



**Storage Enclosures**  
**V2.6—25 January 1999**  
Systems and Options Catalog

StorageWorks Device Carriers and BA356 Shelves  
StorageWorks SW800 24-Shelf Data Center Cabinet  
StorageWorks SW300 5-Shelf Office Cabinet  
StorageWorks SW600 Data Center Cabinet  
StorageWorks BA356 Deskside and Pedestal Enclosures  
StorageWorks BA35R and BA36R Rackmount Shelves  
StorageWorks BA355 Rackmount Enclosure  
StorageWorks UltraSCSI BA370 Rackmount Enclosure  
StorageWorks SCSI Controller Shelf Upgrade and Add-On Kits  
StorageWorks Supported Device Charts

---

Compaq and the names of Compaq products referenced herein are either trademarks and/or service marks or registered trademarks and/or service marks of Compaq.

DIGITAL is a Trademark of Compaq Computer Corporation.

Microsoft, Windows, Windows NT, SQL Server, Office and BackOffice are either trademarks or registered trademarks of Microsoft Corporation.

Intel and Pentium are registered trademarks of Intel Corporation.

Other product and company names mentioned herein may be trademarks and/or service marks of their respective owners.

## StorageWorks Device Carriers and BA356 Shelves

StorageWorks supported devices are mounted in green (Fast10), and blue (Fast20) rugged carriers, creating a StorageWorks Building Block (SBB).

The basic element is the shelf which can be installed in different storage arrays using cabinet- or system-specific mounting brackets. Shelves can be mounted horizontally or vertically in system enclosures and/or cabinets. A pedestal unit is created by mounting shelves inside a pedestal enclosure.

A single modular shelf supports a combination of 3.5" and 5.25" devices, plus a power supply. All supported devices (disk, tapes, power supplies, and adapters) are mounted in carriers. Shelves can be configured for seven 3.5" devices, or four 3.5" devices and one 5.25" full-height device, or one 3.5" device and two 5.25" full-height devices. The number of 5.25" devices may be doubled if two half-height devices are installed in each carrier.

Power for each shelf is furnished by an ac or dc subsystem power supply and there are provisions for optional redundant power supplies. Cooling for each shelf is provided by two field-replaceable dual speed blowers mounted on the back of the shelf.

Shelves can be configured with two SCSI data channels for high data rate applications and high performance devices. With the appropriate I/O Personality Module, the BA356 shelf can operate with either 8- or 16-bit host controllers/adapters. All components of the modular shelf are customer installable without any special tools or training. Carriers with devices and blowers can be removed and installed without turning off the subsystem or individual shelf power.

### BA356 Fast10 Shelf

- Shelf supports seven 3.5" devices, or four 3.5" devices and one 5.25" full-height device, or one 3.5" and two 5.25" full-height devices. The number of 5.25" devices can be doubled if two half-height devices are installed in each carrier.
- Installation of a redundant power supply reduces number of 3.5" devices by one.
- Fast20 UltraSCSI drives are supported but will only operate in Fast10 mode.

**BA356-SB** Single-height 16-bit shelf. FCC Class B certified. Includes one 16-bit I/O Personality Module BA35X-MH

**BA356-SC** Single-height shelf. FCC Class B certified. Requires either BA35X-MG 8-bit or BA35X-MH 16-bit I/O Personality Module.

### BA356 UltraSCSI Blue Shelf Configured for Single-bus or Split-bus

- Shelf supports seven 3.5" devices, or four 3.5" devices and one 5.25" full-height device, or one 3.5" and two 5.25" full-height devices. The number of 5.25" devices can be doubled if two half-height devices are installed in each carrier.
- Installation of redundant power supply reduces number of 3.5" devices by one.
- Fast10 and Fast20 SCSI drives are supported. Fast10 drives operate at Fast10 speed and Fast20 drives operate as Fast20 speed.
- 180 W power supply (DS-BA35X-HH) must be ordered separately.

**DS-BA356-SD** Single-height 16-bit shelf. FCC Class B certified. Configured for UltraSCSI Single-ended single-bus with DS-BA35X-FA UltraSCSI I/O Personality Module, and dual speed blowers. Shelf is blue.

**DS-BA356-SE** Single-height 16-bit shelf. FCC Class B certified. Configured for UltraSCSI Single-ended split-bus with DS-BA35X-FB UltraSCSI I/O Personality Module, BA35X-ME terminator, and dual speed blowers. Shelf is blue.

**DS-BA356-SF** Single-height 16-bit shelf. FCC Class B certified. Configured for UltraSCSI Single-ended single-bus with DS-BA35X-DA UltraSCSI I/O Differential Personality Module, and dual speed blowers. Shelf is blue.

## StorageWorks Device Carriers and BA356 Shelves (*continued*)

### BA356 Rackmount UltraSCSI Blue Shelf Configured for Single-bus or Split-bus

- Shelf supports seven 3.5" devices, or four 3.5" devices and one 5.25" full-height device, or one 3.5" and two 5.25" full-height devices. The number of 5.25" devices may be doubled if two half-height devices are installed in each carrier.
- Installation of redundant power supply reduces number of 3.5" devices by one.
- Fast10 and Fast20 SCSI drives are supported. Fast10 drives operate at Fast10 speed and Fast20 drives operate at Fast20 speed.

**DS-BA356-RC** Single-height 16-bit shelf. FCC Class B certified. Configured for UltraSCSI Single-ended single-bus with DS-BA35X-FA UltraSCSI I/O Personality Module, 180 W power supply (DS-BA35X-HH), dual speed blowers, and RETMA mounting kit. Shelf is blue.

**DS-BA356-RD** Single-height 16-bit shelf. FCC Class B certified. Configured for UltraSCSI Single-ended split-bus with DS-BA35X-FB UltraSCSI I/O Personality Module, 180 W power supply (DS-BA35X-HH), BA35X-ME terminator, and dual speed blowers, and RETMA mounting kit. Shelf is blue.

### Shelves for HSJ and HSZ controllers

- See HSJ and HSZ controller section for required cables and ordering information.
- Controller Shelves use 150 W power supplies.

**BA350-MA** Shelf for hardware RAID controllers, maximum two supported per shelf plus two cache module

**BA350-MB** Shelf for hardware RAID controllers, maximum two supported per shelf plus two cache module, BA35X-HF power supply, BA35X-RD metric mounting brackets

### Fast10 Shelves for SW500 and SW800

- Shelf supports maximum of seven 3.5" 8-bit and/or 16-bit devices.
- Device shelves use 150 W power supplies.

**BA356-JC** Shelf includes power supply, dual speed blowers and metric mounting brackets. FCC Class B certified. Requires either BA35X-MG 8-bit or BA35X-MH 16-bit I/O Personality Module. Split bus mode requires BA35X-ME active terminator.

**BA356-SB** 16-bit shelf includes dual speed blowers, 16-bit I/O Personality Module (BA35X-MH). FCC Class B certified. Split bus mode requires BA35X-ME active terminator.

**BA356-SC** Shelf with 16-bit backplane includes dual speed blowers. FCC Class B certified. Requires either BA35X-MG 8-bit or BA35X-MH 16-bit I/O Personality Module. Split bus mode requires BA35X-ME active terminator.

### UltraSCSI Shelves for SW500 and SW800

UltraSCSI shelves must have 180 W power supplies

**DS-BA356-JD** Single-height 16-bit shelf. Configured for UltraSCSI Single-ended single-bus with DS-BA35X-FA UltraSCSI I/O Personality Module, 180 W power supply (DS-BA35X-HH), dual speed blowers, and metric mounting brackets. Shelf is blue.

**DS-BA356-JE** Single-height 16-bit shelf. Configured for UltraSCSI Single-ended split-bus with DS-BA35X-FB UltraSCSI I/O Personality Module, 180 W power supply (DS-BA35X-HH), BA35X-ME active terminator, and dual speed blowers,. Shelf is blue.

**DS-BA356-JF** Single-height 16-bit shelf. Configured for UltraSCSI Single-ended single-bus with DS-BA35X-DA UltraSCSI I/O Differential Personality Module, 180 W power supply (DS-BA35X-HH), dual speed blowers, metric mounting brackets. Shelf is blue.

### UltraSCSI BA356 Shelf Options

**DS-BA35X-FA** UltraSCSI I/O Personality Module—single-bus UltraSCSI Single-ended

**DS-BA35X-FB** UltraSCSI II/O Personality Module—split-bus UltraSCSI Single-ended

**DS-BA35X-DA** UltraSCSI I/O Personality Module—single-bus UltraSCSI Differential

## StorageWorks Device Carriers and BA356 Shelves (*continued*)

### Additional Shelf Options

<b>BA35X-MB</b>	8-bit SCSI terminator board for BA350. Replacement unit for customer installation
<b>BA35X-MC</b>	8-bit SCSI jumper board for BA350. Replacement unit for customer installation
<b>BA35X-MD</b>	Dual-speed blowers for BA350, BA356, and SW300
<b>BA35X-ME</b>	16-bit active terminator for BA356 to configure in split bus node
<b>BA35X-MF</b>	16-bit SCSI jumper board for BA356. Replacement unit for customer installation
<b>BA35X-MG</b>	8-bit I/O Personality Module for BA356 shelf to run 8- or 16-bit devices with 8-bit host controllers/adapters
<b>BA35X-MH</b>	16-bit I/O Personality Module for BA356 shelf to run 8- or 16-bit devices with 16-bit host controllers/adapters
<b>BA35X-MJ</b>	Dual-speed blower plus foam, upgrade kit for BA350-K pedestal
<b>BA35X-RB</b>	Rackmount kit for BA350/BA356 shelf in RETMA cabinets. Assembly requires 7 inches of vertical space
<b>BA35X-RD</b>	Rackmount kit for BA350/BA356 shelf in Metric cabinets. Assembly requires 150 mm of vertical space
<b>BA35X-VA</b>	Vertical mounting kit for BA350/BA356 shelf for deskside use with locking translucent front door. BN27S-03 U.S./Japan power cord, and daisy-chained power switch.

### Shelf Specifications

#### Physical Characteristics

Height	15 cm (5.9 in.)
Width	44.5 cm (17.5 in.)
Depth	35 cm (13.8 in.)/ 30 cm (11.8 in.) (with 5.25" carriers)
Weight	
Installed	15.9 kg (35 lb) / 15.0 kg (33 lb)
Shipping	20.4 kg (45 lb) / 19.5 kg (43 lb)

### StorageWorks Power Supply

- Power supply choice is determined by the power supply design of system.
- Power supply mounted in shelf provides connection for devices mounted in shelf. Power cords for devices mounted in pedestals are not required.

