PRIMERGY

B7FY-2261-01EN Z0-00

Rack Conversion Kit User's Guide

(PG-R1CK22)



Introduction

We at Fujitsu would like to thank you for choosing the PRIMERGY TX150 S6 Rack Conversion kit. This PRIMERGY TX150 S6 Rack Conversion kit enables you to convert your server from a tower type to a rack type.

This manual explains how to use the PRIMERGY TX150 S6 Rack Conversion kit.

Please read the information in this manual when using the PRIMERGY TX150 S6 Rack Conversion kit.

January 2008

For safety use

Important information to use this product safely and correctly is described in this manual. Please read this manual before using this product. Use this product after thoroughly reading "Safety" of this manual and understanding the contents. Keep this manual available while using this product.

Rack cabinet types

This kit can be installed in the following rack cabinets.

Rack Type	Product ID
Standard rack cabinet	PG-R6RC1, PG-R6RC2, PG-R4RC1, PG-R4RC2, PG-R4RC3,
	PG-R4RC4, PG-R4RC5, PG-R3RC1, PG-R3RC2

[Standard rack cabinet]



Remarks

Warning Descriptions

Various symbols are used throughout this manual. These are used to emphasize important points for your safety and that of others. The following are the symbols and their meanings.

MARNING	Failure to observe this warning cause to serious injury or death, and/or destroys the system.
	Failure to observe this warning may lead to injury, destroy the system, or loss of data.

The following symbols are used to indicate the type of warning or cautions being described.

	The triangle mark emphasizes the urgency of the WARNING and CAUTION. Details are described inside the triangle and above it.	
\otimes	The barred circle (\bigcirc) warns against certain actions (Do Not). These actions are detailed inside the circle and above it.	
0	The black circle indicates actions that must be taken. These actions are detailed inside the black circle and above it.	

Key Descriptions / Operations

Keys are represented throughout this manual in the following manner:

E.g.: [Ctrl] key, [Enter] key, $[\rightarrow]$ key, etc.

The following indicates the pressing of several keys at once:

E.g.: [Ctrl] + [F3] key, [Shift] + [\uparrow] key, etc.

DVD-ROM Drive Description

DVD-ROM drive is described as "CD/DVD drive" herein.

Entering Commands

Command entries are displayed in the following way.

diskcopy a: a: ↑ ↑

- In the areas of the "[↑]" mark, press the [Space] key once.
- When using Windows or DOS OS, commands are not case sensitive.
- CD/DVD drive letters are shown as [CD/DVD drive]. Enter your drive letters according to your environment.

[CD/DVD Drive]:\setup.exe

Symbols

The following are symbols used throughout this manual.

Symbols	Meaning	
MPORTANT	These sections explain prohibited actions and points to note when using this device. Make sure to read these sections.	
[₽] POINT	These sections explain information needed to operate the hardware and software properly. Make sure to read these sections.	
\rightarrow	This mark indicates reference pages or manuals.	

Product Names

The following expressions and abbreviations are used throughout this manual.

Product name	Expressions and Abbreviations
Rack Conversion kit for PRIMERGY TX150 S6	Rack Conversion kit / this product
PRIMERGY TX150 S6 SAS model	the server / this server
PRIMERGY TX150 S6 SATA model	

Server Types

This server is available in two different types.

Server Type	Expressions and Abbreviations
Server positioned on the ground	Tower type
Server installed on a rack	Rack type

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Safety

For your safety and that of others, follow the instructions provided on the following pages concerning the use of the Rack Conversion Kit and server.

For notes on installing and using the server, refer to "Safety Precautions" attached to the server. Please read the notes and use the server correctly.

MARNING



 When installing or removing the server from the rack, turn off the server, all peripheral devices, the display, and any other connected devices. Also unplug all power cords.

Failure to do so can lead to electric shock or cause damages to devices.



• Do not damage or modify internal cables or devices. Doing so may cause a device failure, fire, or electric shock.

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• For safety reasons, make sure the server is located on a stable and level surface when performing the conversion work as the combined weight can be 28kg.



• Also, work in an enough open space as the rack must be laid horizontally to perform the conversion.



Devices inside the server remain hot after shutdown. Wait for approximately 10
minutes after shutdown before installing or removing hardware options from the
server.



• Do not obstruct the ventilation slots. Poor ventilation traps the heat inside the server, which can lead to fire.



