HITACHI
Gigabit Fibre Channel Adapter
USER'S GUIDE
(Support Matrix Edition)

Revision 71.0

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HITACHI

Read this manual well and keep it near the system so that you can refer to it as needed.
Before starting operation, familiarize yourself with the safety instructions.

Information

- The BladeSymphony server name has been changed to Hitachi Compute Blade. If you are using BladeSymphony based server products, substitute references to Hitachi Compute Blade with BladeSymphony.

- The Hitachi Virtualization Manager (HVM) name has been changed to Hitachi logical partitioning manager (LPAR manager, or LP). If you are using HVM based logical partitioning feature, substitute references to Hitachi logical partitioning manager (LPAR manager, or LP) with HVM.

Important Notes

- It is strictly forbidden to reprint or duplicate part or all of this manual without the permission of the publisher.

- The contents of this manual are subject to change without notice.

- Despite our meticulous care to ensure the accuracy of the contents, should you find any errors or questionable issues, or if you have opinions to share with us, please contact your dealer.

- Note that we shall not be liable for the consequences of operating this product in ways not stated in this manual.

Reliability of the System Equipment

The system equipment you purchased is designed for general office work. Avoid using it for applications requiring high reliability that may seriously affect human life or property. We shall not assume any responsibility for any accidents resulting from such use of the product.

Examples of inappropriate applications of system equipment intended for general office work are:

- Control of a chemical plant, control of medical devices, and control of emergency communications, all of which require high reliability.

You need a different system for such high reliability applications. Please consult our sales department for the appropriate system.

Regulatory Compliance Notices

❑ Federal Communications Commission (FCC) Compliance

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at personal expense. The user is cautioned that changes or modifications not expressly approved by the manufacturer could void the user's right to operate the equipment.

❑ EN55022 Compliance

Warning: This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

❑ Class A Emission Statement (Korea)

이 기기는 업무용(A급)으로 전자파적합등록을
한 기기이오니 판매자 또는 사용자는 이 점을
주의하시기 바라며, 가정외의 지역에서 사용하는
것을 목적으로 합니다.

❑ Canadian Compliance Statement

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

❑ Product recycling and disposal (EU and Norway) (Waste Electrical and Electronic Equipment Directive 2002/96/EC [WEEE])

The following mark on Products indicates that these Products are to be collected separately and to be recycled or discarded according to applicable local and national regulations. For further information regarding return, collection, recycle or disposal, please contact your sales company where you purchased the Products.

The above mark is not printed on the following Products but these Products are also subject to electrical and electronic equipment (EEE). These un-marked Products are, as well as marked Products, to be collected separately and to be recycled or discarded according to applicable local and national regulations. For further information, please contact your sales company where you purchased the Products.

No.	Products code	Products name
1	GVX-CC64G*BX, GVX-CC64G*	Fibre Channel Board
2	GVX-CC9FCCMB2BX, GVX-CC9FCCMB2	Combo Card For FCSW module
3	GVX-CC9IOCOMBBX, GVX-9IOCOMB	Combo Card For I/O module T3
4	GGX-CC9M4G2X1EX, GGX-CC9M4G2X1	FC mezzanine card

Note: The above regulation/marking applies only to countries within the European Union (EU) and Norway.

❑ **Export control**

To export this product, check the export control-related regulations and follow the necessary procedures. If you have any questions, contact our sales representative.

Note that the same handling is required for peripheral equipment and pre-installed software shipped with this product.

Notes on Deleting Data when Disposing of or Transferring the System Equipment

Personal computers and system equipment are used for various purposes at the office and home. Important data of customers are recorded in the hard disks in these computers and system equipment.

You must erase these important data contents when transferring or disposing of the system equipment.

However, it is not easy to erase data written on the hard disk.

When you "erase data", you generally do one or more of the following:

■ Discard data in the "Recycle Bin".

■ "Delete" data.

■ Erase data using the "Empty Recycle Bin" command.

■ Perform initialization (formatting) of the hard disk using software utilities.

■ Recover the factory defaults using a recovery CD.

The above operations only change the file management information of data recorded on the hard disk; actually the data is just blocked from view.

That is, although the data appears to have been erased, it was just made unavailable under an operating system such as Windows. The actual data remains on the hard disk and may be read using special data recovery software. Consequently, important data on the hard disk of the system equipment can be read and used for unexpected applications by malicious people.

To avoid unauthorized access to important data on the hard disk when disposing of or transferring the system equipment, it is extremely important for you to erase all data recorded on the hard disk at your own risk. When you erase the data, we recommend that you purchase and use a dedicated software or service, or corrupt the data on the hard disk physically or magnetically using a hammer or strong magnet to make it unreadable.

Transferring the system equipment without deleting software on the hard disk (operating system, applications, etc.) may be against software licensing agreements. Check your software licensing agreements carefully.

Registered Trademarks and Trademarks

Microsoft, Windows, and Windows Server are registered trademarks or trademarks of Microsoft Corp. in and outside the U.S.

Pentium and Xeon are trademarks or registered trademarks of Intel Corporation in and outside the U.S.

Linux is a registered trademark or trademark of Linus Torvalds in and outside the U.S.

Red Hat is a registered trademark or trademark of Red Hat, Inc. in and outside the U.S.

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Introduction

Thank you for purchasing Hitachi Gigabit Fibre Channel Adapter. This manual describes procedures for the use of Hitachi Gigabit Fibre Channel Adapter such as installation, connection, and handling.

Notation

❑ Symbols

Meanings of symbols used in this manual are as follows:

⚠ **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	This indicates the presence of a potential risk that might cause damage to the equipment and/or damage to surrounding properties.
Note	This indicates notes not directly related to injury or severe damage to the equipment.
Tip	This indicates advice on how to make the best use of the equipment.

Abbreviations for Operating Systems (OS)

In this manual, the following abbreviations are used for OS name:

- Microsoft® Windows Server® 2012 R2 Standard
  (Hereinafter, referred to as Windows Server 2012 R2 Standard)

- Microsoft® Windows Server® 2012 R2 Datacenter
  (Hereinafter, referred to as Windows Server 2012 R2 Datacenter)

- Microsoft® Windows Server® 2012 Standard
  (Hereinafter, referred to as Windows Server 2012 Standard)

- Microsoft® Windows Server® 2012 Datacenter
  (Hereinafter, referred to as Windows Server 2012 Datacenter)

- Microsoft® Windows Server® 2008 R2 Standard
  (Hereinafter, referred to as Windows Server 2008 R2 Standard)

- Microsoft® Windows Server® 2008 R2 Enterprise
  (Hereinafter, referred to as Windows Server 2008 R2 Enterprise)

- Microsoft® Windows Server® 2008 R2 Datacenter
  (Hereinafter, referred to as Windows Server 2008 R2 Datacenter)

- Microsoft® Windows Server® 2008 Standard
  (Hereinafter, referred to as Windows Server 2008 Standard)

- Microsoft® Windows Server® 2008 Enterprise
  (Hereinafter, referred to as Windows Server 2008 Enterprise)

- Microsoft® Windows Server® 2008 Datacenter
  (Hereinafter, referred to as Windows Server 2008 Datacenter)

- Microsoft® Windows Server® 2008 Standard without Hyper-V™
  (Hereinafter, referred to as Windows Server 2008 Standard without Hyper-V)

- Microsoft® Windows Server® 2008 Enterprise without Hyper-V™
  (Hereinafter, referred to as Windows Server 2008 Enterprise without Hyper-V)

- Microsoft® Windows Server® 2008 Datacenter without Hyper-V™
  (Hereinafter, referred to as Windows Server 2008 Datacenter without Hyper-V)

- Microsoft® Windows Server® 2008 Standard 32-bit
  (Hereinafter, referred to as Windows Server 2008 Standard 32-bit)

- Microsoft® Windows Server® 2008 Enterprise 32-bit
  (Hereinafter, referred to as Windows Server 2008 Enterprise 32-bit)

- Microsoft® Windows Server® 2008 Datacenter 32-bit
  (Hereinafter, referred to as Windows Server 2008 Datacenter 32-bit)

- Microsoft® Windows Server® 2008 Standard without Hyper-V™ 32-bit
  (Hereinafter, referred to as Windows Server 2008 Standard without Hyper-V 32-bit)

- Microsoft® Windows Server® 2008 Enterprise without Hyper-V™ 32-bit
  (Hereinafter, referred to as Windows Server 2008 Enterprise without Hyper-V 32-bit)

- Microsoft® Windows Server® 2008 Datacenter without Hyper-V™ 32-bit
  (Hereinafter, referred to as Windows Server 2008 Datacenter without Hyper-V 32-bit)

- Microsoft® Windows Server® 2008 for Itanium-based systems
  (Hereinafter, referred to as Windows Server 2008 for Itanium)

- Microsoft® Windows Server® 2003 R2, Standard x64 Edition
  (Hereinafter, referred to as Windows Server 2003 R2, Standard x64 Edition)

- Microsoft® Windows Server® 2003 R2, Enterprise x64 Edition
  (Hereinafter, referred to as Windows Server 2003 R2, Enterprise x64 Edition)

- Microsoft® Windows Server® 2003 R2, Standard Edition
  (Hereinafter, referred to as Windows Server 2003 R2, Standard Edition)

- Microsoft® Windows Server® 2003 R2, Enterprise Edition
  (Hereinafter, referred to as Windows Server 2003 R2, Enterprise Edition)

- Microsoft® Windows Server® 2003, Standard x64 Edition
  (Hereinafter, referred to as Windows Server 2003, Standard x64 Edition)

- Microsoft® Windows Server® 2003, Enterprise x64 Edition
  (Hereinafter, referred to as Windows Server 2003, Enterprise x64 Edition)

- Microsoft® Windows Server® 2003, Standard Edition
  (Hereinafter, referred to as Windows Server 2003, Standard Edition)

- Microsoft® Windows Server® 2003, Enterprise Edition
  (Hereinafter, referred to as Windows Server 2003, Enterprise Edition)

- Microsoft® Windows Server® 2003, Enterprise Edition for Itanium-based Systems
  (Hereinafter, referred to as Windows Server 2003, Enterprise Edition for Itanium)

- Red Hat Enterprise Linux 7 Server
  (Hereinafter, referred to as Red Hat Enterprise Linux 7 or RHEL7)

- Red Hat Enterprise Linux 6 Server
  (Hereinafter, referred to as Red Hat Enterprise Linux 6 or RHEL6)

- Red Hat Enterprise Linux Advanced Platform

- Red Hat Enterprise Linux 5 Server
  (Hereinafter, referred to as Red Hat Enterprise Linux 5 or RHEL5)

- Red Hat Enterprise Linux AS

- Red Hat Enterprise Linux ES
  (Hereinafter, referred to as Red Hat Enterprise Linux 4 or RHEL4)

- Red Hat Enterprise Linux AS 3
  (Hereinafter, referred to as Red Hat Enterprise Linux 3 or RHEL3)

- VMware vSphere® ESXi™ 6.0
  (Hereinafter, referred to as ESXi 6.0)

- VMware vSphere® ESXi™ 5.5
  (Hereinafter, referred to as ESXi 5.5)

- VMware vSphere® ESXi™ 5.1
  (Hereinafter, referred to as ESXi 5.1)

- VMware vSphere® ESXi™ 5.0
  (Hereinafter, referred to as ESXi 5.0)

- VMware® ESX™ 4.* or VMware® ESXi™ 4.*
  (Hereinafter, referred to as ESX 4.* or ESXi 4.*)

■ OS names used in this manual stand for official OS names in "Included OS" in the table below:

OS name in this manual	Included OS
Windows Server 2012 R2	Windows Server 2012 R2 Standard Windows Server 2012 R2 Datacenter
Windows Server 2012	Windows Server 2012 Standard Windows Server 2012 Datacenter
Windows Server 2008 R2	Windows Server 2008 R2 Standard Windows Server 2008 R2 Enterprise Windows Server 2008 R2 Datacenter
Windows Server 2008	Windows Server 2008 Standard Windows Server 2008 Enterprise Windows Server 2008 Datacenter Windows Server 2008 Standard without Hyper-V Windows Server 2008 Enterprise without Hyper-V Windows Server 2008 Datacenter without Hyper-V Windows Server 2008 Standard 32-bit Windows Server 2008 Enterprise 32-bit Windows Server 2008 Datacenter 32-bit Windows Server 2008 Standard without Hyper-V 32-bit Windows Server 2008 Enterprise without Hyper-V 32-bit Windows Server 2008 Datacenter without Hyper-V 32-bit
Windows Server 2008 64-bit	Windows Server 2008 Standard Windows Server 2008 Enterprise Windows Server 2008 Datacenter Windows Server 2008 Standard without Hyper-V Windows Server 2008 Enterprise without Hyper-V Windows Server 2008 Datacenter without Hyper-V
Windows Server 2008 32-bit	Windows Server 2008 Standard 32-bit Windows Server 2008 Enterprise 32-bit Windows Server 2008 Datacenter 32-bit Windows Server 2008 Standard without Hyper-V 32-bit Windows Server 2008 Enterprise without Hyper-V 32-bit Windows Server 2008 Datacenter without Hyper-V 32-bit
Windows Server 2008 Itanium	Windows Server 2008 for Itanium
Windows Server 2003 R2	Windows Server 2003 R2, Standard x64 Edition Windows Server 2003 R2, Enterprise x64 Edition Windows Server 2003 R2, Standard Edition Windows Server 2003 R2, Enterprise Edition
Windows Server 2003 R2 (x64)	Windows Server 2003 R2, Standard x64 Edition Windows Server 2003 R2, Enterprise x64 Edition
Windows Server 2003 R2 (32-bit)	Windows Server 2003 R2, Standard Edition Windows Server 2003 R2, Enterprise Edition
Windows Server 2003	Windows Server 2003, Standard x64 Edition Windows Server 2003, Enterprise x64 Edition Windows Server 2003, Standard Edition Windows Server 2003, Enterprise Edition
Windows Server 2003 (x64)	Windows Server 2003, Standard x64 Edition Windows Server 2003, Enterprise x64 Edition
Windows Server 2003 (32-bit)	Windows Server 2003, Standard Edition Windows Server 2003, Enterprise Edition
Windows Server 2003 (Itanium)	Windows Server 2003, Enterprise Edition for Itanium

The OS name with 32-bit stands only for the 32-bit Editions, and the OS name with x64 Edition stands only for x64 Editions.

