FUJITSU

FUJITSU Server
PRIMEQUEST 1000 Series
User Interface Operating Instructions

C122-E109-05EN

Preface

This manual describes how to use the Web-UI and UEFI to properly operate the PRIMEQUEST 1000 series server. For details on the regulatory compliance statements and safety precautions, see the *PRIMEQUEST 1000 Series Safety and Regulatory Information* (C122-E115XA).

Errata and addenda for the manual

The *PRIMEQUEST 1000 Series Errata and Addenda* (C122-E119EN) provides errata and addenda for the manual. Read the *PRIMEQUEST 1000 Series Errata and Addenda* (C122-E119EN) thoroughly in reference to the manual.

For Safe Operation

How to use this manual

This manual contains important information about the safe use of this product. Read the manual thoroughly to understand the information in it before using this product. Be sure to keep this manual in a safe and convenient location for quick reference.

Fujitsu makes every effort to prevent users and bystanders from being injured and to prevent property damage. Be sure to use the product according to the instructions in this manual.

About this product

This product is designed and manufactured for standard applications. Such applications include, but are not limited to, general office work, personal and home use, and general industrial use. The product is not intended for applications that require extremely high levels of safety to be guaranteed (referred to below as "safety-critical" applications). Use of the product for a safety-critical application may present a significant risk of personal injury and/or death. Such applications include, but are not limited to, nuclear reactor control, aircraft flight control, air traffic control, mass transit control, medical life support, and missile launch control. Customers shall not use the product for a safety-critical application without guaranteeing the required level of safety. Customers who plan to use the product in a safety-critical system are requested to consult the Fujitsu sales representatives in charge.

Storage of accessories

Keep the accessories in a safe place because they are required for server operation.

Organization and Notation of This Manual

This section describes the following topics:

Organization of this manual

This manual is organized as follows.

CHAPTER 1 Web-UI Overview

Chapter 1 describes how the MMB operates with the Web-UI.

CHAPTER 2 UEFI Overview

Chapter 2 provides an overview of the UEFI and describes how it operates.

Index

The index lists keywords and the pages that they refer to, helping readers quickly find the necessary information in the manual.

Manuals for the PRIMEQUEST 1000 series

The following manuals have been prepared to provide you with the information necessary to use the PRIMEQUEST 1000 series.

You can access HTML versions of these manuals at the following sites:

Japanese-language site: http://jp.fujitsu.com/platform/server/primequest/manual/

Global site: http://jp.fujitsu.com/platform/server/primequest/manual-e/

Title	Description	Manual code
PRIMEQUEST 1000 Series Getting Started Guide	Describes what manuals you should read and how to access important information after unpacking the PRIMEQUEST 1000 series server. (This manual comes with the product.)	C122-E114XA
PRIMEQUEST 1000 Series Safety and Regulatory Information	Contains important information required for using the PRIMEQUEST 1000 series safely.	C122-E115XA
PRIMEQUEST 1000 Series Errata and Addenda	Provides errata and addenda for the PRIMEQUEST 1000 series manuals. This manual will be updated as needed.	C122-E119EN
PRIMEQUEST 1000 Series General Description	Describes the functions and features of the PRIMEQUEST 1000 series.	C122-B022EN
SPARC Enterprise/ PRIMEQUEST Common Installation Planning Manual	Provides the necessary information and concepts you should understand for installation and facility planning for SPARC Enterprise and PRIMEQUEST installations.	C120-H007EN
PRIMEQUEST 1000 Series Hardware Installation Manual	Includes the specifications of and the installation location requirements for the PRIMEQUEST 1000 series.	C122-H004EN
PRIMEQUEST 1000 Series Installation Manual	Describes how to set up the PRIMEQUEST 1000 series server, including the steps for installation preparation, initialization, and software installation.	C122-E107EN

Title	Description	Manual code
PRIMEQUEST 1000 Series User Interface Operating Instructions	Describes how to use the Web-UI and UEFI to assure proper operation of the PRIMEQUEST 1000 series server.	C122-E109EN
PRIMEQUEST 1000 Series Administration Manual	Describes how to use tools and software for system administration and how to maintain the system (component replacement and error notification).	C122-E108EN
PRIMEQUEST 1000 Series Tool Reference	Provides information on operation methods and settings, including details on the MMB, PSA, and UEFI functions.	C122-E110EN
PRIMEQUEST 1000 Series Message Reference	Lists the messages that may be displayed when a problem occurs during operation and describes how to respond to them.	C122-E111EN
PRIMEQUEST 1000 Series REMCS Installation Manual	Describes REMCS service installation and operation.	C122-E120EN
PRIMEQUEST 1000 Series Glossary	Defines the PRIMEQUEST 1000 series related terms and abbreviations.	C122-E116EN
PRIMEQUEST 1000 Series SAN Boot Environment Configuration Manual	Gives a revised version of APPENDIX D Configuring the SAN Boot Environment in the *PRIMEQUEST 1000 Series Installation Manual* (C122-E107EN). This manual describes procedures for installing the SAN boot environment and provides the latest information including notes on design.	C122-E155EN

Related manuals

The following manuals relate to the PRIMEQUEST 1000 series.

You can access these manuals at the following site:

http://jp.fujitsu.com/platform/server/primequest/manual-e/

Contact your sales representative for inquiries about the ServerView manuals.

Title	Description	Manual code
ServerView Suite ServerView Operations Manager Quick Installation (Windows)	Describes how to install and start ServerView Operations Manager in a Windows environment.	None
ServerView Suite ServerView Operations Manager Quick Installation (Linux)	Describes how to install and start ServerView Operations Manager in a Linux environment.	None
ServerView Suite ServerView Installation Manager	Describes the installation procedure using ServerView Installation Manager.	None

Title	Description	Manual code
ServerView Suite ServerView Operations Manager Server Management	Provides an overview of server monitoring using ServerView Operations Manager, and describes the user interface of ServerView Operations Manager.	None
ServerView Suite ServerView RAID Management User Manual	Describes RAID management using ServerView RAID Manager.	None
ServerView Suite Basic Concepts	Describes the basic concepts of ServerView Suite.	None
ServerView Operations Manager Installation ServerView Agents for Linux	Describes installation and update installation of ServerView Linux Agent.	None
ServerView Operations Manager Installation ServerView Agents for Windows	Describes installation and update installation of ServerView Windows Agent.	None
ServerView Mission Critical Option User Manual	Describes the necessary functions unique to PRIMEQUEST (notification via the MMB, hot replacement command) and ServerView Mission Critical Option (SVmco), which is required for supporting these functions.	None
MegaRAID SAS Software	Provides technical information on using array controllers. Refer to the manual from the SVS-DVD2 supplied with the product or from the following URL: The Fujitsu Technology Solutions manuals server http://manuals.ts.fujitsu.com/index.php?id=0	None
MegaRAID SAS Device Driver Installation	Provides technical information on using array controllers. Refer to the manual from the SVS-DVD2 supplied with the product or from the following URL: The Fujitsu Technology Solutions manuals server http://manuals.ts.fujitsu.com/index.php?id=0	None
Modular RAID Controller Installation Guide	Provides technical information on using array controllers. Refer to the manual from the SVS-DVD2 supplied with the product or from the following URL: The Fujitsu Technology Solutions manuals server http://manuals.ts.fujitsu.com/index.php?id=0	None

Abbreviations

This manual uses the following product name abbreviations.