<b>BA35X-HF</b>	150 W universal ac input power supply. Maximum two per BA350/BA356 shelf. Occupies single 3.5" carrier.
<b>BA35X-HG</b>	150 W 48-Vdc input power supply. Maximum two per BA350 shelf. Occupies single 3.5" carrier. ( <b>Note:</b> One power supply included in each of two shelves in BA655, for redundant power or spare).
<b>DS-BA35X-HH</b>	180 W universal ac input power supply; maximum two per BA356 shelf, SBB is blue. 180 W power supply must be used with all UltraSCSI configurations that have UltraSCSI I/O Personality Modules.
<b>DS-BA35X-HJ</b>	150 W 48-Vdc input power supply. Maximum two per BA350 shelf. Occupies single 3.5" carrier. ( <b>Note:</b> One power supply included in each of two shelves in BA655, for redundant power or spare).

### Power Supply Specifications

#### BA35X-HF Universal ac Input Power Supply

Input	90–264 V ac, 47–63 Hz, auto-ranging
Output	150 W +12 V, +5 V dc
Power Cable Connector	IEC C14, Shrouded

#### BA35X-HG Universal dc Input Power Supply

Input	32–72 V dc, auto-ranging
Output	150 W +12 V dc, +5 V dc

#### BA35X-VA/ DS-BA35X-VB Pedestal Mounting Kit

Power Connector	IEC C14, Shrouded
-----------------	-------------------

## StorageWorks SW800 24-Shelf Data Center Cabinet

StorageWorks SW800 Data Center Cabinet provides high-capacity storage expansion for OpenVMS and Tru64 UNIX based systems. Slots in the cabinet can be used to support up to 24 StorageWorks shelves or up to 16 shelves and four tape subsystems. Cabinets are pre-configured with two sets of ac power cords; one for the primary distribution unit and one for the optional redundant power distribution unit (SW8XP-BA/BB).

### Maximum SW8xx Configurations

- Any combination of 24 device or controller shelves.
- Ten TZ875-AE/NE or TZ877-AE/AF Tape Subsystems.
- Four TZ857-AE/AF or TZ867-AE/AF tape subsystems which occupy eight shelf slots (top four shelf slots in cabinet front and top four shelf slots in cabinet rear).
- The number of devices supported in a cabinet depends on the number of hosts or controllers accessing the cabinet, and the number of SCSI channels supported by each host/controller.

The StorageWorks Data Center Cabinet measures 1700 mm (67 in) high and supports a 3 phase power option that allows isolated disk arrays in a single cabinet.

### SW8xx Data Center Cabinet Options

<b>SW800-AA/AB</b>	Basic StorageWorks Data Center Cabinet. Includes one power distribution unit and two sets of ac power cords. One power distribution unit supports 24 StorageWorks shelves and uses one set of ac power cords. Requires 3 phase power.
<b>SW800-FA/FB</b>	Basic StorageWorks Data Center Cabinet. Includes one thermal fan tray to support 7200 RPM drives, one power distribution unit, and two sets of ac power cords. One power distribution unit supports 23 StorageWorks shelves and uses one set of ac power cords. Requires 3 phase power.
<b>SW800-GA/GB</b>	Basic StorageWorks Data Center Cabinet. Includes one thermal fan tray to support 7200 RPM drives, one power distribution unit, and two sets of ac power cords. One power distribution unit supports 23 StorageWorks shelves and uses one set of ac power cords. Requires 3 phase power. Color blue.
<b>SW8XP-AA/AB</b>	Second Power Distribution Unit—Includes one power distribution unit and a set of ac power cords. Supports up to 24 additional StorageWorks shelf power supplies.
<b>SW8XP-BA/BB</b>	Second Power Distribution Unit. Supports up to 24 additional StorageWorks shelf power supplies. Additional power cords for second power distribution unit are included in the SW8xx Data Center Cabinet.

### StorageWorks SW8xx Storage Arrays

Order Number	Shelves	I/O Modules	PDU <sup>1</sup>	Cables and Terminators	Power Supply <sup>2</sup>
<b>High Bandwidth/Medium Capacity</b>					
SW820-LA/LB	15 BA356-JC 5 BA350-MB	15 BA35X-MG	2 SW8XP	30 BN21H-01 15 BA35X-ME	40 BA35X-HF
<b>High Bandwidth/Lower Capacity</b>					
SW821-LA/LB	14 BA356-JC 7 BA350-MB	14 BA35X-MG	2 SW8XP	28 BN21H-01 14 BA35X-ME	42 BA35X-HF
<b>High Bandwidth/High Capacity</b>					
SW822-LA/LB	18 BA356-JC 3 BA350-MB	18 BA35X-MG	2 SW8XP	12 BN21H-02 6 BN21H-01	42 BA35X-HF

1. One power distribution unit comes bundled with cabinet, one is added for power redundancy.

2. Half come bundled with individual BA356 shelves, half are added for power redundancy.

## StorageWorks SW800 24-Shelf Data Center Cabinet (*continued*)

### Supported Controllers

Controller	Interface	Storage Device Buses
HSD30	Digital Standard System Interconnect (DSSI)	3 8-bit single-ended SCSI-maximum of 2
HSD50	Digital Standard System Interconnect (DSSI)	3 8-bit single-ended SCSI-maximum of 2
HSJ30	Computer Interconnect (CI) bus	3 8-bit single-ended SCSI-maximum of 2
HSJ40	Computer Interconnect (CI) bus	6 8-bit single-ended SCSI-maximum of 2
HSJ50	Computer Interconnect (CI) bus	6 8-bit single-ended SCSI-maximum of 2
HSZ10	Fast wide differential SCSI	5 8-bit single-ended SCSI-maximum of 2
HSZ15	Fast wide differential SCSI	5 8-bit single-ended SCSI-maximum of 2
HSZ40	Fast wide differential SCSI	6 8-bit single-ended SCSI-maximum of 2
HSZ50	Fast wide differential SCSI	6 8-bit single-ended SCSI-maximum of 2

### Supported Options

DS-BA35X-HK	180 W ac power supply
DS-BA35X-FA	1 port Fast20 Single-ended personality module for BA356
DS-BA35X-FB	2 port Fast20 Single-ended personality module for BA356
DS-BA35X-DA	1 port Fast Wide Differential to Fast Wide Single-ended module
RZ26N-VA	1.05 GB 8-bit narrow hard disk drive
RZ28B-VA	2.1 GB 8-bit narrow hard disk drive
RZ28D-VA	2.1 GB 8-bit narrow hard disk drive 7200 RPM
RZ28M-VA	2.1 GB 8-bit narrow hard disk drive 5400RPM
DS-RZ28L-VA	2.1 GB 8-bit narrow hard disk drive 7200 RPM
DS-RZ29L-VA	4.3 GB 8-bit narrow hard disk drive 7200 RPM
DS-RZ40-VA	9.1 GB 8-bit narrow hard disk drive 7200 RPM
RZ29B-VA	4.3 GB 8-bit narrow hard disk drive 7200 RPM
RZ26N-VW	1.05 GB 16-bit wide hard disk drive
DS-RZ26N-VZ	1.05 GB 16-bit wide hard disk drive 5400 RPM
RZ28D-VW	2.1 GB 16-bit wide hard disk drive 7200 RPM
RZ28M-VW	2.1 GB 16-bit wide hard disk drive 5400 RPM
DS-RZ28M-VZ	2.1 GB 16-bit wide hard disk drive 5400 RPM
RZ29B-VW	4.3 GB 16-bit wide hard disk drive 7200 RPM
DS-RZ1BB-VW	2.1 GB 16-bit UltraSCSI disk drive 7200 RPM
DS-RZ1CB-VW	4.3 GB 16-bit UltraSCSI disk drive 7200 RPM
DS-RZ1DB-VW	9.1 GB 16-bit UltraSCSI disk drive 7200 RPM
EZ31-VW	134 MB solid state drive in 3.5-inch carrier
EZ32-VW	268 MB solid state drive in 3.5-inch carrier
EZ64-VA/VW	475 MB solid state drive in 5.25-inch carrier
EZ69-VA/VW	950 MB solid state drive in 5.25-inch carrier
RWZ53-VA	2.4/2.6 GB StorageWorks optical drive in SBB
RWZ53-VU	2.4/2.6 GB magneto optical add on drive for RWZ53-VA

## StorageWorks SW800 24-Shelf Data Center Cabinet (*continued*)

### Supported Devices (*continued*)

<b>TZ88N-VA</b>	20/40 GB DLT drive mounted in 5.25-inch carrier
<b>DS-TZ89N-VW</b>	35/70 GB DLT drive in 5.25-inch carrier
<b>TZK11-VA</b>	2 GB QIC cartridge tape drive in 5.25-inch carrier
<b>TZK11-VU</b>	2 GB QIC add in cartridge tape drive for TZK11-VA or RRD4x-VA
<b>TLZ07-VA</b>	8 GB 4mm DAT cartridge tape drive
<b>TLZ09-VA</b>	8 GB 4mm DAT cartridge tape drive in 3.5-inch carrier
<b>TLZ7L-VA</b>	32 GB 4mm DAT four cartridge tape loader
<b>TLZ9L-VA</b>	32/64 GB 4mm DAT eight cartridge tape loader

### Supported Tape Subsystems

The SW8xx supports up to four TZ857-AE/AF or TZ867-AE/AF tape subsystems. The tape subsystems must be mounted in the top four shelf slots in the front or rear of the cabinet. The SW8xx supports up to 10 TZ875-AE/NE or TZ877-AE/AF tape subsystems.

- . TZ857-AE/AF
- . TZ867-AE/AF
- . TZ875-AE/NE
- . TZ877-AE/AF

### Tape Mounting Kit

One tape bezel mounting kit supports one or two tape subsystems; select additional tape bezel mounting kits to support extra tape subsystems.

**CK-SF400-TE** Tape mounting bezel kit (supports two tape subsystems; not required for TZ875-AE/NE)

### Specifications

**Note:** Maximum input wattage for fully loaded SW82X data center cabinet with drives and controllers is 5200 Watts. This equates to 45 Amps @ 115 V (15 Amps/phase) or 22.5 Amps @ 230 V (7.5 Amps/phase). Maximum thermal load is 37,000 BTUs/hour.

---

#### Physical Characteristics

Height	1700 mm (67 in.)
Width	800 mm (31 in.)
Depth	875 mm (34.5 in.)
Weight	454 kg (1000 lb) (approx.)

