserver:
     Order printer as -X (no cable) and order required cable as a separate line item.

   - On AV 530, 3200, 4000, 4300, 4600, 5200+, 6200, 7000+, 8000:

     If printer is to be configured on a AV 530, AV 4300, AV 4600, VAC/16 or VDC/8p/16:
     Order printer with suffix (-N = RS232-C) or, for those printers that do not supply models that include cabling (see specific printer description), see "Hard Copy Cables" at the end of this section.

     If printer is to be configured on a Termserver:
     Order printer as -X (no cable) and order required cable as a separate line item.

   - For hard copy devices that include cabling (see specific printer description), ensure that the cable length meets customer needs. If a different cable length is required, order device as -X (no cable) and order the cable required as a separate line item. See applicable model description for cable length included.

   - IMPORTANT NOTE: **The Order Distribution System ensures that the correct cable is selected to support the processor type ordered. For this reason it is imperative that the correct CPU Designator is specified on System Expansion (SX) orders. An incorrect CPU Designator will most likely result in the wrong cable arriving at the customer's site. (See "Introduction" for a listing of current CPU Designators.)**

CENTRONICS PARALLEL CONNECT:

Determine where the customer wants to configure hardcopy devices.

- On AV 300, 400:
  Depending on printer model structure, order printer with suffix (-P = Centronics Parallel) or, for those printers that do not supply models that include cabling (see specific printer description), see "Hard Copy Cables" at the end of this section. Early Monochrome versions of the AV 300 family support one Centronics port. Color versions (AV 310CD) have replaced this parallel port with an additional RS232-C serial connect.

- On AV 530, 3200, 4000, 4300, 4600, 5200+, 6200, 6200-20, 7000+, 8000:

  If printer is to be configured on an AV 530, 4300, 4600 system board Centronics parallel port:
  Order printer as -X (no cable) and order required cable (10235 - 5 ft. or 15293E030 - 30 ft.) as a separate line item.

  If printer is to be configured on an AV 5200+, 6200, 6200-20, 8000 system board Centronics parallel port:
  Order printer with desired suffix (-P = Centronics parallel) or, for those printers that do not supply models that include cabling (see specific printer description), see "Hard Copy Cables" at the end of this section. For these processors, printer models that include parallel cables (-P) will have a 15 ft. Centronics parallel cable (15345E015) structured.

  If printer is to be configured on a VDC/8p Cluster Box Centronics parallel port:
  Order printer with suffix (-P = Centronics parallel) or, for those printers that do not supply models that include cabling (see specific printer description), see "Hard Copy Cables" at the end of this section. For these processors, printer models that include parallel cables (-P) will have a 15 ft. Centronics parallel cable (15345E015) structured.

- For Hard Copy devices that include cabling (-P), ensure that the cable length meets customer needs. If a different cable length is required, order terminal as -X (no cable) and order the cable required as a separate line item.

- IMPORTANT NOTE: **The Order Distribution System ensures that the correct cable is selected to support the processor type ordered. For this reason it is imperative that the correct CPU Designator is specified on System Expansion (SX) orders. An incorrect CPU Designator will most likely result in the wrong cable arriving at the customer's site. (See "Introduction" for a listing of current CPU Designators.)**

AViiON SYSTEM HARD COPY CONNECT REFERENCE

System Board, VAC/16, and VDC/16/8p Cluster Box ports utilize different interfaces and connectors which require different cable models. The following is a list of serial and parallel printer connects on the AViiON product line.

AViiON SYSTEM HARD COPY CONNECTS

	SERIAL CONNECTOR	PARALLEL CONNECTOR
AV 100, 200, 300CD System Board	DB-25 male	N/A
AV 300, 400, 3200, 4000 System Board	DB-25 male	DB-25 Female
AV 530, 4300, 4600 System Board	DB-25 Female	DB-25 Female
AV 5200+, 6200, 6200-20, 7000+, 8000 System Board	DB-25 System Console Female	CHAMP-36 Female
VAC/16 Host Adapter VDC/16 Cluster Box	DB-25 Female	N/A
VDC/8P Cluster Box	DB-25 Female	CHAMP-36 Female
TermServer	DB-25 Male	N/A

Note:

1. Early Monochrome versions of the AV 300 family support one Centronics port. Color versions (AV 310CD) have replaced this parallel port with an additional RS232-C serial connect.
2. See "Hard Copy Cables" at the end of this section for associated cable model numbers.

CHARACTER PRINTERS

300 CPS DOT MATRIX PRINTERS (Models 6647, 6648)

The Models 6647 (80 column) and 6648 (136 column) are the Okidata Models 320 and 321. The printers handle paper from 3"-10" wide, including multi-part forms, labels, and stationary. They are 9-wire printhead, impact dot matrix printers. The models are IBM and Epson compatible, and offer small size and quiet operation. They print at speeds of up to 300 CPS draft, 250 CPS utility, and 63 CPS NLQ mode. The 6647 and 6648 include a standard Centronics parallel interface; an RS232-C serial interface is available as an option. (Cable not included)

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
6647	80 column, w/o cable, 120V/60Hz US	499	10	8	1	A	Notes 1, 2	DT
6647A	80 column, w/o cable, 120V/60HZ non-US	628	9	/NQ	1	A	Notes 1, 2	DT
6647F-@	80 column, w/o cable, export	692	10	/NQ	1	A	Notes 1, 2	DT
6648	136 column, w/o cable, 120V/60Hz US	699	11	9	1	A	Notes 1, 2	DT
6648A	136 column, w/o cable, 120V/60Hz non-US	880	10	/NQ	1	A	Notes 1, 2	DT
6648F-@	136 column, w/o cable, export	969	10	/NQ	1	A	Notes 1, 2	DT
10755	RS232-C Serial Interface	102	/NC	/NC	1	A		
10756	Pull tractor for 6647	63	/NC	/NC	1	A		
10757	Pull tractor for 6648	68	/NC	/NC	1	A		

Notes:

1. Centronics parallel or RS232-C serial interface cable must be ordered as a separate line item See "Hard Copy Cables" at the end of this section.
2. RS232-C connection requires that model 10755 Serial Interface be included on the order as a separate line item.
3. For RS232-C serial connection to an asynchronous modem order RS232-C serial interface (10755), and 1338 (25ft) or 1338-A (5ft) modem cable as a separate line item.
4. Replace AC Power Suffix (-@) with:

   6647, 6647A, 6648, 6648A
   (Blank) - 120V/60Hz

   6647F, 6648F
   (-5,-6) - 240V/50Hz
   (-7,-8,-9,-0) - 220V/50Hz

   In addition to power requirements, these suffixes indicate line cord dependencies to specific country requirements. For further information, see the "Standalone Power Cord Dependent Device Matrix" table in the "Introduction" section.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

300 CPS DOT MATRIX PRINTER (Models 6514, 6515)

The Models 6514 (80 column) and 6515 (136 column) are 24 wire, text/graphics impact dot matrix printers. They produce high resolution NLQ and graphics output for business applications. They can print multi-part forms, labels, stationery at up to 300CPS. An optional sheet feeder supports cut sheet paper. The Models 6514 and 6515 printers include a Centronics parallel and RS232-C serial interface.

6514-@	80 column, with 15 ft. RS232-C cable	934	22	16	1	A	Note 1	DT
6514-X@	80 column, w/o cable	899	22	16	1	A	Note 1,2	DT
6515-@	136 column, with 15 ft. RS232-C cable	1,134	25	22	1	A	Note 1	DT
6515-X@	136 column, w/o cable	1,099	25	22	1	A	Note 1,2	DT
10527	Dual-bin sheetfeeder for 6515	495	10	5	3	A		

Notes:

1. For Termserver connect, and RS232-C serial support at requirements other than 15 ft. order model as -X (no cable) and order required length RS232-C cable as a separate line item. See "Hard Copy Printer Cables" at the end of this section for associated cable model numbers.

   For RS232-C serial connection to an asynchronous modem order model as -X (no cable) and order 1338 (25ft) or 1338-A (5ft) modem cable as a separate line item.

2. For Centronics parallel support, order model as -X (no cable) and order interface cable as a separate line item. See "Hard Copy Cables" at the end of this section.

3. Replace AC Power Suffix (-@) with:

   (Blank) - 120V/60Hz
   (-5,-6) - 240V/50Hz
   (-7,-8,-9,-0) - 220V/50Hz

   In addition to power requirements, these suffixes indicate line cord dependencies to specific country requirements. For further information, see the "Standalone Power Cord Dependent Device Matrix" table in the "Introduction" section.

300 CPS DOT MATRIX PRINTER (Model 6788)

Model 6788 is a heavy duty forms oriented, 9-wire, 132 column dot matrix printer designed for usage of 2000 to 9000 pages per month. This duty cycle, coupled with demand document capability, multi-part form printing (9 parts .021"), and barcode support, make it a reliable choice for many applications. Variable speeds are supported up to 300 CPS (at 10CPI) in high speed mode. The 6788 printer includes a Centronics parallel and RS232-C serial interface. RS422 may be supported by ordering an optional RS232-C to RS422 converter (10433). Both parallel and serial modes are control panel selectable and may be supported simultaneously by ordering an additional cable. A tilt-base stand and one box ribbons (1280) are also included.

