

### MODELS

#### Three-Channel Backplane RAID Controller (DS-KZPCC-CE)

DS-KZPCC-CE (Rev. D01)

#### Benefits at a Glance

- Supports 9.1-GB, 18.2-GB, 36.4-GB, 72.8-GB, and 146-GB disk drives
- Ultra2/LVD support for *AlphaServers*
- 64-MB Cache
- Supports up to 14 SCSI devices per channel (with *StorageWorks™* Enclosure 4314 Ultra3/LVD) \*
- Support for Internal Card Cage (BA610-6D) on AlphaServer DS20E, ES40, and ES45

\* Dual bus configuration on the StorageWorks Enclosure Model 4254 Ultra2/LVD and 4354 Ultra3/LVD device shelves only allows seven drives per channel

### OVERVIEW

The Three-Channel Backplane RAID controller (DS-KZPCC-CE) is a high-performance, 3-channel, 64-bit PCI to Ultra2/LVD SCSI Backplane RAID controller with 64-MB cache and battery backup.

DS-KZPCC-CE is supported on the following AlphaServers/AlphaStations:

Systems	Maximum # Supported	Notes
AlphaServer 800	1	Supported as a data device only. No boot support.
AlphaStation XP1000	1	
AlphaServer DS10, AlphaStation XP900	2	
AlphaServer DS20E (EV67 Pass 2.6 and up and EV68 CPU's)	2	
AlphaServer DS25	3	
AlphaServer ES40	8	
AlphaServer ES45	8	
AlphaServer GS80, GS160, GS320	8	

The DS-KZPCC-AC controller is supported with the following versions of the Tru64 UNIX operating system:

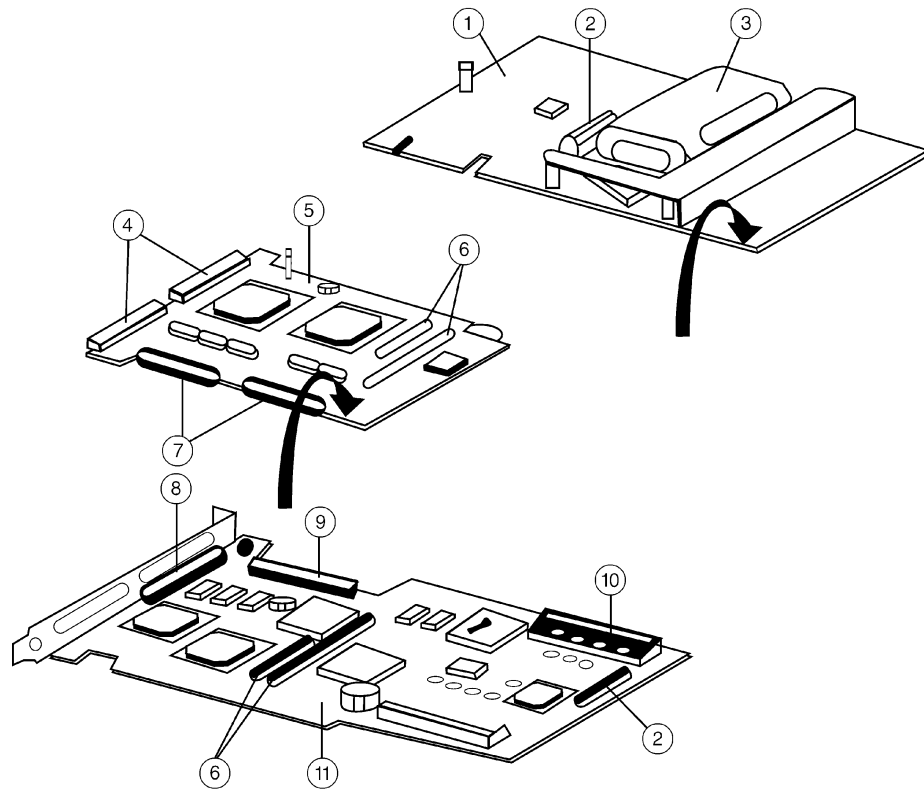
- Tru64 UNIX V4.0F with required New Hardware Delivery – 3 Kit (NHD 3) or later – CD-ROM part number is QA-MT4AX-H8
- Tru64 UNIX V4.0G
- Tru64 UNIX V5.1 with Patch Kit 4 or later
- Tru64 UNIX V5.1A
- Tru64 UNIX V5.1B
- TruCluster V5.1A: requires Patch Kit 1 (BL1) (T64V51AB01AS0001-2002mdd.tar) or later
- TruCluster V5.1B