Formal product name	Abbreviation
Red Hat® Enterprise Linux® 5 (for Intel 64)	Linux RHEL5, RHEL
Red Hat® Enterprise Linux® 5 (for x86)	
Red Hat® Enterprise Linux® 6 (for Intel 64)	Linux RHEL6, RHEL
Red Hat® Enterprise Linux® 6 (for x86)	
Microsoft® Windows Server® 2003, Standard Edition	Windows Windows Server 2003
Microsoft® Windows Server® 2003, Enterprise Edition	
Microsoft® Windows Server® 2003, Datacenter Edition	
Microsoft® Windows Server® 2003, Standard x64 Edition	
Microsoft® Windows Server® 2003, Enterprise x64 Edition	
Microsoft® Windows Server® 2003, Datacenter x64 Edition	
Microsoft® Windows Server® 2003 R2, Standard Edition	
Microsoft® Windows Server® 2003 R2, Enterprise Edition	
Microsoft® Windows Server® 2003 R2, Datacenter Edition	
Microsoft® Windows Server® 2003 R2, Standard x64 Edition	
Microsoft® Windows Server® 2003 R2, Enterprise x64 Edition	
Microsoft® Windows Server® 2003 R2, Datacenter x64 Edition	
Microsoft® Windows Server® 2008, Standard	Windows Windows Server 2008
Microsoft® Windows Server® 2008, Enterprise	
Microsoft® Windows Server® 2008, Datacenter	
Microsoft® Windows Server® 2008 R2, Standard	
Microsoft® Windows Server® 2008 R2, Enterprise	
Microsoft® Windows Server® 2008 R2, Datacenter	

Notation

This manual uses the following fonts and symbols to express specific types of information.

Font or symbol	Meaning	Example
italics	Title of a manual that you should refer to	See the *PRIMEQUEST 1000 Series Installation Manual* (C122-E107EN).

Font or symbol	Meaning	Example
[ ]	Window names as well as the names of buttons, tabs, and drop-down menus in windows are enclosed in brackets.	Click the [OK] button.

Notation for the CLI (command line interface)

The following notation is used for commands.

Command syntax

Command syntax is represented as follows.

- Variables requiring the entry of a value are enclosed in angle brackets < >.
- Optional elements are enclosed in brackets [ ].
- Options for optional keywords are grouped in | (stroke) separated lists enclosed in brackets [ ].
- Options for required keywords are grouped in | (stroke) separated lists enclosed in braces { }.

Command syntax is written in a box.

Remarks

The command output shown in the PDF manuals may include line feeds at places where there is no line feed symbol (\ at the end of the line).

Notes on notations

- In this manual, the Management Board and MMB firmware are abbreviated as "MMB."
- In this manual, IOBs and GSPBs (LIOBs and LGSPBs within partitions) are collectively referred to as IO Units.
- Screenshots contained in this manual may differ from the actual product screen displays.
- The IP addresses, configuration information, and other such information contained in this manual are display examples and differ from that for actual operation.

Alert messages

This manual uses the following alert messages to prevent users and bystanders from being injured and to prevent property damage.

WARNING	This indicates a hazardous (potentially dangerous) situation that is likely to result in death or serious personal injury if the user does not perform the procedure correctly.
CAUTION	This indicates a hazardous situation that could result in minor or moderate personal injury if the user does not perform the procedure correctly. This also indicates that damage to the product or other property may occur if the user does not perform the procedure correctly.
Important	This indicates information that could help the user use the product more efficiently.

Alert messages in the text

An alert statement follows an alert symbol. An alert statement is indented on both ends to distinguish it from regular text. Similarly, one space line is inserted before and after the alert statement.

WARNING

Only Fujitsu certified service engineers should perform the following tasks on this product and the options provided by Fujitsu. Customers must not perform these tasks under any circumstances. Otherwise, electric shock, injury, or fire may result.

- Newly installing or moving equipment
- Removing the front, rear, and side covers
- Installing and removing built-in options
- Connecting and disconnecting external interface cables
- Maintenance (repair and periodic diagnosis and maintenance)

The List of important alert items table lists important alert items.

Product operating environment

This product is a computer intended for use in a computer room environment. For details on the product operating environment, see the following manual:
PRIMEQUEST 1000 Series Hardware Installation Manual (C122-H004EN)

Note

- If you have a comment or request regarding this manual, or if you find any part of this manual unclear, please take a moment to share it with us by filling in the form at the following webpage, stating your points specifically, and sending the form to us:
  https://www-s.fujitsu.com/global/contact/computing/PRMQST_feedback.html
- The contents of this manual may be revised without prior notice.
- The PDF file of this manual is intended for display using Adobe® Reader® in single page viewing mode at 100% zoom.
- Although a heading and body text may have a line feed inserted between them in the PDF file, the HTML file displays them properly.
- The PRIMEQUEST 1800E model supports only 200 V power supply.

Trademarks

- Microsoft, Windows, and Windows Server are trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries.
- Linux is a trademark or registered trademark of Linus Torvalds in the United States and other countries.
- Red Hat, RPM, and all Red Hat based trademarks and logos are trademarks or registered trademarks of Red Hat, Inc. in the United States and other countries.
- Intel and Xeon are trademarks or registered trademarks of Intel Corporation.
- Ethernet is a registered trademark of Fuji Xerox Co., Ltd. in Japan and is a registered trademark of Xerox Corp. in the United States and other countries.
- VMware is a trademark or registered trademark of VMware, Inc. in the United States and other countries.
- Xen is a trademark or registered trademark of Citrix Systems, Inc. or its subsidiaries in the United States and other countries.
- Other company names and product names are the trademarks or registered trademarks of their respective owners.
- Trademark indications are omitted for some system and product names in this manual.