6788-#@	400 CPS dot matrix printer, with cable	1,645	22	22	3	A		
6788-X@	400 CPS dot matrix printer, w/o cable	1,595	22	/NQ	3	A		
10433	RS232-C to RS422 converter	85	N/A	N/A		F		
1280	Printer ribbons (6)	43	N/A	N/A		B		

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

Notes:

1. Replace Interface/Cable Suffix (-#) with:

   Serial Connect:

   -X - For serial connect to the AV 3200 and AV 4000 system board, order printer as -X (no cable), and order model 15307E025 as a separate line item.

   -N - Supplies a 15ft. RS232-C serial interface cable on all other AViiON processors.

   -J - Supplies 25ft. RS232-C serial interface cable (1338) for connection to an asynchronous modem or RS232-C TermServer port.

   Parallel Connect:

   -X - For parallel connect on AV 530, 3200, 4100, 4300, and 4600 system board, order printer as -X (no cable) and order cable model 10235 or 15293E030 as a separate line item.

   -P - Supplies a 5ft. Centronics parallel printer cable (10235) on AV 300 and AV 400.

   - Supplies a 15ft. Centronics parallel printer cable (15345E015) on all other AViiON processors for connection to VDC/8p cluster box or AV 5200, 6200, 7000, or 8000 system board connect.

   For cable length requirements outside of what -N/-P/-J models supply, order printer as -X (no cable) and order interface cable as a separate line item. See "HARD COPY CABLES" at the end of this section for appropriate cables.

2. Replace AC Power Suffix (-@) with:

   (Blank) - 120V/60Hz
   (-5,-6) - 240V/50Hz
   (-7,-8,-9,-0) - 220V/50Hz

   These suffices are line cord dependent as to specific country requirements. For further information see "Power Cord Dependent Device Matrix" in the "Introduction".

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

400 CPS DOT MATRIX PRINTER (Model 6594)

Model 6594 is a rugged, 18-wire impact dot matrix general purpose printer. It can output on multi-part forms and cut sheet paper with an easy-to-use manual insert slot for single multi-part and odd sized media. It has variable speeds up to 400 CPS while printing draft, text or NLQ mode. It also has a wide carriage (136 columns at 10 CPI). The 6594 printer includes a Centronics parallel and RS232-C serial interface.

6594-#@	400 CPS dot matrix, with cable	2,655	51	/NQ	3	A	Note 1	DT
6594-X@	400 CPS dot matrix, w/o cable	2,595	51	/NQ	3	A	Note 1	DT
10662	Dual-bin sheet feeder	795	9	/NQ	3	A		

Notes:

1. Replace Interface/Cable Suffix (-#) with:

   -N - Supplies a 15 ft. RS232-C serial interface cable.

   -P - Supplies a 5 ft. Centronics parallel cable (10235) on AV 300 and AV 400.

   - Supplies a 15 ft. Centronics parallel cable (15345E015) on AV 3200, 4000, 4300, 4600, 5200, 5200+, 6200, 7000, 7000+, and 8000 for connection to VDC/8p cluster box or AV 5200, 6200, 7000, and 8000 system board.

   -X - For parallel connect on AV 530, 3200, 4000, 4300 and 4600 system board, order printer as -X (no cable) and order associated cable as a separate line item.

   - For serial connect on AV 3200 and 4000 system board, order printer as -X (no cable) and order associated cable as a separate line item.

   - For Termserver connect, and cable length requirements outside of -N/-P models order printer as -X (no cable) and order interface cable as separate line item.

   - For RS232-C serial connection to an asynchronous modem order model as -X (no cable) and order 1338 (25ft) or 1338-A (5ft) modem cable as a separate line item.

   - See "Hard Copy Cables" at the end of this section for associated cable models.

2. Replace AC Power Suffix (-@) with:
   (Blank) - 120V/60Hz
   (-5,-6) - 240V/50Hz
   (-7,-8,-9,-0) - 220V/50Hz

   In addition to power requirements, these suffixes indicate line cord dependencies to specific country requirements. For further information see the "Standalone Power Cord Dependent Device Matrix" table in the "Introduction" section.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

622 CPS DOT MATRIX PRINTER (Model 6789)

Model 6789 is a heavy duty forms oriented, 18-wire, 132 column dot matrix printer designed for usage of 20,000 pages per month. This duty cycle, coupled with demand document capability, multi-part form printing (6 parts .021"), and barcode support, make it a reliable choice for many applications. Variable speeds are supported up to 622 CPS (at 10 CPI) in high speed mode. The 6789 printer includes a Centronics parallel and RS232-C serial interface. RS422 may be supported by ordering an optional RS232-C to RS422 converter (10433). Both parallel and serial modes are control panel selectable and may be supported simultaneously by ordering an additional cable. One ribbon (18947) is included with the printer.

6789-#@	622 CPS dot matrix printer, with cable	3,045	27	27	3	A	Note 1	DT
6789-X@	622 CPS dot matrix printer, w/o cable	2,995	27	/NQ	3	A	Note 1	DT
10433	RS232-C to RS422 converter	85	N/A	N/A		F		
18947	Ribbon Cartridge	26	N/A	N/A		B		

Notes:

1. Replace Interface/Cable Suffix (-#) with;

Serial Connect:

-X - For serial connect to the AV 3200 and AV 4000 system board, order printer as -X (no cable), and order model 15307E025 RS232-C cable as a separate line item.

-N - Supplies a 15ft. RS232-C serial interface cable on all other AViiON processors.

-J - Supplies a 25ft. RS232-C serial interface cable (1338) for connection to an asynchronous modem or RS232-C TermServer port.

Parallel Connect:

-X - For parallel connect on AV 530, 3200, 4000, 4300 and 4600 system board, order printer as -X (no cable) and order associated cable as a separate line item.

Parallel Connect (Continued)

-P - Supplies a 5ft. Centronics parallel printer cable (10235) on AV 300 and AV 400.

- Supplies a 15ft. Centronics parallel printer cable (15345E015) on all other AViiON processors for connection to VDC/8p cluster box or AV 5200, 6200, 7000, or 8000 system board connect.

For cable length requirements outside of what -N/-P/-J models supply, order printer as -X (no cable) and order interface cable as a separate line item. See "Hard Copy Cables" at the end of this section for appropriate cables.

2. Replace AC Power Suffix (-@) with:

(Blank) - 120V/60Hz
(-5,-6) - 240V/50Hz
(-7,-8,-9,-0) - 220V/50Hz

Theses suffices are line cord dependent as to specific country requirements. For further information see "Power Cord Dependent Device Matrix" in the "Introduction" section.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

LINE PRINTERS

1500LPM/2000LPM BAND PRINTERS

These models are 1500 (4598C/4603C) and 2000 (4599C/4604C) LPM impact band (fixed character) printers intended for heavy duty EDP output applications. This family includes quietized cabinets, power stackers, rear control panels, and Centronics parallel interface. Models 4598C and 4599C are available in 120V/60Hz and 100V/50/60Hz only. Models 4603C and 4604C are DIN compliant versions and are available in 220V/50Hz and 240V/50Hz. (Cables not included)

4598C-X!%@	1500 LPM printer, w/Centronics interface, w/o cable	27,995	424	/NQ	4	A	Note 1	FS
4603C-X!%@	DIN 1500 LPM printer, w/Centronics interface, w/o cable	27,995	424	/NQ	4	A	Note 1	FS
4599C-X!%@	2000 LPM printer w/Centronics interface, w/o cable	34,995	477	/NQ	4	A	Note 1	FS
4604C-X!%@	DIN 2000 LPM printer w/Centronics interface, w/o cable	34,995	477	/NQ	4	A	Note 1	FS

Notes:

1. 1500, 2000LPM Band printers are available as -X (no cable) and require that applicable Centronics parallel cable be ordered as a separate line item. See "Hard Copy Cables" at the end of this section.

2. Printer Suffixes:
   (!) = Font Type
   (%) = Band Type

   Replace Font/Band (!%) suffixes with:

AA = US 48 Char.	DD = German 96 Char.
AB = US 64 Char.	GB = Spanish/Portugal 64 Char.
AD = US 96 Char.	GD = Spanish/Portugal 96 Char.
BB = UK 64 Char.	HB = Danish/Norwegian 64 Char.
BD = UK 96 Char.	HD = Danish/Norwegian 96 Char.
CD = French/Belgium 96 Char.	NB = Swedish/Finnish 64 Char.
DB = German 64 Char.	ND = Swedish/Finnish 96 Char

3. Replace AC Power (@) suffix with:

4598C/4599C:	4603C/4604C:
(No Suffix) - 120V/60Hz	(-2) - 220V/50Hz
(-1) - 100V/50or60Hz	(-4) - 240V/50Hz

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

450/800LPM LINE DOT MATRIX PRINTERS

These impact dot matrix printers produce text at 450 LPM (6617) or 800 LPM (6618). They come equipped with a standard Graphics Processing Option, so users can generate and manipulate text/graphics. They print barcodes, halftones, even logos. The 6617/6618 models feature quietized cabinets and Centronics parallel and RS232-C serial interface support.