---

#### Power Requirements

Voltage	120/208 V ac, 240/416 V ac
AC plug type	NEMA L21-30, IEC 309-516P6W
Number of phases	3
Rated current	24 Amps/phase

---

#### Operating Environment

Class A

## StorageWorks SW300 5-Shelf Office Cabinet

SW300 is an integrated unit that supports devices and controllers in a single cabinet optimized for high availability. The enhanced backplane provides six internal single-ended SCSI buses that eliminate the need for device SCSI cables. SW300 features an environmental monitor to access all available status signals, an ac power entry box configurable to N+1 power redundancy with only five power supplies, and N+1 redundant dual speed blowers. Optional N+N full redundant power and ac input are available.

### Maximum SW300 Configurations

Twenty-four 3.5-inch SBBs or eight 5.25-inch SBBs and two controllers with cache. 8-bit narrow and 16-bit wide drives are supported. Note: All drives run in 8-bit narrow mode if an 8-bit device is installed.

**Note:** SW300 cabinet options ship with 180 W (DS-BA35X-HH) power supplies. Additional power supplies for SW300 must be same wattage. Mixing 180 W with 150 W power supplies is not supported.

### SW300 Cabinet Options

<b>SW300-AA</b>	SW300 Expansion Cabinet includes integrated blackplane, six single-ended SCSI buses, eight dual speed blowers, five power supplies, ac power entry unit, environmental monitor, and user documentation.
<b>SW300-GA</b>	SW300 Expansion Cabinet includes integrated blackplane, six single-ended SCSI buses, eight dual speed blowers, five power supplies, ac power entry unit, environmental monitor, and user documentation. Color blue.
<b>BA35X-EA</b>	Environmental monitor for redundancy, maximum two per SW300
<b>BA35X-HE</b>	ac power entry unit for redundancy, maximum two per SW300
<b>DS-BA35X-HH</b>	3.5-inch universal power supply in SBB, 180 W for SW300-AA, maximum eight per SW300
<b>BA35X-MD</b>	Dual-speed blower replacement

### Supported Controllers

**Note:** HSD05 and HSD10 controllers are not supported in SW300 Deskside Cabinets

Controller	Interface	Storage Device Buses
<b>HSD30</b>	Digital Standard System Interconnect (DSSI)	3 8-bit single-ended SCSI-maximum of 2
<b>HSD50</b>	Digital Standard System Interconnect (DSSI)	3 8-bit single-ended SCSI-maximum of 2
<b>HSJ30</b>	Computer Interconnect (CI) bus	3 8-bit single-ended SCSI-maximum of 2
<b>HSJ40</b>	Computer Interconnect (CI) bus	6 8-bit single-ended SCSI-maximum of 2
<b>HSJ50</b>	Computer Interconnect (CI) bus	6 8-bit single-ended SCSI-maximum of 2
<b>HSZ10</b>	Fast wide differential SCSI	5 8-bit single-ended SCSI-maximum of 2
<b>HSZ15</b>	Fast wide differential SCSI	5 8-bit single-ended SCSI-maximum of 2
<b>HSZ40</b>	Fast wide differential SCSI	6 8-bit single-ended SCSI-maximum of 2
<b>HSZ50</b>	Fast wide differential SCSI	6 8-bit single-ended SCSI-maximum of 2

### Supported Devices

<b>RX26-VA</b>	2.88 MB removable diskette drive
<b>RZ26L-VA</b>	1.05 GB 8-bit narrow hard disk drive
<b>RZ26N-VA</b>	1.05 GB 8-bit narrow hard disk drive
<b>RZ28-VA</b>	2.1 GB 8-bit narrow hard disk drive
<b>RZ28B-VA</b>	2.1 GB 8-bit narrow hard disk drive
<b>RZ28D-VA</b>	2.1 GB 8-bit narrow hard disk drive 7200 RPM
<b>RZ28M-VA</b>	2.1 GB 8-bit narrow hard disk drive 7200 RPM
<b>RZ29B-VA</b>	4.3 GB 8-bit narrow hard disk drive 7200 RPM
<b>RZ26L-VW</b>	1.05 GB 16-bit wide hard disk drive
<b>RZ26N-VW</b>	1.05 GB 16-bit wide hard disk drive
<b>RZ28-VW</b>	2.1 GB 16-bit wide hard disk drive

## StorageWorks SW300 5-Shelf Office Cabinet (*continued*)

### Supported Devices (*continued*)

<b>RZ28D-VW</b>	2.1 GB 16-bit wide hard disk drive 7200 RPM
<b>RZ28M-VW</b>	2.1 GB 16-bit wide hard disk drive 7200 RPM
<b>RZ29B-VW</b>	4.3 GB 16-bit wide hard disk drive 7200 RPM
<b>RWZ52-VA</b>	1.3 GB removable optical disk drive in 5.25-inch carrier
<b>EZ51R-VA</b>	107 MB solid state disk in 5.25-inch carrier
<b>EZ54R-VA</b>	428 MB solid state disk in 5.25-inch carrier
<b>EZ58R-VA</b>	856 MB solid state disk in 5.25-inch carrier
<b>EZ31-VW</b>	134 MB solid state drive in 3.5-inch carrier
<b>EZ32-VW</b>	268 MB solid state drive in 3.5-inch carrier
<b>EZ64-VA</b>	475 MB solid state drive in 3.5-inch carrier
<b>EZ69-VA</b>	950 MB solid state drive in 3.5-inch carrier
<b>RRD43-VA</b>	600 MB dual speed CD-ROM in 5.25-inch carrier
<b>RRD43-VU</b>	600 MB add in dual speed CD-ROM for RRD4x-VA or TZK11-VA
<b>RRD44-VA</b>	600 MB dual speed CD-ROM in 5.25-inch carrier
<b>RRD44-VU</b>	600 MB add in dual speed CD-ROM for RRD4x-VA or TZK11-VA
<b>RRD45-VA</b>	600 MB quad speed CD-ROM in 5.25-inch carrier
<b>RRD45-VU</b>	600 MB add in quad speed CD-ROM for RRD4x-VA or TZK11-VA
<b>TZ87-VA</b>	10/20 GB DLT drive mounted in BA35X-CD
<b>TZ87N-VA</b>	20 GB DLT drive mounted in BA35X-CD
<b>TZ88N-VA</b>	20/40 GB DLT drive mounted in BA35X-CD
<b>TZK11-VA</b>	2.0 GB QIC cartridge tape drive in 5.25-inch carrier
<b>TZK11-VU</b>	2.0 GB QIC add in cartridge tape drive for TZK11-VA or RRD4x-VA
<b>TKZ15-VA</b>	5.0 GB 8 mm cartridge tape drive
<b>TLZ06-VA</b>	4.0 GB 4 mm DAT cartridge tape drive
<b>TLZ6L-VA</b>	4.0 GB 4 mm DAT 4 cartage tape loader
<b>TLZ07-VA</b>	8.0 GB 4 mm DAT cartridge tape drive in 3.5-inch carrier
<b>TLZ09-VA</b>	8.0 GB 4 mm DAT cartridge tape drive
<b>TLZ7L-VA</b>	32 GB 4 mm DAT 4 cartage tape loader
<b>TKZ09-VA</b>	5.0 GB 8 mm helical scan cartridge tape drive
<b>SWXTE-AA</b>	10.0 GB 8 mm helical scan cartridge tape drive
<b>SWXTE-AB</b>	10.0 GB 8 mm helical scan cartridge tape drive
<b>DS-RZ26N-VZ</b>	1.05 GB 16-bit wide hard disk drive 5400 RPM
<b>DS-RZ28M-VZ</b>	2.1 GB 16-bit wide hard disk drive 5400 RPM
<b>DS-RZ28L-VA</b>	2.1 GB 8-bit narrow hard disk drive 7200 RPM
<b>DS-RZ29L-VA</b>	4.3 GB 8-bit narrow hard disk drive 7200 RPM
<b>DS-RZ40-VA</b>	9.1 GB 8-bit narrow hard disk drive 7200 RPM
<b>DS-RZ1BB-VW</b>	2.1 GB UltraSCSI disk drive 7200 RPM
<b>DS-RZ1CB-VW</b>	4.3 GB UltraSCSI disk drive 7200 RPM
<b>DS-RZ1DB-VW</b>	9.1 GB UltraSCSI disk drive 7200 RPM

## StorageWorks SW300 5-Shelf Office Cabinet (continued)

### Country Kits

Order country-specific 13-20 amp input power cords

Order Number	Country/Voltage	Amps	Plug	Meters (Feet)
BN27S-03	U.S./Japan, 250 V	15	NEMA 5-15	3.0 (9.8)
BN19H-2E	Australia/New Zealand, 250 V	10	AS 3112-1981	2.5 (8.2)
BN19C-2E	Central Europe, 250 V	10	CEE 7/7(Schuko)	2.5 (8.2)
BN19A-2E	U.K./Ireland, 250 V	10	BS 1363	2.5 (8.2)
BN19E-2E	Switzerland, 250 V	10	SEV 1011	2.5 (8.2)
BN19K-2E	Denmark, 250 V	10	Afsnit 107	2.5 (8.2)
BN19Z-2E	Italy, 250 V	10	CEI 23-16/VII	2.5 (8.2)
BN19S-2E	India/South Africa, 250 V	10	BS 546	2.5 (8.2)
BN18L-2E	Israel, 250 V	10	SI 32	2.5 (8.2)

### Specifications

#### Physical Dimensions

Height	838.20 mm (33.00 in)
Width	476.25 mm (18.75 in)
Depth	482.60 mm (19.00 in)
Weight	
Cabinet with shipping packaging	106.65 kg (242.00 lb)
Maximum configuration	77.85 kg (178.00 lb)
Agency Compliance	FCC, UL, CSA, TUV, CE-mark
Electrical Rating	100-120/220-240 V ac, 50/60 Hz, single phase, 12/6 Amps

#### Power Requirements of BA35X power supply

Input	90–264 V ac, 47–63 Hz, auto-ranging, power factor corrected
Output	150 W +12 V dc, +5 V dc
Power Cable Connector	IEC C14, Shrouded

#### Power Requirements of SW300

Voltage	100-120/220-240 V ac, 50/60 Hz
Number of phases	1
Rated current	12/6 Amps

#### Operating Environment

Temperature	10° C to 40° C (50° F to 95° F) Derate 1.8° C for each 1000 m altitude (1.0° F for each 1000 ft altitude)
Relative humidity	0% to 90% (noncondensing) Maximum wet bulb temperature: 28° C (82° F) Minimum dew point: 2° C (36° F)
Altitude	From sea level to 2400 m (8000 ft)
Air quality(maximum particle count)	Not to exceed 500,000 particles per cubic foot of air at 0.5 micron or larger

#### Non-operating Environment

Temperature	-40° C to 66° C (-40° F to 151° F) (During transportation and associated short-term storage)
Relative humidity	8% to 95% in original shipping container (noncondensing); otherwise, 50% (noncondensing)
Altitude	3600 m (12,000 ft)

## StorageWorks SW600 Data Center Cabinet

StorageWorks SW600 Data Center Cabinet provides high-capacity storage expansion for UltraSCSI based systems. Slots in the cabinet can be used to support up to two BA370 enclosures. Cabinets are pre-configured with shelf for batteries and a power distribution unit. An optional redundant power distribution unit and an optional joiner kit are available.