 Do not string the connecting cables in a way that they become trip hazards. Doing so may cause failure.



- Do not block the ventilation slots in the front and rear of the server. Poor ventilation traps the heat which can lead to fire.
- Move the unit with care. Shut down all power sources and disconnect all cables and peripherals (e.g. cables, mouse, keyboard, AC cables etc.). Also be aware that depending on the hardware options installed, this rackmounted unit can weight up to 28kg.

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1 Checking included items

Ensure that all of the following items are included in the Rack Conversion kit before performing operations. If any items are missing, contact an office listed in the "Appendix B Contact Information" (\rightarrow P.30).





2 Before starting operations

This chapter explains the workflow for conversion and required preparations.

2.1 Workflow



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• For safety reasons, make sure the server is located on a stable and level surface when performing the conversion as the combined weight can be 28kg.



- Also, work in an enough open space as the rack must be laid horizontally to perform the conversion.
- **1** Complete the "A Product information sheet" (→pg.29).

2 Copy the information on "Product ID and manufactures number label" attached to the server to the supplied blank label.

The "Product ID and manufactures number label" is attached on the location as seen in the figure below.



3 Check the model on the server.

The "model label" is attached on the location as seen in the figure below.



4 Shut down the system after checking the server system operation. Make sure that the system is operating properly before performing the conversion to rack

type.

5 Turn off the server and disconnect the power cable from the server.

6 If any peripherals are connected to the server, turn off all peripherals and disconnect them.



• Devices inside the server remain hot after shutdown. Wait for approximately 10 minutes after shutdown before installing or removing hardware options from the server.

3 Converting the server and installing to the rack

This chapter explains the procedures for converting the server to a rack type and installing it to the rack.

3.1 Removing the hard disk units

Remove the hard disk units. The hard disk units must be reinstalled after the server is installed in the rack.





 Before moving the server, remove all hard disk units. Striking or hitting a hard disk unit can corrupt its data.



Devices inside the server remain hot after shutdown. Wait for approximately 10
minutes after shutdown before installing or removing hardware options from the
server.

Notes on installation locations

Note that when converting the server to a rack type, the bay orientation also differs. Be sure to take note of the bay numbers and slot numbers for each hard disk unit so that they can be reinstalled to their proper locations.





[Rack type: front view]



Removal procedure

1 Turn the drive cover key counterclockwise to unlock the cover.



 The drive cover key is unique to each device. Be careful not to lose this key.
 If you lose the drive cover key, contact an office listed in the "Contact Information" section of the "Start Guide".



2 Slide the drive cover upwards and remove the hard disk cover.

Tilt the hard disk cover (1) and pull it up to remove (2).



3 Touch the metal chassis to discharge static electricity.

4 Remove the hard disk units.

Pressing the release button on the hard disk unit, raise the handle upward to release the lock and pull out to remove. Hold the hard disk unit with both of your hands and pull it out.



It is not necessary to remove dummy units for 3.5-inch storage bays. The server can be converted to a rack type with the units attached.



3.2 Removing the covers from a tower type

Remove the left, front, and right side covers.





• Before handling the covers or any hardware options, first touch the metal chassis to discharge static electricity.

Removing the left side cover

1 Loose the M3 screws at two places on the rear side as seen below.



2 Slowly slide the side cover to the rear side (1), and then tilt it toward you to remove it from the server (2).



Removing the front cover

1 The front cover is fastened with five tabs. Pull the left tabs first, and then remove the front cover while pressing the right tabs.



Removing the right side cover

1 Remove the M3 screws from two places at the rear side as seen below.



2 Release the tab from the right side cover using a tool such as screwdriver and slide to the rear of the server to remove it.

Hold the top of the server and slide the right side cover to the rear of the server.



3.3 Repositioning the operator panel and 5-inch storage bays

To convert the server to a rack type, reorient the operator panel and 5-inch storage bay components as follows:



Removing the fixation feet

1 Lay the server down horizontally. And then detach the screw in three places where the foot of the server is fixed.



2 Move the plate to the rear of the server (1). Then pull forward and detach it (2).



Removing the operator panel and 5-inch storage bays

1 Pull out the operator panel.

Pull the operator panel slowly towards you while pressing its latches inward.