6617-#@	450 LPM dot matrix printer with cable	7,795	96	/NQ	3	A	Note 1	FS
6617-X@	450 LPM dot matrix printer w/o cable	7,695	96	/NQ	3	A		FS
6618-#@	800 LPM dot matrix printer with cable	8,795	117	/NQ	3	A	Note 1	FS
6618-X@	800 LPM dot matrix printer w/o cable	8,695	117	/NQ	3	A		FS
6619	450 to 800 LPM Upgrade Kit for Model 6617	1,195	117	/NQ	3	A		

Notes:

1. Replace Interface/Cable Suffix (-#) with:

   -N - Supplies 15 ft. RS232-C serial interface cable

   -P - Supplies a 5 ft. Centronics parallel cable (10235) on AV 300, 400.

   - Supplies a 15 ft. Centronics parallel cable (15345E015) on AV 3200, 4000, 4300, 4600, 5200, 5200+, 6200, 7000, 7000+, and 8000 for connection to VDC8p cluster box and AV 5200, 6200, 7000, 8000 system board.

   -X - For parallel connect on AV 530, 3200, 4000, 4300 and 4600 system board, order printer as -X (no cable) and order associated cable as a separate line item.

   - For serial connect on AV 3200 and AV 4000 system board, order printer as -X (no cable) and order associated cable as a separate line item.

   - For TermServer connect, and cable length requirements outside of what -N/-P models supply, order printer as -X (no cable) and order interface cable as a separate line item. See "Hard Copy Cables" at the end of this section for associated cable model numbers.

   - For RS232-C serial connection to an asynchronous modem order model as -X (no cable) and order 1338 (25ft) or 1338-A (5ft) modem cable as a separate line item.

2. Replace AC Power Suffix (-@) with:

   (Blank) - 120V/60Hz
   (-5,-6) - 240V/50Hz
   (-7,-8,-9,-0) - 220V/50Hz

   In addition to power requirements, these suffixes indicate line cord dependencies to specific country requirements. For further information see the "Standalone Power Cord Dependent Device Matrix" table in the "Introduction" section.

PAGE PRINTERS

9 PPM LASER PRINTERS

The Model 6640T 9 page-per-minute (PPM) laser printer features 14 built-in fonts and 24 symbol sets, a single 250-sheet input feeder, 0.5MB of memory expandable to 4.5MB, comprehensive control panel, Centronics parallel interface, and HPLaserJet Series II emulation. Its 300 x 300 dpi (dots per inch) text/graphics print resolution is perfect for desktop publishing, business graphics, correspondence, and financial reports. Optional Adobe PostScript controllers provide 35 or 17 different print fonts. An optional RS232-C serial interface is available for remote locations. The paper cassette can be expanded with a second 250-sheet feeder to hold 500 cut sheets of paper and 40 envelopes.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
6640T-#@	9 PPM laser, 0.5MB, with cable	1,445	33	29	1	A	Note 1	DT
6640T-X@	9 PPM laser, 0.5MB, w/o cable	1,395	33	29	1	A	Note 1	DT
6779T-@	9 PPM, 17 PostScript cntrl, 1.5MB, with cable	2,045	38	34	1	A	Note 1	DT
6779T-X@	9 PPM, 17 PostScript cntrl, 1.5MB, w/o cable	1,995	38	34	1	A	Note 1	DT
6646T-#@	9 PPM Laser, 35 PostScript cntrl, 1.5MB, with cable	2,295	42	37	1	A	Note 1	DT
6646T-X@	9 PPM Laser, 35 PostScript cntrl, 1.5MB, w/o cable	2,245	42	37	1	A	Note 1	DT

Options:

6641	RS232-C Serial I/O	69	/NC	/NC	1	A
6641-A	AppleTalk RS422	110	/NC	/NQ	1	A
6642	250-sheet paper feeder	349	6	5	1	A
6643	Envelope feeder	299	4	3	1	A
6774	17-font PostScript upgrade with 1MB memory	595	5	/NQ	1	A
6777	35-font PostScript upgrade with 1MB memory	945	9	/NQ	1	A
6645	1MB memory upgrade	155	6	4	1	A

Notes:

1. Replace Interface/Cable Suffix (-#) with:

   -N - Supplies 15 ft. RS232-C serial interface cable (requires model 6641 to be ordered as a separate line item).

   -P - Supplies a 5 ft. Centronics parallel cable (10235) on AV 300, 400.

   - Supplies a 15 ft. Centronics parallel cable (15345E015) on AV 3200, 4000, 4300, 4600, 5200, 5200+, 6200, 7000, 7000+, and 8000 for connection to VDC/8p cluster box and AV 5200, 6200, 7000, and 8000 system board.

   -X - For parallel connect on AV 530, 3200, 4000, 4300 and 4600 system board, order printer as -X (no cable) and order associated cable as a separate line item.

   - For serial connect on AV 3200 and AV 4000 system board, order printer as -X (no cable), order model 6641 RS232-C serial interface, and order associated cable as a separate line item.

1. (Continued)

   -J - Supplies 25 ft. RS232-C asynchronous modem to printer cable (1338) (requires model 6641 to be ordered as a separate line item).

   For TermServer connect, and for cable length requirements outside of what -N/-P/-J models supply, order printer as -X (no cable) and order interface cable as a separate line item. RS232-C connection requires model 6641 to be ordered as a separate line item. See "Hard Copy Cables" at the end of this section for associated cable model numbers.

2. Replace AC Power Suffix (-@) with:

   (Blank) - 120V/60Hz
   (-5,-6) - 240V/50Hz
   (-7,-8,-9,-0) - 220V/50Hz

   In addition to power requirements, these suffixes indicate line cord dependencies to specific country requirements. For further information see the "Standalone Power Cord Dependent Device Matrix" table in the "Introduction" section.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

16 PPM LASER PRINTERS

The Model 6671 16 page-per-minute (PPM) laser printer features 14 built-in fonts and 24 symbol sets, a single 250-sheet input feeder, 0.5MB of memory expandable to 4.5MB, comprehensive control panel, Centronics parallel interface, and HPLaserJet Series II emulation. Its 300 x 300 dpi (dots-per-inch) text/graphics print resolution is perfect for desktop publishing, business graphics, correspondence, and financial reports. Optional Adobe PostScript controllers provide 35 or 17 different print fonts. An optional RS232-C serial interface is available for remote locations. The paper cassette can be expanded with a second 250-sheet feeder to hold 500 cut sheets of paper and 40 envelopes.

6771-#@	16 PPM laser, 0.5MB, with cable	2,945	40	/NQ	1	A	Note 1	DT
6771-X@	16 PPM laser, 0.5MB, w/o cable	2,895	40	/NQ	1	A	Note 1	DT
6772-#@	16 PPM laser, 1.5MB, 35-font PS cntrl. with cable	3,795	49	/NQ	1	A	Note 1	DT
6772-X@	16 PPM laser, 1.5MB, 35-font PS cntrl. w/o cable	3,745	49	/NQ	1	A	Note 1	DT
6773-#@	16 PPM laser, 1.5MB, 17-font PS cntrl. with cable	3,545	45	/NQ	1	A	Note 1	DT
6773-X@	16 PPM laser, 1.5MB, 17-font PS cntrl.w/o cable	3,495	45	/NQ	1	A	Note 1	DT
Options:								
6774	17-font PostScript upgrade with 1MB memory	595	5	/NQ	1	A		
6775	500-sheet feeder (8.5"x11")	495	5	/NQ	1	A		
6777	35-font PostScript upgrade with 1MB memory	945	9	/NQ	1	A		
6641	RS232-C Serial I/O	69	/NC	/NC	1	A		
6641-A	AppleTalk RS422	110	/NC	/NQ	1	A		
6645	1MB memory upgrade	155	6	4	1	A		
18908	Envelope feeder	375	3	/NQ		B		

Notes:

1. Replace Interface/Cable Suffix (-#) with:

   -N - Supplies 15 ft. RS232-C serial interface cable (requires model 6641 to be ordered as a separate line item).

   -P - Supplies a 5 ft. Centronics parallel cable (10235) on AV 300, 400.

   - Supplies a 15 ft. Centronics parallel cable (15345E015) on AV 3200, 4000, 4300, 4600, 5200, 5200+, 6200, 7000, 7000+, and 8000 for connection to VDC/8p cluster box and AV 5200, 6200, 7000, and 8000 system board.

   -X - For parallel connect on AV 530, 3200, 4000, 4300 and 4600 system board, order printer as -X (no cable) and order associated cable as a separate line item.

   - For serial connect on AV 3200 and AV 4000 system board, order printer as -X (no cable) and order associated cable as a separate line item.

1. (Continued)

   -J - Supplies 25 ft. RS232-C asynchronous modem to printer cable (1338) (requires model 6641 to be ordered as a separate line item).

