

Compaq StorageWorks

Release Notes – Tru64 UNIX and OpenVMS FCA2354 Host Bus Adapter

Part Number: AA-RR6YC-TE

Third Edition (June 2002)

These release notes contain late-breaking and supplemental information for the Compaq StorageWorks FCA2354 Host Bus Adapter for Tru64 UNIX and OpenVMS. For the latest version of these Release Notes and other Host Bus Adapter documentation, visit the Compaq storage website at:

<http://www.compaq.com/products/storageworks/adapters.html>

COMPAQ

© 2002 Compaq Information Technologies Group, L.P.

Compaq, the Compaq logo, SANworks, StorageWorks, Tru64, and OpenVMS are trademarks of Compaq Information Technologies Group, L.P. in the U.S. and/or other countries.

Intel, Pentium, Intel Inside, and Celeron are trademarks of Intel Corporation in the U.S. and/or other countries.

The Open Group, Motif, OSF/1, UNIX, the “X” device, IT DialTone are trademarks of The Open Group in the U.S. and/or other countries.

All other product names mentioned herein may be trademarks of their respective companies.

Confidential computer software. Valid license from Compaq required for possession, use or copying. Consistent with FAR 12.211 and 12.212, Commercial Computer Software, Computer Software Documentation, and Technical Data for Commercial Items are licensed to the U.S. Government under vendor's standard commercial license.

Compaq shall not be liable for technical or editorial errors or omissions contained herein. The information is provided “as is” without warranty of any kind and is subject to change without notice. The warranties for Compaq products are set forth in the express limited warranty statements accompanying such products. Nothing herein should be construed as constituting an additional warranty.

Compaq service tool software, including associated documentation, is the property of and contains confidential technology of Compaq Computer Corporation or its affiliates. Service customer is hereby licensed to use the software only for activities directly relating to the delivery of, and only during the term of, the applicable services delivered by Compaq or its authorized service provider. Customer may not modify or reverse engineer, remove, or transfer the software or make the software or any resultant diagnosis or system management data available to other parties without Compaq's or its authorized service provider's consent. Upon termination of the services, customer will, at Compaq's or its service provider's option, destroy or return the software and associated documentation in its possession.

Printed in the U.S.A.

Release Notes – Tru64 UNIX and OpenVMS FCA2354 Host Bus Adapter
Third Edition (June 2002)
Part Number: AA-RR6YC-TE

Release Notes Contents

The FCA2354 Host Bus Adapter (HBA) is a high-performance PCI option module that connects to devices attached through either a hub-based optical Fibre Channel arbitrated loop or a switch based optical Fibre Channel fabric. The HBA supports short-wave laser multi-mode connections. These release notes include all known issues or restrictions for using the HBA within a system configuration. These release notes cover the following major topics:

- Other FCA2354 documentation
- Parts list
- Supported systems
- Supported Storage and Interconnecting Devices
- Configuration Information
- Restrictions
- Troubleshooting

Other Documentation

The FCA2354 Host Bus Adapter kit also includes the *Compaq StorageWorks Tru64 UNIX and OpenVMS FCA-2354 Host Bus Adapter Installation Guide*, part number AA-RR6XA-TE.

Additional documentation, including white papers and best practices documents, are available via the Compaq website at: <http://www.compaq.com>.

Parts List

[Table 1](#) includes the Parts List for the FCA2354 adapter.

Table 1: Parts List

Part Number	Description
266299-001	FCA2354 Host Bus Adapter
AA-RR6YC-TE	Release notes for the FCA2354 (this document)
AA-RR6XA-TE	<i>Compaq StorageWorks Tru64 UNIX and OpenVMS FCA2354 Host Bus Adapter Installation Guide</i>
3R-Q409A-AA	Compaq StorageWorks Warranty
3R-Q411A-AA	Compaq StorageWorks Telephone Book

Supported Systems

[Table 2](#) describes the Alpha server platforms with the associated number of adapters that are supported per operating system configuration. [Table 3](#) lists platforms and operating systems that have passed compatibility testing with the HBA as of the date on these release notes. Refer to the Restrictions section in these release notes for known operating system and device restrictions.

NOTE: The minimum console revision for all platforms is Version 6.1.

