RAID Upgrade Kit

User Guide

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Table of Contents

Preface 3

NOTES ON USE - Always read the Notes - 4

Symbols Used in This Manual and Warning Labels 5

Safety Notes 6

Notes on Use -for correct operation of Upgrade Kit- 9

This Manual 9

In the Package 10

Transportation 10

Disposal 10

Third Party Transfer 10

Chapter 1 Overview 11

1. Characteristics of the Upgrade Kit 11
2. Specification 11
3. Maintenance Service 11
4. Checking Contents in Package 12
5. Names and Functions of Sections 13

Chapter 2 Installing and removing the Upgrade Kit 14

1. Installation Procedure 14
2. Removal Procedure 16

Preface

Congratulations for your purchase of the RAID Upgrade Kit (called Upgrade Kit hereafter).

This guide describes how to install and use the Upgrade Kit correctly and safely. Read the guide thoroughly before handling it, and refer to this manual when you want to know how to use it or should some malfunction occur.

For the Internal RAID Controller to which the Upgrade Kit is connected, refer to the User’s Guide coming with the server or to the RAID controller manua.

Read the "Notes on Use" carefully before handling the Upgrade Kit.

Keep this User Guide handy for quick reference.
Be sure to read this section carefully.

⚠ NOTES ON USE - Always read the Notes -

The following includes information necessary for proper and safe operation of the product.

SAFETY INDICATIONS

In the User Guide, "WARNING" or "CAUTION" is used to indicate a degree of danger. These terms are defined as follows:

⚠ WARNING Indicates a hazard that may result in death or serious personal injury.

⚠ CAUTION Indicates a hazard that may cause minor personal injury, including burns, or property damage.

Precautions against hazards are presented with the following symbols. The individual symbols are defined as follows:

△	Attention	This symbol indicates a hazard. An image in the symbol illustrates the hazard type.	(Example) Precaution against electric shock
⃠	Prohibited Action	This symbol indicates prohibited actions. An image in the symbol illustrates a particular prohibited action.	(Example) Prohibition of disassembly
●	Mandatory Action	This symbol indicates mandatory actions. An image in the symbol illustrates a mandatory action to avoid a particular hazard.	(Example) Unplug the power cord!

Symbols Used in This Manual and Warning Labels

Cautions

	Indicates a general notice or warning that cannot be specifically identified.
	Indicates that improper use may cause an electric shock.
	Indicates that improper use may cause a personal injury.
	Indicates that improper use may cause fumes or fire.

Prohibited Actions

	Indicates a general prohibited action that cannot be specifically identified.
	Do not disassemble, repair, or modify the server. Doing so may cause an electric shock or fire.

Mandatory Action

	Unplug the power cord of the server. Not doing so may cause an electric shock or fire.
	Indicates a mandatory action that cannot be specifically identified. Make sure to follow the instruction.

Safety Notes

Read the notes described below carefully to understand them, these will enable you to safely use your product. See "Safety Indications" described earlier for the descriptions of symbols.

General

⚠ WARNING

Do not use the product for services involving human lives or requiring high reliability.

The product is not intended to be used with or control facilities or devices concerning human lives, including medical devices, nuclear facilities and devices, aeronautics and space devices, transportation facilities and devices; and facilities and devices requiring high reliability. The manufacturer assumes no liability for any accident resulting in personal injury, death, or property damage if the Disk Expansion Unit has been used in the above conditions.

Do not use the product if you are aware of any suspect smoke, odour, or noise.

If smoke, odour, or noise is present, immediately switch off the unit and disconnect the power plug from the outlet. Contact your sales agent. Using the product in such conditions may cause a fire.

Keep needles or metal objects away from the server.

Do not insert needles or metal objects into the ventilation holes or cartridge slot of the server. Doing so may cause an electric shock.

⚠ CAUTION

Keep water or foreign matter away from the server.

Do not let any form of liquid (water etc.) or foreign matter (e.g., pins or paper clips) enter the server. Failure to follow this warning may cause an electric shock, a fire, or a failure of the server. When such things accidentally enter the server, immediately turn off the power and disconnect the power plug from the AC outlet. Do not disassemble the server. Contact your service representative.

Power Supply and Power Cord Use

⚠ CAUTION

Disconnect the power cord(s) before installing or removing the product in/from the server.

Make sure to power off the server and disconnect the power cord(s) from the power outlet before installing/removing the product in/from the server, or connecting with the peripheral devices. All voltage is removed only when the power cords are unplugged.

Do not hold the power plug if your hands are wet.