   For TermServer connect, and for cable length requirements outside of what -N/-P/-J models supply, order printer as -X (no cable) and order interface cable as a separate line item. RS232-C connection requires model 6641 to be ordered as a separate line item. See "Hard Copy Cables" at the end of this section for associated cable model numbers.

2. Replace AC Power Suffix (-@) with:

   (Blank) - 120V/60Hz
   (-5,-6) - 240V/50Hz
   (-7,-8,-9,-0) - 220V/50Hz

   In addition to power requirements, these suffixes indicate line cord dependencies to specific country requirements. For further information see the "Standalone Power Cord Dependent Device Matrix" table in the "Introduction" section.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

HARD COPY CABLES

PARALLEL CABLES

When Connecting to AV 300, 400, 530, 3200, 4000, 4300, or 4600 System Board:

10235	5 ft. Centronics printer cable	30	N/A	N/A		B	
15293E030	30 ft. Centronics printer cable	50	N/A	N/A		B	

When Connecting to AV 5200+, 6200, 7000+, or 8000 System Board or VDC/128/255 Cluster Box (VDC/8p):

15345E015	15 ft. Centronics printer cable	48	N/A	N/A		B	
15345E025	25 ft. Centronics printer cable	58	N/A	N/A		B	

SERIAL ASYNCHRONOUS CABLES

When Connecting Hard Copy Device To:

AV 100, 200, 300, 400, 3200, or 4000 system board asynchronous ports:

Printer Models (6514/6515/6617/6618/10692/10693/10696/18782/18783)

1340S	5 ft. RS232 cable	20	N/A	N/A		B	
1340-T	15 ft. RS232 cable	25	N/A	N/A	1	B	
1340	25 ft. RS232 cable	30	N/A	N/A		B	
1340-A	50 ft. RS232 cable	40	N/A	N/A		B	

Printer Models (6647/6648/6594/6640/6646/6779/6771/6772/6773/6788/6789)

15307E025	25 ft. RS232 cable w/software busy	40	N/A	N/A		B	

When Connecting Hard Copy Device To:

AV 530, AV 4300, AV 4600, VDC/8p and VDC/16 Cluster or VAC/16 bulkhead/TCB ports:

15340E010	10 ft. RS232-C cable	43	N/A	N/A		B	
15340E015	15 ft. RS232-C cable	50	N/A	N/A		B	
15340E025	25 ft. RS232-C cable	60	N/A	N/A		B	
15340E050	50 ft. RS232-C cable	75	N/A	N/A		B	

When Connecting Hard Copy Device To:

An Asynchronous Modem or TermServer:

1338	25 ft. RS232-C cable	40	N/A	N/A		B	
1338-A	5 ft. RS232-C cable	35	N/A	N/A		B	

AViiON Terminals Section

AViiON Terminals

The following Section lists video terminals available for support on all AViiON processors. All terminals support VT, PC, UNIX, and Tektronix emulations. The following guidelines should be followed when ordering Data General terminal models.

AViiON SERIAL/PARALLEL CONNECT QUICK REFERENCE

PROCESSOR	SERIAL PORTS	PARALLEL PRINTER
AV 100 AV 210 AV 310CD	(1) RS422/RS232-C (1) RS232-C	N/A
AV 410 AV 4300	(2) RS232-C One utilized for System Console connect	1
AV 530 AV 4600	(3) RS232-C Two with modem control	1
AV 5200+ AV 6200 AV 6200-20 AV 7000+ AV 8000	(1) RS232-C SYS CON (1) REMOTE MODEM	1
VAC/16 VDC/16	(16) RS232-C	N/A
VDC/8p	(8) RS232-C	1
TermServer	(10) RS232-C OR (10) RS422 per Termserver	N/A

Note: Except where noted, all RS232-C Connects support modem control

ORDERING GUIDELINES

The following suffix scheme will define all terminal model ordering. Each model will require some or all of these suffixes to be identified. See the applicable product listing for suffixes required.

1. DETERMINE CUSTOMER CABLING NEEDS:

- Determine where customer wants to configure his terminal devices.

If ordering asynchronous terminal for connection to:

- AV 100, 200, 300:

  Order terminal with desired suffix (-N = RS232-C, -W = RS422), and associated 25 ft. cable will be included. RS422 (-W) is supported on AV 100, 200, 300 only (1 port available).
  N - 25 ft. RS232-C cable (1340) for system board connect
  W - 25 ft. RS422 cable (1339) for system board connect

- AV 400:

  Order terminal with desired suffix (-N = RS232-C), and associated 25 ft. cable will be included.
  N - 25 ft. RS232-C cable (1340) for system board connect

  If terminal is to be configured on a VAC/16 or VDC/8p/16, order terminal as -X (no cable), and order required cable as a separate line item.

- AV 530, 3200, 4300, 4600, 5200+, 6200, 6200-20, 7000+, 8000:

  If terminal is to be configured as a System console on AV 5200+, 6200, 6200-20, 7000+, or 8000, order as -X (no cable). 25 ft. system console cable (15339E025) is included with each processor.

  If terminal is to be configured on an AV 530, AV 4300, or AV 4600 system board port, VAC/16 or VDC/8p/16, order terminal with desired suffix (-N = RS232-C), and associated 25 ft. cable will be included.
  N - 25 ft. RS232-C cable (15340E025) for VAC/16 or VDA/128/255 connect.

- An asynchronous modem or TermServer:
  Order cable suffix (-J) and you will receive a 25 ft. RS232-C modem/TermServer to device cable (1338).

If connecting an asynchronous modem to:

- AV 100, 200, 300, 400 System Board Port:
  Order a 1084M/1084M-A CPU to asynchronous modem cable.

- AV 530, AV 4300, or AV 4600 System Board Port, VAC/16, or VDA/128/255 Cluster Box:
  Order a 15369EXXX series Host Adapter to asynchronous modem cable.

- For terminal devices that include cabling, ensure that the 25 ft. length meets customer needs. If a different cable length is required, order terminal as -X (no cable) and order the cable required as a separate line item.

(#) - INTERFACE/CABLE SUFFIX - Defines interface/cable type desired for required customer connection.

Suffix Listing:

N - RS232-C asynchronous serial connection
W - RS422 asynchronous serial connection **(AV 100, 200, 300 Only)**
J - RS232-C asynchronous serial modem or TermServer to device connection
X - No cable included with terminal

- IMPORTANT NOTE: **The Order Distribution System ensures that the correct cable is selected to support the processor type ordered. For this reason it is imperative that the correct CPU Designator is specified on System Expansion (SX) orders. An incorrect CPU Designator will most likely result in the wrong cable arriving at the customer's site. (See "Introduction" for a listing of current CPU Designators.**

2. DETERMINE FONT/KEYBOARD REQUIREMENTS

CEO Keyboard:

- All terminal models that include a keyboard have the CEO keyboard model E/G6348-! structured.

- Earthtone (E6348-!) CEO Keyboards are available in font styles (B,C,D,E,G,H,I,J,K,L,M,N,O,S,V,W).
- Grey (G6348-!) CEO Keyboards are available in font styles (A,B,C,D,E,G,H,I,J,K,L,M,N,O,S,V,W).

101/102 Key PC/AT Compatible Keyboard:

- If PC/AT 101/102 compatible keyboard (E/G6488-!) is desired, designate keyboard suffix as -X (No Keyboard) and order keyboard as a separate line item.

- Earthtone (E6488-!) is available in U.S. (-A) and Kanji (-S) fonts only. Grey (G6488-!) is available in (A,B,C,D,E,G,H,I,M,N,O,S,Y,Z).

(!) - FONT/KEYBOARD SUFFIX - Defines Keyboard language supported by terminal. All terminal models that include a keyboard utilize the CEO (6348) version.

Suffix Listing:

A	-	ASCII	L	-	Canadian (English)
B	-	U.K.	M	-	Canadian (French)
C	-	French	N	-	Swedish/Finnish
D	-	German	O	-	Norwegian
G	-	Spanish	R	-	International/ASCII
H	-	Danish	S	-	Kanji
I	-	Italian	V	-	Arabic
J	-	Swiss/German	W	-	Hebrew
K	-	Swiss/French	Y	-	Swiss

X - No Keyboard

3. DETERMINE POWER REQUIREMENTS

Font/Power Relationship:

- It is important to note that all suffixes are not available on all products and that not all FONT/AC POWER combinations will exist. These combinations are defined by required country power/language support.

(@) - AC POWER SUFFIX - defines geographical power requirements.

