

QuickSpecs

Overview

Models

Triple-Function Combo Adapter: LVD / SCSI II, 10/100 UTP Ethernet, and 2D Graphics

3X-DEPVZ-AA

Introduction

The Compaq multi-function "Combo" Adapter reduces the number of PCI I/O slots required to configure an HP AlphaServer or AlphaStation, and in doing so, frees PCI slots for the addition of other functional I/O modules required by your application.

The Compaq 3X-DEPVZ-AA is a triple-function "Combo" Adapter that provides:

1. State-of-the-Art Low Voltage Differential (LVD) SCSI II technology (based on LSI Logic's 53C895). LVD SCSI II technology provides the highest possible performance and most flexible storage configuration available.
2. 10/100 UTP Ethernet based on Intel's 82559 fast Ethernet ASIC. The 10/100 Mb/s Ethernet port is capable of auto-negotiating to run at either 10 or 100 Mb/s, and in either full-or half-duplex mode.
3. 2D Video with 4 MB of graphics memory based on 3DLabs Permedia2V video ASIC, all operating behind a 32-/64-bit, 33-MHz PCI-to-PCI (Intel 21154-AB) bridge chip.

The Compaq Triple-Function LVD SCSI-2/Fast-Ethernet/2D Video "Combo" host adapter offers the highest degree of functional integration available for HP Alpha Platforms to enhance their configuration flexibility.

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Standard Features

Ease of Use

PCI Plug and Play

It has Jumperless "Plug and Play" implementation. Compliant with the PCI 2.1 PCI specification, this adapter can be automatically configured to set its I/O address and interrupt (IRQ) settings for easy installation.

Ethernet Auto-negotiation/ configuration

The adapter will auto-negotiate to configure at the highest common Ethernet connection speed and mode between the Ethernet port and another Ethernet NIC, hub, or switch port. That is, 10 or 100 Mb/s, in either Full-or half-duplex mode operation.

The adapter employs SCSI automatic termination, and if any device(s) is in SE (single-ended) mode, the SCSI bus auto-configures to single-ended operation.

LVD technology is not compatible with the older High Voltage Differential SCSI standard. If an HVD device is placed on the Ultra2/LVD bus, the adapter will turn off the port, and indicate the error by flashing the LVD LED Status Indicator. Do not use HVD terminators on your LVD bus.

Diagnostic LED Indicators Both the SCSI and 10/100 Ethernet ports provide LED Indicators to provide a visual indication for SCSI configuration, show link integrity, network speed, and network activity at-a-glance for easy troubleshooting.

LVD Status Indicator: ACT, TERM, LVD

10/100 Ethernet: Link and Activity

Performance

64-bit PCI Bus

Efficient data transfer between the network the host CPU is essential for high-performance and low CPU utilization. The 3X-DEPVZ-AA provides a PCI 2.1 compliant Universal 32-/64-bit PCI Connector to work in either a 32-or 64-bit PCI bus slot at 33 MHz, and bus-mastering technology to maximize sustainable throughput and optimize host system utilization.

Ultra2 SCSI LVD/SE

The SCSI bus requires that all connected devices be LVD capable to operate in this mode. The adapter has both an internal and external Ultra2 SCSI LVD/SE connector. The LVD indicator on the front of the module should be on if all devices are in LVD mode. If any devices are in SE (single-ended) mode, the SCSI bus auto-configures to single-ended operation.

10/100 Ethernet Port

Direct 10Base-T or 100Base-TX UTP network connections with full auto-negotiation support for full-or half-Duplex mode of operation. Includes Speed, Link Status, Transmit and Receive activity LEDs

2D Graphics Functions

- Full Primitive Support
 - Efficient Processing of Small Primitives
 - Window Clip
 - Ultra-Fast Solid Fill
 - Ultra-Fast Monochrome Expansion
 - High Speed Color Brushes
 - High Speed Monochrome Brushes
 - Raster Operations
 - Fast BLTS
 - Fast Upload and Download
 - High Speed Monochrome Download
 - Flexible Font Caching Support
 - Color Translation
- Points, lines, spans, rectangles, polygons
 - Integrated setup calculation, low latency
 - Hardware rectangle clipping
 - SGRAM block fills
 - SGRAM block fills with pixel mask
 - Internal pattern RAM
 - Internal stipple table
 - Logic op unit
 - Wide data path
 - Packed into 32 bit words
 - Bitmask test with SGRAM block fills
 - Byte aligned monochrome bitmaps in local memory
 - Through internal LUT

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Standard Features

Security/Reliability

Network Fault Tolerance (NFT) Failover to a second Fast Ethernet, or other LAN technology, is provided by NETrain under Tru64UNIX, and by OpenVMS Clusters.

Warranty

Maximum - The remaining warranty of the HP AlphaServer in which it is installed.

Minimum - 1-year Return-to-Factory with Advance Exchange

NOTE: Certain restrictions and exclusions apply. Consult the [Compaq Computer Support Center](#) for details.

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Host Platform Support and Configuration Rules

NOTE: Refer to the respective Supported Options List (SOL) <http://h18002.www1.hp.com/alphaserver/> for specific AlphaServers or AlphaStations to determine current option support status, minimum console and operating system revisions, and system configuration rules.