### Maximum SW600 configurations are:

- Two BA370 Rackmountable Enclosures
- Four HSZ70 controllers
- Forty-eight 3.5-inch SBBs
- One shelf for batteries

### SW600 Data Center Options

<b>DS-SW600-AA</b>	Data center cabinet includes one power distribution unit for supporting two BA370 enclosures, one shelf for batteries, and ac power cords. Supports 60Hz optional power distribution unit. Requires one phase power.
<b>DS-SW600-AB</b>	Data center cabinet includes one power distribution unit for supporting two BA370 enclosures, one shelf for batteries, and ac power cords. 50Hz optional power distribution unit. One shelf for batteries. Requires 1 phase power.
<b>DS-SW6XP-AA</b>	Second power distribution unit supports up to two additional ac input boxes (in BA370) and ac power cords (60Hz)
<b>DS-SW6XP-AB</b>	Second power distribution unit supports up to two additional ac input boxes (in BA370) and ac power cords (50Hz)
<b>DS-BA35X-BA</b>	Empty shelf to hold batteries

### Supported Controller

<b>DS-HSZ70-AH</b>	HSZ70 UltraSCSI RAID controller
--------------------	---------------------------------

### Cache Upgrade

<b>DS-HSSIM-AB</b>	64 MB cache memory upgrade for DS-HSZ70-AH controller
--------------------	---

### SW600 Upgrade Options

<b>H9C10-JC</b>	Joiner kit for SW600 cabinets to be bolted together for expansion..
<b>DS-BA370-AA</b>	24 SBB Rackmountable enclosure supports two HSZ70 controllers, contains a minimum of five 180 W power supplies, one ac input box, metric mounting kit, eight blowers, PVA, EMU, and six single-ended I/O modules.
<b>DS-SW6XP-AA</b>	Second power distribution unit supports up to two additional ac input boxes (in BA370) and ac power cords (60Hz).
<b>DS-SW6XP-AB</b>	Second power distribution unit supports up to two additional ac input boxes (in BA370) and ac power cords (50Hz).
<b>DS-BA35X-HE</b>	Second ac input box for the BA370.

## StorageWorks SW600 Data Center Cabinet (*continued*)

### Specifications

#### Physical Characteristics

Height	1700 mm (66.93 in)
Width	600 mm (23.62 in)
Depth	900 mm (35.43 in)
Weight	109 kg (240 lb) (empty)

#### Power Requirements

AC plug type (Domestic/Japan)	3 wire NEMA No.L6-30P (220 to 240V 60Hz 30A)
AC plug type (Europe)	13 wire, 2 pole IEC309 (220 to 24V 50Hz 30A)
Number of phases	Single
Rated current	10 A
BTU rating	6140/hr
Wattage	180 W maximum (input)

#### Operating Environment

Temperature	10 C to 35 C (50 F to 95 F) <b>Note:</b> Reduce rating by 1.8 degree C (1 degree F/1000 ft) for each 1000 m altitude
Humidity	10% to 85% at maximum wet bulb temp of 32C (90 F) and minimum dew point of 2 C (36 F)
Altitude	Up to 2400 m (8000 ft)
Air Quality	Not to exceed 500,000 particles/cu ft of air at a size of 0.5 microm or larger
Regulatory approvals	Regulatory approvals: UL, CSA, TUV, FCC, CE Mark, C TICK, VCCI, BCIQ

## StorageWorks BA356 Deskside and Pedestal Enclosures

BA356 StorageWorks Deskside Pedestal enclosure support 8-bit and 16-bit devices when connected to a qualified 8- or 16-bit SCSI controller. BA356-KC and BA356-KD support a PCI-based Wide Differential SCSI controller with a DWZZB-VW wide differential to wide single-ended signal converter. System layouts that require more than three meters of SCSI bus length are also supported when a DWZZB-VW signal converter is installed.

The BA356-KC and BA356-KD pedestals support up to seven 16-bit, 3.5-inch SBB devices. See table of supported devices. Dual-speed blowers provide cooling required for 7200 RPM disk drives. An optional power supply can be added to provide high data availability. There are no slot restrictions and many StorageWorks devices can be migrated and used without modifications. See 8-bit Supported Device Table for required minimum revision levels for older devices.

Installation and use is easy. SCSI cable connections are easily accessible, and access to drives for hot-swapping has been simplified. Shelf-OK indicators on power supply indicate condition of supplies and blowers. BA356-KC and BA356-KD support DIGITAL Fault Bus standards and provide signals to host controllers/adapters for remote system management.

BA356-KC/KD and options come with a one-year on-site and two additional years return-to-factory warranty.

### Supported Systems

AlphaServer 2100, AlphaServer 2000, and AlphaServer 1000 systems, Pentium Prioris HX Servers

### Fast10 BA356 Deskside Units

- Bus one connection requires right angle connector. Use BN21L-E/01/02 (right angle to right angle).
- Bus two connection requires straight connector. Use BN21K-01 (straight to straight).
- See system ordering menus for SCSI cable information.
- BA356 Fast10 Deskside unit uses 150 W power supplies.

<b>BA356-KC</b>	Deskside unit with BA356 shelf, 150 W power supply, pedestal kit BA35X-VA, dual speed blowers, 16-bit I/O Personality Module (BA35X-MH), U.S./Japan power cord (BN27S-03). FCC Class B certified.
<b>BA356-KD</b>	Deskside unit with BA356 shelf, 150 W power supply, BA35X-VA pedestal kit dual speed blowers, BN27S-03 U.S./Japan power cords. FCC Class B certified. Requires either 8-bit (BA35X-MG) or 16-bit (BA35X-MH) I/O Personality Module.
<b>BA35X-VA</b>	BA35X-VA pedestal kit and BA27S-03 power cord.
<b>BA35X-HF</b>	150 W Universal ac input power supply, maximum of two per enclosure, occupies a single 3.5-inch device slot.

### Fast20 BA356 Pedestal Units

BA356 Fast20 Pedestal unit uses a 180 W power supply

<b>DS-BA356-KF</b>	Deskside pedestal unit with BA356 shelf, 180 W power supply DS-BA35X-HH, dual speed blowers in blue, UltraSCSI I/O Personality Module (DS-BA35X-FA). Configured for single bus. FCC Class B. Pedestal is blue.
<b>DS-BA356-KG</b>	Deskside pedestal unit with BA356 shelf, 180 W power supply DS-BA35X-HH, dual speed blowers in blue, UltraSCSI I/O Personality Module (DS-BA35X-FB). Configured for split bus. Includes BA35X-ME terminators. FCC Class B. Pedestal is blue.
<b>DS-BA356-KH</b>	Deskside pedestal unit with BA356 shelf, 180 W power supply DS-BA35X-HH, dual speed blowers in blue, UltraSCSI I/O Differential Personality Module (DS-BA35X-DA). Configured for single bus. FCC Class B. Pedestal is blue.
<b>DS-BA35X-HH</b>	180 W Universal ac input power supply, maximum of two per enclosure, occupies a single 3.5-inch device slot.

**Note:** 180 W power supply required when using UltraSCSI I/O Personality Modules.

<b>StorageWorks BA356 Deskside and Pedestal Enclosures (continued)</b>
--

**BA356 Specifications****Physical Characteristics**

Height	61 cm (24 in.)
Width	25.4 cm (10 in.)
Depth	36.8 cm (14.5 in.)
Weight	
Installed	16.26 kg (35.8 lb)
Shipping	20.76 kg (45.8 lb)

**Electrical**

Input voltage	94-264 V ac, autoranging power supply
Optimum	+18 to +24 degrees C; maximum rate of change 3 degrees C; maximum step change 3 degrees C
Maximum	+10 to +40 degrees C; 10 to 90 percent non-condensing

**Compliance**

	Enclosure, devices, and subsystem fully comply with FCC Class B, and meet UL, TUV, CSA, and CE Mark
Spin-up	Device spin-up must be staggered by a minimum of four seconds
Regulatory approval	FCC Class B and CE Class B

## StorageWorks BA35R and BA36R Rackmount Shelves

BA35R and BA36R Rackmount shelves for wide and narrow SCSI devices provide a cost effective way to organize storage with systems and other options in an easily accessible 19 inch wide EIA/ANSI industry standard rack. Rackmount shelves offer comparable functionality to BA356-KC StorageWorks pedestal, with the same option storage space and support for a redundant BA35X-HF 150 W power supply. These shelves support 7200 RPM disk drives. BA36R series supports both 8-bit and 16-bit devices. BA35R series (Rev A and Rev B) support 8 bit devices only, BA35R series (Rev C) supports both 8-bit and 16-bit devices, in 8-bit mode.

Each Rackmount shelf requires seven inches of vertical space, although a front and a rear shelf can be mounted back-to-back, front, and rear in the same seven inch spacing. The front mounted shelves include an operator viewing bezel, while the rear shelves have open access. See Supported Device Tables for minimum revision levels for older devices.

### BA35R/BA36R 8-bit and 16-bit Rackmount Shelves

<b>BA36R-AF</b>	BA356 16-bit Rackmount Shelf with Front Mount and Power
<b>BA36R-AR</b>	BA356 16-bit Rackmount Shelf with Rear Mount and Power
<b>BA35R-SF</b>	BA350 8-bit Rackmount Shelf with Front Mount and Power
<b>BA35R-SR</b>	BA350 8-bit Rackmount Shelf with Rear Mount and Power

### BA35R/BA36R Options

<b>BA35X-MD</b>	Dual-speed blower
<b>BA35X-ME</b>	Active terminator, 16-bits for BA356, SCSI-2.
<b>BA35X-MF</b>	Jumper module for 16-bit SCSI-2 bus in BA356.
<b>BA35X-MG</b>	8-bit I/O module for the BA356 shelf to run 8- or 16-bit devices with 8-bit host controllers/adapters
<b>BA35X-MH</b>	16-bit I/O module for the BA356 shelf to run 8- or 16-bit devices with 16-bit host controllers/adapters
<b>BA35X-HF</b>	150 W Universal ac input power supply, maximum of two per enclosure, occupies a single 3.5-inch device slot for SW300.