Do not disconnect/connect the plug while your hands are wet. Failure to follow this warning may cause an electric shock.

Do not pull the cable when disconnecting the power cord.

When disconnecting the power cord from the server, hold the plug and pull it straight out. Pulling the cord out by the cable portion could damage the cable to result in an electrical shock hazard or a fire.

Installation, Relocation, Storage, and Connection

⚠ CAUTION

Do not connect any interface cable when the power cord of the Disk Expansion Unit is plugged to a power source.

Make sure to power off the server and unplug the power cord from a power outlet before connecting/disconnecting the interface cable. If the server is off-powered but its power cord is plugged to a power source, touching the cable may cause an electric shock or a fire may result from a short circuit. Also, connect/disconnect the interface cable after turning off the power of the destination.

Do not use or store the product in the place where corrosive gases exist.

Make sure not to locate or use the server in the place where corrosive gases (sulphur dioxide, hydrogen sulphide, nitrogen dioxide, chlorine, ammonia, ozone, etc) exist.
Also, do not set it in the environment where the air (or dust) includes components accelerating corrosion (ex. sulphur, sodium chloride) or conductive metals. There is a risk of a fire due to corrosion and/or short-circuits of an internal printed board.

Avoid installation in extreme temperature conditions.

Immediately after the server is powered off, its internal components, such as hard disk drives are very hot. Let the installed components fully cool down before installing/removing anything.

Cleaning and Working with the Product

⚠ WARNING

Do not disassemble, repair, or alter the server.

Do not attempt to disassemble, repair, or alter the product in any occasion other than those described in this User Guide. Failure to follow this instruction may cause an electric shock or fire as well as malfunctions of the product.

Disconnect the power plug before accessing inside the server.

Make sure to power off the server and disconnect the power plug from the AC outlet before accessing inside the server. Touching any internal device of the server when its power cord connected to a power source may cause an electric shock even if the server is off-powered.

⚠ CAUTION

Make sure to complete installation.

Always connect the DC cable and/or interface cable firmly. An incompletely connected cable may cause a contact failure, resulting in smoke or fire.

During Operation

⚠ CAUTION

Avoid contact with the server during thunderstorms.

Disconnect the power plug from the outlet when a thunderstorm is approaching. If the thunderstorm begins before you can disconnect the power plug, do not touch any part of the server containing the product. Failure to follow this warning may cause an electric shock.

Keep animals away from the server.

Notes on Use -for correct operation of Upgrade Kit-

Note the following when using the Upgrade Kit. If you ignore the notes, your assets (including important data and/or other devices) may be damaged.

- The Upgrade Kit cannot be connected to any RAID controller, but only to the one for which it was purchased.
- The Upgrade Kit is an extremely sensitive electronic device. Touch the metallic frame of the server to discharge static electricity from your body before handling the Upgrade Kit.
- Do not drop the Upgrade Kit.
- Do not hit the Upgrade Kit against other objects.
- Turn off the cellular phone or pager near the server containing the product. Radio interference may cause malfunctions of the server.

This Manual

The guide is intended for persons who are familiar with operating systems, including Windows, and fundamental operations of general-purpose I/O devices, including the keyboard and mouse.

Text Conventions

The following conventions are used throughout this User Guide. For safety symbols, see "SAFETY INDICATIONS" provided earlier.

Items to be observed or points to be noted when operating the product.

Items to be checked when operating the product.

Information useful or convenient for you.

In the Package

Check the package contents.

The package contains various accessories, as well as the product itself. Check with the packing list and make sure you have everything and that individual components are not damaged. If you find any missing or damaged components, contact your sales agent.

Transportation

To transport the Upgrade Kit, remove it from the server following "Chapter 1 Overview" and put the Upgrade Kit and all the accessories in the package used for the delivery.

Disposal

Dispose of the product according to all national laws and regulations.

It is the user's responsibility to completely erase or modify all the data stored in storage device such as hard disk, backup data cartridge, floppy disk, or any other media (CD-R/CD-RW) so that the data cannot be restored.

Third Party Transfer

Make sure to provide this manual along with the product to a third party.

About data on the hard disk
Be sure to take appropriate measures not to leak important data (e.g., customers' information or companies' management information) on the removed hard disk to any third parties.
Data seems to be erased when you empty "Recycle Bin" of Windows or execute the "format" command of the operating system. However, the actual data remains written on the hard disk. Data not erased completely may be restored by special software and used for unexpected purposes.
It is strongly recommended that the software or service (both available at stores) for data erasure should be used in order to avoid the trouble explained above. For details on data erasure, ask your sales representative.
The manufacturer assumes no liability for data leakage if the product is transferred to third party without erasing the data.