Driver Support and Where to Find it

Driver Support is provided as part of the host AlphaServer or AlphaStation Operating System Distribution - Tru64 UNIX and OpenVMS. As stated above, refer to the respective host Alpha system Supported Options List to determine support and any required patch kits

Ordering Information

NOTE: Refer to the respective Supported Options List (SOL) <http://h18002.www1.hp.com/alphaserver/> for specific AlphaServers or AlphaStations to determine current option support status, minimum console and operating system revisions, and system configuration rules.

Triple-Function Combo Adapter 10/100 Ethernet, 2D Video, & SCSI II

HP Part Number	Description
3X-DEPVZ-AA	PCI Combo-Card LVD SCSI-2, 10/100BASE-T Ethernet, and 2D Graphics Adapter

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Technical Specifications

General Specifications	Single PCI slot operation	
	Universal, 32-bit, 33-MHz PCI bus-master interface	
	PCI 2.1 compliant	
	EEPROM support for configuration and customization feature section	
Power and Environmental Specifications	Operating temperature	32° to 122° F (0° to 50° C) 5% to 90% relative humidity, non-condensing
	Non-operating temperature	32° to 140° F (0° to 60° C) 5% to 90% relative humidity, non-condensing
	Power requirement	2.0A @ 5V maximum 0.03A @ 12V
	Emissions Standard	FCC Class B, VCCI Class B on Alpha Platforms
	Safety compliance	CE Mark: UL 1950, CUL, TUV
	Dimensions (L x W)	7.75 x 5 in (19.7 x 12.7 cm)
	Single port 10/100 Base-TX	IEEE 802.3/802.3u 10Base-T and 100Base-TX compatible
	Single RJ-45 connector	
	Cable support - Cat. 3, 4, 5 UTP for 10 Mb/s and Cat. 5 UTP for 100 Mb/s	
	Support for IEEE 802.3u Auto-Negotiation	
	Full- or half-duplex capable at 10 or 100 Mb/s	

SCSI II Interface

The **Ultra2 SCSI** adapter is based on the LSI Logic SYM53C895 Adapter chip. The bus supports auto termination and mode detection. It will automatically operate in Single Ended mode or LVD mode, and will only operate in LVD mode if all devices running on the bus report they are LVD capable (DIFFSENSE pin). The SCSI bus provides AUTO termination at the adapter. If only one SCSI cable is plugged into the bus, the adapter card will terminate the bus. If two cables are plugged in, the card will disable its terminators. The SCSI bus supports up to 12 meters of cable length in LVD mode. When running in single ended mode, the bus length is degraded per the SCSI specification.

NOTE: It is highly recommended that the customer either uses internally or externally connected drives, but not both at the same time. Mixing cable types can, in some cases, result in unreliable operation.

SCSI bus signaling	Single-Ended (SE), and Low Voltage Differential (LVD)
Ultra Wide Transfer Rate	40 MHz
Connector Type(s)	Internal: 68P, Female, RT Angle External: 68P, Female

Mode	Peak Bandwidth	Maximum Cable Length
SE	40 MB	3 Meters
LVD	80 MB	12 Meters

In order to ensure optimal signal integrity in the Ultra2 LVD environment, a differential pair (twisted pair) cable should be used on all LVD segments of the bus.

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Technical Specifications

<p>3DLabs P2V Graphics Chip 2D Graphics Functions</p>	<p>Software Support</p> <p>VGA</p> <p>Maximum Supported Resolutions</p> <p>Multi display</p> <p>GenLock</p> <p>YUV Color Space Conversion</p> <p>Video Scaling</p> <p>DVD</p> <p>Video input/output</p> <p>Streaming Video</p> <p>Maximum Number of Monitors</p> <p>Monitor Support</p> <p>Compaq Flat Panel Connector</p> <p>Monitor Connector</p> <p>Minimum Frame Buffer Size</p> <p>Monochrome planes</p> <p>Gamma Correction</p> <p>Maximum Resolution</p> <p>Alpha Planes</p>	<p>2D GDI on both OpenVMS and Tru64 UNIX. OpenGL, 3D graphics operations and Z-buffer are not supported.</p> <p>All VGA modes are supported and function for all operating systems. (VGA disable jumper available for manual configuration.)</p> <p>1280 x 1024 @24 bit @60, 65, 70 & 75Hz 1024 x 768 @24 bit @60, 65, 70, 75, 85Hz 800 x 600 @24 bit @60, 65, 70, 75, 85Hz 640 x 480 @24 bit @60, 65, 70, 75, 85Hz</p> <p>Support for one screen only</p> <p>Not supported</p> <p>YUV 422 to RGB conversion</p> <p>Hardware accelerated bilinear filtered scaling of video images in the video overlay</p> <p>Not supported</p> <p>Not supported</p> <p>Not supported</p> <p>1 x 2D screen for Tru64 UNIX, 1 x 2D screen for OpenVMS P110 - 21", P75 - 17", P700 - 17", P1100 - 21", P900, TFT5000, TFT8000 as well as most multi-sync monitors</p> <p>Not Supported</p> <p>Standard D-shell 15-pin HD connector</p> <p>4-MB unified memory, with 96 bits per Pixel</p> <p>8-bit grayscale, Overlay 0</p> <p>10-bit Gamma correction, Stencil Planes 0</p> <p>1280 x 1024 @75 Hz, Alpha Planes 0</p> <p>0, Window ID 1</p>
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