### Country Power Kits

<b>BN19H-2E</b>	Australia, New Zealand
<b>BN19C-2E</b>	Central Europe
<b>BN19A-2E</b>	UK, Ireland
<b>BN19E-2E</b>	Switzerland
<b>BN19K-2E</b>	Denmark
<b>BN19Z-2E</b>	Italy
<b>BN19S-2E</b>	India
<b>BN18L-2E</b>	Israel

## StorageWorks BA355 Rackmount Enclosure

BA355 is a rackmount unit with devices and controllers in a single system. The BA355 is optimized for high availability. The enhanced backplane provides six internal single-ended SCSI buses that eliminate the need for device SCSI cables. BA355 features an environmental monitor to access all available status signals, an ac power entry box., six SCSI buses, and eight dual speed blowers.

Optional N+1 power redundancy with only five power supplies, or N+N power with 8 power supplies for full redundant power, and ac input are available.

The enclosure requires either BA35X-RA or BA35X-RJ rackmount brackets, and BA35X-HF universal ac power supply, a minimum of four power supplies are required for unit to run. All supported devices (disks, tapes, power supplies, and adapters) are mounted in carriers. The BA355 provides packages for twenty-four 3.5" SBBs or eight 5.25" SBBs, and two controllers with cache. 8-bit narrow and 16-bit wide drives are supported. **Note:** All drives run in 8-bit narrow mode since SCSI controllers supported in BA355 are 8-bit narrow (HSxx) controllers. See supported device tables for minimum revision levels for older devices.

### BA355 Rackmount Enclosure Options

**BA355-AA**<sup>1</sup> Integrated backplane, six single-ended SCSI buses, eight dual speed blowers, ac power entry unit, environmental monitor, and user documentation.

1. A minimum of four power supplies (BA35X-HF) are required for unit to run.

### Options

**BA35X-HF** 150 W Universal ac input power supply, maximum of two per enclosure, occupies a single 3.5-inch device slot. Maximum eight per BA355.

**BA35X-HE** ac power entry unit for redundancy, maximum two per BA355.

**BA35X-EA** Environmental Monitor for redundancy, maximum two per BA355.

**BA35X-MD** Dual-Speed Blower replacement, maximum eight blowers per BA355.

### Supported Controllers

**Note:** HSD05 and HSD10 controllers are not supported in BA355 Rackmount enclosures.

Controller	Interface	Storage Device Buses
<b>HSD30</b>	DIGITAL Standard System Interconnect (DSSI)	3 8-bit single-ended SCSI-maximum of two
<b>HSJ30</b>	Computer Interconnect (CI) bus	3 8-bit single-ended SCSI-maximum of two
<b>HSJ40</b>	Computer Interconnect (CI) bus	6 8-bit single-ended SCSI-maximum of two
<b>HSZ10</b>	Fast wide differential SCSI	5 8-bit single-ended SCSI-maximum of two
<b>HSZ15</b>	Fast wide differential SCSI	5 8-bit single-ended SCSI-maximum of two
<b>HSZ40</b>	Fast wide differential SCSI	6 8-bit single-ended SCSI-maximum of two

### Supported Devices

<b>RX26-VA</b>	2.88 MB removable diskette drive
<b>RZ26L-VA</b>	1.05 GB 8-bit narrow hard disk drive
<b>RZ26N-VA</b>	1.05 GB 8-bit narrow hard disk drive
<b>RZ28-VA</b>	2.1 GB 8-bit narrow hard disk drive
<b>RZ28B-VA</b>	2.1 GB 8-bit narrow hard disk drive
<b>RZ28D-VA</b>	2.1 GB 8-bit narrow hard disk drive 7200 RPM
<b>RZ28M-VA</b>	2.1 GB 8-bit narrow hard disk drive 7200 RPM
<b>RZ29B-VA</b>	4.3 GB 8-bit narrow hard disk drive 7200 RPM
<b>RZ26L-VW</b>	1.05 GB 16-bit wide hard disk drive
<b>RZ26N-VW</b>	1.05 GB 16-bit wide hard disk drive
<b>RZ28-VW</b>	2.1 GB 16-bit wide hard disk drive
<b>RZ28D-VW</b>	2.1 GB 16-bit wide hard disk drive 7200 RPM
<b>RZ28M-VW</b>	2.1 GB 16-bit wide hard disk drive 7200 RPM
<b>RZ29B-VW</b>	2.1 GB 16-bit wide hard disk drive 7200 RPM

## StorageWorks BA355 Rackmount Enclosure (*continued*)

<b>RWZ52-VA</b>	1.3 GB removable optical disk drive in 5.25" carrier
<b>EZ51R-VA</b>	107 MB solid state disk in 5.25" carrier
<b>EZ54R-VA</b>	428 MB solid state disk in 5.25" carrier
<b>EZ58R-VA</b>	856 MB solid state disk in 5.25" carrier
<b>EZ31-VW</b>	134 MB solid state drive in 3.5" carrier
<b>EZ32-VW</b>	268 MB solid state drive in 3.5" carrier
<b>EZ64-VA</b>	475 MB solid state drive in 3.5" carrier
<b>EZ69-VA</b>	950 MB solid state drive in 3.5" carrier
<b>RRD43-VA</b>	600 MB dual speed CD-ROM in 5.25" carrier
<b>RRD43-VU</b>	600 MB add in dual speed CD-ROM for RRD4x-VA or TZK11-VA
<b>RRD44-VA</b>	600 MB dual speed CD-ROM in 5.25" carrier
<b>RRD44-VU</b>	600 MB add in dual speed CD-ROM for RRD4x-VA or TZK11-VA
<b>RRD45-VA</b>	600 MB quad speed CD-ROM in 5.25" carrier
<b>RRD45-VU</b>	600 MB add in quad speed CD-ROM for RRD4x-VA or TZK11-VA
<b>TZ87-VA</b>	10/20 GB DLT drive mounted in BA35X-CD
<b>TZ87N-VA</b>	20 GB DLT drive mounted in BA35X-CD
<b>TZ88N-VA</b>	20/40 GB DLT drive mounted in BA35X-CD
<b>TZK11-VA</b>	2 GB QIC cartridge tape drive in 5.25" carrier
<b>TZK11-VU</b>	2 GB QIC add in cartridge tape drive for TZK11-VA or RRD4x-VA
<b>TKZ15-VA</b>	5 GB 8mm cartridge tape drive
<b>TLZ06-VA</b>	4 GB 4mm DAT cartridge tape drive
<b>TLZ6L-VA</b>	16 GB 4mm DAT four cartridge tape loader
<b>TLZ07-VA</b>	8 GB 4mm DAT cartridge tape drive in 3.5" carrier
<b>TLZ09-VA</b>	8 GB 4mm DAT cartridge tape drive
<b>TLZ7L-VA</b>	32 GB 4mm DAT four cartridge tape loader
<b>TKZ09-VA</b>	5 GB 8mm helical scan cartridge tape drive
<b>SWXTE-AA</b>	10 GB 8mm helical scan cartridge tape drive
<b>SWXTE-AB</b>	10 GB 8mm helical scan cartridge tape drive

### Country Kits

Order country-specific 13-20 amp input power cords

Order Number	Country/Voltage	Amps	Plug	Meters (Feet)
<b>BN27S-03</b>	U.S./Japan, 250 V	15	NEMA 5-15	3.0 (9.8)
<b>BN19H-2E</b>	Australia/New Zealand, 250 V	10	AS 3112-1981	2.5 (8.2)
<b>BN19C-2E</b>	Central Europe, 250 V	10	CEE 7/7(Schuko)	2.5 (8.2)
<b>BN19A-2E</b>	U.K./Ireland, 250 V	10	BS 1363	2.5 (8.2)
<b>BN19E-2E</b>	Switzerland, 250 V	10	SEV 1011	2.5 (8.2)
<b>BN19K-2E</b>	Denmark, 250 V	10	Afsnit 107	2.5 (8.2)
<b>BN19Z-2E</b>	Italy, 250 V	10	CEI 23-16/VII	2.5 (8.2)
<b>BN19S-2E</b>	India/South Africa, 250 V	10	BS 546	2.5 (8.2)
<b>BN18L-2E</b>	Israel, 250 V	10	SI 32	2.5 (8.2)

## StorageWorks BA355 Rackmount Enclosure (*continued*)

### Specifications

#### Physical Dimensions

Height	838.20 mm (29.44 in)
Width	476.25 mm (18.75 in)
Depth	482.60 mm (19.00 in)
Weight	
Cabinet with shipping packaging	106.65 kg (242.00 lb)
Maximum configuration	77.85 kg (178.00 lb)
Agency Compliance	FCC, UL, CSA, TUV, CE-mark
Electrical Rating	100-120/220-240 V ac, 50/60 Hz, single phase, 12/6 amps

#### Power Requirements of BA35X power supply

Input	90–264 V ac, 47–63 Hz, auto-ranging, power factor corrected
Output	150 W +12 V dc, +5 V dc
Power Cable Connector	IEC C14, Shrouded

#### Power Requirements of BA355

Voltage	100-120/220-240 V ac, 50/60 Hz
Number of phases	1
Rated current	12/6 Amps

#### Operating Environment

Temperature	10° C to 40° C (50° F to 95° F) Derate 1.8° C for each 1000 m altitude (1.0° F for each 1000 ft altitude)
Relative humidity	0% to 90% (noncondensing) Maximum wet bulb temperature: 28° C (82° F) Minimum dew point: 2° C (36° F)
Altitude	From sea level to 2400 m (8000 ft)
Air quality(maximum particle count)	Not to exceed 500,000 particles per cubic foot of air at 0.5 micron or larger

#### Non-operating Environment

Temperature	-40° C to 66° C (-40° F to 151° F) (During transportation and associated short-term storage)
Relative humidity	8% to 95% in original shipping container (noncondensing); otherwise, 50% (noncondensing)
Altitude	3600 m (12,000 ft)

## StorageWorks UltraSCSI BA370 Rackmount Enclosure

The UltraSCSI BA370 Rackmountable Enclosure for devices and controllers in a single system. BA370 is optimized for high availability. The enhanced backplane provides six internal single-ended UltraSCSI buses that eliminate the need for device SCSI cables. In addition, BA370 features expansion capabilities to two other BA370 units using six single-ended I/O modules per BA370, connected by six expansion cables.