Safety Precautions

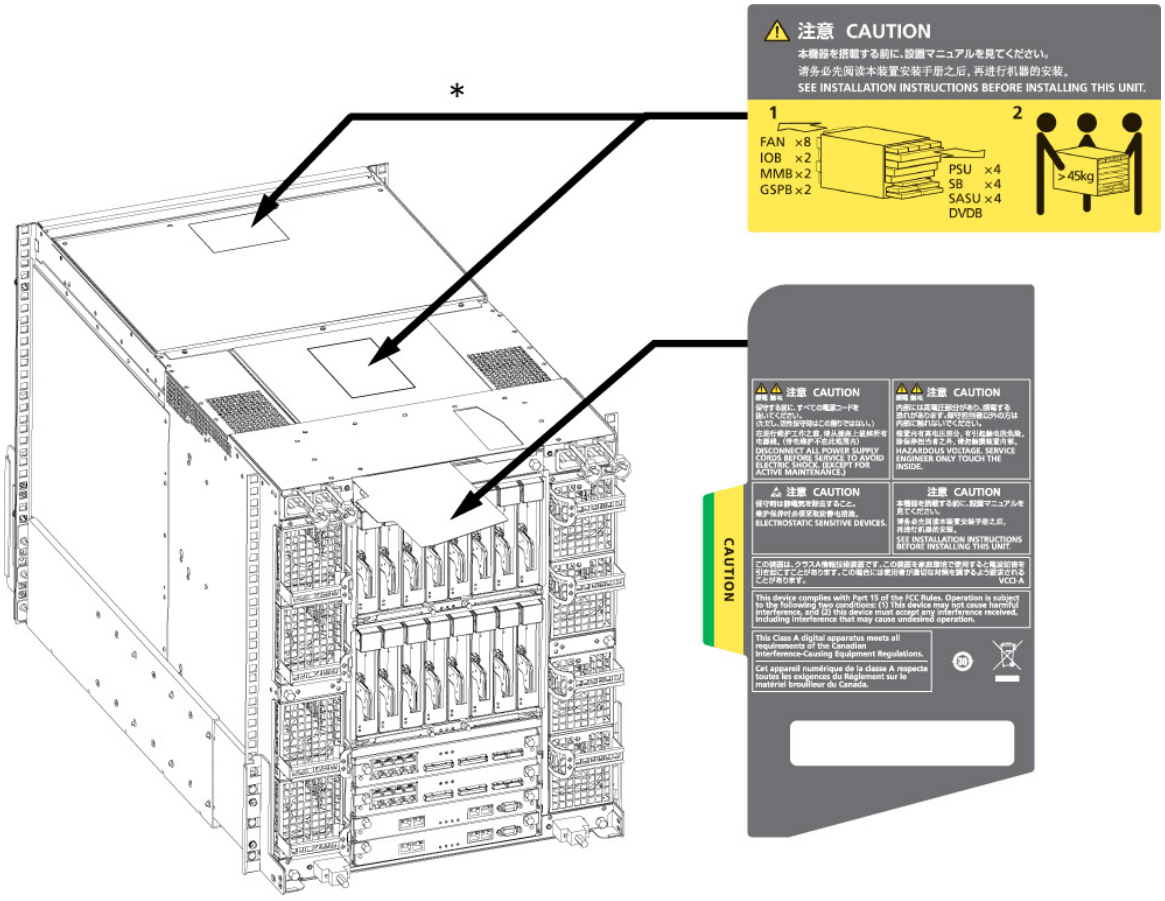
List of important alert items

This manual does not contain important alert items.

Warning labels

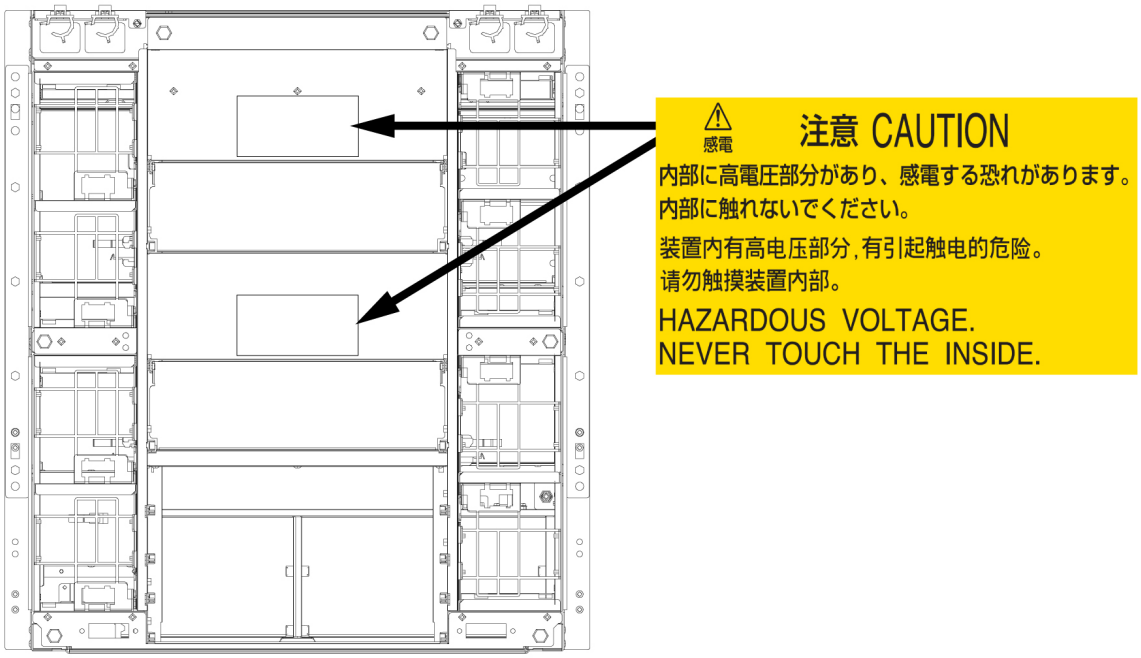
The following warning labels are affixed to this product. These labels are intended for the users of this product.

CAUTION Never remove the warning labels.