Table 2: Supported Alpha Server Platforms

ALPHA SERVER	Tru64 UNIX		OpenVMS [†]	
	Switch		Switch	
	SINGLE	CLUSTER	SINGLE	CLUSTER
ES40	6	6	6	6
ES45	6	6	6	6
DS20E	4	4	4	4
DS10	2	2	2	2
GS80/160/320	62	62	26	26

[†] TIMA kit is required. Refer to the OpenVMS Restrictions section in this document for version information.

Supported Storage and Interconnecting Devices

Table 3 describes the components and their revisions that are qualified with the HBA.

Table 3: Supported Storage and Interconnect Devices

Component	Firmware/Driver Version	Part Number
FCA2354	CD381A4.awc	Resides on the HBA
Unix Driver 5.1	2.02	Patch Kit 4
Unix Driver 5.1A	2.02	Patch Kit 1
VMS Driver 7.2-2, 7.3	7.2-2, 7.3	NA
VMS TIMA KIT	N/A	N/A
8 Port Switch	1.6dD	DS-DSGGA-AA 158222-B21
16 Port Switch		DS-DSGGA-AB 158222-B21
8 Port Switch	2.6.0C	DS-DSGGB-AB 158223-B21
16 Port Switch		DS-DSGGB-AB 158224-B21
8-EL Switch	2.6.0C	DS-DSGGC-AA 176219-B21
16-EL Switch		DS-DSGGC-AB 212776-B21
8-EL Switch	3.0.2C	DS-DSGGD-AC 25707-B21
16-EL Switch		DS-DSGGD-AD 283056-B21
SAN Director 64 Switch	1.04.00 Build 2	DS-DMGGD-AA 254512-B21
RA8000/ESA12000 MA6000 MA8000 GMA 12000	ACS 8.6	UNIX QB-65RAB-SA OVMS QB-65RAC-SA
Alpha Console	6.1	
SWL GBIC (IBM)	N/A	30-56040-01
SWL GBIC (Vixel)	N/A	30-56040-01
Optical Cables (connection from HBA to Hub or Switch)	N/A	187891-xx (xx = 0.6, 01, 02,05,15,30,50) xx is the length in meters

Configuration Information

Refer to the *Heterogeneous Open SAN Design Reference Guide*, Part Number AA-RMPNA-TE-001, for configuration information about:

- Supporting mixed HBA in the same host
- Maximum number of cascaded (serial) switches
- Maximum number of hops
- Maximum cable length between switches
- Supporting a mix of fibre channel switches in the same configuration

Restrictions

This section contains the restrictions for the FCA2354 HBA and for each of the operating systems on which the adapter can be installed.

FCA2354 Restrictions

FCA2354 restrictions include:

- The minimum hardware revision of FCA2354 is FC1010472-01 Revision A.
- The minimum firmware revision of FCA2354 for *Alpha* platforms all Operating Systems is CD381A4.awc.
- The FCA2354 is 2 GB-ready, however current SAN infrastructure only supports 1 GB operation.
- The Maximum length of the OPTICAL cable from the FCA2354 adapter to a hub or switch is 500 meters short wave multi mode 50/125 micron Fibre Channel Cable.

Tru64 UNIX Restrictions

Tru64 UNIX restrictions include:

- The FCA2354 driver for Tru64 UNIX is built into the operating system.
- Refer to <http://www.service.digital.com/patches/index.html> for updates.

OpenVMS Restrictions

OpenVMS restrictions include:

- The FCA2354 driver for OpenVMS is built into the Operating System. The minimum revision of the operating system for the FCA2354 HBA is VMS V7.2-2 and V7.3.
- OpenVMS only supports FCA2354 adapters in Fibre Channel switch topologies.
- Refer to the web site <http://ftp1.service.digital.com/public/vms/axp/> for updates.

Troubleshooting

Use the following tips to troubleshoot FCA2354 related problems:

- The driver revision and the FCA2354 adapter firmware revision are critical. Make sure both have the correct versions installed.
- Read the ASCII error message from the driver and investigate based on that information.
- Check for the Fibre Channel addresses appearing and disappearing without reason, or other conditions that affect part of or the entire Fibre Channel network. Check the fabric configuration including:
 - Check the switches for port errors or other switch problems such as setup, or firmware level.
 - Cabling problems
 - Possible bad FCA2354 adapter
- Look for adapter error bits set in the FCA2354 adapter's registers. The driver resets the adapter after each internal error. If internal FCA2354 device errors appear repeatedly, this could indicate that the FCA2354 module should be replaced.