### UltraSCSI BA370 Includes

- Environmental monitor DS-BA35X-EB
- Power Verification Addressing DS-BA35X-EC
- Five 180 W power supplies DS-BA35X-HH
- ac input box switchable power 60/50 Hz DS-BA356-HE,
- Eight high speed blowers DS-BA35X-MK
- Metric mounting kit
- Six Single-ended UltraSCSI I/O modules DS-BA35X-MN
- Optional: RETMA mounting kit DS-BA35X-RK
- Optional: Three additional power supplies for maximum of eight
- Optional: additional ac input box
- Optional: Cables for expansion DS-BNK37-1E

### UltraSCSI BA370 Rackmountable Enclosure

**DS-BA370-AA** Integrated backplane, six Single-ended UltraSCSI buses, six single-ended I/O modules for expansion, eight high-speed blowers, one ac power entry unit, environmental monitor, Power Verification Addressing module, user Docs, metric mounting kit. Switchable power 60hz or 50hz. Single phase Power.

### BA370 Options

**DS-BA35X-HH** 180 W power supply in Blue SBBs, maximum eight supported per BA370  
**DS-BA35X-HE** Second ac Input Box 60/50Hz switchable, two supported per BA370  
**DS-BA35X-MK** Replacement High speed blower for the BA370  
**DS-BA35X-EB** Enhanced Environmental Monitor Unit (EMU), required if PVA module is ordered  
**DS-BA35X-EC** Power Verification Addressing (PVA) module, requires EMU  
**DS-BA35X-MN** Single-ended I/O module for BA370  
**DS-BNK37-1E** Six cables for SCSI expansion upgrade BA370

### Supported Controllers

**DS-HSZ70-AH** HSZ70 UltraSCSI RAID Array controller with 64 MB of cache

### Cache Upgrade

Select cache upgrade. Redundant controllers require equal amounts of cache

**DS-HSSIM-AB** 64 MB cache memory upgrade for DS-HSZ70-AH controller, maximum 128 MB cache supported

### Fully redundant Power Upgrade

**DS-BA35X-HH** 180 W Power Supply, quantity of three required for each BA370 for full redundancy.  
**DS-BA35X-HE** ac input box, quantity of one required for each BA370 for full redundancy.  
**DS-SW6XP-AA** Second power distribution unit supports up to two additional ac input boxes (in BA370) and ac power cords (60Hz).  
**DS-SW6XP-AB** Second power distribution unit supports up to two additional ac input boxes (in BA370) and ac power cords (50Hz).

### Disk Support

2 GB, 4 GB and 9 GB UltraSCSI disks are recommended

**DS-RZ1BB-VW** 2.1 GB 7200 RPM UltraSCSI disk drive  
**DS-RZ1CB-VW** 4.3 GB 7200 RPM UltraSCSI disk drive  
**DS-RZ1DF-VW** 9.2 GB 7200 RPM UltraSCSI disk drive

## StorageWorks UltraSCSI BA370 Rackmount Enclosure (*continued*)

### Fast10 Wide Disk Drives

<b>RZ26L-VW</b>	1.05 GB	<b>SWXD3-WG</b>	2.1 GB
<b>RZ26N-VW</b>	1.05 GB	<b>RZ28M-VW</b>	2.1 GB
<b>SWXD3-WF</b>	1.05 GB	<b>DS-RZ28M-VZ</b>	2.1 GB
<b>DS-RZ26N-VZ</b>	1.05 GB	<b>SWXD3-VH</b>	2.1 GB
<b>RZ28-VW</b>	2.1 GB	<b>RZ29B-VW</b>	4.3 GB
<b>RZ28D-VW</b>	2.1 GB	<b>SWXD3-WE</b>	4.3 GB

### General Guidelines

BA370 cabs are populated with disk SBBs in the following manner:

- Divide order of disk SBBs (by capacity) between the number of subsystems in the order. Each subsystem in the order will receive equal quantities of 9.2 GB, 4.3 GB and 2.1 GB disks, respectively.
- BA370 enclosure with HSZ70 controllers is populated first, the expander cab with PVA address set to two (2) is populated next, followed by the expander cab with PVA address set to three (3), last.
- BA370 is populated from bottom to top, the lowest BA370 shelf is fully populated first, etc.
- Disk SBBs are installed in each shelf starting on the left and filling to the right.
- Shelves are fully populated before disks are inserted into the shelves above.
- 9.2 GB disks are installed first, 4.3 GB disks are installed next, followed by the 2.1 GB disks.

**Summary:** BA370s are populated with the largest capacity disks first, in a bottom to top, left to right manner, to give 9.1 GB disks a higher priority because SCSI IDs 0-7 are the highest priority on UltraSCSI.

### Specifications

#### Physical Dimensions

Height	895 mm (35.25 in)
Width	476. mm (18.75 in)
Depth	514 mm (20.25 in)
Weight	102 kg (225 lb)

#### Power Requirements

Nominal Input Voltage	60 Hz/50 Hz, 110 V ac/220V ac
Input Voltage Range	110-120 V ac/220-240 V ac, 60 Hz/50 Hz
Number of phases	1
Power	12/6 Amps
Maximum 3.5 in SBB	24
Maximum HSZ70 controllers	2
Maximum cache modules	2
Maximum 180 W power supplies	8
Maximum ac input boxes	2

#### Operating Environment

Temperature	180 C to +240 C (640 F to 750 F) with an average rate of change of Reduce rating by 30 C/hr maximum and a step change of 30 C or less
Relative humidity	40% to 60% (noncondensing) with a step change of 10% or less (noncondensing)
Altitude	Up to 2400 mm (8000 ft)
Nominal Airflow	50 cubic ft/m
Air quality	Not to exceed 500,000 particles, 0.5 micron or larger per cubic foot of air.
Heat dissipation	3070 BTU/hr

## StorageWorks SCSI Controller Shelf Upgrade and Add-On Kits

StorageWorks SCSI Controller Shelf Upgrade and Add-On Kits are available. The DS-SWXM1-AA/BA solution kits and the DS-BA356-MD shelf kit allows customers to upgrade their current BA350 SCSI controller shelves to take advantage of the latest HSZ70 SCSI controller technology in existing SW500 and SW800 packaging. The solution kits include the DS-BA356-MD SCSI controller shelf, dual power supplies, either one or two HSZ70 controllers with 64 MB cache per controller, and applicable external cache batteries. The applicable HSZ70 Solution Software Kits support a wide range of supported platforms. Perform the easy replacement procedures and the upgrade is complete, or order on-site installation services directly from Compaq Services.

These field upgrade kits provide the performance and feature benefits of the HSZ70 while maintaining legacy packaging and device investment protection.

### Features

- Includes the latest in StorageWorks high performance RAID controllers.
- Provides UltraSCSI performance to host.
- Provides Fast10 performance to devices.
- Supports all major operating systems including Tru64 UNIX, HP-UX, Sun Solaris, IBM-AIX, OpenVMS and Windows NT.
- Supports all major RAID levels, and fully redundant, hot-swappable components eliminate single points of failure.
- Mirrored write back cache provides maximum performance and complete data integrity.
- Investment protection provided for existing packaging and devices.
- Uses the latest in StorageWorks UltraSCSI RAID controller technology to maximize system performance in throughput and bandwidth.
- Choice of empty, single, or dual controller upgrade kits.
- Upgrades offer SCSI performance increases while maintaining investment in SW500 and SW800 packaging.

### Ordering Information

Upgrade kits are field installable only, no factory configuration is available. Each HSZ70 controller in the configuration requires one HSZ70 Solutions Software Kit.

<b>DS-BA356-MD</b>	SCSI Controller shelf upgrade with dual power supplies
<b>DS-SWXM1-AA</b>	SCSI Controller shelf upgrade with one HSZ70 controller
<b>DS-SWXM1-BA</b>	SCSI Controller shelf upgrade with two HSZ70 controllers

### SCSI Cable

<b>BN37A-xx</b>	UltraSCSI host cable (various lengths available)
-----------------	--

### HSZ70 Solution Software Kits

- One HSZ70 Solutions Software Kit is required for each HSZ70 controller.
- HSZ70 Solutions Software Kits with -SA variants included documentation  
HSZ70 Solutions Software Kits with -SB variants do not include documentation, select for each additional adapter ordered if documentation is available on-site

<b>QB-5SBAB-SA/-SB</b>	HSZ70 Solutions Software for Tru64 UNIX V3.2G, V4.0B
<b>QB-5SBAC-SA/-SB</b>	HSZ70 Solutions Software for OpenVMS V6.2, V7.1
<b>QB-5SBAG-SA/-SB</b>	HSZ70 Solutions Software for Sun Solaris 2.5, 2.5.1
<b>QB-5SBAJ-SA/-SB</b>	HSZ70 Solutions Software for HP-UX 10.10, 10.2
<b>QB-5SBAE-SA/-SB</b>	HSZ70 Solutions Software for Windows NT Intel 3.51, 4.0
<b>QB-5SBAD-SA/-SB</b>	HSZ70 Solutions Software for Alpha NT 3.51, 4.0
<b>QB-5SBAK-SA/-SB</b>	HSZ70 Solutions Software for IBM AIX 4.1.5, 4.2

### Warranty

- First year, onsite hardware service, Monday through Friday 8 a.m. to 5 p.m., next business day response
- Additional years of Return-to-Compaq:
  - Controllers – two years
  - Packaging – two years

## StorageWorks SCSI Controller Shelf Upgrade and Add-On Kits (*continued*)

### Specifications

Feature	Description
Host interface	16-bit Differential UltraSCSI
Drive interface	8-bit Single-ended Fast10
Maximum transfer rate to host	40 MB per second per controller pair
Device channels per controller pair	6
RAID levels supported	0, 1, 0+1, 3/5
Maximum disks per controller pair	36
Controller cache	up to 256 MB per controller pair
Battery backup for cache	Yes
Mirrored write back cache	Yes
Redundant fans	Yes
Redundant power supplies	Yes
Serviceability	Hot-swappable components
<b>Physical Dimensions (per shelf)</b>	
Height	5.9 in, (150 mm)
Width	17.5 in, (445 mm)
Depth	13.8 in, (350 mm)
Weight (empty)	10 lb; (4.45 Kg)
BTU rating	3,070 BTUs/hr
Nominal airflow	40 cubic ft/minute
<b>Operating Environment</b>	
Temperature	10°C to 40°C (50°F to 104°F) -- Reduce rating by 1.8°C for each 1,000M altitude (1.0°F/1000 ft)
Humidity	10 to 85 percent at maximum wet bulb temp of 32°C (90°F) and minimum dew point of 2°C (36°F)
Altitude	Up to 2,400M (8,000 ft.)
Air Quality	Not to exceed 500,000 particles per cubic foot of air at a size of 0.5 micron or larger