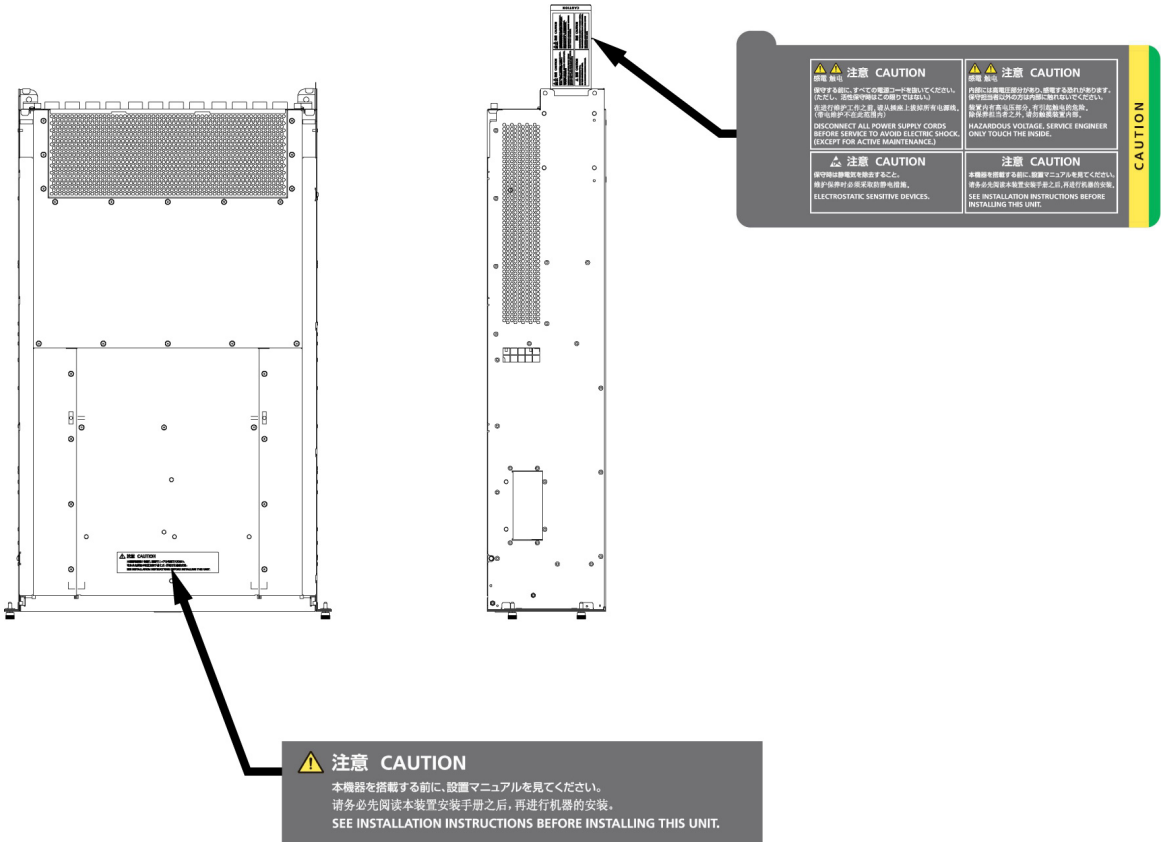


* The label is affixed at either location.

Warning label location (PRIMEQUEST 1800E2/1800E rear)



Warning label location (PRIMEQUEST 1800E2/1800E rear) (IOBs removed)



Warning label location (PCI_Box)

Notes on Handling the Product

Adding optional products

For stable operation of the PRIMEQUEST 1000 series server, use only a Fujitsu certified optional product as an added option.

Note that the PRIMEQUEST 1000 series server is not guaranteed to operate with any optional product not certified by Fujitsu.

Maintenance

Only Fujitsu certified service engineers should perform the following tasks on this product and the options provided by Fujitsu. Customers must not perform these tasks under any circumstances. Otherwise, electric shock, injury, or fire may result.

- Newly installing or moving equipment
- Removing the front, rear, and side covers
- Installing and removing built-in options
- Connecting and disconnecting external interface cables
- Maintenance (repair and periodic diagnosis and maintenance)

Only Fujitsu certified service engineers should perform the following tasks on this product and the options provided by Fujitsu. Customers must not perform these tasks under any circumstances. Otherwise, product failure may result.

- Unpacking an optional Fujitsu product, such as an optional adapter, delivered to the customer

Modifying or recycling the product

Modifying this product or recycling a secondhand product by overhauling it without prior approval may result in personal injury to users and/or bystanders or damage to the product and/or other property.

Note on erasing data from hard disks when disposing of the product or transferring it

Disposing of this product or transferring it as is may enable third parties to access the data on the hard disk and use it for unforeseen purposes. To prevent the leakage of confidential information and important data, all of the data on the hard disk must be erased before disposal or transfer of the product.

However, it can be difficult to completely erase all of the data from the hard disk. Simply initializing (reformatting) the hard disk or deleting files on the operating system is insufficient to erase the data, even though the data appears at a glance to have been erased. This type of operation only makes it impossible to access the data from the operating system. Malicious third parties can restore this data.

If you save your confidential information or other important data on the hard disk, you should completely erase the data, instead of simply carrying out the aforementioned operation, to prevent the data from being restored.

To prevent important data on the hard disk from being leaked when the product is disposed of or transferred, you will need to take care to erase all the data recorded on the hard disk on your own responsibility.
Furthermore, if a software license agreement restricts the transfer of the software (operating system and application software) on the hard disk in the server or other product to a third party, transferring the product without deleting the software from the hard disk may violate the agreement. Adequate verification from this point of view is also necessary.

Support and service

SupportDesk (available only in Japan, for a fee)

For stable system operation, we recommend concluding our SupportDesk agreement, which provides a maintenance and operation support service. SupportDesk agreement customers receive a same-day response service for hardware problems. They are eligible for regular checkups, remote notification of potential-failure predictions, and information on system problems. Moreover, they can avail themselves of other services such as troubleshooting support by phone for hardware and software problems, and access to operation support information from a dedicated website for our customers. For details, see "Product support" on the SupportDesk homepage (http://jp.fujitsu.com/solutions/support/sdk/index.html).

Product and service inquiries

For all product use and technical inquiries, contact the distributor where you purchased your product, or a Fujitsu sales representative or systems engineer (SE). If you do not know the appropriate contact address for inquiries about the PRIMEQUEST 1000 series, use the Fujitsu contact line.

Fujitsu contact line

We accept Web inquiries. For details, visit our website:
https://www-s.fujitsu.com/global/contact/computing/PRMQST_feedback.html

Warranty

If a component failure occurs during the warranty period, we will repair it free of charge in accordance with the terms of the warranty agreement. For details, see the warranty.

Before requesting a repair

If a problem occurs with the product, confirm the problem by referring to 11.2 Troubleshooting in the *PRIMEQUEST 1000 Series Administration Manual* (C122-E108EN). If the error recurs, contact your sales representative or a field engineer. Confirm the model name and serial number shown on the label affixed to the right front of the device and report it. Also check any other required items beforehand according to 11.2 Troubleshooting in the *PRIMEQUEST 1000 Series Administration Manual* (C122-E108EN). The system settings saved by the customer will be used during maintenance.

Revision History

Edition	Date	Revised location (type) (*)	Description
01	2010-02-09	-	-
02	2010-03-12	All pages	Incorporated differences in *Errata and Addenda* (C122-E119-01EN)

Edition	Date	Revised location (type) (*)	Description
03	2010-08-20	All pages	Incorporated differences in *Errata and Addenda* (C122-E119-02EN to C122-E119-10EN)
04	2011-04-28	All pages	- Added items about 1800E2 - Incorporated differences in *Errata and Addenda* (C122-E119-11EN to C122-E119-18EN)
05	2011-12-20	All pages	Incorporated differences in *Errata and Addenda* (C122-E119-20EN to C122-E119-24EN)

* Chapter, section, and item numbers in the "Revised location" column refer to those in the latest edition of the document. However, a number marked with an asterisk (*) denotes a chapter, section, or item in a previous edition of the document.