Chapter 1 Overview

Read this chapter if you are using the RAID Upgrade Kit for the first time.

This chapter describes the characteristics and the configuration of the Upgrade Kit and outlines the Upgrade Kit installation.

1. Characteristics of the Upgrade Kit

When the Upgrade Kit is installed on the RAID controller, you can use RAID5, RAID6 and RAID50.

2. Specification

Item		**Specification**	**Remarks**
Outer dimensions		12 (width) x 24 (depth) x 10 (height) mm	
Weight		About 0.01 kg	
Operating environment	Temperature	10°C to 35°C	
	Humidity	20% to 80%	Without condensation
Storage environment	Temperature	0°C to 35°C	
	Humidity	20% to 80%	Without condensation

3. Maintenance Service

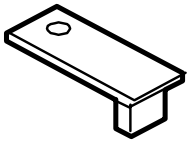
We recommend you contact a Service Representative approved by the manufacturer to order genuine spare parts or to perform any operations on your system.

4. Checking Contents in Package

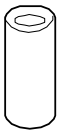
The package contains the following items. Check the contents to confirm that all the items are provided before starting the installation job.

Item	Qty	Remarks
Upgrade Key	1	This unit
Spacer	1	
Screw	1	
Serial number label	1	

The package contains the following items.



Upgrade Key



Spacer(metallic pillar)

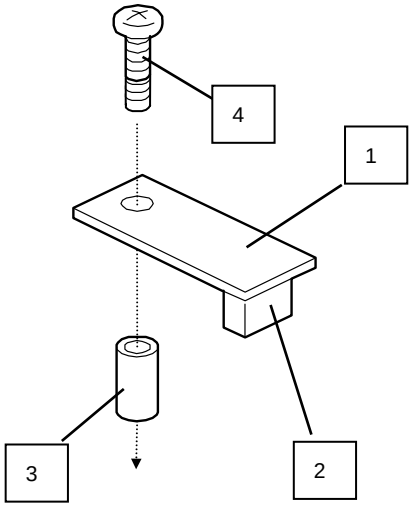
Screw

Serial number label

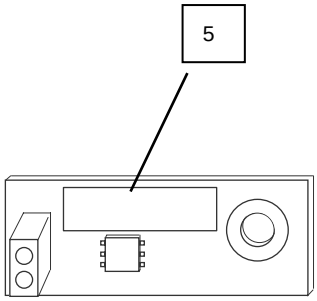
5. Names and Functions of Sections

This section describes the Upgrade Kit sections.

Whole view



Rear view of Upgrade key



1	Upgrade Key Connect it to the RAID controller to use RAID5, RAID6 and RAID50.
2	Connector This part is connected with the jumper pin (J12) of the RAID controller.
3	Spacer Install between the upgrade key and the RAID controller.
4	Screw Secures the upgrade key to the RAID controller.
5	Label

Chapter 2 Installing and removing the Upgrade Kit

This chapter describes the installation and removal of the Upgrade Kit in the server.

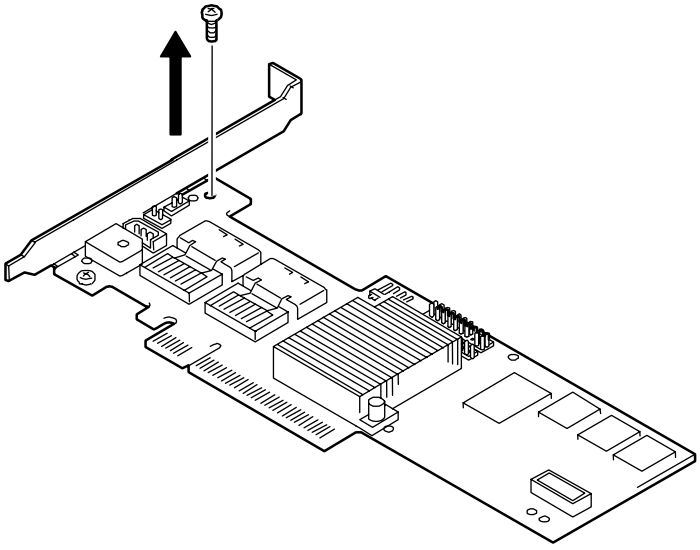
To install or remove the Upgrade Kit in the disk array controller, refer to the following procedure.

Check	Before the installation, refer to the User's Guide of the server.