Information on Support and Service

Missing Parts on Delivery

The product is checked by local support personnel when it is delivered.

In some cases, no checkout work is performed or no local support personnel visit you when the product is delivered. If you find any missing part or if you have any questions on the delivered product in such cases, contact your sales.

When You Need Help

1 **Refer to the manual.**
Refer to manuals. Also refer to other printed manuals provided with the product.

2 **Contact us by phone.**

Contact the reseller where you have purchased the product.

Contents

Precautions for Safe Use

Notes related to safety issues are marked as shown below.

This is a safety alert symbol. It calls attention to a potential safety hazard to humans. In order to avoid possible injury or death, follow the message provided after this symbol.

⚠ WARNING   This symbol indicates the presence of a potential risk that might cause death or severe injury.

⚠ CAUTION   This symbol indicates the presence of a potential risk that might cause relatively mild or moderate injury.

NOTICE   This symbol indicates the presence of a potential risk that might cause severe damage to the equipment and/or damage to surrounding properties.

This pictogram (△) indicates a precaution. The figure inside the triangle (△) indicates the type of hazard.

The example on the left indicates a shock hazard.

This pictogram (⊘) indicates an action that you must not take. The pictogram (⊘) is placed over a figure that depicts the "must-not" item involved.

The example on the left indicates "Do not disassemble".

This pictogram (●) indicates an action to take. The figure inside the circle (●) shows the action to take.

The example on the left tells you to "Unplug the power cord from the outlet".

Common precautions concerning safety

Please follow these safety instructions:

- When operating the equipment, follow the instructions and procedures provided in the manual.
- Be sure to follow notes, cautionary statements and advice indicated on the equipment or in the manual.

Failure to follow those instructions may lead to injury, fire or damage to the equipment.

Operations and actions to perform

Do not perform operations or actions other than those described in the manual.
Should you find any problem with the equipment, turn off the power, unplug the power cord from the electrical outlet, and then contact your dealer or call for maintenance personnel.

Pay attention

The equipment and the manual carry notes, cautionary statements and advice that have been fully examined and reviewed. However, unforeseeable situations may occur.
When operating the equipment, always stay alert.

⚠ WARNING

Abnormal heat, smoke, abnormal noise, or abnormal smell

Should you find anything abnormal occurring, turn off the power and unplug all the power cords of the equipment (maximum of 5) from the electrical outlets. Using the power cord after such occurrences may lead to electric shock or fire.

Do not place any objects around the electrical outlet to allow users to unplug the power cord immediately.

Do not repair, remodel or disassemble

Do not attempt to repair, remodel or disassemble the equipment on your own, except for expansion work to be performed in accordance with the instructions in this manual. Work performed by unqualified persons may lead to electric shock, fire, or burns. There are many high-voltage areas inside the power unit. It might be hazardous if you touch these areas.

Insertion of foreign objects into the equipment

Do not allow clips, pins or any other metal items or flammable items to enter the equipment through a vent or by any other means. Continuing to operate the equipment with foreign objects may lead to electric shock or fire.

Removal of cover or bracket

- Unless otherwise instructed, turn off the power, unplug all power cords of the equipment from the electrical outlets, and disconnect all cables from the equipment before removing covers or brackets. Even if you turn off the power to the equipment, some circuits are live and unexpected contact may cause a fire.

- Do not use the equipment with the cover removed. It may also result in electric shock or equipment failure.

Handling of the power outlet

- Use a grounding 2-pole plug-in power outlet. Outlets of any other types would cause electric shock or fire.

- In order to prevent electric shock, use a ground wire to connect the outlet's grounding electrode to a ground terminal installed by a qualified electrician. Omission of this connecting step may cause electric shock in the event of a power failure.

Do not place objects on the equipment

Do not place a vase, potted plant or any other container with water in it or small metal items like pins and clips on the equipment. Operating the equipment with conductive objects such those mentioned above may lead to electric shock, smoke, or fire.

Handling of heavy loads

- The equipment is heavy. Be careful when moving it. Otherwise, handling of this equipment may hurt your arms or lumbar.

- To move or lift heavy loads such as this product, use tools or perform the task with the help of at least one other person. Otherwise handling of heavy loads could cause injury.

⚠ WARNING

Handling of the power cables

Always use the power cables shipped with the equipment, and follow the instructions below: Failure to follow the correct handling practices may lead to damage to the power cables to expose the copper wires, or overheating due to short-circuiting or partial disconnection, which may cause electric shock or fire.

- Do not place any object on the power cables.
- Do not pull the cables.
- Do not apply pressure on the power cables.
- Do not fold the power cables.
- Do not work upon the power cables.
- Do not use the power cables near heat-generating appliances.
- Do not bundle the power cables.

- Do not subject the power cables to ultraviolet or strong visible light continuously.
- Do not use the power cables past their service life.
- Do not expose the power cables to alkali, acid, fat and oil, or humidity.
- Do not use the power cables in a high-temperature environment.
- Do not use the power cables above their specified rating.
- Do not use the power cables for other devices

Not designed to operate near volatile liquid

Do not use volatile liquids such as nail polish remover near the equipment. Such volatile liquids could cause a fire if they enter inside the equipment and are ignited.

Handling of the power plug

- When inserting the power plug into the electrical outlet or removing it, be sure to hold the plug section. Do not pull the cable; it may partially break the wire, heat the broken part and lead to a fire.
- If a long downtime is planned, remove the power plug from the outlet. The equipment is live even when not in use, and any damaged components may cause a fire.
- Be sure to handle the power plug with dry hands when inserting or removing it from the outlet. Handling it with wet hands may cause an electric shock.

Impact from falling

Do not let the plug fall or hit it against another object. It may cause internal deformation and deterioration. Operating the equipment under such defective conditions may lead to electric shock or fire.

Applicable power source

The equipment uses 200 VAC. Do not operate the equipment with a voltage other than that specified. It may lead to internal breakage or electric shock or fire due to overheating and deterioration (depending on the voltage magnitude).

⚠ WARNING

Contact failure and tracking of the power plug

Comply with the following instructions for handling of the power plug.
Otherwise, tracking or contact failure may cause a fire.

- Make sure that the power plug is fully and securely inserted into the electrical outlet.
- Before inserting the power plug, check that there is no dust or water on the plug. If any dust or water is found, wipe it off with a dry cloth and then insert it.
- Check that the outlet can firmly hold the plug.

Handling of batteries

The following actions must be avoided. Inappropriate handling may cause the battery to overheat, burst, and leak, resulting in injury, smoke or fire.

- Disassembling the battery
- Heating beyond 100°C
- Incinerating
- Wetting
- Using batteries other than those specified

Storage location for batteries

Keep batteries out of the reach of young children. There is a danger that they might swallow them. Should a battery ever be swallowed, take care to secure a breathing path for the child and immediately call for medical assistance.

Disposal of batteries

To dispose of batteries, consult your dealer or follow the relevant regulations and rules of your country.

Storing batteries

When storing batteries, apply adhesive tape on the terminals for insulation. If the batteries are stored without insulation, the terminals can contact each other to cause a short-circuit and overheat or burst, leading to injury or fire.

Multiple connections to a single outlet not allowed

Do not connect multiple power cables to a single electrical outlet. Overheating of the power cables or outlet may cause fire and trip the circuit breaker, stopping the operation of other devices on the same circuit.

⚠ WARNING

Not designed to operate in a humid or dusty environment

Do not use the equipment near a place where water is used such as sink, in a humid basement, or in a dusty place. Such conditions may lower electric insulation, leading to electric shock or fire.

Not designed to operate in a high-temperature environment

Do not install the equipment in a place subject to high temperatures and do not cover it with insulating material. It may cause a fire.

Moving between two locations with a significant temperature gap

When you move the equipment from one location to another, a significant temperature gap between the two locations may cause condensation on the surface or inside the equipment. Using the equipment when condensation is present may lead to electric shock or fire. Leave the equipment at the new location for several hours before you start using it.

Addition and connection of peripheral devices or optional components

To add or connect peripheral devices or optional components to the equipment, remove the power plug from the outlet and disconnect all cables from the equipment unless otherwise instructed. Use only peripheral devices and optional components which are explicitly listed as supported devices in the manual, and always follow the instructions in the manual.

Using devices other than those mentioned above would cause a failure of the peripheral devices or optional components, smoke, or fire due to the difference in connection specifications.

Vents

Vents on the equipment aim to prevent internal temperature rise. Do not block the vents by placing any objects in front of or against them. Otherwise the internal temperature may rise, leading to smoke, fire or failure.

Keep vents clear of dust by periodically checking and cleaning them.

Plastic bags for packaging

To avoid the risk of suffocation, do not leave plastic bags (such as air bubble cushioning for packaging) within the reach of young children.

Handling the power supply module

The power supply module has a high-voltage area in it. Do not open the cover. It may result in electric shock or equipment failure.

Handling of the product

Install the product on a fixed rack. Do not lean against the product or stand on it. Do not install the product in a place with weak floors and walls. Do not subject the product to excessive vibration. It could fall and cause a failure.

⚠ CAUTION

Contact with contact pins

- Do not touch the contact pins of connectors with your hand or any metal item. Do not any objects such as wire among the pins. Do not place the equipment in a place where there are metal pieces. Otherwise, contact failure may cause a malfunction.

- When you have to touch the card, take care not to hurt yourself. You can wear cotton gloves.

Addition and replacement of parts in the equipment

Increasing the number of built-in options for a system device or replacing them must be entirely conducted by maintenance personnel. Avoid removing the cover from the device and avoid installing or removing built-in options. The system device contains parts mounted at high density, which suggests that unskilled work will lead to injury or device failure. If you need to add or replace options, you should contact your dealer or call the maintenance personnel.

Contact with metal edges

When moving the equipment or adding parts, take care not to hurt yourself on the metal or plastic edges. You can wear cotton gloves.

Using at an unstable place

Do not place the equipment on an inclined ground or at a narrow or unstable place. The equipment may fall and cause an injury.

Use for purposes other than the stated purpose

Do not use the equipment for any other purpose other than its intended use. It may malfunction or fall and cause an injury.

Consumables

Only use specified consumables. Using consumables other than those specified may not only reduce reliability of the product but also cause malfunction, electric shock or fire.

Eye fatigue

Provide luminance of 300 to 1000 lux for viewing the display. Take a break of 10 to 15 minute every hour. Viewing the display for a long time results in eye fatigue.

Cover for the power supply module

The power supply module, and its cover and handle are heated while that module is run. Take care when replacing a failed module or in other cases. You might get burned.

Laser beam

- On this product, a Class 1 laser product is installed. Do not look directly at the laser beam. Do not look at the laser beam using an optical device.

- Under the laser module cover, a laser beam is being emitted. Do not remove the cover of an unused board.

⚠ CAUTION

Signal cables

- When wiring cables, take care not to trip over the cables. It could cause injury or failure of devices connected to the equipment. It could also cause loss of valuable data.

- 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.

Improper battery type

Improper type of battery used can cause explosion.

Replace the battery with a proper one as recommended by the manufacturer.

Dispose of the worn-out battery according to the manufacturer's instructions.

Aluminum electrolytic capacitors

An aluminum electrolytic capacitor has a limited service life. Do not use it past its service life. Otherwise, leakage or depletion of the electrolyte may cause smoke or electric shock. To avoid such hazardous situations, replace limited-life parts once they are past their designated service life

Handling of the system equipment

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.

Installing the equipment onto a rack

- To mount or remove the system equipment onto or from the rack cabinet, do not strain yourself to do so alone. Instead, always get help from at least one other person or use tools. If the system equipment has to be mounted on 31U and above of the rack cabinet or it is already mounted there, do not attempt to mount or remove it. Call maintenance personnel.
  Defective mounting may cause the system equipment to fall, resulting in an injury or equipment failure.

- To perform any operation with the equipment pulled out from the rack cabinet, be sure to mount a stabilizer to the rack cabinet. Applying excessive force could cause the rack cabinet to fall, resulting in an injury or equipment failure.
  If a stabilizer is not mounted, call maintenance personnel.

High Temperature at the 10GBASE-R Transceiver

The 10GBASE-R transceiver in the 10Gbps LAN switch module increases in temperature during operation. To remove the transceiver, therefore, allow at least approximately 5 minutes after the power supply for the 10Gbps LAN switch module is stopped from the management module. Failure to do so may cause you to get burned.

NOTICE

Backing up data

Always create backup copies of important data on the hard disk to auxiliary storage. If the hard disk fails, all data stored on it will be lost.

Not designed to operate outdoors

Do not operate the equipment outdoors. It could cause a failure.

Disposal of the equipment

- For disposal by a business operator
  Check the industrial waste disposal regulations for your country and follow the necessary procedures.

- For disposal by an individual
  To dispose of this equipment, consult your dealer or follow the relevant regulations.

Radio interference

When installed next to other electronic equipment, the equipment may interfere with each other. In particular, with a television set or a radio in the vicinity, some noise may occur on the equipment. If this happens, do the following:

- Place the equipment as far away as possible from the TV or radio.

- Change the orientation of the antenna of the TV or radio.

- Plug the electronic equipment into separate electrical outlets.

Anti-earthquake measures

Strong vibration such as that generated by an earthquake could cause the equipment to move and fall, resulting in serious accidents.
In order to prevent disastrous outcomes, consult a maintenance company or an expert business for developing counter-seismic measures and implement them accordingly.

Handling the hard disk

The hard disk is a precision instrument. Handle it carefully when you use it. Inappropriate handling may result in hard disk failure.

- When carrying the system equipment or hard disk, handle it carefully and do not vibrate or hit it. Before handling the hard disk, remove static electricity or wear cotton gloves.

- Before moving the system equipment, turn off the power, remove the power plug from the electrical outlet, and wait at least 30 seconds.

Rat control

Rats can cause the following damage to a computer system:

- Breakage of cable sheaths

- Corrosion, contact failure, or soiled parts inside the equipment

In order to prevent the above damage, consult a maintenance company or an expert business for developing rat control measures and implement them accordingly.