Contents

Figures

Tables

CHAPTER 1 Web-UI Overview

This chapter describes how the MMB operates with the Web-UI.

1.1 PRIMEQUEST 1000 Series User Interfaces

The PRIMEQUEST 1000 series has a server management board called the MMB, which has a dedicated processor mounted. The MMB provides the following two user interfaces.

Web-UI (Web User Interface)

The Web-UI enables operation and management from Web browsers on personal computers and workstations (collectively referred to below as PCs).

CLI (Command Line Interface)

The CLI enables operation through a serial port and from a remote PC via a LAN.

This section describes the common Web-UI window and basic operations required for PRIMEQUEST 1000 series operation and management using the MMB. For details on basic operations with the CLI, see Chapter 2 MMB CLI (Command Line Interface) Operations and Chapter 4 PSA CLI (Command Line Interface) Operations in the *PRIMEQUEST 1000 Series Tool Reference* (C122-E110EN).

Caution

The MMB Web-UI supports the following browsers. Other browsers may incorrectly display the Web-UI window.

- Microsoft Internet Explorer 6 (Service Pack 1) or later
- Mozilla FireFox 3.0 or later

1.2 Web-UI Window

You can select your preferred character size in the Web-UI window. A character string indicates the status of the system. Users can easily determine the status from the following four different background color patterns.

Normal status

The window background color is used as is.

Warning status

Yellow in the background indicates the Warning level.

For example, a field with a yellow background indicating a unit's status in a table corresponds to Warning.

Error status

Red in the background indicates the Error level.

For example, a field with a red background indicating a unit's status in a table corresponds to Error.

Not-present status

Grey in the background indicates the Not-present status.

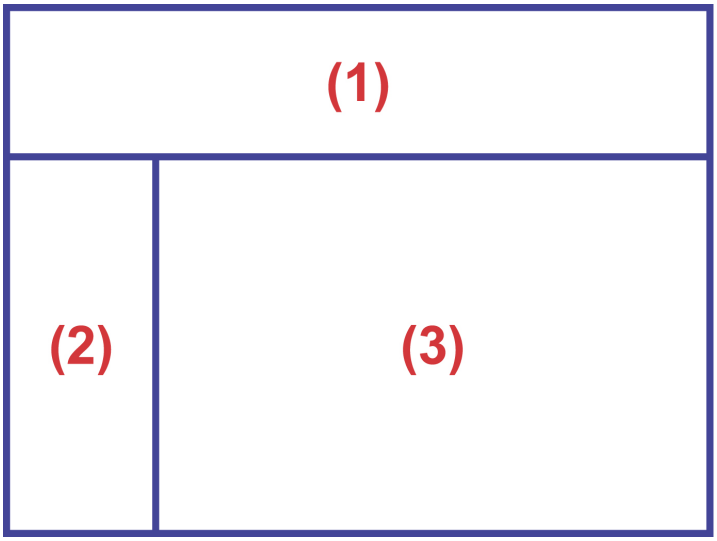
For example, a field with a grey background indicating a unit's status in a table corresponds to the Not-present status, which indicates that the unit is not installed.

If any abnormal, warning, or other MMB status listed below occurs, refrain from operating the server. Instead, contact your sales representative or a field engineer. Before making contact, confirm the model name and serial number shown on the label affixed to the main unit.

- The Alarm LED on the MMB is on.
- The Active LEDs on both MMB#0 and MMB#1 are off.
- Users cannot connect to the Web-UI.
- Alarm LEDs on multiple boards in the main unit are on.
- The Web-UI displays "Read Error."
- The Web-UI displays "Not Present" for all units in the [System Status] window.

1.3 Frame Layout

The Web-UI window contains three frames as shown in FIGURE 1.1 Frame layout.



No.	Description
(1)	Information area
(2)	Submenu area
(3)	Content area

FIGURE 1.1 Frame layout

Information area

This area displays the model name and part number of the PRIMEQUEST 1000 series server. This information enables the user to easily identify the system.

Submenu area

This area displays a hierarchical menu. Selecting from the menu displays information for settings and/or status indicators in the content area.

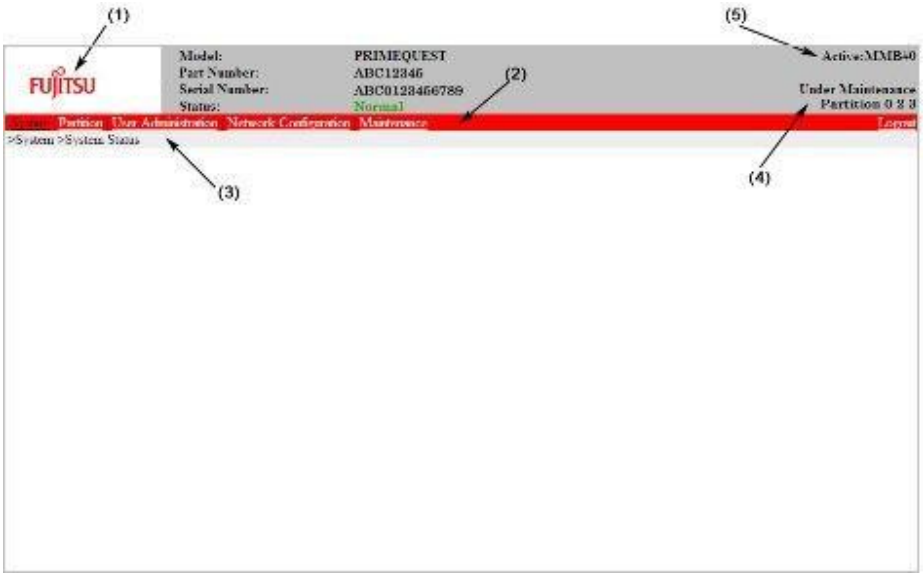
Content area

This area displays information for status indicators and/or settings of individual functions.

1.4 Information Area

This section describes the displayed contents of the information area.

The letters (1) to (5) in FIGURE 1.2 Information area represent information area display items.



No.	Description
(1)	Fujitsu logo (This logo provides a link to Fujitsu's top page.)
(2)	Navigation bar
(3)	Submenu breadcrumb trail
(4)	Maintenance status display
(5)	Active MMB board number display

FIGURE 1.2 Information area

[Model]

This field displays the model name of the PRIMEQUEST 1000 series server.

[Part Number]

This field displays the part number of the PRIMEQUEST 1000 series server.

Note

If this field displays "Read Error," check for details on the error in 11.2 Troubleshooting in the *PRIMEQUEST 1000 Series Administration Manual* (C122-E108EN). If the error recurs, contact your sales representative or a field engineer.

Before making contact, confirm the model name and serial number shown on the label affixed to the main unit.

[Serial Number]

This field displays the serial number of the PRIMEQUEST 1000 series server.