Suffix Listing:

(Blank)	-	120V/60Hz
(-1)	-	100V/50or60Hz
(-5,-6)	-	240V/50Hz
(-7,-8,-9,-0)	-	220V/50Hz

Notes:

1. In addition to power requirements, these suffixes indicate line cord dependencies to specific country requirements. For further information see the "Standalone Power Cord Dependent Device Matrix" table in the "Introduction" section.
2. All device AC Power Suffixes on any order must be of the same type. (i.e. If processor is 220V/50Hz, all devices on order must be 220V/50Hz)

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

D462E

The D462E is a 14" diagonal, DIN-compliant version of our popular D462 terminal product. The product features a white overscan phosphor and meets both German and Swedish ergonomic regulatory standards. Major features of the product include: text compression for up to 208 columns of viewing; programmable function keys via the host environment; VT220, DG-UNIX and PC-term modes for compatibility with multiuser DOS and UNIX environments; definable character sets, and graphics support for DRAWING BOARD, PRESENT, TRENDVIEW, and WORDVIEW applications. These terminals are almond in color.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
6504W-#!@	DIN-Compliant D462E terminal, 25 ft.cable, keyboard	1,440	29	18	6	F	Note 2	DT
6504W-X!@	DIN-Compliant D462E terminal, kybd, w/o cable	1,375	29	18	6	F	Note 2	DT
6524W-@	DIN-Compliant D462E terminal w/o interface cable or keyboard	1,265	26	16	6	F	Note 2	DT

Notes:

1. Suffixes:

   Interface/cable (#) = J, N, W
   Font (!) = B,C,D,G,H,I,J,K,L,M,N,O,R
   AC Power (@) = -,5,6,7,8,9,0

   For suffix definition, see "Ordering Guidelines" at the beginning of this section.

2. The D462E is compatible with the CEO style keyboard (E6348-!) Only.

3. To order terminal without keyboard but with interface cable, order 6524-W@ and add cable as a separate line item.

D1400i

The D1400i is a 14" Intelligent video display text terminal for AViiON and PC host environments. The product line features Wyse 60 and VT320 compatibility, green, amber, or white overscan display, dual host/split screen capabilities, two serial and one parallel port interface, and European certified low magnetic ergonomics. D1400i models include a G6488 AT-style keyboard and interface cable. Additionally, there are models available that allow ordering terminal without cable (-X), or without keyboard and cable (-XX).

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
Green Display:								
G6693G-#!@	D1400i Green Phosphor terminal w/keyboard & 25ft. cable.	580	6	4.50	6	F	Note 3-5	
G6693G-X!@	D1400i Green Phosphor terminal w/o interface cable	525	6	4.50	6	F	Note 3-5	
G6693G-XX@	D1400i Green Phosphor terminal w/o interface cable or keyboard	455	5	3.50	6	F		
Ameber Display:								
G6693A-#!@	D1400i Amber Phosphor terminal w/keyboard & 25ft. cable.	580	6	4.50	6	F	Note 3-5	
G6693A-X!@	D1400i Amber Phosphor terminal w/o interface cable	525	6	4.50	6	F	Note 3-5	
G6693A-XX@	D1400i Amber Phosphor terminal w/o interface cable or keyboard	455	5	3.50	6	F		
White Display:								
G6693W-#!@	D1400i White Phosphor terminal w/keyboard & 25ft. cable.	580	6	4.50	6	F	Note 3-5	
G6693W-X!@	D1400i White Phosphor terminal w/o interface cable	525	6	4.50	6	F	Note 3-5	
G6693W-XX@	D1400i White Phosphor terminal w/o interface cable or keyboard	455	5	3.50	6	F		
9-Pin Adapter								
15388B006	DB-9 tp DG-25 adapter for secondary serial port connection	100	N/A	N/A		B		
RS422 to RS232 Converter								
10433-@	RS422 to RS232-C converter	85	N/A	N/A		F	Note 4	

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement

D1400i

Notes:

1. Suffixes:

   Interface/cable (#) = J, N, W
   Font (!) = A,B,C,D,G,H,I,J,K,L,M,N,O
   AC Power (@) = -,5,6,7,8,9,0

   For suffix definition, see "Ordering Guidelines" at the beginning of this section.

2. To order terminal without keyboard but with interface cable, order as XX@ and add cable as a separate line item. For available models, see "Serial Asynchronous Cables" at the end of this section.

3. When ordering -M (20MA), a current loop to RS232-C converter (10389) for each terminal configured, must be ordered as a separate line item.

4. When ordering the D1400i as -W (RS422), an RS422 to RS232-C converter (10433) must be ordered as a separate line item for each terminal configured. This converter includes a power pack which will require an additional 5-15R wall outlet.

5. Terminal Connection Scheme:

   There are 3 connections on the terminal bulkhead.

   The **primary asynchronous port** is supported by a 25-pin connector. Serial cables, included under bundled models, utilize this connector.

   A secondary asynchronous port, supported by a 9-pin connector, is available for a secondary host or serial slave printer configuration. All currently supported serial printers may be configured on this port:

   Step 1.

   - A 9-pin to 25-pin adapter (15388B006) must be ordered as a separate line time to allow connection of the required 25-pin cable

   Step 2.

   - Slave Printer Connection

     Order serial slave printer as -X (no cable) and order cable model (15307E025 or 1340) as a separate line item.

     See "HARD COPY CABLES" in the "Hard Copy" section to determine appropriate RS232-C cable. Reference the "Printer Models" heading's.

   - Secondary Processor Connection

     Order processor to RS232-C asynchronous device cable. See "TERMINAL CABLES" in the "TERMINALS" section for applicable RS232-C cable.

   A 25-pin Centronics parallel slave printer port is the third available connection. Order printer as -X and order cable (10235/15293E030) as a separate line item. All currently supported Centronics parallel printers may be supported on this port.

D216E+

The D216E+ is a 14" diagonal, ergonomic version of our popular D216+ low-cost, entry-level display terminal. The product is available in DGC's standard grey color and offers a choice of either amber (A) or green (G) screen phosphors. The amber version of the D216E+ is DIN-compliant and can be offered for situations where compliance with DIN or VDE ergonomic and safety standards are market requirements. Other major features of the D216E+ include 24x80 column text viewing; D216+ compatibility; VT100, DG-UNIX, and PC-Term modes for compatibility with multiuser DOS and UNIX environments; and dual host capabilities for simultaneous interaction with multiple hosts systems. The D216E+ is available with either the CEO style (G6348) or PC/AT style (G6488) keyboard. (See Notes)

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
6678A-#!@	D216E+ amber phosphor terminal, 25 ft. cable, keyboard	590	6	4	6	F	Notes 2,3	DT
6678A-X!@	D216E+ amber phosphor terminal w/o interface cable	525	6	4	6	F	Note 3	DT
6678A-XX@	D216E+ amber phosphor terminal w/o interface cable or keyboard	415	5	3	6	F		DT
6678G-#!@	D216+ green phosphor terminal, 25 ft. cable, keyboard	590	6	4	6	F	Notes 2,3	DT
6678G-X!@	D216+ green phosphor terminal w/o interface cable	525	6	4	6	F	Note 3	DT
6678G-XX@	D216E+ green phosphor terminal w/o interface cable or keyboard	415	5	3	6	F		DT

Notes:

1. Suffixes:

   Interface/cable (#) = J, N, W
   Font (!) = A,B,C,D,G,H,I,J,K,L,M,N,O,R
   AC Power (@) = -,5,6,7,8,9,0

   For suffix definition, see "Ordering Guidelines" at the beginning of this section.

2. Models with keyboard bundled include a CEO style (G6348-!) keyboard and 25 ft. interface cable.

3. To configure the PC/AT (G6488-!) keyboard, order terminal as -XX@ and add the keyboard and interface cable as a separate line item.

4. To order terminal without keyboard but with interface cable, order as -XX@ and add cable as a separate line item.

D217

The D217 Data Entry display terminal is our low-cost, entry-level display device. This product is available in DGC's standard grey color and features a 14" diagonal display offered in either amber (A) or green (G) screen phosphor. The major features of the D217 include a new, modern terminal cabinet design; enhanced setup utilities; VT100+ (extended VT function key support), DG-UNIX, PC-Term, and ISO 8859.1 support for both display and communications purposes for improved Open Systems compatibility; single board design for improved performance and reliability; and dual host capabilities for simultaneous interaction with multiple hosts systems. The D217 is available with either the CEO style (G6348) or PC/AT style (G6488) keyboard. (See Notes)

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
6682A-#!@	D217 amber phosphor terminal, 25 ft. cable, keyboard	515	6	4	6	F	Notes 2,3	DT
6682A-X!@	D217 amber phosphor terminal w/o interface cable	450	6	4	6	F	Notes 2,3	DT
6682A-XX@	D217 amber phosphor terminal w/o interface cable or keyboard	340	5	3	6	F		
6682G-#!@	D217 green phosphor terminal	515	6	4	6	F	Notes 2,3	DT
6682G-X!@	D217 green phosphor terminal w/o interface cable	450	6	4	6	F	Notes 2,3	DT
6682G-XX@	D217 green phosphor terminal w/o interface cable or keyboard	340	5	3	6	F		DT

Notes:

1. Suffixes:

   Interface/cable (#) = J, N, W
   Font (!) = A,B,C,D,G,H,I,J,K,L,M,N
   AC Power (@) = -,5,6,7,8,9,0

   For suffix definition, see "Ordering Guidelines" at the beginning of this section.