## StorageWorks SCSI Controller Shelf Upgrade and Add-On Kits (*continued*)

### Shelf Supported Devices

Device	Type <sup>1</sup>	Capacity GB	Minimum Microcode Version	Minimum Hardware Rev <sup>2</sup>
RZ25-VA	DD	0.426	900	B01
RZ26-VA	DD	1.05	T392	D02
RZ26L-VA/VW <sup>3</sup>	DD	1.05	440C	A01
RZ26N-VW <sup>3</sup>	DD	1.05	446	A01
SWXD3-WF <sup>3</sup>	DD	1.05	446	A01
DS-RZ26N-VZ <sup>3</sup>	DD	1.05	1003	A01
RZ28-VA/VW	DD	2.1	435E	B01
RZ28B-VA	DD	2.1	0003	A01
RZ28D-VA/VW <sup>3</sup>	DD	2.1	0008	A01
SWXD3-SG/WG <sup>3</sup>	DD	2.1	0008	A01
RZ28M-VA/VW <sup>3</sup>	DD	2.1	466	A01
DS-RZ28M-VZ <sup>3</sup>	DD	2.1	1003	A01
SWXD3-SH/WH <sup>3</sup>	DD	2.1	466	A01
RZ29B-VA/VW <sup>3</sup>	DD	4.3	0007	B01
SWXD3-SE/WE <sup>3</sup>	DD	4.3	0007	C02/A01
DS-RZ40-VA	DD	9.1	LYGO	A01
DS-RZ1BB-VW	DD	2.1	LYJ0	A01
DS-RZ1CB-VW	DD	4.3	LYJ0	A01
DS-RZ1DB-VW	DD	9.1	LYJ0	A01
EZ31-VW <sup>4</sup>	SSD	0.134	V064	A01
EZ32-VW <sup>4</sup>	SSD	0.268	V064	A01
EZ69-VW <sup>4</sup>	SSD	0.95	V070	A01

- 1 Device types are indicated as follows: DD for Disk Drive and SSD for solid state devices.
- 2 Minimum hardware revision supported.
- 3 Wide disks require BA356 wide device shelves and 8-bit I/O modules.
- 4 Do not warm swap solid state devices. Make sure the device shelf power is off when inserting or removing a solid state disk device.

## StorageWorks SCSI Controller Shelf Upgrade and Add-On Kits (*continued*)

### Shelf Supported Tape and Tape Library

Device	Type <sup>1</sup>	Capacity GB	Minimum Microcode Version	Minimum Hardware Rev <sup>2</sup>
TL812 <sup>3467</sup>	TLB	960/1920 <sup>5</sup>	1.2 robot/CC33 drive	A01
TL820 <sup>346</sup>	TLB	5200	1d3M Robot/v40 drive	L1
TL822 <sup>3467</sup>	TLB	3520/10560 <sup>5</sup>	1g4F robot/CC33 drive	A01
TL826 <sup>3467</sup>	TLB	3520/7040 <sup>5</sup>	1g4F robot/CC33 drive	A01
DS-TL893 <sup>3467</sup>	TLB	9.24/18.48T <sup>5</sup>	V2A/5A	A01
DS-TL894 <sup>3467</sup>	TLB	1.69/3.36T <sup>5</sup>	V1.24	A01
DS-TL896 <sup>3467</sup>	TLB	6.1/12.32T <sup>5</sup>	V2A/5A	A01
TZ87-VA <sup>78</sup>	TD	10/20 <sup>5</sup>	930A	A01
TZ87-TA <sup>348</sup>	TD	10/20 <sup>5</sup>	9514	B02
TZ875-NT <sup>378</sup>	TDL	50/100 <sup>5</sup>	930A	A01
TZ877-AE/AF <sup>378</sup>	TDL	70/140 <sup>5</sup>	930A	A01
TZ88N-VA <sup>678</sup>	TD	20/40 <sup>5</sup>	CC33	A01
TZ885-TA <sup>3569</sup>	TDL	100/200 <sup>5</sup>	CC33	A01
DS-TZ89N-VW <sup>6789</sup>	TD	35/70 <sup>5</sup>	141F	A01
DS-TZ89N-TA <sup>3678</sup>	TD	35/70 <sup>5</sup>	141F	A01
DS-TZS20-VW	TD	25/50V <sup>5</sup>		

1. Device types are indicated as follows: TD for tape drive, TDL for tape drive loader and TLB for tape libraries.
2. Minimum hardware revision supported.
3. Requires 0.2 meter SCSI-1 to SCSI-2 transition cable, Compaq internal part number 17-03831-01 for DWZZA-AA, and Compaq part number 17-04367-01 for DWZZA-VA and DWZZB-VW.
4. Requires DWZZA/DWZZB single-ended to differential SCSI signal converter.
5. Values represent compressed data. The compression factor is device dependent based on individual device algorithms.
6. Can not read TK50, TK70 or TZ30 format tapes.
7. Requires KZPSA or PMAZC host adapter.
8. Tape Device Code load is supported.
9. Wide Tape Devices require BA356 with 8-bit I/O module

<b>Supported Devices for DS-BA356 UltraSCSI Pedestals and Shelves</b>
---

<b>RZ26N-VA</b>	1.05 GB 8-bit narrow hard disk drive
<b>RZ28B-VA</b>	2.1 GB 8-bit narrow hard disk drive
<b>RZ28D-VA</b>	2.1 GB 8-bit narrow hard disk drive 7200 RPM
<b>RZ28M-VA</b>	2.1 GB 8-bit narrow hard disk drive 7200 RPM
<b>RZ26N-VW</b>	1.05 GB 16-bit wide hard disk drive
<b>DS-RZ26N-VZ</b>	1.05 GB 16-bit wide hard disk drive, 5400 RPM
<b>RZ28D-VW</b>	2.1 GB 16-bit wide hard disk drive 7200 RPM
<b>RZ28M-VW</b>	2.1 GB 16-bit wide hard disk drive 7200 RPM
<b>DS-RZ28M-VZ</b>	2.1 GB 16-bit wide hard disk drive 5400 RPM
<b>RZ29B-VA</b>	4.3 GB 8-bit narrow hard disk drive 7200 RPM
<b>DS-RZ29L-VA</b>	4.3 GB 8-bit narrow hard disk drive 7200 RPM
<b>DS-RZ40-VA<sup>1</sup></b>	9.1 GB 8-bit narrow hard disk drive 7200 RPM
<b>RZ29B-VW</b>	4.3 GB 16-bit wide hard disk drive 7200 RPM
<b>DS-RZ1BB-VW</b>	2.1 GB 16-bit UltraSCSI disk drive, 7200 RPM
<b>DS-RZ1CB-VW</b>	4.3 GB 16-bit UltraSCSI disk drive, 7200 RPM
<b>DS-RZ1DB-VW</b>	9.1 GB 16-bit UltraSCSI disk drive, 7200 RPM
<b>EZ31-VW</b>	134 MB solid state drive in 3.5" carrier
<b>EZ32-VW</b>	268 MB solid state drive in 3.5" carrier
<b>EZ64-VA/VW<sup>1</sup></b>	475 MB solid state drive in 3.5" carrier
<b>EZ69-VA/VW<sup>1</sup></b>	950 MB solid state drive in 3.5" carrier
<b>RWZ53-VA</b>	2.4/2.6 GB Optical Drive with BA35X-CD
<b>RRD45-VA</b>	600 MB quad speed CD-ROM in 5.25" carrier
<b>RRD45-VU</b>	600 MB add in quad speed CD-ROM for RRD4x-VA or TZK11-VA
<b>DS-RRD46-VA</b>	600 MB 12x SCSI CD-ROM drive in 5.25" carrier
<b>DS-RRD46-VU</b>	600 MB add in 12x SCSI CD-ROM drive
<b>TZ88N-VA</b>	20/40 GB DLT drive mounted in BA35X-CD
<b>DS-TZ89N-VW<sup>1</sup></b>	35/70 GB DLT drive in 5.25" carrier
<b>TZK11-VA</b>	2 GB QIC cartridge tape drive in 5.25" carrier
<b>TZK11-VU</b>	2 GB QIC add in cartridge tape drive for TZK11-VA or RRD4x-VA
<b>TZK20-VW</b>	2.3GB QIC cartridge tape drive in 5.25" carrier
<b>TLZ07-VA</b>	8 GB 4mm DAT cartridge tape drive in 3.5" carrier
<b>TLZ09-VA</b>	8 GB 4mm DAT cartridge tape drive
<b>TLZ7L-VA</b>	32 GB 4mm DAT four cartridge tape loader
<b>TLZ9L-VA</b>	32/64 GB 4mm DAT eight cartridge tape loader