#### Minimum Supported Hardware/Software Revisions for DS-KZPCC-CE Controllers for Tru64 UNIX V4.0F, V4.0G, V5.1, V5.1A, and V5.1B

Tru64 UNIX Version	V4.0F with NHD3	V4.0G	V 5.1 with PK4	V5.1A	V5.1B	BA610-6D Enclosures
Hardware	A01	C01	C01	D01	D01	D01
Firmware	CQZ2	CQZ2	CQZ2	CQ16	CQ16	CQ16
SMOR	Smor0021.111	Smor0033.112	Smor0033.112	Smor0033.112	Smor0033.112	Smor0033.112
SWCC	V 2.2	V 2.3	V 2.3	V2.3	V2.31	V2.3
SRM console	V 5.7	V 5.8*	V 5.8*	V6.0	V6.0	V6.0

\*V6.0 SRM console revision (or higher versions when released) is recommended  
V6.0 SRM console revision is minimum for GS80/GS160/GS320

### OVERVIEW *(continued)*



1. Battery Module
2. Battery Module Connector
3. Battery
4. SCSI bus expansion module external Ultra2 SCSI connectors (SCSI B & SCSI C)
5. Two-channel SCSI bus expansion module
6. SCSI bus expansion module connectors
7. SCSI bus expansion module internal 68-pin SCSI connectors
8. External Ultra2 SCSI connector (SCSI A)
9. Internal 68-pin SCSI connector
10. Cache memory DIMM sockets (64 MB installed)
11. KZPCC Backplane RAID Controller main board

### KEY FEATURES

- I<sub>2</sub>O shell compliant interface
- RAID Level: 0, 1, 5, 0 + 1, 0 +5, and JBOD
- Three Ultra2/LVD Channels
- Tru64 UNIX 4.0F, V4.0G, V5.1, V5.1A, V5.1B boot support, TruCluster V5.1A and V5.1B
- Support for StorageWorks Command Console (SWCC)
- Alpha SMOR off-line configuration utility
- Add storage capacity online
- Battery backup of 24 hours with 64-MB of cache memory
- Hot, warm, and cold swap
- Up to 14 devices per channel (only seven drives with the StorageWorks Enclosure Model 4254 Ultra2/LVD and 4354 Ultra3/LVD device shelves)
- Internal Card Cage (BA610-6D) on AlphaServer DS20E, ES40 and ES45

### PRODUCT HIGHLIGHTS

#### Capacity

- Supports up to 14 SCSI drives per channel on StorageWorks Enclosure Model 4314 Ultra3/LVD (only seven drives with the StorageWorks Enclosure Model 4254 Ultra2/LVD and 4354 Ultra3/LVD device shelves)
- Supports 9.1-GB and 18.2-GB Ultra2 drives;  
9.1-GB, 18.2-GB, 36.4-GB, 72.8-GB, and 146-GB Ultra320/Ultra3/Ultra2 10K rpm capable drives;  
9.1-GB and 18.2-GB Ultra3/Ultra2 15K rpm capable drives  
(Only supports Ultra320/Ultra3 drives at Ultra2 speeds)
- Supports online storage capacity adds
- Supports Six Slot Internal Card Cage (BA610-6D) on AlphaServer DS20E, ES40 and ES45

#### Manageability

Support for StorageWorks Command Console (SWCC) & Alpha SMOR off-line configuration utility

#### Options Supported

KZPCC 64-MB Memory Cache Replacement	DS-MS100-DE
KZPCC Battery Backup Replacement	DS-KZPCC-UB