Note

If this field displays "Read Error," check for details on the error in 11.2 Troubleshooting in the *PRIMEQUEST 1000 Series Administration Manual* (C122-E108EN). If the error recurs, contact your sales representative or a field engineer.

Before making contact, confirm the model name and serial number shown on the label affixed to the main unit.

[Status]

This field displays the status of the entire PRIMEQUEST 1000 series server system. The following table shows the three different system status indicators.

TABLE 1.1 System status indicators

Status	Display color	Icon
Normal	Green	(None)
Warning	Yellow	A black ! mark in a yellow triangle 
Error	Red	A white x mark in a red circle 

Clicking a system status indicator displays the [System Event Log] window.

Active MMB display

This field displays the number of the active MMB, which is operating with the connected Web-UI.

Maintenance status display

The window displays the information area in gray for a field engineer who is performing maintenance on the PRIMEQUEST 1000 series server using the [Maintenance Wizard] menu.

Also, the area displays [Under Maintenance] in black characters and the partition number of the partition under maintenance below [Under Maintenance].

No.	Description
(1)	Partition under maintenance

FIGURE 1.3 Maintenance status display

Navigation bar

Select a menu on the navigation bar to display the menu in the submenu area.

The selected menu is displayed in black characters. The menus not selected are displayed in white characters.

[Logout]

Click here to log out from the Web-UI.

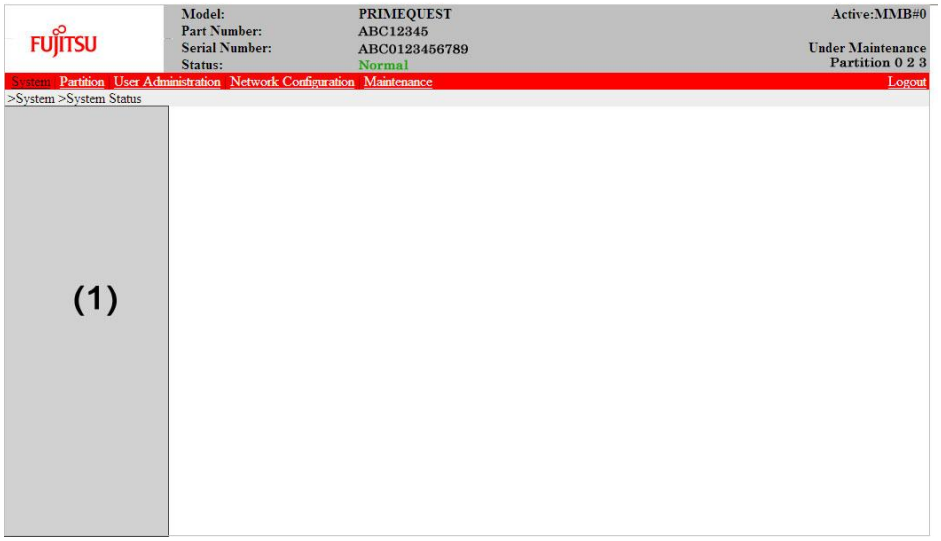
Submenu breadcrumb trail

This bar displays the levels on the path to the menu that is displayed in the submenu area.

Click a level to display the window for that level.

1.5 Submenu Area

The submenu area displays the submenu corresponding to the menu selected on the navigation bar.
FIGURE 1.4 Submenu area shows an example of a window with the submenu area.



No.	Description
(1)	Submenu area

FIGURE 1.4 Submenu area

The submenu area display is as follows.

Area displaying up to three menu levels

One level is added to the submenu breadcrumb trail when the user goes deeper than three levels or when the submenu area displays a scroll bar for a large number of menu items.
When displayed, the added submenu is the lowest menu on the submenu breadcrumb trail and the top submenu in the submenu area.

Icon display indicating whether lower-level menu items exist

Each submenu has one of the following icons to indicate whether it has lower-level menu items.

- : This icon indicates that the submenu has lower-level menu items.
- : This icon indicates that the submenu has lower-level menu items and is currently expanded.
- : This icon indicates that the submenu has no lower-level menu items.

The display of the icons and submenus is as follows.

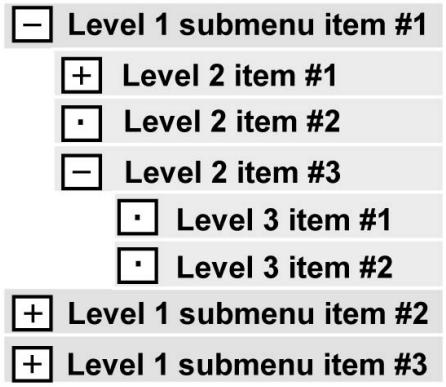


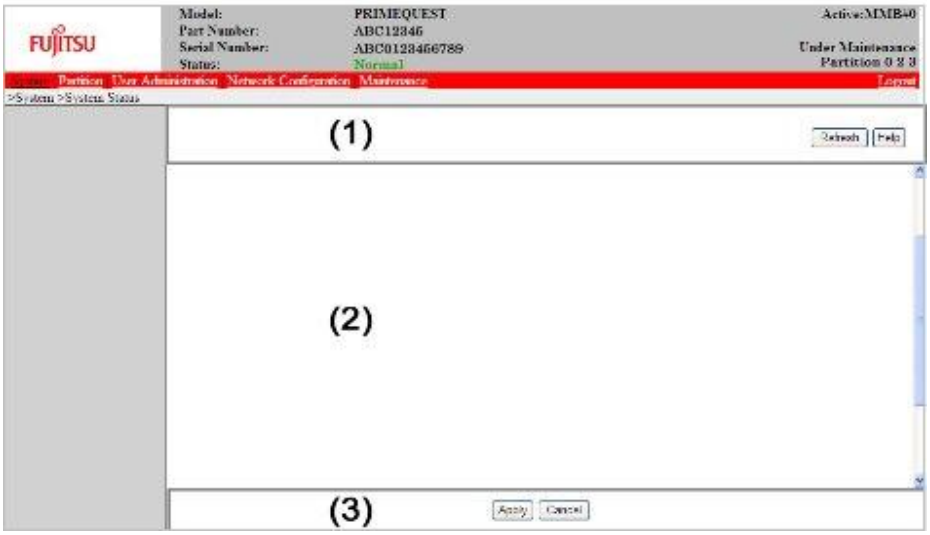
FIGURE 1.5 Menu levels

- Placing the cursor on a submenu makes the submenu background white.
- The selected submenu has a different background color.
- The background colors of menu items at different levels depend on the level.

1.6 Content Area

The content area displays the screen corresponding to the selected menu on the navigation bar and the selected menu item in the submenu area.

FIGURE 1.6 Content area shows the content area.



No.	Description
(1)	Title area
(2)	Status display and settings area
(3)	Button area

FIGURE 1.6 Content area

The content area is divided into the following three areas.