1. Class A device. Not supported in Class B enclosures (BA356-Kx).

## StorageWorks Supported Devices for 8-bit BA350, BA35R and BA353

DWZZA-VA <sup>1</sup>	Fast Wide Differential to Fast Narrow single-ended SCSI signal converter in 3.5-inch carrier. BA350 and BA35R only.
EZ51R-VA <sup>1</sup>	107 MB solid state disk in 5.25-inch carrier. BA350 and BA35R only.
EZ54R-VA <sup>1</sup>	428 MB solid state disk in 5.25-inch carrier. BA350 and BA35R only.
EZ58R-VA <sup>1</sup>	856 MB solid state disk in 5.25-inch carrier. BA350 and BA35R only.
RRD42-VB <sup>1</sup>	CD-ROM device in 5.25-inch carrier (BA35X-CD). BA350 and BA35R only.
RRD42-VU <sup>1</sup>	CD-ROM device, can be added to RRD42-VB. BA350 and BA35R only.
RRD45-VA <sup>1</sup>	Quad-speed high-performance CD-ROM drive in 5.25-inch carrier with space for additional half-height device. BA350 and BA35R only.
RRD45-VE <sup>1</sup>	Quad-speed high-performance CD-ROM drive. BA353 only.
RRD45-VU <sup>1</sup>	Quad-speed high-performance CD-ROM upgrade, add on for RRD4x-VA, TZK1x-VA carrier. BA350 and BA35R only.
RWZ52-VA	1.2 GB multifunction optical drive in 5.25-inch carrier
RX26-VA	2.88 MB diskette drive in 3.5-inch carrier
RZ25-VA	426 MB disk drive in 3.5-inch carrier
RZ25L-VA	535 MB disk drive in 3.5-inch carrier
RZ26-VA	1.05 GB disk drive in 3.5-inch carrier
RZ26L-VA	1.05 GB disk drive in 3.5-inch carrier
RZ28-VA	2.1 GB disk drive in 3.5-inch carrier
RZ28B-VA	2.1 GB disk drive in 3.5-inch carrier
RZ29B-VA <sup>1</sup>	4.3 GB disk drives in 3.5-inch carrier. BA350 and BA35R only
SWXTE-AA <sup>1</sup>	5 GB 8 mm helical scan tape drive in 5.25-inch carrier. BA350 and BA35R only.
SWXTE-AB <sup>1</sup>	5 GB 8 mm helical scan tape drive, can be added to SWXTE-AA. BA350 only.
TKZ09-VA <sup>1</sup>	5 GB 8 mm tape drive in 5.25-inch carrier. BA350 and BA35R only.
TLZ06-VA	4 GB 4 mm Digital audio tape (DAT) in 3.5" carrier
TLZ07-VA	8 GB 4 mm Digital audio tape (DAT) in 3.5" carrier
TLZ7L-VA	8 GB 4 mm Digital audio tape (DAT) mini-library in 5.25" carrier
TLZ6L-VA <sup>1</sup>	16 GB 4 mm Digital audio tape (DAT) in 5.25-inch carrier. BA350 and BA35R only.
TZ86-VA <sup>1</sup>	6 GB DLT in 5.25-inch carrier. BA350 and BA35R only
TZ87-VA <sup>1</sup>	20 GB DLT in 5.25-inch carrier. BA350 and BA35R only
TZ87N-VA <sup>1</sup>	20 GB tape in 5.25-inch carrier, reads TK50. BA350 and BA35R only
TZ88N-VA <sup>1</sup>	40 GB tape in 5.25-inch carrier, reads TK50. BA350 and BA35R only
TZK10-VA <sup>1</sup>	525 MB QIC tape in 5.25-inch carrier. BA350 and BA35R only
TZK10-VU <sup>1</sup>	525 MB QIC tape, add on for TZK10-VA for two tapes in one 5.25-inch carrier. BA350 and BA35R only
TZK11-VA <sup>1</sup>	2 GB QIC tape in 5.25-inch carrier. BA350 and BA35R only
TZK11-VU <sup>1</sup>	2 GB QIC tape, add on for TZK11-VA for two tapes in one 5.25-inch carrier. BA350 and BA35R only
TKZ15-VA <sup>1</sup>	5 GB 8 mm full-height 5.25-inch tape. BA350 and BA35R only

1. Supported by BA350, BA35R, or BA353 **only** as noted in description.

## Compliance Requirements for StorageWorks 8-bit Devices in 16-bit BA356 and BA36R

- Most installed 8-bit StorageWorks devices may be mixed with wide 16-bit StorageWorks devices. All models of all StorageWorks devices now shipping are 16-bit compliant. Table lists minimum revision level for all 8-bit devices supported by BA356.
- Compliance date is when factory began shipping 16-bit compliant revision. Blanks indicate the date is not absolute and all devices should be carefully checked.
- "All" means the device has been 16-bit compliant since its first shipments.
- Note: Hardware platform and operating system support may be different than the table.
- 16-bit StorageWorks devices will not work and may not be used in 8-bit enclosures.
- Out-of-REV 8-bit devices plugged into a bit bus will instantly freeze bus activity. Removing the device allows bus and attached devices to operate properly again.

Device	Description	Minimum Revision	16-bit Compliance Date
EZ51R-VA	107 MB solid state disk	E03	02/28/95
EZ54R-VA	428 MB solid state disk	E03	02/28/95
EZ58R-VA	856 MB solid state disk	C03	02/28/95
RRD42-VB	CD-ROM	B03	02/28/95
RRD42-VU	CD-ROM	B04	02/28/95
RRD43-VA	600 MB dual speed CD-ROM	B05	02/28/95
RRD43-VU	600 MB dual speed CD-ROM	B05	02/28/95
RRD44-VA	600 MB dual speed CD-ROM	B03	02/28/95
RRD44-VU	600 MB dual speed CD-ROM	B03	02/28/95
RWZ52-VA	1.2 GB optical drive	B03	02/28/95
RX26 -VA	2.88 MB diskette drive	B03	02/28/95
RZ25 -VA	426 MB disk	D01	11/93
RZ25L-VA	535 MB disk	—	All
RZ26 -VA	1.05 GB disk drive	H02	11/93
RZ26L-VA	1.05 GB disk drive	B01	11/93
RZ28 -VA	2.1 GB disk	C01	11/93
RZ28B-VA	2.1 GB disk	A01	All
SWXTE-AA	5 GB 8 mm helical scan tape	B03	02/28/95
SWXTE-AB	5 GB 8 mm helical scan tape	B03	02/28/95
TZ86-VA	6 GB DLT in 5.25" carrier	C01	4/94
TZ87-VA	20 GB DLT in 5.25" carrier	—	All
TZ87N-VA	20 GB DLT in 5.25" carrier	—	All
TZ88N-VA	40 GB DLT in 5.25" carrier	—	All
TLZ06-VA	4 GB 4mm DAT drive	D06	02/28/95
TLZ6L-VA	16 GB 4mm DAT drive	B04	02/28/95
TLZ07-VA	8 GB 4mm DAT drive	—	All
TLZ7L-VA	32 GB 4mm DAT loader	B03	02/28/95
TKZ09-VA	5 GB 8 mm full-height tape	B03	02/28/95
TKZ15-VA	5 GB 8 mm full-height tape	B03	02/28/95
TZK10-VA	525 MB QIC tape	C04	02/28/95
TZK10-VU	525 MB QIC tape add on	C04	02/28/95
TZK11-VA	2 GB QIC tape	B03	02/28/95
TZK11-VU	2 GB QIC tape add on	B03	02/28/95

**StorageWorks 8-bit and 16-bit Supported Devices in Fast10 16-bit BA356/BA36R**

8-Bit Devices	16-Bit Devices	Description
	<b>DWZZB-VW</b>	FWD to FWSE or FNSE SCSI converter
<b>EZ51R-VA</b>		107 MB solid state disk
<b>EZ54R-VA</b>		428 MB solid state disk
<b>EZ58R-VA</b>		856 MB solid state disk
<b>RRD44-VA</b>		600 MB dual speed CD-ROM
<b>RRD45-VA</b>		600 MB quad speed CD-ROM
<b>RRD45-VU</b>		600 MB quad speed CD-ROM
<b>RZ26-VA</b>		1.05 GB disk drive
<b>RZ26L-VA</b>	<b>RZ26L-VW</b>	1.05 GB disk drive
<b>RZ26N-VA</b>	<b>RZ26N-VW</b>	1.05 GB disk drive
<b>RZ28-VA</b>	<b>RZ28-VW</b>	2.1 GB disk drive
<b>RZ28B-VA</b>		2.1 GB disk drive
<b>RZ28M-VA</b>	<b>RZ28M-VW</b>	2.1 GB disk drive
<b>RZ29B-VA</b>	<b>RZ29B-VW</b>	4.3 GB disk drive
<b>RX26-VA</b>		2.88 MB diskette drive
<b>TLZ06-VA</b>		4 GB 4mm DAT drive
<b>TLZ6L-VA</b>		16 GB 4mm DAT drive
<b>TLZ07-VA</b>		8 GB 4mm DAT drive
<b>TLZ7L-VA</b>		32 GB 4mm DAT loader
<b>TKZ09-VA</b>		5 GB 8 mm full-height tape
<b>SWXTE-AA/AB</b>		5 GB 8 mm helical scan tape in 5.25" full-height SBB

### Compliance Requirements for StorageWorks 8-bit Devices in 16-bit BA346

- Most installed 8-bit StorageWorks devices may be mixed with wide 16-bit StorageWorks devices. All models of all StorageWorks devices now shipping are 16-bit compliant. Table lists minimum revision level for all 8-bit devices supported by BA346.
- Compliance date is when factory began shipping 16-bit compliant revision. Blanks indicate the date is not absolute and all devices should be carefully checked.
- "All" means the device has been 16-bit compliant since its first shipments.
- Note: Hardware platform and operating system support may be different than the table.
- 16-bit StorageWorks devices will not work and may not be used in 8-bit enclosures.

Out-of-REV 8-bit devices plugged into a 16-bit bus will instantly freeze bus activity. Removing the device allows bus and attached devices to operate properly again.

Device	Description	Minimum Revision	16-bit Compliance Date
RX26 -VA	2.88 MB diskette drive	B03	02/28/95
RZ25 -VA	426 MB disk	D01	11/93
RZ26 -VA	1.05 GB disk	H02	11/93
RZ26L-VA	1.05 GB disk	B01	11/93
RZ28B-VA	2.1 GB disk	A01	All
TLZ06-VA	4 GB 4mm DAT drive	D06	02/28/95
TLZ07-VA	8 GB 4mm DAT drive	—	All

### StorageWorks 8-bit and 16-bit Supported Devices for 16-bit BA346

8-Bit Devices	16-Bit Devices	Description
	DWZZA-VW	FWD to FNSE SCSI adapter in 3.5" carrier
EZ51R-VA		107 MB solid state disk
EZ54R-VA		428 MB solid state disk
EZ58R-VA		856 MB solid state disk
RRD43-AA		600 MB dual speed CD-ROM (fixed slot)
RRD44-AA		600 MB dual speed CD-ROM (fixed slot)
RRD45-AA		600 MB quad speed CD-ROM (fixed slot)
RZ26-VA		1.05 GB disk drive
RZ26L-VA		1.05 GB disk drive
RZ26N-VA		1.05 GB disk drive
RZ28B-VA	RZ28B-VW	2.1 GB disk drive
RZ28D-VA	RZ28D-VW	2.1 GB disk drive
RZ28M-VA	RZ28M-VW	2.1 GB disk drive
RZ29B-VA	RZ29B-VW	4.3 GB disk drive
RX26-VA		2.88 MB diskette drive
TLZ06-VA		4 GB 4mm DAT drive
TLZ07-VA		8 GB 4mm DAT drive
TLZ7L-AA		32 GB 4mm DAT loader
TZK11-AA		2 GB QIC tape drive