2 Disconnect the two cables from the top of the operator panel.





[Top view of operator panel]

- **3** Disconnect the internal and power cables from the 5-inch hardware options and DVD-ROM unit.
- **4** Remove the operator panel, DVD-ROM unit, all 5-inch hardware options and/or dummy units from their bays.

Pull out each option slowly towards you with its latches being pressed inward.



Reinstalling the operator panel and 5-inch storage bays

Reinstall the operator panel, all 5-inch hardware options or dummy units, and DVD-ROM unit in this order from the top bay.

1 Lay the server on its side.

Orient the server for a rack type.

2 Reinstall the removed operator panel.

Insert the operator panel halfway, reconnect the cables, and push the panel until it clicks.



3 Reinstall all 5-inch hardware options, dummy units, and DVD-ROM unit.

Insert all 5-inch hardware options, dummy units, and DVD-ROM unit and push them until they click.







• When installing these components, be careful not to pinch the cables between the other components.

- 4 Reconnect the internal and power cables to the DVD-ROM unit.
- 5 Reconnect the internal and power cables to 5-inch hardware options.

3.4 Attaching the covers to a rack type

Attach the front, left side and rack front covers in this order.

Attaching the front covers

1 Attach the front cover bracket to both ends of the server.

Fix the two places on both sides with the attached M4 tap tight screws respectively.



2 Attach the front cover to the front of the server.

Insert two tabs at the lower side followed by three tabs at upper side.



Reattaching the left side cover

Reverse the procedure in "3.2 Removing the covers from a tower type" (\rightarrow pg.13) to reattach the left side cover to the server.

MPORTANT

Make sure that all expansion cards are properly inserted in their slots before reattaching the left side cover. Some expansion cards may have become loose while performing the conversion.

AUTION



• Before reattaching the left side cover, check to see whether any tools were left inside the server.

Attaching the rack front covers

1 Attach the rack front cover.

Fix the front cover to the front cover brackets attached in the server with the attached M4 tap tight screws.



3.5 Attaching the Labels

Attach the supplied labels to the designated locations on the rack front cover before installing the rack on the server.

Attaching the "Product ID and manufactures number label"

As seen in the figure below, attach the "Product ID and manufactures number label" that you filled in according to "2.2 Pre-work preparations" (\rightarrow pg.9).



MPORTANT

 Product ID and manufactures number may be required when you contact an office listed in the "Contact Information" of "Start Guide" in case of server failure. Make sure to attach the label in place.

Attaching the "PRIMERGY Logo Label"

Attach the "PRIMERGY logo label" on the location as seen in the figure below.



Attaching the "Model Label"

As the figure below indicates, attach the "model label" checked in according to "2.2 Pre-work preparations" (\rightarrow pg.9).



Attaching the "CPU Label"

Attach the "CPU label" on the location seen in the figure below.



3.6 Installing the server into the rack

This server requires 5U. Decide the server position (height) in the rack cabinet before installation.

Choosing the server position (height) in the rack cabinet

1 Open the front and rear doors of the rack cabinet.

2 Determine the height where to install the server.

As seen in the figure on the right side, the base surface of the server must be positioned at where the intervals between the rack bracket holes are narrow.



Attaching the slide rails

1 Attach M5 rack nuts to the rack.

Use 5U per device. Insert the latches of the rack nuts from the inside of the rack bracket into the 2nd and the 14th holes (counting from the position where the server is installed) to attach the rack nuts.



2 Join the slide rails to the rail brackets.

Join the rail bracket and the slide rail by using two M4 flathead screws after the slide rail is extended to the position in which a screw hole forward is seen.

For pin type slide rail, pick the protrusion parts of the slide rails through the squared holes of the rail bracket and fix together with a single M4 flathead screw.



3 Fix the slide rails to the rack.

Fix the rear side first.

POINT

together.

Fix by inserting the protrusion of the rail bracket in the 2nd hole, and using the M5 flathead screws and washers in the 3rd hole.



Left slide rail fixing procedure

And then, fix the front side in the same way.

parts to the holes and fix them

For pin type slide rail, no need to use any screw cramps. Fit the protrusion



There are slide rails for left and right sides. Check the "LEFT" and "RIGHT" marks outside the rail, and fix the server. If slide rails are fixed oppositely, the server can not be installed.