Title area

This area indicates the content.

The area also displays the [Help] button and [Refresh] button. Use the [Help] button to display the help for the content. Use the [Refresh] button to reload the content.

- [Help] button
  This button displays help information. Click this button to display a help window.
- [Refresh] button
  Click this button to reload the content. The [Refresh] button reloads the content area only. The [Refresh] button appears only in windows that refresh automatically. Windows that are used simply for configuration and do not refresh automatically do not have the [Refresh] button.

The title area does not scroll even when the status display and settings area under it scrolls.

Status display and settings area

This area displays status and setting information regarding the content.

If the contents are too large for the size of the area, a scroll bar appears so that the user can scroll the area.

Input fields, radio buttons, and check boxes are grayed out and unavailable to users who have only display privileges for this window.

Button area

This area displays buttons for setting the contents of the status display and settings area.

The area displays the [Apply] button and [Cancel] button.

In the following cases, the button area does not appear.

- The content is for display only and does not require input.
- The user who displayed the window has only display privileges.

In such cases, the above status display and settings area has an expanded display area.

Dialog boxes

A dialog box is displayed to prompt the user to confirm an operation done in the content area, notify the user of an error, or ask the user to enter the required information.

Dialog boxes of the following types appear.

- Warning dialog box

  This dialog box notifies the user of an error, such as an input error.

FIGURE 1.7 Warning dialog box (example)

- Confirmation dialog box

  This dialog box asks the user whether to continue the operation.

FIGURE 1.8 Confirmation dialog box (example)

1.7 Basic Operations in the Web-UI Window

This section describes how to perform basic operations in the Web-UI window.

1.7.1 Access procedure

This section describes the procedure for accessing the MMB through the Web-UI.

Accessing the MMB

1. Start your Web browser.

   Remarks

   Both JavaScript and Download must be enabled in the browser settings.

2. Enter the following URL.

   TABLE 1.2 URL to be entered for login

Type	URL
Standard	http://nodename:adminport http://nodename:adminport/login.cgi (for Windows Server 2008)
SSL	https://nodename:adminport
Remarks	For "nodename:adminport" in the above URL, enter the following: nodename: Specify the FQDN or IP address of the MMB adminport: Specify the port number assigned to the MMB management port (8081 by default, and 432 for SSL)

   Note

   If you use https for the connection and the certificate is a self-signed certificate, a warning message appears. Ignore this message and continue the connection procedure.

3. When the MMB Web-UI login window appears, enter the user account and password. Then, click the [Login] button.

FIGURE 1.9 MMB Web-UI login window

Remarks

At initial startup or if the settings have not been changed, use the following default user account and password.
You will be asked to change the password to a new password.

TABLE 1.3 Default user account and password

Item	Default value
Username	Administrator
Password	(Password set with the serial port)

Displaying the target Web-UI window

The procedure for displaying the target window in the Web-UI window after login is as follows.

1. Select a menu on the navigation bar to display the menu in the submenu area.
   The submenu area displays the menu.
2. Select the target window from the menu in the submenu area.
   The browser displays the selected window in the content area.
3. Check and/or set information in the window.

Note

The connection of the Web-UI running in Internet Explorer is terminated in the following cases.
If the Web-UI connection is terminated, log in again.

- The confirmation dialog box for process execution remains displayed for more than two minutes.
- The notification dialog box for process completion remains displayed for more than two minutes.

Exiting the Web-UI window

The procedure for exiting the Web-UI window is as follows.

1. Click [Logout] on the right side of the navigation bar.
   You are logged out from the Web-UI.

1.7.2 Window elements and operations

This section describes the display and operation of window fields.

Character string input field (text field)

You can enter character strings in the field. The types and number of characters that can be entered depend on the field. For details, see the description of each window in the *PRIMEQUEST 1000 Series Tool Reference* (C122-E110EN).

Selection field (pull-down list)

You can select a value from the selection field by clicking the inverted triangle button.

Setting buttons (buttons)

When clicked, these buttons display different content depending on the contents of the fields.

The following describes the types of setting button in the button area.

- [Apply] button
  Clicking the [Apply] button triggers a check of the data entered in the input fields. The content area management program checks whether the data is correct.
  If any entered value is incorrect, a warning dialog box appears so as to notify the user about a user input error. For example, if a user enters an invalid IP address of 255.255.255.255 in the IP address input fields and then clicks the [Apply] button, the following warning dialog box appears.

FIGURE 1.10 Warning dialog box (example)

  If the result of the user input will have a significant impact on the system, another dialog box appears. This dialog box asks the user whether to continue the operation.

- [Cancel] button
  Click the [Cancel] button to revert the settings to their state before input, without applying the data entered in the character string input fields and selection fields to the system.

- Single selection (radio button)
  You can select one of the options in the field.

These options toggle between on and off with each click.

- Multiple selection (check box)
  You can select multiple options.
  These options toggle between on and off with each click.

- Link
  Click a link to go to the window specified by the link.

This is a hyperlink to the XXX manual.

- IP address input field
  You can enter a value between 0 and 255 in each character string input field.

- MAC address input field
  You can enter a hexadecimal value between 00 and FF in each character string input field.
  The letters A to F in these fields are not case-sensitive.

Note

If a user attempts a download through the Web-UI, the pop-up blocker may suppress the confirmation dialog box for the download destination.
To enable downloading, configure the Web-UI so that it will permit pop-ups or disable the pop-up blocker on the Web browser.

1.8 User Privilege Levels

The PRIMEQUEST 1000 series has the following privilege levels to restrict system operations by users:

- Administrator
- Operator
- Partition Operator
- User
- CE

For details on the user privilege levels, see TABLE 1.1 User privileges in the *PRIMEQUEST 1000 Series Tool Reference* (C122-E110EN).

1.9 Displaying the Target System for Operations

This section describes how to display the PSA functions (provided only with the PRIMEQUEST 1800E) or BMC functions in the MMB Web-UI.

The methods for doing so use Web-UI or CLI operations from a PC connected to the management LAN.
The remainder of this section describes the corresponding basic operations from the Web-UI and CLI. For details on the Web-UI and CLI, see the respective chapters in the *PRIMEQUEST 1000 Series Tool Reference* (C122-E110EN).

Basic Web-UI operations

The following Web-UI operations for the MMB, PSA, and BMC functions are available from the navigation bar or menu.
The submenu breadcrumb trail indicates the level of the menu for the currently displayed operation screen so that the user can identify the current system for operations.

Displaying the MMB functions

1. Click [System] on the navigation bar.
   The MMB functions appear.

Displaying the PSA functions

Note

The PSA functions are provided only with the PRIMEQUEST 1800E.

1. Click [Partition] on the navigation bar.
2. Click [Partition#n] - [PSA] from the [Partition] menu.
   The [PSA] menu for Partition#n appears.

