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Hitachi Compute Blade
CB2500
10GBase-SR 2-port LAN Adapter
User's Guide

Hitachi Data Systems

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Contents

Hitachi Compute Blade CB2500 1000Base-T 2-port LAN Adapter User's Manual

Preface

This document describes how to use the Hitachi Compute Blade CB2500 LAN adapter such as installation, connection, and handling.

This preface includes the following information:

Notice: The use of Hitachi Compute Blade CB2500 LAN adapter User's Manual and all other Hitachi Data Systems products is governed by the terms of your agreement with Hitachi Data Systems.

Intended Audience

This document is intended for personnel involved in planning, managing, and performing the tasks to prepare your site for Compute Blade installation. This document assumes the following:

The reader has a background in hardware installation of computer systems. The reader is familiar with the location where the Compute Blade will be installed, including knowledge of physical characteristics, power systems and specifications, and environmental specifications.

Release Notes

Read the release notes before installing and using this product. They may contain requirements or restrictions that are not fully described in this document or updates or corrections to this document.

Referenced Documents

Hitachi Compute Blade documents:

- Hitachi Compute Blade 2500 SOFTWARE GUIDE

Document Conventions

This document uses the following typographic conventions:

Convention	Description
Regular text bold	In text: keyboard key, parameter name, property name, hardware labels, hardware button, hardware switch. In a procedure: user interface item
Italic	Variable, emphasis, reference to document title, called-out term
`Screen text`	Command name and option, drive name, file name, folder name, directory name, code, file content, system and application output, user input
< > (angled brackets)	Variable (used when italic is not enough to identify variable).
[ ] (square bracket)	Optional values
{ } braces	Required or expected value
| vertical bar	Choice between two or more options or arguments
_(underline)	Default value, for example, [a	b]

This document uses the following icons to draw attention to information:

Icon	Meaning	Description
	WARNING	This indicates the presence of a potential risk that might cause death or severe injury.
	CAUTION	This indicates the presence of a potential risk that might cause relatively mild or moderate injury.
NOTICE	NOTICE	This indicates the presence of a potential risk that might cause severe damage to the equipment and/or damage to surrounding properties.
	Note	This indicates notes not directly related to injury or severe damage to equipment.
	Tip	This indicates advice on how to make the best use of the equipment.

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Convention for storage capacity values

Physical storage capacity values (for example, disk drive capacity) are calculated based on the following values:

Physical capacity unit	Value
1 kilobyte (KB)	1,000 (10^3) bytes
1 megabyte (MB)	1,000 KB or $1,000^2$ bytes
1 gigabyte (GB)	1,000 MB or $1,000^3$ bytes
1 terabyte (TB)	1,000 GB or $1,000^4$ bytes
1 petabyte (PB)	1,000 TB or $1,000^5$ bytes
1 exabyte (EB)	1,000 PB or $1,000^6$ bytes

Logical storage capacity values (for example, logical device capacity) are calculated based on the following values:

Logical capacity unit	Value
1 block	512 bytes
1 KB	1,024 (2^{10}) bytes
1 MB	1,024 KB or $1,024^2$ bytes
1 GB	1,024 MB or $1,024^3$ bytes
1 TB	1,024 GB or $1,024^4$ bytes
1 PB	1,024 TB or $1,024^5$ bytes
1 EB	1,024 PB or $1,024^6$ bytes

Getting Help

The Hitachi Data Systems customer support staff is available 24 hours a day, seven days a week. If you need technical support, log on to the Hitachi Data Systems Portal for contact information: https://portal.hds.com

Comments

Please send us your comments on this document: doc.comments@hds.com. Include the document title and number including the revision level (for example, -07), and refer to specific sections and paragraphs whenever possible. All comments become the property of Hitachi Data Systems Corporation.

Thank you!

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Outline

This chapter contains an outline of the LAN adapter.

- [Feature](#)
- [Supported OS](#)
- [Restriction](#)

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Features

This Compute Blade CB2500 LAN adapter is installed in PCI Express (henceforth PCIe) slot of the system device. This product has the following features.

■ This adapter correspond to 10GBase-SR (IEEE802.3ae)

■ This adapter has the network interface connector by two port

■ This adapter is connected with Multi channel fiber cable

■ This adapter can be installed in PCI Express x8 Slot

Supported OS's

This Compute Blade CB2500 10GBase-SR 2-port LAN adapter can be used with the following OS's

■ Windows Server 2008 R2

■ Windows Server 2012

■ Windows Server 2012 R2

■ Red Hat Enterprise Linux 6.5

■ VMware ESXi 5.5

Restrictions

■ About PXE boot

The PXE boot is not supported in this adapter.

■ About Wake on LAN

The Wake on LAN is not supported in this adapter.

■ About iSCSI boot

The iSCSI boot is not supported in this adapter.