NOTICE

Implementing a disk array

- You must not change the disk array during system operations. Otherwise, the system would lose all data.

- If you select [New Configuration], the hard disk will lose all data.

Power operation

Follow the prescribed procedure for power operation. Power input or output not according to the prescribed procedure may cause problems to the system equipment.

Faulty disk

- If you attempt to replace a faulty disk using an incorrect procedure, data on the disk may be corrupted. Before starting disk replacement work, back up the data.

- Replacing a hard disk without failure will corrupt the data on it. Do not remove any hard disk other than the faulty disk.

Connecting a cable to the management module

When you connect the management module over a network, the system will incur an error if a device assigned with the same IP address as for the BMC on the management module or server blade exists on the network.

After the end of a network configuration, connect a cable to the management module.

N + M cold standby function

- When the N+M cold standby function is enabled, Pre-configuration is automatically executed and the status LED (CND) on the server blade lights solid green after the POWER LED on the front panel lights solid orange. Confirm that the POWER LED of the front panel lights solid orange to show Pre-configuration is completed before executing step 3 described above.

- Make sure to use the same LPAR manager firmware version as the active partition for the standby partition. Otherwise, N+M failover may fail.

- Do not move the EFI Shell to the highest booting priority in the EFI Setup menu. If the EFI Shell is on the top of the boot option, the OS will not successfully boot after N+M switching and failback.

- For a Xeon server blade, executing the Pre-configure automatically changes the SAN booting priority to the lowest of the priority settings.

- If you change the LPAR configuration (processors, memory, or device assignment), make sure to implement [F9]: "Save Configuration" on the LPAR manager Menu screen. For details, see "Saving Settings on the LPAR manager Screen".

- When a switching alert is issued by the BSM command execution, the active partition is forcibly powered off.

First Aid for Electric Shock

First aid is the help you can provide before you can get professional medical help. For serious conditions, it is vitally important to take the victim to a doctor as soon as possible. Have someone call an ambulance at once while you apply first aid.

Break the victim's contact with the source of electricity in the quickest safe way possible. Turn off the main switch of the power distribution panel immediately and ground the circuits. Remove the victim from contact with the current, using a dry wooden pole, a dry rope or dry clothing. Do not touch the victim before contact with the current is broken.

Warning labels

Warning labels can be found at the following locations on the system equipment.

<Hitachi Compute Blade system equipment>

1

How to Use the Manuals

This section describes the manuals provided with Hitachi Gigabit Fibre Channel Adapter.

Manual Organization

Hitachi Gigabit Fibre Channel Adapter User's Guide has several edition published in parts.

The contents of the User's Guide are shown below.

❑ User's guide

Edition	Contents
Hitachi Gigabit Fibre Channel Adapter User's Guide (Hardware Edition)	Describes overview of Hitachi Gigabit Fibre Channel Adapter and procedures for the use of Hitachi Gigabit Fibre Channel Adapter such as installation, connection, handling and checking of operation.
Hitachi Gigabit Fibre Channel Adapter User's Guide (BIOS/EFI Edition)	Describes list of Option parameters of onboard BIOS and EFI. Also provides error log information of onboard BIOS and EFI.
Hitachi Gigabit Fibre Channel Adapter User's Guide (Windows Driver Edition)	Describes procedures how to install and update Windows driver. Also provides error log information and list of driver parameters.
Hitachi Gigabit Fibre Channel Adapter User's Guide (Linux/VMware Driver Edition)	Describes procedures how to install and update Linux/VMware driver. Also provides error log information and list of driver parameters.
Hitachi Gigabit Fibre Channel Adapter User's Guide (Support Matrix Edition)	This manual. Details driver version and functions combinations that are supported by driver on each OS. This document also includes onboard firmware support matrix.
Hitachi Gigabit Fibre Channel Adapter User's Guide (Utility Software Edition)	Describes list of parameters and operations of utility software to set and modify various parameters.
Hitachi Gigabit Fibre Channel Adapter User's Guide (Utility Software Edition-VMware)	Describes operations of utility software for VMware ESXi 5.0 or later.

2

Driver support matrix

The following table from the next page shows the correspondence between the function and its supported version.
Note that all of your Hitachi Compute Blade system, Hitachi Gigabit Fibre Channel Adapter, the driver and the firmware may need to apply the function.

Windows 2003

#	Supported feature	Platform	Driver Version																	
			x.0.1.30	x.0.1.60	x.0.1.70	x.0.2.100	x.0.2.120	x.0.2.130	x.0.2.140	x.0.3.180	x.0.4.210	x.0.4.260	x.0.4.470	x.0.5.530	x.0.5.540	x.0.6.670	x.0.6.730	x.0.6.800	x.0.6.840	x.0.6.880
	Driver for Windows Server 2003																			
	Release Date	x86	2005/5/23	2005/07/05	2005/07/25	2005/10/11	2006/05/31	2006/08/31				2007/05/14	2008/01/15	2009/03/27	2009/11/30	2010/01/29	2010/05/31	2010/10/29	2011/09/26	2012/04/27	2012/09/24
		x64			2005/07/25	2005/10/11	2006/05/31	2006/08/31				2007/05/14	2008/02/04	2009/03/27	2009/11/30	2010/01/29	2010/05/31	2010/10/29		2012/04/27	2012/09/24
		Itanium	2005/4/20	2005/07/05	2005/07/25	2005/10/11			2006/08/02	2007/02/28	2007/05/14	2008/01/15	2009/03/27		2010/01/29						
1	GVX-CC64G2** (Hitachi Compute Blade 1000)	x86	2005/5/23																		
		x64			2005/07/25																
		Itanium	2005/4/20																		
2	Windows Server 2003 SP1	x86		2005/07/05																	
		x64			2005/07/25																
		Itanium		2005/07/05																	
3	GVX-CC64G1** (Hitachi Compute Blade 1000) and Windows Server 2003 x64	x86			2005/07/25																
		x64			2005/07/25																
		Itanium			2005/07/25																
4	GVX-CC9IOCOMBR** and GVX-CC9FCCMB1R** (Hitachi Compute Blade 1000)	x86				2005/10/11															
		x64				2005/10/11															
		Itanium				2005/10/11															
5	Windows Server 2003 R2	x86					2006/05/31														
		x64					2006/05/31														
		Itanium																			
6	GGX-CC9MZFC1** (Hitachi Compute Blade 320)	x86						2006/08/31													
		x64						2006/08/31													
		Itanium																			
7	Adaptor hot-plug feature	x86																			
		x64																			
		Itanium							2006/08/02												
8	Shared FC on LPAR manager	x86										2008/01/15									
		x64										2008/02/04									
		Itanium								2007/02/28											
9	Windows Server 2003 SP2	x86									2007/05/14										
		x64									2007/05/14										
		Itanium									2007/05/14										
10	GGX-CC9M4G1X1** (Hitachi Compute Blade 320)	x86											2009/03/27								
		x64											2009/03/27								
		Itanium																			
11	GVX-CC2N4G1X1** (Hitachi Compute Blade 2000)	x86											2009/03/27								
		x64											2009/03/27								
		Itanium																			
12	GGX-CC9P4G1X1** (Hitachi Compute Blade 320)	x86													2009/11/30						
		x64													2009/11/30						
		Itanium																			
13	GVX-CC2M4G1X1** (Hitachi Compute Blade 2000)	x86													2009/11/30						
		x64													2009/11/30						
		Itanium																			
14	SFP hot-swap feature *1)	x86													2009/11/30						
		x64													2009/11/30						
		Itanium														2010/01/29					
15	8Gbps Fibre Channel *2) (Hitachi Compute Blade 2000, Hitachi Compute Blade 320)	x86															2010/05/31				
		x64															2010/05/31				
		Itanium																			
16	Firmware Online Update feature *3)	x86															2010/05/31				
		x64															2010/05/31				
		Itanium																			
17	Bugfix: Uninstallation of HFCTools causes improper deletion of Registry *4)	x86																2010/10/29			
		x64																2010/10/29			
		Itanium																			
18	Target Scan feature Driver Parameter (Supress logging/Filtering Login target) *5)	x86																		2012/04/27	
		x64																		2012/04/27	
		Itanium																			
19	LPAR manager concurrent maintenance feature	x86																			2012/09/24
		x64																			2012/09/24
		Itanium																			

*1) The following model is not supported.
  GVX-CC9FCCMB1R**
  GGX-CC9MZFC1**
  GGX-CC9M4G1X1**
  GVX-CC2M4G1X1**

*2) For the 8Gbps Fibre Channel model, see chapter 3 for details.
*3) Include updating FLASH-ROM of the adapter function from the guest OS on LPAR.
*4) For details, see "Hitachi Gigabit Fibre Channel Adapter User's Guide" (Windows driver Edition) .
   "Install utility software" section.
*5) For details, see "Hitachi Gigabit Fibre Channel Adapter User's Guide" (Utility software Edition) .
   "TargetScan", "Display or Set the Port Information"

Windows 2008

#	Supported feature	Platform	Driver Version											
Driver for Windows Server 2008														
			x1.4.340	x1.4.370	x1.4.390	x1.4.470	x1.5.530	x1.5.540	x1.6.670	x1.6.730	x1.6.790	x1.6.800	x1.6.840	x1.6.880
	Release Date	x86	2008/06/18		2008/10/24	2009/03/27	2009/11/30	2009/12/29	2010/05/31	2010/10/29	2011/06/30	2011/09/26	2012/04/27	2012/08/31
		x64	2008/06/18		2008/10/24	2009/03/27	2009/11/30	2009/12/29	2010/05/31	2010/10/29	2011/06/30	2011/09/26	2012/04/27	2012/08/31
		Itanium		2008/09/30	2008/10/24	2009/03/27		2010/01/29						
1	Windows Server 2008 *1)	x86	2008/06/18											
		x64	2008/06/18											
		Itanium		2008/09/30										
2	Hyper-V™	x86			2008/10/24									
		x64			2008/10/24									
		Itanium												
3	Shared FC on LPAR manager	x86			2008/10/24									
		x64			2008/10/24									
		Itanium				2009/03/27								
4	GGX-CC9M4G1X1** (Hitachi Compute Blade 320)	x86				2009/03/27								
		x64				2009/03/27								
		Itanium												
5	GVX-CC2N4G1X1** (Hitachi Compute Blade 2000)	x86				2009/03/27								
		x64				2009/03/27								
		Itanium												
6	GGX-CC9P4G1X1** (Hitachi Compute Blade 320)	x86				2009/03/27								
		x64				2009/03/27								
		Itanium												
7	Windows Server 2008 SP2	x86				2009/03/27								
		x64				2009/03/27								
		Itanium												
8	GVX-CC2M4G1X1** (Hitachi Compute Blade 2000)	x86					2009/11/30							
		x64					2009/11/30							
		Itanium												
9	SFP hot-swap feature *2)	x86					2009/11/30							
		x64					2009/11/30							
		Itanium												
10	Adaptor hot-plug feature *3)	x86						2009/12/29						
		x64						2009/12/29						
		Itanium												
11	8Gbps Fibre Channel *4) (Hitachi Compute Blade 2000, Hitachi Compute Blade 320)	x86							2010/05/31					
		x64							2010/05/31					
		Itanium												
12	Firmware Online Update feature *5)	x86							2010/05/31					
		x64							2010/05/31					
		Itanium												
13	Bugfix: Uninstallation of HFCTools causes improper deletion of Registry *6)	x86								2010/10/29				
		x64								2010/10/29				
		Itanium												
14	PCI Isolation Support	x86									2011/06/30			
		x64									2011/06/30			
		Itanium												
15	8Gbps Fibre Channel *4) (Hitachi Compute Blade 500)	x86											2012/04/30	
		x64											2012/04/30	
		Itanium												
16	8Gbps Fibre Channel *4) (Hitachi Compute Rack Series)	x86											2012/05/07	
		x64											2012/05/07	
		Itanium												
17	Target Scan feature Driver Parameter (Supress logging/Filtering Login target) *7) LPAR manager guest statistics information feature	x86											2012/04/27	
		x64											2012/04/27	
		Itanium												
18	LPAR manager concurrent maintenance feature	x86												2012/08/31
		x64												2012/08/31
		Itanium												

*1) Server Core feature is not supported.
*2) The following model is not supported.
  GVX-CC9FCOMB1R**/GGX-CC9MZFC1**
  GGX-CC9M4G1X1**/GVX-CC2M4G1X1**
  GVX-CC2M8G1X1**/GVX-CC2M8G2X1**
  GV-CC2M8G1X1-Y/GV-CC2M8G2X1-Y
  GGX-CC3M8G2X1**/GGX-CC3M8G2X2**
  GG-CC3M8G2X1-Y/GG-CC3M8G2X2-Y
  GQ-CC7841-Y/GQ-CC7842-Y

*3) The only following model is supported
  GVX-CC2N4G1X1**
  G*-CC2N8G**
  G*-CC2D8G**

*4) For the 8Gbps Fibre Channel model, see chapter 3 for details.
*5) Include updating FLASH-ROM of the adapter function from the guest OS on LPAR.
*6) For details, see "Hitachi Gigabit Fibre Channel Adapter User's Guide" (Windows driver Edition).
  "Install utility software" section.
*7) For details, see "Hitachi Gigabit Fibre Channel Adapter User's Guide" (Utility software Edition).
  "TargetScan", "Display or Set the Port Information"