2. Models with keyboard bundled include a CEO style (G6348-!) keyboard and 25 ft. interface cable.

3. To configure the PC/AT (G6488-!) keyboard, order terminal as -XX@ and add the keyboard and interface cable as a separate line item.

4. To order terminal without keyboard but with interface cable, order as -XX@ and add cable as a separate line item.

D413

The D413 Intelligent display terminal is our midrange product offered for integrated office environments. This terminal is available in DGC's standard grey color and features a 14" diagonal display offered in either amber (A) or green (G) screen phosphor. The D413 includes all the features of the D217, along with enhancements and features that more advanced applications require. These include compressed text viewing for a total of 207 viewable columns; definable function keys programmed either through the host system or through the enhanced setup menus; dual-host on one-port capabilities for simultaneous communications with multiple host over a single I/O line; "hot key" capabilities for switching between active hosts without loss of data; and split screen capabilities for viewing multiple hosts and/or applications simultaneously. The D413 is available with either the CEO style (G6348) or the PC/AT (G6488) keyboard. (See Notes)

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
6683A-#!@	D413 amber phosphor terminal, 25 ft. cable, keyboard	610	6	4	6	F	Notes 2,3	DT
6683A-X!@	D413 amber phosphor terminal w/o interface cable	545	6	4	6	F	Notes 2,3	DT
6683A-XX@	D413 amber phosphor terminal w/o interface cable or keyboard	435	5	3	6	F		DT
6683G-#!@	D413 green phosphor terminal, 25 ft. cable, keyboard	610	6	4	6	F	Notes 2,3	DT
6683G-X!@	D413 green phosphor terminal w/o interface cable	545	6	4	6	F	Notes 2,3	DT
6683G-XX@	D413 green phosphor terminal w/o interface cable or keyboard	435	5	3	6	F		DT

Notes:

1. Suffixes:

   Interface/cable (#) = J, N, W
   Font (!) = A,B,C,D,G,H,I,J,K,L,M,N
   AC Power (@) = -,1,5,6,7,8,9,0

   For suffix definition, see "Ordering Guidelines" at the beginning of this section.

2. Models with keyboard bundled include a CEO style (G6348-!) keyboard and 25 ft. interface cable.

3. To configure the PC/AT (G6488-!) keyboard, order terminal as -XX@ and add the keyboard and interface cable as a separate line item.

4. To order terminal without keyboard but with interface cable, order as -XX@ and add cable as a separate line item.

D463

The D463 Intelligent Graphics display terminal is our high-end product offering for integrated office environments where graphics capabilities is a must. The product is available in DGC's standard grey color and features a 14" diagonal display offered in either amber (A) or green (G) screen phosphor. The D463 includes all the features of the D413, along with graphics support for popular applications such as DRAWING BOARD, TRENDVIEW, PRESENT, and WORDVIEW. As with the D216E+, D217 and D413 display terminals, the D463 supports both the CEO-style (G6348) and PC/AT-style (G6488) keyboards. (See Notes). The D463 is also available with an optional mouse pointing device (G4512) which must be ordered separately.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
6684A-#!@	D463 amber phosphor terminal, 25 ft. cable, keyboard	1,060	7	4	6	F	Notes 2,3	DT
6684A-X!@	D463 amber phosphor terminal w/o interface cable	995	7	4	6	F	Notes 2,3	DT
6684A-XX@	D463 amber phosphor terminal w/o interface cable or keyboard	885	6	4	6	F		DT
6684G-#!@	D463 green phosphor terminal, 25 ft. cable, keyboard	1,060	7	4	6	F	Notes 2,3	DT
6684G-X!@	D463 green phosphor terminal w/o interface cable	995	7	4	6	F	Notes 2,3	DT
6684G-XX@	D463 green phosphor terminal w/o interface cable or keyboard	885	6	4	6	F		DT
4512	3-button optical mouse	105	1	0.70	2	F		

Notes:

1. Suffixes:

   Interface/cable (#) = J, N, W
   Font (!) = A,B,C,D,G,H,I,J,K,L,M,N
   AC Power (@) = -,5,6,7,8,9,0

   For suffix definition, see "Ordering Guidelines" at the beginning of this section.

2. Models with keyboard bundled include a CEO style (G6348-!) keyboard and 25 ft. interface cable.

3. To configure the PC/AT (G6488-!) keyboard, order terminal as -XX@ and add the keyboard and interface cable as a separate line item.

4. To order terminal without keyboard but with interface cable, order as -XX@ and add cable as a separate line item.

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
TERMINAL CABLES								
When connecting asynchronous device to:								
AV 100, 200, 300, 400, system board asynchronous ports								
1340S	5 ft. RS232 cable	20	N/A	N/A		B		
1340-T	15 ft. RS232 cable	25	N/A	N/A	1	B		
1340	25 ft. RS232 cable	30	N/A	N/A		B		
1340-A	50 ft. RS232 cable	40	N/A	N/A		B		
1084M	25 ft. CPU to modem cable	50	N/A	N/A		B		
1084M-A	10 ft. CPU to modem cable	40	N/A	N/A		B		
1339	25 ft. RS422 cable	30	N/A	N/A		B		
1339-A	50 ft. RS422 extension cable	50	N/A	N/A		B	Note 2	
1339-B	100 ft. RS422 extension cable	75	N/A	N/A		B	Note 2	
AV 530, AV 4300, and AV 4600 system board asynchronous ports: VDC/8p and VDC/16 Clusters or VAC/16 bulkhead/TCB ports:								
15340E010	10 ft. RS232-C cable	43	N/A	N/A		B		
15340E015	15 ft. RS232-C cable	50	N/A	N/A		B		
15340E025	25 ft. RS232-C cable	60	N/A	N/A		B		
15369E010	10 ft. RS232-C CPU to modem cable	35	N/A	N/A		B		
15369E015	15 ft. RS232-C CPU to modem cable	40	N/A	N/A		B		
15369E025	25 ft. RS232-C CPU to modem cable	45	N/A	N/A		B		
TermServer ports:								
1338	25 ft. TermServer to RS232 serial device	40	N/A	N/A		B		
1338-A	5 ft. TermServer to RS232 serial device	35	N/A	N/A		B		
1339	RS422 (25ft) TermServer to RS422 async. device	30	N/A	N/A		B		
1339-A	RS422 (50ft) extension cable	50	N/A	N/A		B	Note 2	
1339-B	RS422 (100ft) extension cable	75	N/A	N/A		B	Note 2	
Asynchronous Modem:								
1338	25 ft. modem to RS232 serial device	40	N/A	N/A		B		
1338-A	5 ft. modem to RS232 serial device	35	N/A	N/A		B		

Notes:

1. RS422 supported on AV 100, 200, and 300 only. One line per processor available.
2. RS422 extension cables may not be used to connect device to CPU. These cables are only available as extensions to the 25 ft. 1339.

AViiON Cabinetry Section

CABINETRY

AViiON processors utilize the 11000 Series cabinet line to support rackmount products. The 11000 Series are grey in color and components ordered for installation in these cabinets should be ordered with color prefix (G) when applicable. Due to differing cooling requirements (processors cool left to right, peripherals cool front to back), there are two cabinet versions available in heights of 39, 59, and 71 inches. The 11200 series supports installation of processors and peripherals and has a width of 34 inches. The 11300 series are "peripheral only" bays and have a width of 23 inches.

ORDERING GUIDELINES

The following procedure should be followed when determining 11000 series cabinet requirements. Reference the example provided for further definition of this procedure.

Step 1: Identify rackmount components on the order.

Step 2: Reference the "RACKMOUNT COMPONENT MATRIX" listed at the end of this section to determine the rackspace and AC power receptacle requirements of the rackmount components configured.

Step 3: Determine what local power is available at the installation site and identify the cabinet AC power suffix required.

Step 4: Reference "AViiON 11000 SERIES CABINET MATRIX" at the end of this section for cabinets available in the power applicable to the installation site.

Step 5: Select cabinet model from the "AViiON 11000 SERIES CABINET MATRIX" based on the "INSTALLATION GUIDELINES" outlined in the example configuration provided.

Step 6: If more than one 11200 series processor/peripheral cabinet is configured, insure correct multi-bay adapter kit configuration.

Notes:

1. Ensure that processors utilize a 11200 series cabinet to satisfy the left to right cooling requirements.

2. Any peripherals that include media loading devices (CSS2, Reel Tapes) should be configured in the main processor bay. If these media load devices are not planned for processor bay configuration, bus length restrictions may cause them to be installed in the lower (user-unfriendly) portion of an adjacent peripheral bay.

AViiON 11000 SERIES CABINET CONFIGURATION

EXAMPLE:

Step 1. IDENTIFY RACK MOUNT COMPONENTS ON THE ORDER.

- Rackmount components will have "RM" designated in the space column of the model description.

- Current AViiON rackmount processor packages come configured with the processor and packaged peripherals installed in an 11200 series 59" processor/peripheral bay. Those packages that include a CLARiiON subsystem and CSS 2 subsystem utilize all available rack space. Any additional peripheral chassis configured will require additional cabinetry. Packages that include a Combined Storage Subsystem 2 only, have 14.0" of additional rackspace available.