■ About TCP/IP Checksum Offload function of the network adapter

This LAN adapter has the TCP/IP protocol checksum calculation function that is executed on LAN controller.

It is recommended, however, to use the TCP/IP checksum calculation function that OS provides as standard, rather than to use this function. You can construct more high reliability system if the calculation function of OS side is set available.

That is because the correspondence confirmation of the packet data received from the network will be performed in the last phase of the OS protocol processing. Follow the description below to turn off the checksum function by LAN controller.

Please refer to "LAN controller function supplementation matter" of the System Equipment attachment for setup steps on each OS.

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Installation on System Equipment

This chapter explains the installation of Compute Blade CB2500 LAN adapters into the system equipment.

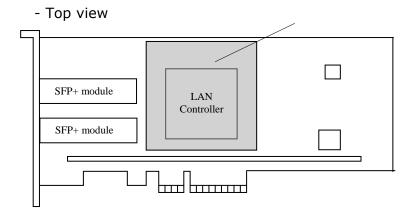Hitachi Compute Blade CB2500 10GBase-SR 2-port LAN Adapter User's Guide

Installing LAN Adapter

⚠ WARNING

Addition or replacement of optional components must be performed by maintenance personnel. Do not attempt to remove the cover of the equipment. Do not attempt to install or remove optional components. Parts implemented in the system equipment are high-density, and highly complex. Operation or maintenance by inexperienced persons may lead to injury or equipment failure. When you need to add or replace optional components, contact your dealer or call maintenance personnel.

Only maintenance personnel are allowed to add each optional component to the system. Contact the reseller from which you have purchased the equipment or call maintenance personnel.

Outside Appearance (10GBase-SR 2-port LAN Adapter)

- Top view

- Side view

Port A　　Port B

○ : GRN=10G、 □ : ACT/LNK

LED Specification (10GBase-SR 2-port LAN Adapter)

LED Mark	Color	Condition	State
GRN/10G	---	Turn off	Power off/Link down
	Amber	Lighting	1Gbps Link up
	Green	Lighting	10Gbps Link up
ACT/LNK	---	Turn off	Power off/Link down
	Green	Blinking	Data transfer
	Green	Lighting	Link up

Installation of Cable

<table>
<tr><td align="center">⚠️CAUTION</td></tr>
<tr><td>

Signal cables

■   When wiring cables, be careful not to get caught in the cables. It could cause injury or failure of devices connected to the equipment. It could also cause loss of valuable data.

</td></tr>
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<tr><td align="center">NOTICE</td></tr>
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Signal cables

■   Do not place heavy items on the cables. Avoid wiring cables close to a thermal appliance. It may cause damage to cable sheaths, resulting in failure of the connected devices.

</td></tr>
</table>

Refer to "3-23-2 Basic Specification" for LAN cable connected with this LAN adapter.

Please don't use cables other than LAN cable.

1.   Insert LAN cable to Compute Blade 2500 LAN Adapter until being locked.

2   Insert LAN cable to connection destination such as LAN switches until being locked.

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Specification

T his chapter describes the basic specification of the LAN adapters.

☐ Basic Specification (10GBase-SR 2-port LAN Adapter)

Basic Specification (10GBase-SR 2-port LAN Adapter)

The basic specifications of 10GBase-SR 2-port LAN Adapter are listed below.

Item	Specification	Notes
Product Code	GG-CN4NXG1N1-Y	
LAN Controller	Intel 82599ES 10 GbE Controller	
Vender ID	8086	
Device ID	10FB	
SubSystem ID	000C	
SubVender ID	8086	
PCI Interface	PCI Express 2.0	
Lane Speed	2.5GT/s	
Number of Lane	8 line	
Connecter Type	PCI Express x8	
PCI Slot Type	PCI Express x8, x16	
LAN Interface	IEEE802.3ae 10GBase-SR	
Speed	10Gbps/1Gbps	
Number of Port	2	
Connecter Type	LC	
Cable	Multi-Channel Fiber (300m)	Maximum
LED	GRN/10G, ACT/LNK	2 each
Wake On LAN PXE Boot	Not supported	Not allow to use the function because it has been supported on onboard LAN already.
Applying Standard	VCCI (Class A) FCC (Class A),UL、CE、MIC	
Operating Temperature	0C ~ 55C	
Operating Humidity	0% ~ 80%	Non-condensing
Storage Temperature	-40C ~ 70C	
Storage Humidity	0% ~ 90%	Non-condensing
Power Supply	3.3V, 12V (+/-5%)	
Consumption Current	17.5W	Maximum
Dimension	H: 63.5mm×L: 152.4mm×W:21.5mm	
Weight	0.15kg Approx.	
RoHS Compliance	In compliance with RoHS regulation	Pb free
Operating Temperature		

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