Windows 2008 R2

Driver for Windows Server 2008 R2

#	Supported feature	Platform	x2.5.530	x2.5.540	x2.6.670	x2.6.730	x2.6.790	x2.6.800	x2.6.840	x2.6.880	x2.8.1500 *7)	x2.8.1540 *7)	x2.8.1550 *7)	x2.8.1570 *7)	x2.8.1970	x2.8.2050	x2.8.2070
	Release Date	x64 Itanium	2009/12/29	2010/1/29	2010/05/31	2010/10/29	2011/06/30	2011/09/26	2012/04/27	2012/08/31	2014/07/10	2014/07/10	2014/09/11	2015/02/05	2015/03/26	2015/06/25	2015/10/21
1	Windows Server 2008 R2	x64 / Itanium	2009/12/29														
2	SFP hot-swap feature *1)	x64 / Itanium	2009/12/29														
3	Adaptor hot-plug feature *2)	x64 / Itanium		2010/1/29													
4	8Gbps Fibre Channel *3) (Hitachi Compute Blade 2000, Hitachi Compute Blade 320)	x64 / Itanium			2010/05/31												
5	Firmware Online Update feature *4)	x64 / Itanium			2010/05/31												
6	Bugfix: Uninstallation of HFCTools causes improper deletion of Registry *5)	x64 / Itanium				2010/10/29											
7	Windows Server 2008 R2 SP1	x64 / Itanium				2011/05/20											
8	PCI Isolation Support	x64 / Itanium					2011/06/30										
9	8Gbps Fibre Channel *3) (Hitachi Compute Blade 500)	x64 / Itanium						2012/04/30									
10	8Gbps Fibre Channel *3) (Hitachi Compute Rack Series)	x64 / Itanium						2012/05/07									
11	Target Scan feature / Driver Parameter (Supress logging/Filtering Login target) *6) / LPAR manager guest statistics information feature	x64 / Itanium							2012/04/27								
12	LPAR manager concurrent maintenance feature	x64 / Itanium								2012/08/31							
13	16Gbps Fibre Channel *3) (Hitachi Compute Blade 2000, Hitachi Compute Blade 500, Hitachi Compute Rack Series)	x64 / Itanium									2014/07/10						
14	8Gbps Fibre Channel *3) 16Gbps Fibre Channel *3) (Hitachi Compute Blade 2500)	x64 / Itanium											2014/09/11				
15	16Gbps Fibre Channel on LPAR manager	x64 / Itanium													2015/03/26		
16	HBA Core Dedicated Mode on LPAR manager *8)	x64 / Itanium														2015/06/25	

*1) The following model is not supported.
　　GVX-CC9FCCMB1R**/GGX-CC9MZFC1**
　　GGX-CC9M4G1X1**/GVX-CC2M4G1X1**
　　GVX-CC2M8G1X1**/GVX-CC2M8G2X1**
　　GV-CC2M8G1X1-Y/GV-CC2M8G2X1-Y
　　GGX-CC3M8G2X1**/GGX-CC3M8G2X2**
　　GG-CC3M8G2X1-Y/GG-CC3M8G2X2-Y
　　GQ-CC7841-Y/GQ-CC7842-Y

*2) The only following model is supported
　　GVX-CC2N4G1X1**
　　G*-CC2N8G**
　　G*-CC2D8G**
　　GV*-CC2N16*X1**
　　GV*-CC2D16*X1**

*3) For the 8Gbps/16Gbps Fibre Channel model, see chapter 3 for details.
*4) Include updating FLASH-ROM of the adapter function from the guest OS on LPAR.
*5) For details, see 'Hitachi Gigabit Fibre Channel Adapter User's Guide' (Windows driver Edition)', "Install utility software" section.
*6) For details, see 'Hitachi Gigabit Fibre Channel Adapter User's Guide' (Utility software Edition)', "TargetScan", "Display or Set the Port Information"
*7) This driver does not support use of 16Gbps Fibre Channel on the LPAR manager.
*8) Update the firmware version of the adapter and the HVM version which support HBA Core Dedicated Mode on LPAR manager to use this feature.

Windows 2012

#	Supported feature	Platform	Driver Version								
Driver for Windows Server 2012											
			4.3.6.900 *1)	4.3.7.1080	4.3.7.1120	4.3.8.1500 *4)	4.3.8.1670 *4)	4.3.8.1690 *4)	4.3.8.1970	4.3.8.2050	4.3.8.2070
Release Date		x64	2012/12/12	2013/06/19	2014/04/23	2014/07/10	2014/07/10	2014/09/11	2015/03/26	2015/06/25	2015/10/21
1	Windows Server 2012	x64	2012/12/12								
2	8Gbps Fibre Channel Virtual fibre channel feature in Windows Server 2012 with Hyper-V roll installed *2)	x64		2013/06/19							
3	16Gbps Fibre Channel *3) (Hitachi Compute Blade 2000, Hitachi Compute Blade 500, Hitachi Compute Rack Series)	x64				2014/7/10					
4	16Gbps Fibre Channel Virtual fibre channel feature in Windows Server 2012 with Hyper-V roll installed	x64					2014/7/10				
5	8Gbps Fibre Channel *3) 16Gbps Fibre Channel *3) (Hitachi Compute Blade 2500)	x64						2014/9/11			
6	16Gbps Fibre Channel on LPAR manager	x64							2015/03/26		
7	HBA Core Dedicated Mode on LPAR manager *5)	x64								2015/06/25	

*1) Driver version 4.3.6.900 does not support virtual Fiber Channel feature of Hyper-V in Windows Server 2012 with Hyper-V role installed
    Refer to support matrix of Hitachi Server equipped with hitachi fibre channel adapter before you install this driver in Windows Server 2012.
    This driver supports the feature that is equal to all the feature that the version ″x.2.6.880″ driver of Windows Server 2008 R2 supports. See ″Windows Server 2008 R2″ section for details.

*2) Only 8Gbps Fibre Channel adapter supports the Hyper-V virtual Fibre Channel feature.
    You should also update the firmware of the adapter to support virtual fibre channel feature.
    To confirm the firmware version which supports virtual fibre channel feature, refer to 'Firmware support matrix'.

*3) For the 8Gbps/16Gbps Fibre Channel model, see chapter 3 for details.

*4) This driver does not support use of 16Gbps Fibre Channel on the LPAR manager.

*5) Update the firmware version of the adapter and the HVM version which support HBA Core Dedicated Mode on LPAR manager to use this feature.

Windows 2012 R2

#	Supported feature	Platform	Driver Version							
Driver for Windows Server 2012R2										
			4.4.7.1110 *1)	4.4.7.1120	4.4.8.1500 *4)	4.4.8.1670 *4)	4.4.8.1690 *4)	4.4.8.1970	4.4.8.2050	4.4.8.2070
	Release Date	x64	2014/2/5	2014/4/23	2014/7/10	2014/7/10	2014/9/11	2015/3/26	2015/6/25	2015/10/21
1	Windows Server 2012 R2 *2)	x64	2014/2/5							
2	8Gbps Fibre Channel Virtual fibre channel feature in Windows Server 2012R2 with Hyper-V roll installed *2)	x64	2014/2/5							
3	16Gbps Fibre Channel *3) (Hitachi Compute Blade 2000, Hitachi Compute Blade 500, Hitachi Compute Rack Series)	x64			2014/7/10					
4	16Gbps Fibre Channel Virtual fibre channel feature in Windows Server 2012R2 with Hyper-V roll installed	x64				2014/7/10				
5	8Gbps Fibre Channel *3) 16Gbps Fibre Channel *3) (Hitachi Compute Blade 2500)	x64					2014/9/11			
6	16Gbps Fibre Channel on LPAR manager	x64						2015/3/26		
7	HBA Core Dedicated Mode on LPAR manager *5)	x64							2015/6/25	

*1) This driver supports the feature that is equal to all the feature that the version ″x.3.7.1080″ driver of Windows Server 2012 supports. See ″Windows Server 2012″ section for details.

*2) Only 8Gbps Fibre Channel adapter supports the Hyper-V virtual Fibre Channel feature.
　　You should also update the firmware of the adapter to support virtual fibre channel feature.
　　To confirm the firmware version which supports virtual fibre channel feature, refer to 'Firmware support matrix'.

*3) For the 8Gbps/16Gbps Fibre Channel model, see chapter 3 for details.

*4) This driver does not support use of 16Gbps Fibre Channel on the LPAR manager.

*5) Update the firmware version of the adapter and the HVM version which support HBA Core Dedicated Mode on LPAR manager to use this feature.

Windows driver and its utility software version

		C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16	C17	C18	C19	C20	C21	C22	C23
Driver Version	Windows 2003	x0.1.30 x0.1.60	x0.1.70	x0.2.100 x0.2.110 x0.2.120	x0.2.130 x0.2.140	x0.3.180 x0.4.210 x0.4.260	▩	x0.4.460	x0.4.470	x0.5.530	x0.5.540	x0.6.670	x0.6.730	▩	x0.6.800	x0.6.840 x0.6.880	–	–	–	–	–	–		–
	Windows 2008	▩	▩	▩	▩	▩	x1.4.340 x1.4.370 x1.4.390	▩	x1.4.470	x1.5.530	x1.5.540	x1.6.670	x1.6.730	x1.6.790	x1.6.800	x1.6.840 x1.6.880	–	–	–	–	–	–		–
	Windows 2008 R2	▩	▩	▩	▩	▩	▩	▩	▩	x2.5.530	x2.5.540	x2.6.670	x2.6.730	x2.6.790	x2.6.800	x2.6.840 x2.6.880	–	–	–	x2.8.1500	x2.8.1540 x2.8.1550 x2.8.1570	–	x2.8.1970 x2.8.2050	x2.8.2070
	Windows 2012	▩	▩	▩	▩	▩	▩	▩	▩	▩	▩	▩	▩	▩	▩	▩	x3.6.900	x3.7.1080 x3.7.1110	x3.7.1120	x3.8.1500	–	x3.8.1670 x3.8.1690	x3.8.1970 x3.8.2050	x3.8.2070
	Windows 2012 R2	▩	▩	▩	▩	▩	▩	▩	▩	▩	▩	▩	▩	▩	▩	▩	▩	x4.7.1110	x4.7.1120	x4.8.1500	–	x4.8.1670 x4.8.1690	x4.8.1970 x4.8.2050	x4.8.2070
HFCTools Version	1.0.1.5	◎																						
	1.0.1.6		◎																					
	1.0.1.8																							
	1.0.1.10			◎																				
	1.0.1.11				◎																			
	1.0.1.13					◎																		
	1.0.1.15							◎																
	1.0.1.19								◎															
	1.0.2.22									×														
	1.0.2.23										×													
	1.0.3.33											×												
	1.0.3.37												◎											
	1.0.3.39													◎										
	1.0.3.40														◎									
	1.0.3.45															◎								
	1.0.3.47																◎							
	1.0.3.48																	◎						
	1.0.3.49																		◎					
	1.0.4.58																			◎				
	1.0.4.72																				◎			
	1.0.4.81																					◎		
	1.0.4.82																						◎	
	1.0.4.83																							◎

×:Uninstallation of the HFCTools version causes improper deletion of Registry. For details, see 'Hitachi Gigabit Fibre Channel Adapter User's Guide (Windows driver Edition)' "Install utility software" section.

Red Hat Enterprise Linux 3

#	Supported feature	Platform	Driver Version					
			x.0.1.35	x.0.1.45	x.0.2.51	x.0.2.62	x.0.6.160	x.0.6.344
Driver for Red Hat Enterprise Linux 3								
	Release Date	x86	2005/01/05	2005/07/14	2005/09/12		2006/11/09	2008/05/12
		x86_64		2005/07/22	2005/09/12		2006/11/09	2008/05/12
		Itanium	2005/05/25	2005/07/14	2005/09/12	2005/11/18	2006/11/09	2008/05/12
1	GVX-CC64G2** (Hitachi Compute Blade 1000)	x86	2005/01/05					
		x86_64		2005/07/22				
		Itanium	2005/05/25					
2	kernel-2.4.21-27.EL(U4)	x86	2005/01/05					
		x86_64						
		Itanium						
3	GVX-CC64G1** (Hitachi Compute Blade 1000)	x86		2005/07/14				
		x86_64		2005/07/22				
		Itanium		2005/07/14				
4	kernel-2.4.21-32.0.1.EL(U5)	x86			2005/09/12			
		x86_64			2005/09/12			
		Itanium				2005/11/18		
5	GVX-CC9IOCOMBR** and GVX-CC9FCCMB1R** (Hitachi Compute Blade 1000)	x86			2005/09/12			
		x86_64			2005/09/12			
		Itanium			2005/09/12			
6	kernel-2.4.21-47.EL(U8)	x86					2006/11/09	
		x86_64					2006/11/09	
		Itanium					2006/11/09	
7	kernel-2.4.21-50.EL(U9)	x86						2008/05/12
		x86_64						2008/05/12
		Itanium						2008/05/12

Red Hat Enterprise Linux 4

#	Supported feature	Platform	Driver Version													
			x.1.2.56	x.1.2.68	x.1.6.104	x.1.6.110	x.1.6.136	x.1.7.280	x.1.8.356	x.1.10.482	x.1.12.716	x.1.12.716-3	X.1.13.848	X.1.13.854	X.1.13.857	X.1.13.866
Driver for Red Hat Enterprise Linux 4																
	Release Date	x86		2006/01/05	2006/04/10	2006/07/20	2006/08/31		2007/10/11	2008/05/12	2008/12/04	2009/05/07		2010/01/29	2012/08/31	
		x86_64			2006/04/10	2006/07/20	2006/08/31		2007/10/11	2008/07/29	2008/12/04	2009/05/07		2010/01/29	2012/08/31	
		Itanium	2005/09/12	2006/01/05	2006/04/10	2006/07/20	2006/08/31	2007/02/28	2007/10/11		2008/12/04		2009/09/30	2010/01/29		2012/08/31
1	kernel-2.6.9-11.EL(Update1)	x86		2006/01/05												
		x86_64			2006/04/10											
		Itanium	2005/09/12													
2	kernel-2.6.9-34.EL(Update3)	x86				2006/07/20										
		x86_64				2006/07/20										
		Itanium				2006/07/20										
3	GGX-CC9MZFC1** (Hitachi Compute Blade 320)	x86					2006/08/31									
		x86_64					2006/08/31									
		Itanium														
4	kernel-2.6.9-42.0.3.EL (Update4)	x86														
		x86_64														
		Itanium						2007/02/28								
5	kernel-2.6.9-55.EL (RHEL4.5)	x86							2007/10/11							
		x86_64							2007/10/11							
		Itanium							2007/10/11							
6	HA Logger Kit (RASLOG)	x86								2008/05/12						
		x86_64								2008/07/29						
		Itanium									2008/12/04					
7	kernel-2.6.9-78.EL (RHEL4.7)	x86									2008/12/04					
		x86_64									2008/12/04					
		Itanium									2008/12/04					
8	kernel-2.6.9-78.0.8.EL (RHEL4.7+SU)	x86										2009/05/07				
		x86_64										2009/05/07				
		Itanium											2009/09/30			
9	SFP hot-swap feature *1)	x86												2010/01/29		
		x86_64												2010/01/29		
		Itanium											2009/09/30			
10	kernel-2.6.9-100.EL (RHEL4.9)	x86													2012/08/31	
		x86_64													2012/08/31	
		Itanium														2012/08/31