G70523-E - AV 6240-20 Quad Processor Package
AV 6240-20 - Base Processor
7906-E - CLARiiON Disk Subsystem
G6754-AE - CSS 2
G11211-G7 - 59" Processor/Peripheral Cabinet

(2) 7906-E - 2.5GB CLARiiON Disk Subsystem

G6586-A - 1600BPI Reel Tape Drive

Step 2. DETERMINE RACKSPACE AND THE INTERNAL AC POWER RECEPTACLE REQUIREMENTS OF ANY ADDITIONAL RACKMOUNT COMPONENTS CONFIGURED.

- Reference "RACKMOUNT COMPONENT MATRIX" to determine the rackspace and the internal cabinet power receptacle required for each rackmount component. All current AViiON peripheral chassis require a 5-15R (domestic) or 6-15R (export) power receptacle.

- Take into account future expansion requirements.

Packaged System:

G70523	AV6240-20	Quad processor package			
	AV 6240-20	- Base Processor		28.00"	5-20R
	7906-E	- CLARiiON		14.00"	5-15R
	G6754-AE	- CSS 2		8.75"	5-15R
				-50.75"	
	G11211-G7	- 59" Processor/Peripheral Cabinet		+50.75"	

Add-On Peripheral Chassis:

7906-E	- CLARiiON		14.00"	5-15R
7906-E	- CLARiiON		14.00"	5-15R
G6586-A	- 1600BPI Tape Drive		8.75"	5-15R
			-36.75"	(3)5-15R

The 11200 series processor bay rackspace is fully utilized by the Packaged System model number. Additional rackspace must be configured for add-on peripheral chassis requirements.

RACKMOUNT COMPONENT MATRIX

RACKMOUNT COMPONENT	POWER SUFFIX	REQUIRED RECEPTACLE	COMPONENT AC POWER	COMPONENT RACKSPACE
CLARiiON	-E	5-15R	120V/60Hz	14.00"
	-E1	5-15R	100V/50/60Hz	
	-F2	6-15R	220V/50Hz	
	-F4	6-15R	240V/50Hz	
CSS 2	-E	5-15R	120V/60Hz	8.75"
G6588-A/-TA	-E1	5-15R	100V/50/60Hz	
Reel Tape Drives	-F2	6-15R	220V/50Hz	
	-F4	6-15R	240V/50Hz	
G6586-A	-	5-15R	120V/60Hz	8.75"
Reel Tape Drive	-1	5-15R	100V/5/60Hz	
	-2	6-15R	220V/50Hz	
	-4	6-15R	240V/50Hz	

Step 3. DETERMINE WHAT LOCAL POWER IS AVAILABLE AT THE INSTALLATION SITE AND IDENTIFY THE CABINET POWER SUFFIX REQUIRED.

LOCAL POWER	POWER SUFFIX REQUIRED
Domestic:	Domestic:
208V (120/208V/60Hz 3-phase)	(-H) / (L21-30R) *
240V (120V/240V/60Hz 2-circuit split phase)	(-G7) / (L14-30R)
120V (120V/60Hz single phase)	(-E7) / (2 x 5-15R) **
Export:	**Export:**
200V (100/200V/50 or 60Hz split phase)	(-G7) / (L14-30R)
200V (200V/50 or 60Hz)	(-F7) / (Terminal Strip) ***
220V (220V/50Hz)	(-F7) / (Terminal Strip)
240V (240V/50Hz)	(-F7) / (Terminal Strip)

Notes:

* Domestic AViiON packaged system models include a 59" G11211-G7 120/240V/60Hz split phase (-G7) cabinet. When installed in 3-phase environments (2 phases of 120/208V 3-phase power), care should be taken to insure proper load balancing across all three phases. For any additional cabinetry configured, 3-phase versions (-H), are recommended.

** May be utilized when location of equipment does not have 3-phase or split phase available. This bay may plug into a 5-15R wall receptacle. Two of these receptacles are required for each bay. These cabinets do not support high power (-F) component installation **Warning!** There should be a dedicated line feeding the wall receptacles for these cabinets. Any other devices such as copiers, office machines, coffee pots, etc. located on the line may cause power problems.

*** This power configuration will support ONLY 200V High Power devices. If there is a requirement to support 100V/50 or 60Hz devices in the same bay the -G7 (100/200V/50 or 60Hz) cabinet should be selected.

Example: Local power is 240V (120/240V/60Hz, 2-circuit, split phase). Cabinet Suffix is (-G7).

Step 4. REVIEW "AViiON 11000 SERIES CABINET MATRIX" FOR CABINETS AVAILABLE IN THE POWER (-G7) APPLICABLE TO THE INSTALLATION SITE.

- Since AViiON processors come packaged in a 59" 11200 series processor/peripheral bay, only add-on peripheral chassis configuration must be addressed.
- All current AViiON rackmount peripherals may be configured in an 11300 series peripheral cabinet. Unless there is a specific requirement for a 11200 series processor/peripheral cabinet (i.e. installation of an AViiON processor chassis), the 11300 series will be the cabinets of choice.
- Take into account future expansion requirements.

AViiON 11000 SERIES CABINET MATRIX (-G7 POWER SUFFIX)
(-G7) 120/240V/60Hz Available Models

MODEL	RACKSPACE	RECEPTACLES SUPPLIED	HEIGHT	WIDTH	PHASE	WALL RECEPTACLE
PERIPHERAL BAYS						
G11322-G7	59.5"	12X5-15R	72"	23"	2	L14-30R
G11312-G7	47.25"	12X5-15R	58.75"	23"	2	L14-30R
G11302-G7	28"	12X5-15R	39.5"	23"	2	L14-30R

Step 5. SELECT CABINET MODEL THAT WILL SUPPLY THE RACKSPACE AND POWER RECEPTACLES REQUIRED BASED ON THE FOLLOWING INSTALLATION GUIDELINES.

Add-On Peripheral Chassis:

7906-E	-	CLARiiON	14.00"		5-15R
7906-E	-	CLARiiON	14.00"		5-15R
G6586-A	-	1600BPI Tape Drive	8.75"		5-15R
			36.75"	** (3)	5-15R

** Actual rackspace required will change due to single-ended SCSI chassis placement requirements. (See - "Installation Guidelines").

INSTALLATION GUIDELINES:

- AViiON Packaged System models, if ordered without any additional peripheral chassis will ship with the rackmount components configured in the following order starting at the cabinet bottom and moving up. (Processor, CLARiiON subsystem, CSS 2 subsystem).
- Additional peripheral chassis may require changes to this cabinet configuration to support bus length restrictions (19.6 ft.) involved with single-ended SCSI chassis configuration. All CSS 2 based tape drives, CD-ROM, Optical Disk, and Floppy Disks, as well as all reel tape drives utilize the single-ended SCSI interface. All CSS 2 fixed disks are available in single-ended SCSI.

  Differential SCSI interface supports bus lengths to 81.2 ft. This interface allows much greater configurability for rack mount chassis. CLARiiON utilizes differential SCSI exclusively, and the CSS 2 has differential fixed disk configurations available.

Step 5. (Continued)

Single-ended and Differential SCSI devices/chassis may not be mixed on the same bus. For further information on single-ended SCSI configuration, see the "Mass Storage General Information" section.

If additional single-ended SCSI chassis are configured, they will be installed in the packaged processor/peripheral cabinet. This will insure configuration within bus limits, and location in a user-friendly position for removable media device access.

If the system package includes a CLARiiON subsystem, it will be moved to the bottom of the adjacent add-on cabinet. Any additional differential SCSI chassis will be installed in an adjacent bay.

If there is a requirement to support more than two single-ended SCSI chassis in any configuration, an attempt will be made to install the chassis in the most user-friendly area of an adjacent cabinet. Single-ended SCSI chassis may not be daisy-chained when installed in an adjacent cabinet.

Add-On Cabinet Peripheral Chassis Requirements:
This is the actual rackspace/receptacles required after processor/peripheral cabinet reconfiguration to support single-ended SCSI chassis placement. The single-ended CSS 2 and reel tape chassis will be configured in the processor cabinet, and all three differential CLARiiON chassis will be configured in the adjacent 11300 series peripheral bay.

7906-E	-	CLARiiON	14.00"	5-15R
7906-E	-	CLARiiON	14.00"	5-15R
7906-E	-	CLARiiON	14.00"	5-15R
			-42.00"	(3)5-15R

AViiON 11000 SERIES CABINET MATRIX (-G7 POWER SUFFIX)
(-G7) 120/240V/60Hz Available Models

MODEL	RACKSPACE	RECEPTACLES SUPPLIED	HEIGHT	WIDTH	PHASE	WALL RECEPTACLE
PERIPHERAL BAYS						
G11322-G7	59.5"	12x5-15R	72"	23"	2	L14-30R
G11312-G7	47.25"	12x5-15R	58.75"	23"	2	L14-30R
G11302-G7	28"	12x5-15R	39.5"	23"	2	L14-30R

G11312-G7 would be the correct choice for this configuration.