Installing the server into the rack

1 Pull the slide rails until they click as seen in the figure below.



2 Install the server in the inner rail.

- 1. Insert the server to install the protrusion in the ditch of the inner rail on the server side.
- Slide the server towards the back until the screw hole of the attached inner rail is overlapped with the screw hole on the server side.
- Fix the inner rail and the server with the M3 flathead screws.
 Fix each side with two screws.



3 Slide the server backward to install it in the rack cabinet.

With pressing down the locks of the slide rails to the direction indicated with the arrow in the figure and slowly install the server to the rack.







• Be careful not to pinch your fingers or get any clothing caught when sliding the server into the cabinet. That may cause injuries.

4 Secure the server to the rack.

Secure the server to the rack with 4 M5 thumbscrews.



MPORTANT

Attach the blank panel to secure the rack in the part where no devices are installed.

AUTION



• Be sure to reinstall the hard disk units to their correct bays from which they were removed. Hard disk units installed in wrong bays may not operate correctly.

1 With the handle open, reinsert each hard disk unit into its respective storage bay.



2 Close the handle to lock the hard disk units and insert them properly.



3 Reinstall all the hard disk units.

MPORTANT

Make sure that all the hard disk units are properly inserted in their bays.

3.8 Connecting peripheral devices after installing the server into the rack

Connect peripheral devices after installing the server into the rack. Use long enough cables because you may pull the server from the rack when necessary.

Fixing the Power Cable

To prevent the power cable from falling off, fix the cable with the clamp as seen in the figure below after connecting the power cable to the server, especially when moving the server forward.



When plugging off the cable, make sure to unplug the power connector at the server end.

Cable Forming Process

After connecting the peripheral devices, tie all the cables and fix them with the release tie to the cable holder provided with the rack. This forming process makes the cables easily recognizable even when multiple servers are installed in the rack.

[The rear side of rack]



4 After rack conversion

This chapter explains tasks required after rack conversion and settings for operation.

4.1 Reconnecting peripheral devices and the power cable

Reconnect the peripheral devices and the power cable.

Refer to "Start Guide" supplied with the server and connect the peripheral devices and the power cable of the server correctly.

4.2 Before turning on the server

Be sure to confirm the following items before turning on the server:

Internal hard disk units

Item	Check
Are all the internal hard disk unit installed into the 3.5-inch storage bays completely?	
Are all the internal hard disk units installed?	

Cables

Item	Check
Is each cable connected correctly?	
Is each cable properly plugged in the corresponding drive?	
Did you disconnect cables required to do so before turning on the power?	
Is the server power cable connected?	

Expansion cards

Item	Check
Are all expansion cards properly seated in their slots?	
(Some expansion cards may get loose due to vibrations by the conversion.)	

Peripheral devices

Item	Check
Did you reconnect the peripheral devices disconnected before conversion?	

4.3 Updating the chassis ID

After installing the server in the rack, update the chassis ID as follows to change the server type displayed in the ServerView window to the rack type.

MPORTANT

Before starting the system from the "Server Management Tools" disk, check to see that the "OS Boot Monitoring" function of ServerView is disabled (default setting). If the system is started with the "OS Boot Monitoring" function enabled, the server is liable to automatically shutdown and/or reboot and/or perform other unexpected operations.

Disable the "OS Boot Monitoring" function to update the chassis ID and enable the function again before resuming operations. For details of ServerView, refer to "ServerView User's Guide".

- **1** Make sure that the floppy disk and CD/DVD drives are empty.
- 2 Turn on the display and peripheral devices.
- **3** Insert the "Server Management Tools" disk supplied with the server and start up the server.

Create Server Management Tools disk with ServerStart. For the procedures, refer to "User's Guide".

4 Type the following command after the DOS prompt appears and press the [Enter] key.

A:\SMT\rack.BAT

The following message appears when the processing is properly executed.

OK: Chassis Id Prom (TX150S6R) has been written correctly A:\SMT>

5 Eject the floppy disk from the drive and turn off the server.

Appendix A Product information sheet

Complete the following sheet.

Be careful not to lose this sheet as you must provide this information when you contact your maintenance engineer.

Server	Name	PRIMERGY TX150 S6
	Product ID	PG-
	Serial number	
	Product Key *	
Rack Model		
Rack Conversion kit Type		□PG-R1CK22

* Record the product key only if there is a product key label on either side of the server.

Appendix B Contact Information

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For the latest information, refer to the Fujitsu PRIMERGY website (http://primergy.fujitsu.com).

PRIMERGY TX150 S6

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