*1) The following model is not supported.
GVX-CC9FCCMB1R**
GGX-CC9MZFC1**
GGX-CC9M4G1X1**
GVX-CC2M4G1X1**

Red Hat Enterprise Linux 5

#	Supported feature	Platform	Driver Version											
Driver for Red Hat Enterprise Linux 5			x5.10.482	x5.10.492	x5.12.736	x5.13.854	x5.14.1038	x5.14.1040	x5.15.1116	x5.16.1218	x5.16.1240	x5.16.1268	x5.16.1270	x5.16.1282
	Release Date	x86	2008/04/16	2009/05/12	2009/03/31		2009/11/30	2010/01/29	2010/05/31	2010/10/29	2011/08/31	2012/04/27	2012/09/24	2013/11/06
		x86_64	2008/04/16	2009/07/29	2009/03/31		2009/11/30	2010/01/29	2010/05/31	2010/10/29	2011/08/31	2012/04/27	2012/09/24	2012/11/06
		Itanium	2008/04/16	2009/05/12		2010/01/29								
1	kernel-2.6.18-53.el5 (RHEL5.1)	x86	2008/04/16											
		x86_64	2008/04/16											
		Itanium	2008/04/16											
2	HA Logger Kit (RASLOG)	x86		2009/05/12										
		x86_64		2009/07/29										
		Itanium		2009/05/12										
3	kernel-2.6.18-128.el5 (RHEL5.3)	x86			2009/03/31									
		x86_64			2009/03/31									
		Itanium												
4	GGX-CC9M4G1X1** (Hitachi Compute Blade 320)	x86			2009/03/31									
		x86_64			2009/03/31									
		Itanium												
5	GVX-CC2N4G1X1** (Hitachi Compute Blade 2000)	x86			2009/03/31									
		x86_64			2009/03/31									
		Itanium												
6	GGX-CC9P4G1X1** (Hitachi Compute Blade 320)	x86			2009/06/26									
		x86_64			2009/06/26									
		Itanium												
7	SFP hot-swap feature *1)	x86					2009/11/30							
		x86_64					2009/11/30							
		Itanium			2010/01/29									
8	GVX-CC2M4G1X1** (Hitachi Compute Blade 2000)	x86					2009/11/30							
		x86_64					2009/11/30							
		Itanium												
9	kernel-2.6.18-128.*.*.el5 (RHEL5.3-SA)	x86					2009/11/30							
		x86_64					2009/11/30							
		Itanium												
10	kernel-2.6.18-164.el5 (RHEL5.4)	x86					2009/11/30							
		x86_64					2009/11/30							
		Itanium												
11	Adapter hot-plug feature *2)	x86						2010/01/29						
		x86_64						2010/01/29						
		Itanium												
12	8Gbps Fibre Channel *3) (Hitachi Compute Blade 2000, Hitachi Compute Blade 320)	x86							2010/05/31					
		x86_64							2010/05/31					
		Itanium												
13	Firmware Online Update feature *4)	x86							2010/05/31					
		x86_64							2010/05/31					
		Itanium												
14	kernel-2.6.18-164.*.*.el5 (RHEL5.4.3)	x86							2010/05/31					
		x86_64							2010/05/31					
		Itanium												
15	kernel-2.6.18-164.*.*.el5 (RHEL5.4-SA)	x86							2010/07/30					
		x86_64							2010/07/30					
		Itanium												
16	kernel-2.6.18-238.*.*.el5 (RHEL5.6)	x86								2011/06/13				
		x86_64								2011/06/13				
		Itanium												
17	8Gbps Fibre Channel *3) (Hitachi Compute Blade 2000, Hitachi Compute Blade 320)	x86							2010/05/31					
		x86_64							2010/05/31					
		Itanium												
18	8Gbps Fibre Channel *3) (Hitachi Compute Blade 500)	x86										2012/04/27		
		x86_64										2012/04/27		
		Itanium												
19	kernel-2.6.18-274.*.*.el5 (RHEL5.7)	x86										2012/04/27		
		x86_64										2012/04/27		
		Itanium												
20	Target Scan feature Driver Parameter (Supress logging/Filtering Login target) *5)	x86										2012/04/27		
		x86_64										2012/04/27		
		Itanium												
21	LPAR manager concurrent maintenance feature	x86											2012/09/24	
		x86_64											2012/09/24	
		Itanium												
22	kernel-2.6.18-308.*.*.el5 (RHEL5.8)	x86											2013/01/09	
		x86_64											2013/01/09	
		Itanium												
23	kernel-2.6.18-348.*.*.el5 (RHEL5.9)	x86												2013/11/06
		x86_64												2013/11/06
		Itanium												

*1) The following model is not supported:
GVX-CC9FCCMB1R**/GGX-CC9MZFC1**
GGX-CC9M4G1X1**/GVX-CC2M4G1X1**
GVX-CC2M8G1X1**/GVX-CC2M8G2X1**
GV-CC2M8G1X1-Y/GV-CC2M8G2X1-Y
GGX-CC3M8G2X1**/GGX-CC3M8G2X2**
GG-CC3M8G2X1-Y/GG-CC3M8G2X2-Y

*2) The only following model is supported
GVX-CC2N4G1X1**
G*-CC2N8G**
G*-CC2D8G**

*3) For the 8Gbps Fibre Channel model, see chapter 3 for details.
*4) Include updating FLASH-ROM of the adapter function from the guest OS on LPAR.
*5) For details, see "Hitachi Gigabit Fibre Channel Adapter User's Guide" (Utility software Edition).
"TargetScan", "Display or Set the Port Information"

Red Hat Enterprise Linux 6

#	Supported feature	Platform	x6.17.2018	x6.17.2019	x6.17.2092	x6.17.2096	x6.17.2114	x6.18.2576 *6)	x6.18.2586 *6)	x6.18.2600 *6)	x6.18.2746	x6.18.2766
	Driver for Red Hat Enterprise Linux 6											
	Release Date	x86	2011/10/28									
		x86_64		2011/10/28								
1	kernel-2.6.32-131.*.*.el6 (RHEL6.1)	x86	2011/10/28									
		x86_64		2011/10/28								
2	HA Logger Kit (RASLOG)	x86	2011/10/28									
		x86_64		2011/10/28								
3	GGX-CC9M4G1X1** (Hitachi Compute Blade 320)	x86	2011/10/28									
		x86_64		2011/10/28								
4	GVX-CC2N4G1X1** (Hitachi Compute Blade 2000)	x86	2011/10/28									
		x86_64		2011/10/28								
5	GGX-CC9P4G1X1** (Hitachi Compute Blade 320)	x86	2011/10/28									
		x86_64		2011/10/28								
6	SFP hot-swap feature *1)	x86	2011/10/28									
		x86_64		2011/10/28								
7	GVX-CC2M4G1X1** (Hitachi Compute Blade 2000)	x86	2011/10/28									
		x86_64		2011/10/28								
8	Adapter hot-plug feature *2)	x86	2011/10/28									
		x86_64		2011/10/28								
9	8Gbps Fibre Channel *3) (Hitachi Compute Blade 320)	x86	2011/10/28									
		x86_64		2011/10/28								
10	8Gbps Fibre Channel *3) (Hitachi Compute Blade 2000)	x86	2011/10/28									
		x86_64		2011/10/28								
11	Firmware Online Update feature *4)	x86	2011/10/28									
		x86_64		2011/10/28								
12	8Gbps Fibre Channel *3) (Hitachi Compute Blade 500)	x86			2012/04/27							
		x86_64				2012/04/27						
13	8Gbps Fibre Channel *3) (Hitachi Compute Rack Series)	x86			2012/04/27							
		x86_64				2012/04/27						
14	kernel-2.6.32-220.*.*.el6 (RHEL6.2)	x86			2012/03/30							
		x86_64				2012/03/30						
15	Target Scan feature / Driver Parameter (Supress logging/Filtering Login target) *5) / LPAR manager guest statistics information feature	x86					2012/04/27					
		x86_64					2012/04/27					
16	LPAR manager concurrent maintenance feature	x86						2012/08/31				
		x86_64						2012/08/31				
17	kernel-2.6.32-358.*.*.el6 (RHEL6.4)	x86							2013/07/10			
		x86_64							2013/07/10			
18	kernel-2.6.32-431.*.*.el6 (RHEL6.5)	x86							2014/04/23			
		x86_64							2014/04/23			
19	16Gbps Fibre Channel *3) (Hitachi Compute Blade 2000, Hitachi Compute Blade 500, Hitachi Compute Rack Series)	x86								2014/07/10		
		x86_64								2014/07/10		
20	8Gbps Fibre Channel *3) 16Gbps Fibre Channel *3) (Hitachi Compute Blade 2500)	x86								2014/09/11		
		x86_64								2014/09/11		
21	kernel-2.6.32-504.*.*.el6 (RHEL6.6)	x86									2015/01/22	
		x86_64									2015/01/22	
22	16Gbps Fibre Channel on LPAR manager	x86									2015/03/26	
		x86_64									2015/03/26	
23	HBA Core Dedicated Mode on LPAR manager *7)	x86										2015/06/25
		x86_64										2015/06/25

*1) The following model is not supported.
GVX-CC9FCCMB1R**/GGX-CC9MZFC1**
GGX-CC9M4G1X1**/GVX-CC2M4G1X1**
GVX-CC2M8G1X1**/GVX-CC2MBG2X1**
GV-CC2M8G1X1-Y/GV-CC2MBG2X1-Y
GGX-CC3M8G2X1**/GGX-CC3MBG2X2**
GG-CC3M8G2X1-Y/GG-CC3MBG2X2-Y
GQ-CC7841-Y/GQ-CC7842-Y

*2) The only following model is supported
GVX-CC2N4G1X1**
G*-CC2N8G**
G*-CC2D8G**
GV*-CC2N16*X1**
GV*-CC2D16*X1**

*3) For the 8Gbps/16Gbps Fibre Channel model, see chapter 3 for details.
*4) Include updating FLASH-ROM of the adapter function from the guest OS on LPAR.
*5) For details, see 'Hitachi Gigabit Fibre Channel Adapter User's Guide' (Utility software Edition)', "TargetScan", "Display or Set the Port Information"
*6) This driver does not support use of 16Gbps Fibre Channel on the LPAR manager.
*7) Update the firmware version of the adapter and the HVM version which support HBA Core Dedicated Mode on LPAR manager to use this feature.

Red Hat Enterprise Linux 7

#	Supported feature	Platform	Driver Version			
Driver for Red Hat Enterprise Linux 7						
			4.7.18.3006	4.7.18.3116		
	Release Date	x86_64	2014/09/11	2015/05/27		
1	kernel-3.10.0-123.*.*.el7 (RHEL7.0)	x86_64	2014/09/11			
2	kernel-3.10.0-229.*.*.el7 (RHEL7.1)	x86_64		2015/05/27		

VMware

#	Supported feature	Driver Version			
Driver for VMware ESX3.0.1					
		1.20.6.162	1.20.6.164		
1	ESX3.0.1	2007/03/13	2007/05/14		
Driver for VMware ESX3.0.2					
		1.22.6.164			
1	ESX3.0.2	2007/10/11			
Driver for VMware ESX3.5 U1					
		1.24.10.502			
1	ESX3.5 Update1	2008/09/11			
Driver for VMware ESX3.5 U2					
		1.24.10.502			
1	ESX3.5 Update2	2008/10/14			
Driver for VMware ESX3.5 U3					
		1.24.10.502			
1	ESX3.5 Update3	2009/02/20			
Driver for VMware ESX3.5 U4					
		1.24.10.504			
1	ESX3.5 Update4	2009/06/09			
2	GGX-CC9M4G1X1** (Hitachi Compute Blade 320)	2009/06/09			
3	GGX-CC9P4G1X1** (Hitachi Compute Blade 320)	2009/06/09			
4	GVX-CC2M4G1X1** (Hitachi Compute Blade 2000)	2009/11/13			
Driver for VMware ESX3.5 U5					
		1.24.10.504			
1	ESX3.5 Update5	2010/01/29			
Driver for VMware ESX4.0					
		4.26.13.1038	4.26.15.1078	4.26.15.1088	4.26.16.1138
1	ESX4.0	2009/10/07		2010/10/29	2011/06/30
2	ESX4.0 Update1	2009/12/29		2010/10/29	2011/06/30
3	8Gbps Fibre Channel *1) (Hitachi Compute Blade 2000, Hitachi Compute Blade 320)		2010/06/01	2010/10/29	2011/06/30
4	Firmware Online Update feature		2010/06/01	2010/10/29	2011/06/30
5	ESX4.0 Update2		2010/07/30	2010/10/29	2011/06/30
6	ESX4.0 Update3				2011/06/30
7	ESX4.0 Update4				2011/11/25
Driver for VMware ESX4.1					
			4.26.15.1078	4.26.15.1088	4.26.16.1138
1	ESX4.1		2010/08/06	2010/10/29	2011/06/30
2	ESX4.1 Update1			2011/03/11	2011/06/30
3	ESX4.1 Update2				2011/11/04
4	8Gbps Fibre Channel *1) (Hitachi Compute Blade 500)				2012/04/27
5	ESX4.1 Update3				2012/09/30

*1)For the 8Gbps Fibre Channel model, see chapter 3 for details.