### DS-KZPCC-CE BACKPLANE RAID CONTROLLER SPECIFICATIONS

<b>Protocol Support</b>	Ultra2/LVD		
<b>Processor Support</b>	EV6, EV67, and EV68		
<b>Drive Support</b>	9.1-GB and 18.2-GB Ultra2 drives; 9.1-GB, 18.2-GB, 36.4-GB, 72.8-GB, and 146-GB Ultra320/Ultra3/Ultra2 10K rpm capable drives; 9.1-GB and 18.2-GB Ultra3/Ultra2 15K rpm capable drives (Only supports Ultra320/Ultra3 drives at Ultra2 speeds)		
<b>O/S Support</b>	Tru64 UNIX V4.0F with required New Hardware Delivery – 3 Kit (NHD 3) or later, Tru64 UNIX V4.0G and Tru64 UNIX V5.1 with Patch Kit 4 or later, Tru64 UNIX V5.1A and Tru64 UNIX V5.1B TruCluster V5.1A with Patch Kit 1 (BL1) (T64V51aB01AS0001-2002mmdd.tar) or later, TruCluster V5.1B		
<b>UPC Code</b>	DS-KZPCC-CE	613326187951	
	DS-MS100-DC	613326186725	
<b>Environmental</b>	Temperature	Operating	32° to 127°F/0° to 55°C
	Relative Humidity	Operating	10% to 90% non-condensing
	Altitude	Operating	0 to 9,842.5 ft/0 to 3,000 m
<b>Mechanical Specifications</b>	Dimensions (HxWxD)	Product	0.67 x 12.35 x 3.87 in/1.7 x 31.37 x 9.84 cm
		Shipping	2.75 x 16.5 x 9.5 in/6.98 x 41.91 x 24.13 cm
	Weight	Product	1.1 lbs/0.499 kg
		Shipping	2 lbs/0.907 kg

### DS-KZPCC-CE BACKPLANE RAID CONTROLLER SPECIFICATIONS *(continued)*

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Electrical	Under normal operating conditions, the power characteristics of the adapter are as specified in the table below:	
	<b>Specification</b>	<b>Value</b>
	Power Dissipation	25W Maximum
	Current Requirement	1.87A typical
	Input Voltage Requirement	5V $\pm$ 5%
	Power Supply Voltage Ripple Requirement	50mV peak-to-peak maximum
Reliability	MTBF = 500,000 hours @ 86°F/30°C	

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### SERVICE AND SUPPORT, CAREPAQ AND WARRANTY

#### Software Product Services

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- Standalone telephone support
- Rights to new license version
- Media and documentation updates

#### Hardware Product Services

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- Installation services
- On-site maintenance (includes warranty support)
- Response time upgrades during the warranty period
- Post-warranty coverage
- RAID setup and performance consulting via statement of work

For additional hardware installation and maintenance information, refer to the following Web pages:

<http://www.compaq.com/services/carepag/us/install/>

<http://www.compaq.com/services/carepag/us/hardware/>

**NOTE:** These Web sites are available in English only.

#### Warranty Upgrade Options

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- Response - Upgrade on-site response from next business day to same day 4 hours
  - Coverage - Extend hours of coverage from 9 hours x 5 days to 24 hours x 7 days
  - Duration - Select duration of coverage for a period of 1, 3, or 5 years
- NOTE:** Certain restrictions and exclusions apply. Consult the Customer Support Center for details.

### SERVICE AND SUPPORT, CAREPAQ AND WARRANTY *(continued)*

#### CarePaq Information

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Sample part numbers:

- FM-**\*\***XHW-36, 3-year, uplift to 5 x 9, Next Day Response
- FM-**\*\***4HR-36, 3-year, uplift to 5 x 9, 4-hour Response
- FM-**\*\***724-36, 3-year, uplift to 7 x 24, 4-hour Response

**\*\*** represents a two-digit product-specific code

- CarePaq is defined as an upgrade to the product warranty attribute, available for a specific duration and hours of coverage.
- CarePaq is not available for less than the product's warranty duration.
- CarePaq is available for sale anytime during the warranty period for most products, but the commencement date will be the same as the Warranty Start Date (delivery date to end user customer). Proof of purchase may be required.
- CarePaq services are prepaid.

For additional CarePaq (hardware & software) information as well as orderable part numbers, refer to the following Web page:

<http://www.compaq.com/services/carepag/index.html>

**NOTE:** This Web site is available in English only.

#### Components

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The following brick level options/components do not have individual CarePaqs. These items will be included in product CarePaqs into which they are installed.

Disk Drives	Tape Drives	CD/DVD ROM	SCSI Hubs in SBBS	Adapters
Bus Converters	Backplane RAID Controllers	Power Supplies	Cabling	Fans

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