- supplies 47.25" rackspace (42" required)
- supplies 3 x 5-15R device receptacles required
- compatible with site power (-G7 - 120/240V/60Hz)

Optional Selection:

- Model G11322-G7 (72") could be selected if additional rack space is required for future expansion or migration of existing equipment. However, this bay would not be visually compatible (height) with the 59" processor/peripheral cabinet. In cases where footprint is critical, the 72" bay may be the cabinet of choice.

Step 6. Multi-Bay Adapter Kit Configuration

Model 11157 Adapter Kit is required to provide mechanical and electrical interconnection between cabinets in multi-bay configurations. This step is only applicable if more than one 11200 series processor/peripheral cabinet is included in the configuration.

- Stand-alone Processor/Peripheral bay, if the only bay in the system configuration, does not require an adapter kit.
- Each peripheral bay configured will be attached to the Processor Bay. An adapter kit is included with every 23" 11300 Series Peripheral Bay.
- One 11157 should be ordered as a separate line item for any additional processor/peripheral bays (11200 series) configured on an order in an (n-1) fashion.

  i.e. If there are 3 x 11200 series bays in the configuration, order 2 x 11157 Adapter Kits (3-1=2).

RACKMOUNT COMPONENT MATRIX

This matrix defines Power Suffixes and associated power, and rackspace utilized by AViiON rackmount chassis.

RACKMOUNT COMPONENT	POWER SUFFIX	REQUIRED RECEPTACLE	COMPONENT AC POWER	COMPONENT RACKSPACE
AV 6225-20/6240-20/8000	-E	5-20R	120V/60Hz	28"
Packaged System Suffix *	-F1	6-15R	200V/50/60Hz	
	-F2	6-15R	220V/50Hz	
	-F4	6-15R	240V/50Hz	
AV 6200	-	5-15R	120V/60Hz	14"
Packaged System Suffix *	-1	5-15R	100V/50/60Hz	
	-2	6-15R	220V/50Hz	
	-4	6-15R	240V/50Hz	
AV 6280-20/8000-8	-F	6-15R	240V/60Hz	28"
Packaged System Suffix *	-F1	6-15R	240V/60Hz	
	-F2	6-15R	240V/60Hz	
	-F4	6-15R	240V/60Hz	
CLARiiON	-E	5-15R	120V/60Hz	14"
	-E1	5-15R	100V/50/60Hz	
	-F2	6-15R	220V/50Hz	
	-F4	6-15R	240V/50Hz	
CSS 2	-E	5-15R	120V/60Hz	8.75"
G6588-A/-TA	-E1	5-15R	100V/50/60Hz	
Reel Tape Drives	-F2	6-15R	220V/50Hz	
	-F4	6-15R	240V/50Hz	
G6586-A	-	5-15R	120V/60Hz	8.75"
Reel Tape Drives	-1	5-15R	100V/5/60Hz	
	-2	6-15R	220V/50Hz	
	-4	6-15R	240V/50Hz	

* The suffix, assigned to the packaged system model number defines the processor's power requirements.

AViiON 11000 SERIES CABINET MATRIX

MODEL	RACKSPACE	RECEPTACLES SUPPLIED	HEIGHT	WIDTH	PHASE	WALL RECEPTACLE
PROCESSOR/PERIPHERAL BAYS						
G11226-H	63"	2x5-20R, 2x6-15R, 4x5-15R	71"	34"	3	L21-30R
G11221-H	63"	1x5-20R, 1x6-15R, 8x5-15R	71"	34"	3	L21-30R
G11211-H	50.75"	1x5-20R, 1x6-15R, 8x5-15R	58.75"	34"	3	L21-30R
G11201-H	31.5"	1x5-20R, 1x6-15R, 8x5-15R	39.5	34"	3	L21-30R
G11222-H	63"	12x5-15R	71"	34"	3	L21-30R
G11212-H	50.75"	12x5-15R	58.75"	34"	3	L21-30R
G11202-H	31.5"	12x5-15R	39.5"	34"	3	L21-30R
G11226-G7	63"	2x5-20R, 2x6-15R, 4x5-15R	71"	34"	2	L14-30R
G11221-G7	63"	1x5-20R, 1x6-15R, 8x5-15R	71"	34"	2	L14-30R
G11211-G7	50.75"	1x5-20R, 1x6-15R, 8x5-15R	58.75"	34"	2	L14-30R
G11201-G7	31.5"	1x5-20R, 1x6-15R, 8x5-15R	39.5"	34"	2	L14-30R
G11222-G7	63"	12x5-15R	71"	34"	2	L14-30R
G11212-G7	50.75"	12x5-15R	58.75"	34"	2	L14-30R
G11202-G7	31.5"	12x5-15R	39.5"	34"	2	L14-30R
G11223-F7	63"	12x6-15R	71"	34"	1	TERM.BLK
G11213-F7	50.75"	12x6-15R	58.75"	34"	1	TERM.BLK
G11203-F7	31.5"	12x6-15R	39.5"	34"	1	TERM.BLK
G11204-E7	31.5"	8x5-15R	39.5"	34"	1	2x5-15R
PERIPHERAL BAYS						
G11322-H	59.5"	12x5-15R	71"	23"	3	L21-30R
G11312-H	47.25"	12x5-15R	58.75"	23"	3	L21-30R
G11302-H	28"	12x5-15R	39.5"	23"	3	L21-30R
G11322-G7	59.5"	12x5-15R	71"	23"	2	L14-30R
G11312-G7	47.25"	12x5-15R	58.75"	23"	2	L14-30R
G11302-G7	28"	12x5-15R	39.5"	23"	2	L14-30R
G11323-F7	59.5"	12x6-15R	71"	23"	1	TERM.BLK
G11313-F7	47.25"	12x6-15R	58.75"	23"	1	TERM.BLK
G11303-F7	28"	12x6-15R	39.5"	23"	1	TERM.BLK
G11304-E7	31.5"	8x5-15R	39.5"	23"	1	2x5-15R

CABINET PRICING

Processor/Peripheral Bays:

Domestic

Model No.	Description	US List Price ($)	On Call $/mo	On Site Select $/mo	Disc Class	Wty Code	Prerequisite	Space Requirement
G11226-H	71" x 34" processor/peripheral bay	3,325	/NC	/NQ	5	A		
G11226-G7	71" x 34" processor/peripheral bay	3,325	/NC	/NQ	5	A		
G11222-H	71" x 34" processor/peripheral bay	3,325	/NC	/NQ	5	A		
G11222-G7	71" x 34" processor/peripheral bay	3,325	/NC	/NQ	5	A		
G11221-H	71" x 34" processor/peripheral bay	3,325	/NC	/NQ	5	A		
G11221-G7	71" x 34" processor/peripheral bay	3,325	/NC	/NQ	5	A		
G11211-H	59" x 34" processor/peripheral bay	2,725	/NC	/NQ	5	A		
G11212-H	59" x 34" processor/peripheral bay	2,725	/NC	/NQ	5	A		
G11211-G7	59" x 34" processor/peripheral bay	2,725	/NC	/NQ	5	A		
G11212-G7	59" x 34" processor/peripheral bay	2,725	/NC	/NQ	5	A		
G11204-E7	39" x 34" processor/peripheral bay	2,400	/NC	/NQ	5	A		
G11202-H	39" x 34" processor/peripheral bay	2,400	/NC	/NQ	5	A		
G11202-G7	39" x 34" processor/peripheral bay	2,400	/NC	/NQ	5	A		
G11201-H	39" x 34" processor/peripheral bay	2,400	/NC	/NQ	5	A		
G11201-G7	39" x 34" processor/peripheral bay	2,400	/NC	/NQ	5	A		

Export:

G11223-F7	71" X 34" processor/peripheral bay	3,325	/NC	/NQ	5	A		
G11213-F7	59" x 34" processor/peripheral bay	2,725	/NC	/NQ	5	A		
G11203-F7	39" x 34" processor/peripheral bay	2,400	/NC	/NQ	5	A		

Peripheral Bays

Domestic:

G11322-H	71" x 23" peripheral bay	3,325	/NC	/NQ	5	A		
G11322-G7	71" x 23" peripheral bay	3,325	/NC	/NQ	5	A		
G11312-H	59" x 23" peripheral bay	2,725	/NC	/NQ	5	A		
G11312-G7	59" x 23" peripheral bay	2,725	/NC	/NQ	5	A		
G11302-H	39" x 23" peripheral bay	2,400	/NC	/NQ	5	A		
G11302-G7	39" x 23" peripheral bay	2,400	/NC	/NQ	5	A		
G11304-E7	39" x 23" peripheral bay	2,400	/NC	/NQ	5	A		

Export:

G11323-F7	71" x 23" peripheral bay	3,325	/NC	/NQ	5	A		
G11313-F7	59" x 23" peripheral bay	2,725	/NC	/NQ	5	A		
G11303-F7	39" x 23" peripheral bay	2,400	/NC	/NQ	5	A		
11157	Multi-bay adapter kit	150	N/A	N/A	5	A		