#	Supported feature	Driver Version				
Driver for VMware ESXi 5.0						
		4.28.16.1148	4.28.16.1156	4.28.16.1158	4.28.18.2410	
1	ESXi 5.0	2011/08/22				
2	SFP hot-swap feature	2011/09/26				
3	8Gbps Fibre Channel *1) (Hitachi Compute Blade 500)	2012/04/27				
4	8Gbps Fibre Channel *1) (Hitachi Compute Rack Series)	2012/05/07				
5	ESXi 5.0 Update 1	2012/04/27				
6	Target Scan feature Driver Parameter (Supress logging/Filtering Login target)		2012/04/27			
7	HBA isolation feature (Hitachi Compute Blade 500)			2012/11/30		
8	ESXi 5.0 Update 2	2013/02/06				
9	ESXi 5.0 Update 3	2013/11/29				
10	16Gbps Fibre Channel *1) (Hitachi Compute Blade 2000, Hitachi Compute Blade 500, Hitachi Compute Rack Series)				2014/09/11	
Driver for VMware ESXi 5.1						
		4.28.16.1148	4.28.16.1156	4.28.16.1158	4.28.18.2410	4.28.18.2428
1	ESXi 5.1	2012/10/31				
2	HBA isolation feature (Hitachi Compute Blade 500)			2012/11/30		
3	ESXi 5.1 Update 1	2013/06/05				
4	ESXi 5.1 Update 2	2014/02/28				
5	16Gbps Fibre Channel *1) (Hitachi Compute Blade 2000, Hitachi Compute Blade 500, Hitachi Compute Rack Series)				2014/09/11	
6	8Gbps Fibre Channel *1) 16Gbps Fibre Channel *1) (Hitachi Compute Blade 2500)				2014/09/11	
7	ESXi 5.1 Update 3					2015/01/30
Driver for VMware ESXi 5.5						
		4.40.16.1172	4.40.18.2406			
1	ESXi 5.5	2013/11/06				
2	ESXi 5.5 Update 1	2014/04/24				
3	16Gbps Fibre Channel *1) (Hitachi Compute Blade 2000, Hitachi Compute Blade 500, Hitachi Compute Rack Series)		2014/07/10			
4	8Gbps Fibre Channel *1) 16Gbps Fibre Channel *1) (Hitachi Compute Blade 2500)		2014/09/11			
5	ESXi 5.5 Update 2		2014/10/22			
Driver for VMware ESXi 6.0						
		4.40.18.2428				
1	ESXi 6.0	2015/04/09				
Native Driver for VMware ESXi 6.0 *2)						
		10.42.19.96				
1	ESXi 6.0	2015/10/07				
2	16Gbps Fibre Channel *1) (Hitachi Compute Blade 2000, Hitachi Compute Blade 2500 Hitachi Compute Blade 500, Hitachi Compute Rack Series)	2015/10/07				
3	Secondary LUNID (Enables VVols)	2015/10/07				

*1) For the 8Gbps/16Gbps Fibre Channel model, see chapter 3 for details.

*2) The new driver model introduced by VMware.

On VMware ESXi 5.0 or later, CIM Provider and CIM Client are supported as a utility software.

The following table illustrates the driver version and the corresponding CIM Provider and CIM Client version. Combinations marked as ◎ should be used.

Client OS	driver / CIM Provider / CIM Client	ESXi5.0 (u1/u2/u3)						ESXi5.1 (u1/u2/u3)						ESXi5.5 (u1/u2)					
		4.28.16.1148 1.28.16-20	4.28.16.1156 1.28.16-30	4.28.16.1158 1.28.16-30	4.28.18.2410 1.28.18-64	4.28.18.2428 1.28.18-80	4.28.18.2446 1.28.18-80	4.28.16.1148 1.28.16-20	4.28.16.1156 1.28.16-30	4.28.16.1158 1.28.16-30	4.28.18.2410 1.28.18-64	4.28.18.2428 1.28.18-80	4.28.18.2446 1.28.18-80	4.40.16.1172 1.40.16-40	4.40.18.2406 1.40.18-62	4.40.18.2406 1.40.18-64	4.40.18.2428 1.40.18-82	4.40.18.2446 1.40.18-82	4.40.18.2446 1.40.19-100
vMA 5.0.0.x	1.28.16-20b	◎																	
	1.28.16-30a		◎	◎															
	1.29.18-60a				◎ (vMA5.0.0.1 or later)														
	1.29.18-80a					◎ (vMA5.0.0.1 or later)	◎ (vMA5.0.0.1 or later)												
vMA 5.1.0.x	1.28.16-20b							◎											
	1.28.16-30a																		
	1.29.16-30b								◎	◎									
	1.29.18-60a										◎								
	1.29.18-80a											◎	◎						
vMA 5.5.0.x	1.40.16-40a													◎					
	1.40.18-60a														◎	◎			
	1.40.18-80a																◎	◎	
	1.42.18-80d	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
	1.42.19-100a	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
vMA 6.0.0.x	1.42.18-80d	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	
	1.42.19-100a	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎

Client OS	driver / CIM Provider / CIM Client	ESXi6.0		
		4.40.18.2428 1.40.18-82	4.40.18.2446 1.40.18-82	10.42.19.96 4.40.18.2446 1.40.19-100
vMA 6.0.0.x	1.42.18-80d	◎	◎	
	1.42.19-100a	◎	◎	◎

3

Firmware support matrix

The following table from the next page shows the correspondence between the function and its supported version.
Note that all of your Hitachi Compute Blade system, Hitachi Gigabit Fibre Channel Adapter, the driver and the firmware may need to apply the function.

#	Supported feature	Firmware Version		
		10-11-12	10-11-13	10-11-14
	Release Date	2009/04/05	2010/04/05	2011/04/05
1	N+1 cold standby feature	2009/04/05		
2	N+M cold standby feature		2010/04/05	
3	32 FC ports			2011/04/05
4	Log operation menu feature			2011/04/05

The version and the release date of the Firmware

Support of new function

In the above example,
Function of number 2 is supported by the firmware version 10-11-13 or later.
Function of number 3 and 4 are supported by the firmware version 10-11-14 or later.
The day of publishing in the download site is indicated at the date.

Hitachi Compute Blade 1000

■ 2Gbps Fibre Channel (PCI card, 2port) (G*-CC62G1**)

#	Supported feature	Firmware Version				
		04-22-00	04-24-00	04-30-00	04-31-00	04-33-02
	Release Date	2005/11/28	2006/01/16	2006/04/17	2006/10/04	2008/08/28
1	N+1 cold standby feature	2005/11/28				
2	N+M cold standby feature		2006/01/16			
3	32 FC ports			2006/04/17		
4	Log operation menu feature			2006/04/17		
5	Over 256 LU number support				2006/10/04	
6	Parameter settings validation feature					2008/08/28
7	SCSI/LOGIN Retry feature					2008/08/28

■ 4Gbps Fibre Channel (PCI card, 1port) (G*-CC64G1**)
■ 4Gbps Fibre Channel (PCI card, 2port) (G*-CC64G2**)

#	Supported feature	Firmware Version											
		10-35-00	10-37-00	10-41-00	10-45-00	10-4D-00	20-06-00	20-07-20	20-07-60	20-07-76	20-07-89	20-07-8C	20-07-93
	Release Date	2005/11/28	2006/01/16	2006/04/17	2006/10/04	2007/02/07	2007/09/18	2008/02/22	2008/08/27	2009/05/26	2010/03/24	2010/06/04	2011/07/29
1	N+1 cold standby feature	2005/11/28											
2	N+M cold standby feature		2006/01/16										
3	Adaptor hot-plug feature			2006/04/17									
4	32 FC ports			2006/04/17									
5	Log operation menu feature			2006/04/17									
6	Over 256 LU number support				2006/10/04								
7	VMware (ESX3.0.1 and ESX3.0.2)					2007/02/07							
8	Shared FC on LPAR manager						2007/09/18						
9	Parameter settings validation feature							2008/02/22					
10	SCSI/LOGIN Retry feature							2008/02/22					
11	VMware (ESX 3.5 or later)								2008/08/27				
12	SFP hot-swap feature									2009/05/26			
13	Port isolation feature on BASIC mode									2009/05/26			
14	Firmware Online Update feature										2010/03/24		
15	Performance monitoring function of shared HBA											2010/06/04	
16	Port isolation feature on shared FC mode												2011/07/29

■I/O module Type3/Type4 FC-HBA 4Gbps (G*-CC9IOCOMB(R) **)

#	Supported feature	Firmware Version									
		11-35-00	11-38-00	11-41-00	11-45-00	21-06-00	21-07-20	21-07-76	21-07-89	21-07-8C	21-07-93
	Release Date	2005/11/28	2006/01/31	2006/04/17	2006/10/04	2007/09/18	2008/02/22	2009/05/26	2010/03/24	2010/06/04	2011/07/29
1	N+1 cold standby feature	2005/11/28									
2	N+M cold standby feature		2006/01/31								
3	32 FC ports			2006/04/17							
4	Log operation menu feature			2006/04/17							
5	Over 256 LU number support				2006/10/04						
6	Shared FC on LPAR manager					2007/09/18					
7	Parameter settings validation feature						2008/02/22				
8	SCSI/LOGIN Retry feature						2008/02/22				
9	SFP hot-swap feature							2009/05/26			
10	Port isolation feature on BASIC mode							2009/05/26			
11	Firmware Online Update feature								2010/03/24		
12	Performance monitoring function of shared HBA									2010/06/04	
13	Port isolation feature on shared FC mode										2011/07/29

■FCSW module FC-HBA 4Gbps (G*-CC9FCCMB1(R) **)

#	Supported feature	Firmware Version									
		12-35-00	12-38-00	12-41-00	12-45-00	22-06-00	22-07-20	22-07-76	22-07-89	22-07-8C	22-07-93
	Release Date	2005/11/28	2006/01/31	2006/04/17	2006/10/04	2007/09/18	2008/02/22	2009/05/26	2010/03/24	2010/06/04	2011/07/29
1	N+1 cold standby feature	2005/11/28									
2	N+M cold standby feature		2006/01/31								
3	32 FC ports			2006/04/17							
4	Log operation menu feature			2006/04/17							
5	Over 256 LU number support				2006/10/04						
6	Shared FC on LPAR manager					2007/09/18					
7	Parameter settings validation feature						2008/02/22				
8	SCSI/LOGIN Retry feature						2008/02/22				
9	Port isolation feature on BASIC mode							2009/05/26			
10	Firmware Online Update feature								2010/03/24		
11	Performance monitoring function of shared HBA									2010/06/04	
12	Port isolation feature on shared FC mode										2011/07/29

Hitachi Compute Blade 320

■ 4Gbps Fibre Channel (Expansion card, 2port) (G*-CC9MZFC1**/ G*-CC9M4G1*1**)

#	Supported feature	Firmware Version							
		13-45-00	13-4D-00	23-07-10	23-07-60	23-07-76	23-07-89	23-07-8C	23-07-90
	Release Date	2006/10/04	2007/02/07	2008/02/22	2008/08/27	2009/05/26	2010/03/24	2010/06/04	2011/05/26
1	N+M cold standby feature	2006/10/04							
2	32 FC ports	2006/10/04							
3	Log operation menu feature	2006/10/04							
4	Over 256 LU number support	2006/10/04							
5	VMware (ESX3.0.1 and ESX3.0.2)		2007/02/07						
6	Shared FC on LPAR manager			2008/02/22					
7	Parameter settings validation feature				2008/08/27				
8	SCSI/LOGIN Retry feature				2008/08/27				
9	VMware (ESX 3.5 or later)				2008/08/27				
10	Port isolation feature on BASIC mode					2009/05/26			
11	Firmware Online Update feature						2010/03/24		
12	Performance monitoring function of shared HBA							2010/06/04	
13	Support for Windows PE PXE boot function								2011/05/26
14	Port isolation feature on shared FC mode								2011/07/29

■4Gbps Fibre Channel (PCI card, 2port) (G*-CC9P4G1*1**)

#	Supported feature	Firmware Version			
		26-08-07	26-08-10	26-08-12	26-08-1B
	Release Date	2009/05/26	2010/03/24	2010/06/04	2010/07/29
1	N+M cold standby feature	2009/05/26			
2	32 FC ports	2009/05/26			
3	Log operation menu feature	2009/05/26			
4	Over 256 LU number support	2009/05/26			
5	VMware (ESX3.0.1 and ESX3.0.2)	2009/05/26			
6	Parameter settings validation feature	2009/05/26			
7	SCSI/LOGIN Retry feature	2009/05/26			
8	VMware (ESX 3.5 or later)	2009/05/26			
9	EFI driver is mounted on the extended ROM	2009/05/26			
10	SFP hot-swap feature	2013/08/09			
11	Firmware Online Update feature		2010/03/24		
12	64 FC ports		2010/03/24		
13	FLASH-ROM settings redundancy feature		2010/03/24		
14	Performance monitoring function of shared HBA			2010/06/04	
15	Over 2TB LU support				2010/07/29
16	Detect only Enabled port feature				2010/07/29
17	Support for Windows PE PXE boot function				2010/07/29

■8Gbps Fibre Channel (PCI card, 2port) (G*-CC9P8G2*1**)

#	Supported feature	Firmware Version			
		30-04-39	30-04-54	30-04-6F	30-04-7D
	Release Date	2010/04/23	2011/07/29	2013/06/19	2014/04/25
1	N+M cold standby feature	2010/04/23			
2	32 FC ports	2010/04/23			
3	Log operation menu feature	2010/04/23			
4	Over 256 LU number support	2010/04/23			
5	VMware (ESX3.0.1 and ESX3.0.2)	2010/04/23			
6	Parameter settings validation feature	2010/04/23			
7	SCSI/LOGIN Retry feature	2010/04/23			
8	VMware (ESX 3.5 or later)	2010/04/23			
9	EFI driver is mounted on the extended ROM	2010/04/23			
10	Firmware Online Update feature	2010/04/23			
11	64 FC ports	2010/04/23			
12	FLASH-ROM settings redundancy feature	2010/04/23			
13	Performance monitoring function of shared HBA	2010/04/23			
14	SFP hot-swap feature	2013/08/09			
15	Over 2TB LU support		2011/07/29		
16	Detect only Enabled port feature		2011/07/29		
17	Support for Windows PE PXE boot function		2011/07/29		
18	Virtual fibre channel feature in Windows Server 2012 with Hyper-V roll installed			2013/06/19	