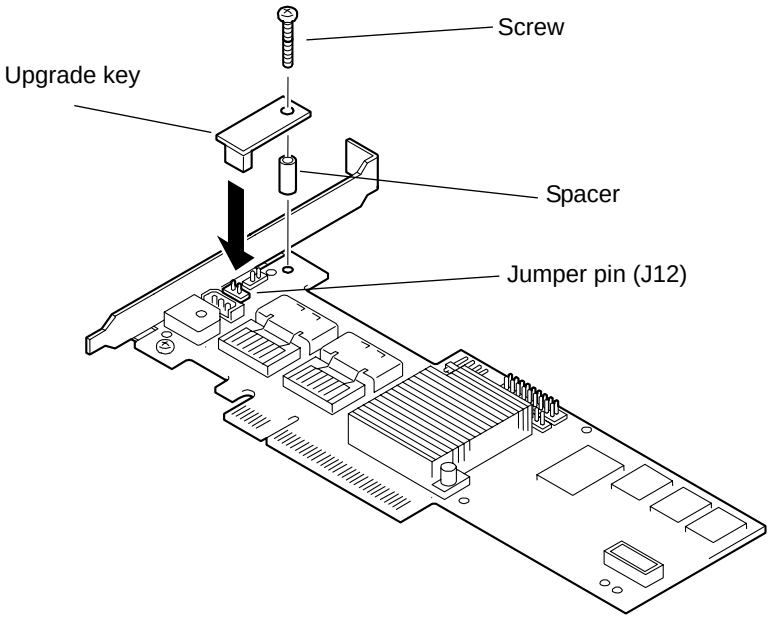
1. Installation Procedure

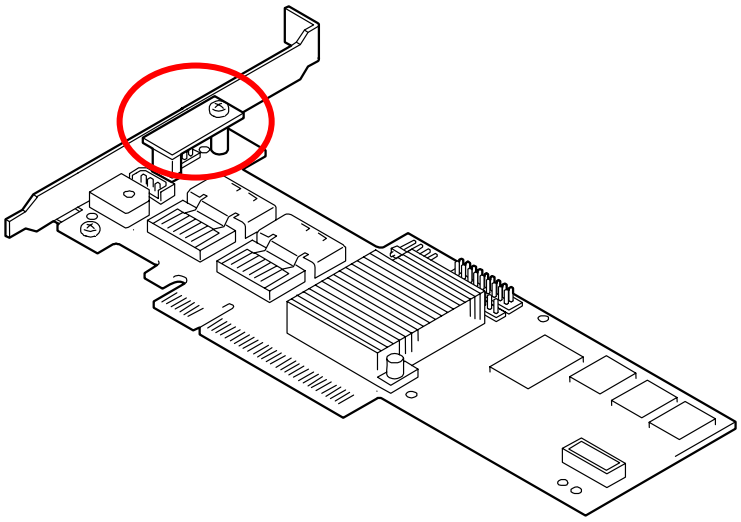
See the following instructions and figures.

1. Remove the screw from the RAID controller, and save it for future use.



2. Install the spacer between the upgrade key and the RAID controller. Securely connect both to the jumper pin (J12) and the connecter of the upgrade key. Carefully screw using the attached screw.