Hitachi Compute Blade 2000

■4Gbps Fibre Channel (Expansion card, 2port) (G*-CC2M4G1*1**)

#	Supported feature	Firmware Version			
		23-08-07	-	-	-
		26-08-07	26-08-10	26-08-12	26-08-1B
	Release Date	2009/05/26 / 2009/05/26	- / 2010/03/24	- / 2010/06/04	- / 2011/07/29
1	N+M cold standby feature	2009/05/26			
2	32 FC ports	2009/05/26			
3	Log operation menu feature	2009/05/26			
4	Over 256 LU number support	2009/05/26			
5	VMware (ESX3.0.1 and ESX3.0.2)	2009/05/26			
6	Shared FC on LPAR manager	2009/05/26			
7	Parameter settings validation feature	2009/05/26			
8	SCSI/LOGIN Retry feature	2009/05/26			
9	VMware (ESX 3.5 or later)	2009/05/26			
10	Port isolation feature on BASIC mode	2009/05/26			
11	EFI driver is mounted on the extended ROM	2009/05/26			
12	Hitachi Compute Blade 2000 Backup and restore the boot settings feature	2009/05/26			
13	Firmware Online Update feature		2010/03/24		
14	64 FC ports		2010/03/24		
15	FLASH-ROM settings redundancy feature		2010/03/24		
16	Performance monitoring function of shared HBA			2010/06/04	
17	Over 2TB LU support				2011/07/29
18	Detect only Enabled port feature				2011/07/29
19	Support for Windows PE PXE boot function				2011/07/29
20	Port isolation feature on shared FC mode				2011/07/29

■4Gbps Fibre Channel (PCI card, 2port) (G*-CC2N4G1*1**)

#	Supported feature	Firmware Version			
		26-08-07	26-08-10	26-08-12	26-08-1B
	Release Date	2009/05/26	2010/03/24	2010/06/04	2011/07/29
1	N+M cold standby feature	2009/05/26			
2	Adaptor hot-plug feature	2009/05/26			
3	32 FC ports	2009/05/26			
4	Log operation menu feature	2009/05/26			
5	Over 256 LU number support	2009/05/26			
6	VMware (ESX3.0.1 and ESX3.0.2)	2009/05/26			
7	Shared FC on LPAR manager	2009/05/26			
8	Parameter settings validation feature	2009/05/26			
9	SCSI/LOGIN Retry feature	2009/05/26			
10	VMware (ESX 3.5 or later)	2009/05/26			
11	SFP hot-swap feature	2009/05/26			
12	Port isolation feature on BASIC mode	2009/05/26			
13	EFI driver is mounted on the extended ROM	2009/05/26			
14	Hitachi Compute Blade 2000 Backup and restore the boot settings feature	2009/05/26			
15	Firmware Online Update feature		2010/03/24		
16	64 FC ports		2010/03/24		
17	FLASH-ROM settings redundancy feature		2010/03/24		
18	Performance monitoring function of shared HBA			2010/06/04	
19	Over 2TB LU support				2011/07/29
20	Detect only Enabled port feature				2011/07/29
21	Support for Windows PE PXE boot function				2011/07/29
22	Port isolation feature on shared FC mode				2011/07/29

■8Gbps Fibre Channel (Expansion card, 2port) (G*-CC2M8G2*1**)
■8Gbps Fibre Channel (Expansion card, 4port) (G*-CC2M8G1*1**)

#	Supported feature	Firmware Version			
		30-04-39	30-04-54	30-04-6F	30-04-7D
	Release Date	2010/04/23	2011/07/29	2013/06/19	2014/04/25
1	N+M cold standby feature	2010/04/23			
2	32 FC ports	2010/04/23			
3	Log operation menu feature	2010/04/23			
4	Over 256 LU number support	2010/04/23			
5	VMware (ESX3.0.1 and ESX3.0.2)	2010/04/23			
6	Shared FC on LPAR manager	2010/04/23			
7	Parameter settings validation feature	2010/04/23			
8	SCSI/LOGIN Retry feature	2010/04/23			
9	VMware (ESX 3.5 or later)	2010/04/23			
10	Port isolation feature on BASIC mode	2010/04/23			
11	EFI driver is mounted on the extended ROM	2010/04/23			
12	Hitachi Compute Blade 2000 Backup and restore the boot settings feature	2010/04/23			
13	Firmware Online Update feature	2010/04/23			
14	64 FC ports	2010/04/23			
15	FLASH-ROM settings redundancy feature	2010/04/23			
16	Performance monitoring function of shared HBA	2010/04/23			
17	Over 2TB LU support		2011/07/29		
18	Detect only Enabled port feature		2011/07/29		
19	Support for Windows PE PXE boot function		2011/07/29		
20	Port isolation feature on shared FC mode		2011/07/29		
21	Virtual fibre channel feature in Windows Server 2012 with Hyper-V roll installed			2013/06/19	

■8Gbps Fibre Channel (PCI card, 1port) (G*-CC2N8G1*1**)
■8Gbps Fibre Channel (PCI card, 2port) (G*-CC2N8G2*1**)
■8Gbps Fibre Channel (1port) (G*-CC2D8G1*1**) [I/O slot expansion unit]
■8Gbps Fibre Channel (2port) (G*-CC2D8G2*1**) [I/O slot expansion unit]

#	Supported feature	Firmware Version			
		30-04-39	30-04-54	30-04-6F	30-04-7D
	Release Date	2010/04/23	2011/07/29	2013/06/19	2014/04/25
1	N+M cold standby feature	2010/04/23			
2	Adaptor hot-plug feature	2010/04/23			
3	32 FC ports	2010/04/23			
4	Log operation menu feature	2010/04/23			
5	Over 256 LU number support	2010/04/23			
6	VMware (ESX3.0.1 and ESX3.0.2)	2010/04/23			
7	Shared FC on LPAR manager	2010/04/23			
8	Parameter settings validation feature	2010/04/23			
9	SCSI/LOGIN Retry feature	2010/04/23			
10	VMware (ESX 3.5 or later)	2010/04/23			
11	SFP hot-swap feature	2010/04/23			
12	Port isolation feature on BASIC mode	2010/04/23			
13	EFI driver is mounted on the extended ROM	2010/04/23			
14	Hitachi Compute Blade 2000 Backup and restore the boot settings feature	2010/04/23			
15	Firmware Online Update feature	2010/04/23			
16	64 FC ports	2010/04/23			
17	FLASH-ROM settings redundancy feature	2010/04/23			
18	Shared FC on LPAR manager without FC SW	2010/04/23			
19	Performance monitoring function of shared HBA	2010/04/23			
20	Over 2TB LU support		2011/07/29		
21	Detect only Enabled port feature		2011/07/29		
22	Support for Windows PE PXE boot function		2011/07/29		
23	Port isolation feature on shared FC mode		2011/07/29		
24	Virtual fibre channel feature in Windows Server 2012 with Hyper-V roll installed			2013/06/19	

■16Gbps Fibre Channel (PCI card, 1port) (G*-CC2N161X1**)
■16Gbps Fibre Channel (PCI card, 2port) (G*-CC2N162X1**)
■16Gbps Fibre Channel (PCI card, 1port) (G*-CC2D161X1**) [I/O slot expansion unit]
■16Gbps Fibre Channel (PCI card, 2port) (G*-CC2D162X1**) [I/O slot expansion unit]

#	Supported feature	Firmware Version	
		40-01-2A	
Release Date		2014/07/10	
1	16Gbps Fibre Channel new release *1)	2014/07/10	

*1 This Firmware supports the feature as the same feature of the version ″30-04-7D″
　 firmware which supports 8Gbps Fibre Channel adapter.
　 This firmware does not support 16Gbps Fibre Channel under the LPAR manager.

Hitachi Compute Blade 500

■8Gbps Fibre Channel (Expansion card, 2port) (GGX-CC3M8G2X1**/GG-CC3M8G2X1-Y)
■8Gbps Fibre Channel (Expansion card, 4port) (GGX-CC3M8G2X2**/GG-CC3M8G2X2-Y)

#	Supported feature	Firmware Version		
		39-04-5A	39-04-70	39-04-7F
	Release Date	2012/04/30	2013/06/19	2014/04/25
1	N+M cold standby feature	2012/04/30		
2	Log operation menu feature	2012/04/30		
3	Over 256 LU number support	2012/04/30		
4	Shared FC on LPAR manager	2012/04/30		
5	Parameter settings validation feature	2012/04/30		
6	SCSI/LOGIN Retry feature	2012/04/30		
7	VMware support	2012/04/30		
8	EFI driver is mounted on the extended ROM	2012/04/30		
9	Backup and restore the boot settings feature	2012/04/30		
10	Firmware Online Update feature	2012/04/30		
11	64 FC ports	2012/04/30		
12	FLASH-ROM settings redundancy feature	2012/04/30		
13	Performance monitoring function of shared HBA	2012/04/30		
14	Over 2TB LU support	2012/04/30		
15	Detect only Enabled port feature	2012/04/30		
16	Support for Windows PE PXE boot function	2012/04/30		
17	Port isolation feature	2012/04/30		
18	Virtual fibre channel feature in Windows Server 2012 with Hyper-V roll installed		2013/06/19	

■16Gbps Fibre Channel (Expansion card, 2port) (GGX-CC3M162X1**/GG-CC3M162X1-Y)
■16Gbps Fibre Channel (Expansion card, 4port) (GGX-CC3M162X2**/GG-CC3M162X2-Y)

#	Supported feature	Firmware Version		
		40-01-2A	40-03-07	40-03-0B
	Release Date	2014/07/10	2015/03/26	2015/06/25
1	16Gbps Fibre Channel new release *1)	2014/07/10		
2	16Gbps Fibre Channel on LPAR manager		2015/03/26	
3	HBA Core Dedicated Mode on LPAR manager			2015/06/25

*1 This Firmware supports the feature as the same feature of the version ″39-04-7F″
    firmware which supports 8Gbps Fibre Channel adapter.
    This firmware does not support 16Gbps Fibre Channel under the LPAR manager.

Hitachi Compute Blade 2500

■8Gbps Fibre Channel (PCI card, 2port) (GG-CC4N8G2X1-Y)

#	Supported feature	Firmware Version	
		30-04-86	
	Release Date	2014/09/11	
1	CB2500 new release *1)	2014/09/11	

*1 This Firmware supports the feature as the same feature of the version "30-04-7D"
   firmware which supports CB2000 8Gbps Fibre Channel adapter.

■16Gbps Fibre Channel (PCI card, 2port) (GG-CC4N162X1-Y)

#	Supported feature	Firmware Version		
		40-01-2D	40-03-07	40-03-0B
	Release Date	2014/09/11	2015/03/26	2015/06/25
1	CB2500 new release *1)	2014/09/11		
2	16Gbps Fibre Channel on LPAR manager		2015/03/26	
3	HBA Core Dedicated Mode on LPAR manager			2015/06/25

*1 This Firmware supports the feature as the same feature of the version "40-01-2A"
   firmware which supports CB2000 16Gbps Fibre Channel adapter.
   This firmware does not support 16Gbps Fibre Channel under the LPAR manager.

Hitachi Compute Rack Series

■8Gbps Fibre Channel (PCI card, 2port, Full Height) (GQ-CC7841-Y)
■8Gbps Fibre Channel (PCI card, 2port, Low Profile) (GQ-CC7842-Y)

#	Supported feature	Firmware Version			
		01-38-04-56	00-38-04-68	00-38-04-6F	00-38-04-7E
	Release Date	2012/05/07	2012/10/31	2013/06/19	2014/04/25
1	Log operation menu feature	2012/05/07			
2	Over 256 LU number support	2012/05/07			
3	Parameter settings validation feature	2012/05/07			
4	SCSI/LOGIN Retry feature	2012/05/07			
5	VMware support	2012/05/07			
6	SFP hot-swap feature	2012/05/07			
7	Firmware Online Update feature	2012/05/07			
8	64 FC ports	2012/05/07			
9	FLASH-ROM settings redundancy feature	2012/05/07			
10	Performance monitoring function of shared HBA	2012/05/07			
11	Over 2TB LU support	2012/05/07			
12	Detect only Enabled port feature	2012/05/07			
13	Support for Windows PE PXE boot function	2012/05/07			
14	Port isolation feature	2012/05/07			
15	Virtual fibre channel feature in Windows Server 2012 with Hyper-V roll installed			2013/06/19	

*1) As for the firmware version, lower 3 bytes is valid value. When a value is big by the compare of the lower 3 bytes, it is new firmware.

■16Gbps Fibre Channel (PCI card, 2port, Full Height) (GQ-CC7F21-Y)

#	Supported feature	Firmware Version	
		40-01-28	
	Release Date	2014/07/10	
1	16Gbps Fibre Channel new release *1)	2014/07/10	

*1 This Firmware supports the feature as the same feature of the version ″00-38-04-7E″

firmware which supports 8Gbps Fibre Channel adapter.

Notes on the firmware online update feature

The firmware online update feature is applicable only if your system meets the following conditions.
For details of the firmware online update feature, see 'Update firmware of Hitachi Gigabit Fibre Channel Adapter' of 'Hitachi Gigabit Fibre Channel Adapter User's Guide' 'Linux/VMware driver edition' or 'Windows edition'.