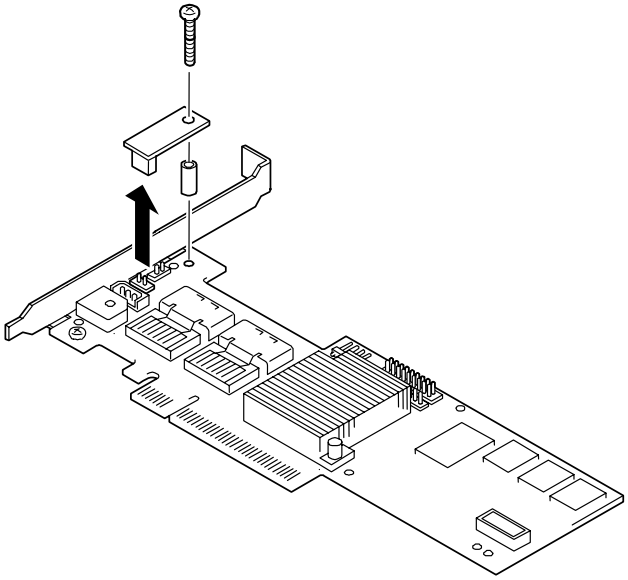
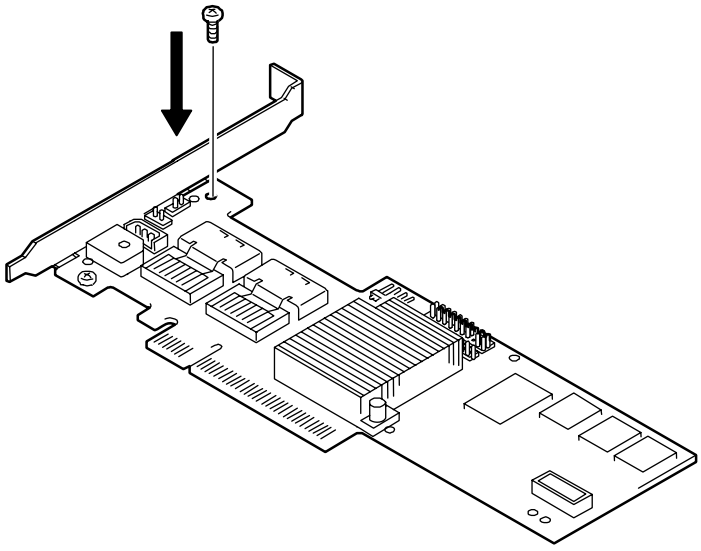
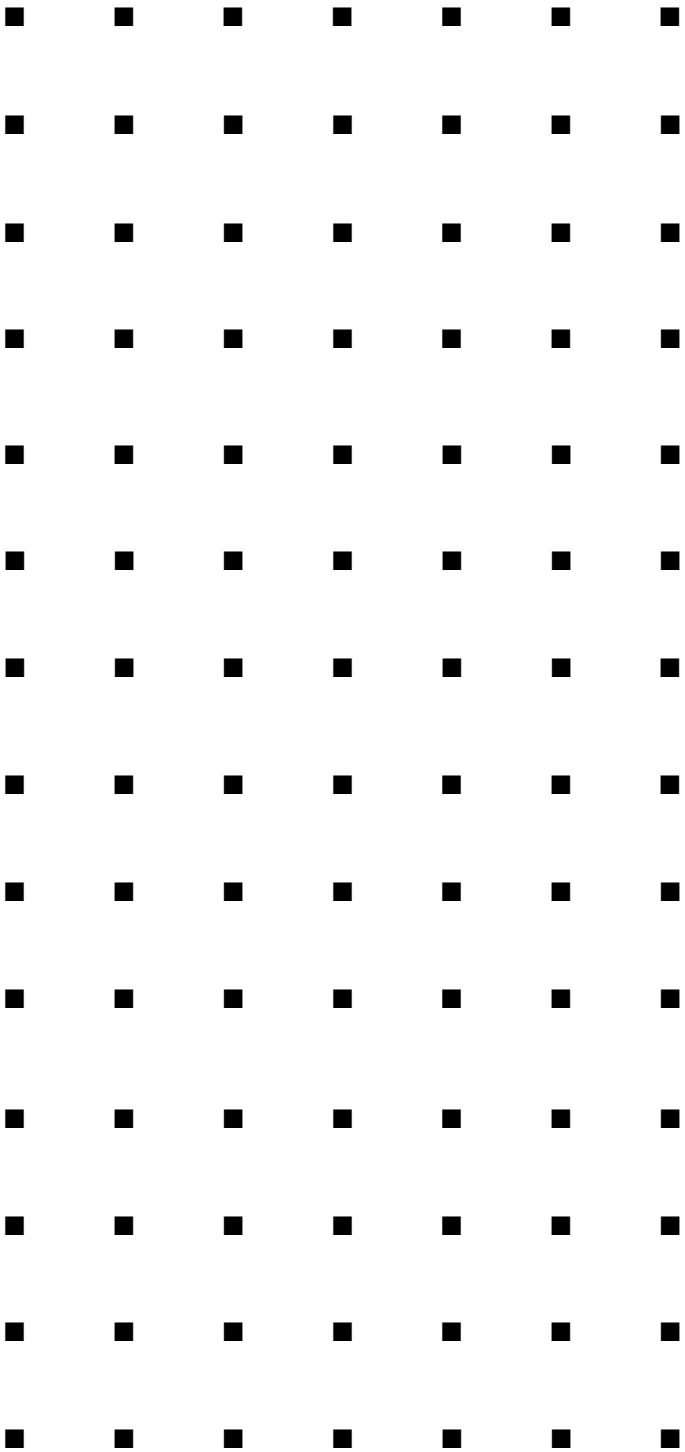




2. Removal Procedure

See the following instructions and figures.

1. Remove the screw securing the upgrade key to the RAID controller.
2. Remove the spacer and pull out the upgrade key from the RAID controller.



3. If you do not use the upgrade key, replace the screw.