Requirement of the server hardware and LPAR manager (logical partitioning manager) firmware

Target System	Hitachi Gigabit Fibre Channel Adapter Product ID	BASIC Mode (*1)	LPAR Mode			
			Dedicated Mode (*1)	Shared Mode (*1) (*2) (*3)	LPAR manager firmware version	
					Standard Blade	High-performance Blade
Hitachi Compute Blade 1000	G*-CC62G1**	×	–	–		
	G*-CC64G1**	●	×	×		
	G*-CC64G2**	●	×	×		
	G*-CC9FCCMB1(R)**	●	×	×		
	G*-CC9IOCOMB(R)**	●	×	×		
Hitachi Compute Blade 320	G*-CC9MZFC1**	●	●	○	17-4x	
	G*-CC9M4G1*1**	●	●	○	17-4x	
	G*-CC9P4G1*1**	●	–	–		
	G*-CC9P8G2*1**	●	–	–		
Hitachi Compute Blade 2000	G*-CC2M4G1*1**	●	●	○	58-1x	78-1x
	G*-CC2N4G1*1**	●	●	○	58-1x	78-1x
	G*-CC2M8G2*1**	●	●	○	58-1x	78-1x
	G*-CC2M8G1*1**	●	●	○	58-1x	78-1x
	G*-CC2N8G1*1**	●	●	○	58-1x	78-1x
	G*-CC2N8G2*1**	●	●	○	58-1x	78-1x
	G*-CC2D8G1*1**	●	●	○	58-1x	78-1x
	G*-CC2D8G2*1**	●	●	○	58-1x	78-1x
	G*-CC2N161X1**	●	–	–		
	G*-CC2N162X1**	●	–	–		
	G*-CC2D161X1**	●	–	–		
	G*-CC2D162X1**	●	–	–		

Hitachi Compute Blade 500	G*-CC3M8G2X1**	●	●	●	all
	G*-CC3M8G2X2**	●	●	●	all
	G*-CC3M162X1**	●	●	○	02-1x
	G*-CC3M162X2**	●	●	○	02-1x
Hitachi Compute Blade 2500	GG-CC4N8G2X1-Y	●	●	●	all
	GG-CC4N162X1-Y	●	●	○	02-1x
Hitachi Compute Rack Series	GQ-CC7841-Y	●			
	GQ-CC7842-Y	●			
	GQ-CC7F21-Y	●			

(*1) The meaning of symbols is as follows.

#	column	meaning
1	●	The firmware online update feature is applicable if all the following conditions are satisfied. - Your driver supports Firmware online update feature. See chapter 2 'Driver support matrix' for details. - Your firmware supports Firmware online update feature. See chapter 3 'Firmware support matrix' for details.
2	○	The firmware online update feature is applicable if all the following conditions are satisfied. - Your driver supports Firmware online update feature. See chapter 2 'Driver support matrix' for details. - Your firmware supports Firmware online update feature. See chapter 3 'Firmware support matrix' for details. - LPAR manager firmware version is equal to or more than the listed version in column 'LPAR manager firmware version'.
3	×	The firmware online update feature is not supported.
4	−	LPAR manager does not support Hitachi Gigabit Fibre Channel Adapter.

(*2) When the column 'Shared Mode' shows '○' and your driver and/or firmware do not support the firmware online update feature, even updating FLASH-ROM of the adapter running on the shared mode from the guest OS on LPAR is not allowed. You have to switch LPAR to the dedicated mode to update FLASH-ROM.

(*3) When the column 'Shared Mode' shows '×', updating FLASH-ROM of the adapter from the guest OS on LPAR is not allowed. You have to switch LPAR to the basic mode to update FLASH-ROM.

Requirement of the firmware version

In addition to requirements described in 'Requirement of the server hardware and LPAR manager (logical partitioning manager) firmware', the adapter firmware version is required to meet the following conditions.

(1) Both current and new firmware version support the firmware online update feature. See chapter 3 'Firmware support matrix' for details.

(2) Both current and new firmware version belong to the same version group described in the following tables.

■Hitachi Compute Blade 1000
　FC-HBA 4Gbps (G*-CC64G1**/ G*-CC64G2**)
　FCSW module FC-HBA 4Gbps (G*-CC9FCCMB1(R) **)
　I/O module Type3/Type4 FC-HBA 4Gbps (G*-CC9IOCOMB(R) **)

Firmware version	Firmware version group
2x-07-89	4-1a
2x-07-8C	4-1a
2x-07-8D	4-1a
2x-07-93	4-2a

■Hitachi Compute Blade 320
　4Gbps Fibre Channel (Expansion card, 2port) (G*-CC9MZFC1**/ G*-CC9M4G1*1**)

Firmware version	Firmware version group
2x-07-89	4-1a
2x-07-8C	4-1a
2x-07-8D	4-1a
2x-07-90	4-2a
2x-07-9B	4-5a

4Gbps Fibre Channel (PCI card, 2port) (G*-CC9P4G1*1**)

Firmware version	Firmware version group
26-08-10	4-1a
26-08-12	4-1a
26-08-13	4-1a
26-08-1B	4-2a
26-08-1F	4-2a
26-08-25	4-5a

8Gbps Fibre Channel (PCI card, 2port) (G*-CC9P8G2*1**)

Firmware version	Firmware version group
30-04-39	8e-3a
30-04-42	8e-3a
30-04-4D	8e-4a
30-04-54	8e-5a
30-04-56	8e-5a
30-04-5D	8e-5a
30-04-68	8e-9a
30-04-6F	8e-ba
30-04-71	8e-ba
30-04-7D	8e-ca
30-04-80	8e-ca
30-04-86	8e-ca
30-05-08	8e-ea
30-05-0C	8e-ea

■Hitachi Compute Blade 2000
4Gbps Fibre Channel (Expansion card, 2port) (G*-CC2M4G1*1**)
4Gbps Fibre Channel (PCI card, 2port) (G*-CC2N4G1*1**)

Firmware version	Firmware version group
26-08-10	4-1a
26-08-12	4-1a
26-08-13	4-1a
26-08-1B	4-2a
26-08-1F	4-2a
26-08-25	4-5a

8Gbps Fibre Channel (Expansion card, 2port) (G*-CC2M8G2*1**)
8Gbps Fibre Channel (Expansion card, 4port) (G*-CC2M8G1*1**)
8Gbps Fibre Channel (PCI card, 1port) (G*-CC2N8G1*1**)
8Gbps Fibre Channel (PCI card, 2port) (G*-CC2N8G2*1**)
8Gbps Fibre Channel (PCI card, 1port) (G*-CC2D8G1*1**) [I/O slot expansion unit]
8Gbps Fibre Channel (PCI card, 2port) (G*-CC2D8G2*1**) [I/O slot expansion unit]

Firmware version	Firmware version group
30-04-39	8e-3a
30-04-42	8e-3a
30-04-4D	8e-4a
30-04-54	8e-5a
30-04-56	8e-5a
30-04-5D	8e-5a
30-04-68	8e-9a
30-04-6F	8e-ba
30-04-71	8e-ba
30-04-7D	8e-ca
30-04-80	8e-ca
30-04-86	8e-ca
30-05-08	8e-ea
30-05-0C	8e-ea

16Gbps Fibre Channel (PCI card, 1port) (G*-CC2N161X1**)
16Gbps Fibre Channel (PCI card, 2port) (G*-CC2N162X1**)
16Gbps Fibre Channel (PCI card, 1port) (G*-CC2D161X1**) [I/O slot expansion unit]
16Gbps Fibre Channel (PCI card, 2port) (G*-CC2D162X1**) [I/O slot expansion unit]

Firmware version	Firmware version group
40-01-2A	16e-0f-c
40-01-2D	16e-10-c
40-02-00	16e-10-c
40-03-07	16e-15-c
40-03-0B	16e-16-c
40-03-0C	16e-16-c

■Hitachi Compute Blade 500
　8Gbps Fibre Channel (Expansion card, 2port) (GGX-CC3M8G2X1**/GG-CC3M8G2X1-Y)
　8Gbps Fibre Channel (Expansion card, 4port) (GGX-CC3M8G2X2**/GG-CC3M8G2X2-Y)

Firmware version	Firmware version group
39-04-5A	8e-5b
39-04-63	8e-7b
39-04-67	8e-9b
39-04-70	8e-bb
39-04-72	8e-bb
39-04-7F	8e-cb
39-04-82	8e-cb
39-04-88	8e-cb
39-05-0A	8e-eb
39-05-0E	8e-eb

　16Gbps Fibre Channel (Expansion card, 2port) (GGX-CC3M162X1**/GG-CC3M162X1-Y)
　16Gbps Fibre Channel (Expansion card, 4port) (GGX-CC3M162X2**/GG-CC3M162X2-Y)

Firmware version	Firmware version group
40-01-2A	16e-0f-c
40-01-2D	16e-10-c
40-02-00	16e-10-c
40-03-07	16e-15-c
40-03-0B	16e-16-c
40-03-0C	16e-16-c

■Hitachi Compute Blade 2500
　8Gbps Fibre Channel (PCI card, 2port) (GG-CC4N8G2X1-Y)

Firmware version	Firmware version group
30-04-86	8e-ca
30-05-08	8e-ea
30-05-0C	8e-ea

　16Gbps Fibre Channel (PCI card, 2port) (GG-CC4N162X1-Y)

Firmware version	Firmware version group
40-01-2D	16e-10-c
40-02-00	16e-10-c
40-03-07	16e-15-c
40-03-0B	16e-16-c
40-03-0C	16e-16-c

■Hitachi Compute Rack Series
8Gbps Fibre Channel (PCI card, 2port, Full Height) (GQ-CC7841-Y)
8Gbps Fibre Channel (PCI card, 2port, Low Profile) (GQ-CC7842-Y)

Firmware version	Firmware version group
01-38-04-56	8e-5b
00-38-04-68	8e-9b
00-38-04-6F	8e-bb
00-38-04-71	8e-bb
00-38-04-7E	8e-cb
00-38-04-81	8e-cb
00-38-04-87	8e-cb
00-38-05-09	8e-eb
00-38-05-0D	8e-eb

As for the firmware version, lower 3 bytes is valid value. When a value is big by the compare of the lower 3 bytes, it is new firmware.

16Gbps Fibre Channel (PCI card, 2port, Full Height) (GQ-CC7F21-Y)

Firmware version	Firmware version group
40-01-28	16e-0f-b
40-01-2D	16e-10-c
40-02-00	16e-10-c
40-03-07	16e-15-c
40-03-0B	16e-16-c
40-03-0C	16e-16-c

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Correspondence between Hitachi Gigabit Fibre Channel Adapter and its model name

The table below describes the correspondence bewteen Hitachi Gigabit Fibre Channel Adapter, its product name and the model name in Hitachi Compute Blade series.

#	Target System	Description	Product ID	Specification	Model Name
1	Hitachi Compute Blade 1000	FC Adapter	GVX-CC62G1**	2Gb, 1ch, PCI-X	HFC0201
2			GVX-CC64G1**	4Gb, 1ch, PCI-X	HFC0401
3			GVX-CC64G2**	4Gb, 2ch, PCI-X	HFC0402
4		Combo Card for FCSW Module	GVX-CC9FCCMB1(R)**	FC-HBA 1port, Gigabit Ethernet 1port	HFC0401-C
5		Combo Card for I/O Module T3	GVX-CC9IOCOMB(R)**	4Gb 2ch+GbE 2ch PCI-Express	HFC0402-C
6	Hitachi Compute Blade 320	FC Expansion card	GGX-CC9MZFC1**	4Gbps×2	HFC0402-M
7			GGX-CC9M4G1X1** GG-CC9M4G1X1-Y	4Gbps×2	HFC0402-M
8		PCI card	GGX-CC9P4G1X1**	2ports 4Gb FC	HFC0402-E
9			GGX-CC9P8G2X1**	2ports 8Gb FC	HFCE0802

#	Target System	Description	Product ID	Specification	Model Name
10	Hitachi Compute Blade 2000	Fibre Channel Board	GVX-CC2N4G1X1**	4Gbps Fibre Channel×2 (PCI card)	HFC0402-E
11			GVX-CC2N8G1X1** GV-CC2N8G1X1-Y	8Gbps Fibre Channel×1 (PCI card)	HFCE0801
12			GVX-CC2N8G2X1** GV-CC2N8G2X1-Y	8Gbps Fibre Channel×2 (PCI card)	HFCE0802
13			GVX-CC2N161X1** GV-CC2N161X1-Y	16Gbps Fibre Channel×1 (PCI card)	HFCE1601
14			GVX-CC2N162X1** GV-CC2N162X1-Y	16Gbps Fibre Channel×2 (PCI card)	HFCE1602
15		FC Expansion Card	GVX-CC2M4G1X1**	4Gbps Fibre Channel×2 (Expansion card)	HFC0402-M
16			GVX-CC2M8G1X1** GV-CC2M8G1X1-Y	8Gbps Fibre Channel×2 (Expansion card)	HFCE0802-M
17			GVX-CC2M8G2X1** GV-CC2M8G2X1-Y	8Gbps Fibre Channel×4 (Expansion card)	HFCE0804-M
18		I/O Slot Extension Module	GVX-CC2D8G1X1** GV-CC2D8G1X1-Y	8Gbps Fibre Channel×1 (PCI card)	HFCE0801
19			GVX-CC2D8G2X1** GV-CC2D8G2X1-Y	8Gbps Fibre Channel×2 (PCI card)	HFCE0802
20			GVX-CC2D161X1** GV-CC2D161X1-Y	16Gbps Fibre Channel×1 (PCI card)	HFCE1601
21			GVX-CC2D162X1** GV-CC2D162X1-Y	16Gbps Fibre Channel×2 (PCI card)	HFCE1602
22	Hitachi Compute Blade 500	FC Expansion Card	GGX-CC3M8G2X1** GG-CC3M8G2X1-Y	8Gbps Fibre Channel×2 (Expansion card)	HFCE0802-M
23			GGX-CC3M8G2X2** GG-CC3M8G2X2-Y	8Gbps Fibre Channel×4 (Expansion card)	HFCE0804-M
24			GGX-CC3M162X1** GG-CC3M162X1-Y	16Gbps Fibre Channel×2 (Expansion card)	HFCE1602-M
25			GGX-CC3M162X2** GG-CC3M162X2-Y	16Gbps Fibre Channel×4 (Expansion card)	HFCE1604-M
26	Hitachi Compute Blade 2500	Fibre Channel Board	GG-CC4N8G2X1-Y	8Gbps Fibre Channel×2 (PCI card)	HFCE0802
27			GG-CC4N162X1-Y	16Gbps Fibre Channel×2 (PCI card)	HFCE1602
28	Hitachi Compute Rack Series	Fibre Channel Board	GQ-CC7841-Y	8Gbps Fibre Channel×2 (PCI card, Full Height)	HFCE0802
29			GQ-CC7842-Y	8Gbps Fibre Channel×2 (PCI card, Low Profile)	HFCE0802
30			GQ-CC7F21-Y	16Gbps Fibre Channel×2 (PCI card, Full Height)	HFCE1602

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