Displaying the BMC functions

1. Click [Partition] on the navigation bar.
2. Click [Partition#n] - [Console Redirection] from the [Partition] menu.
3. Select the target operation (Video Redirection or Text Console Redirection) from [Operation].
4. Click [Apply].
   A new window opens to display the video redirection or text console redirection function.

FIGURE 1.11 Display in the Web-UI window (MMB, PSA, and BMC functions) shows how to display the MMB, PSA, and BMC functions in the Web-UI window.

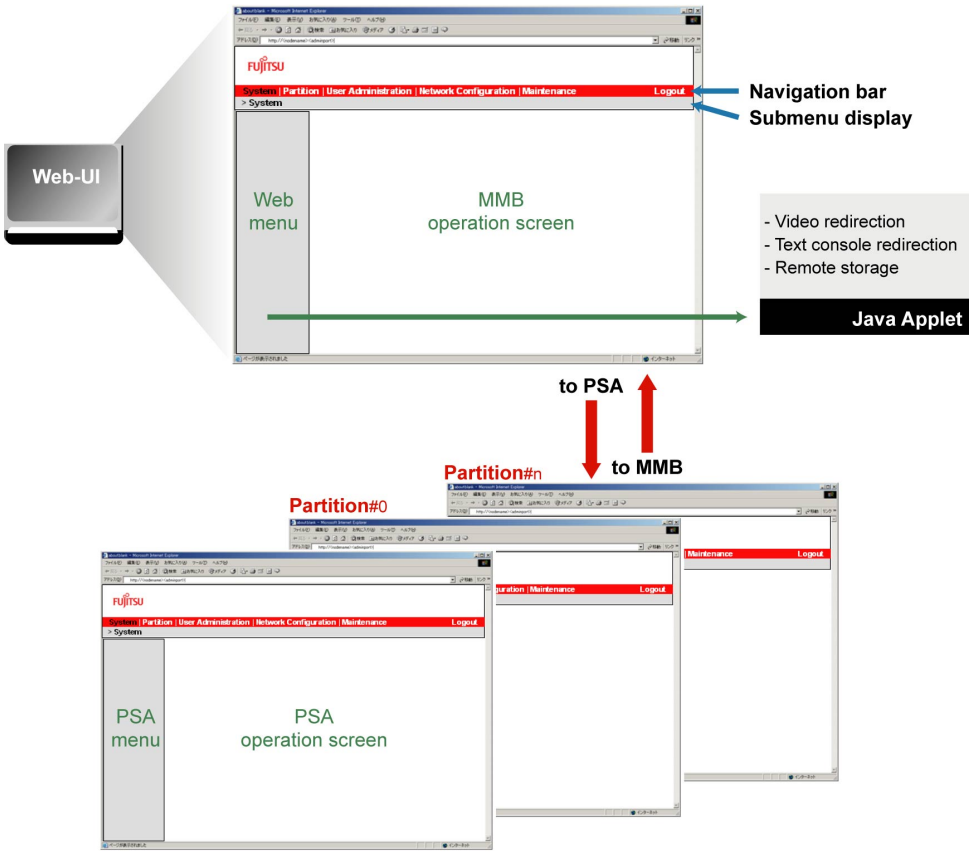


FIGURE 1.11 Display in the Web-UI window (MMB, PSA, and BMC functions)

Basic settings for CLI operations

This section describes the basic settings for CLI operations.

The user displays the target of CLI operations via telnet or SSH from a PC connected to the management LAN. The basic method is to specify the IP address of the target system for operations with a telnet or SSH connection and then log in to the target operating system or firmware.

If the target system for operations is PSA, in order to perform CLI operations, the user needs the MMB IP address and the port number of the partition that is the login destination. The information required for remote login, such as the IP address, port number of the partition, account, and password, must be set in advance.

- Confirm the user account and password for the MMB in the [User List] window of the Web-UI. Click [User Administration] - [User List] to display the [User List] window.
  Only users with Administrator privileges can display the [User List] window.
  For details on how to use the [User List] window, see 1.4.1 [User List] window in the *PRIMEQUEST 1000 Series Tool Reference* (C122-E110EN).

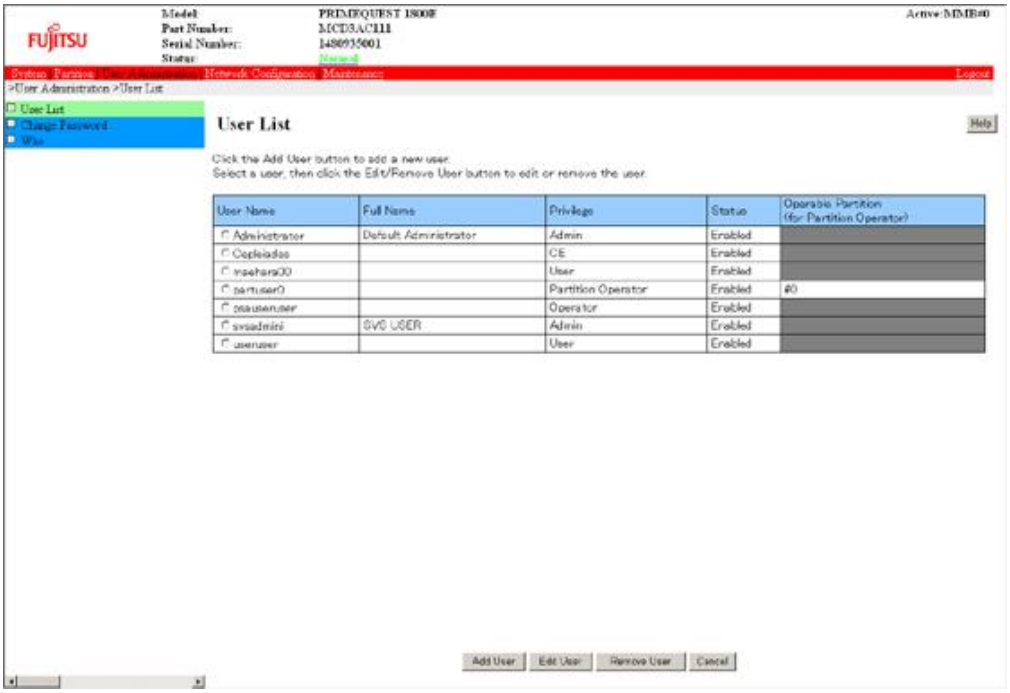


FIGURE 1.12 User List window

- Set the network protocol information required for remote login in the [Network Protocols] window. Click [Network Configuration] - [Network Protocols] in the Web-UI to display the [Network Protocols] window. Only users with Administrator privileges can edit in the [Network Protocols] window.
  For details on how to use the [Network Protocols] window, see 1.5.4 [Network Protocols] window in the *PRIMEQUEST 1000 Series Tool Reference* (C122-E110EN).

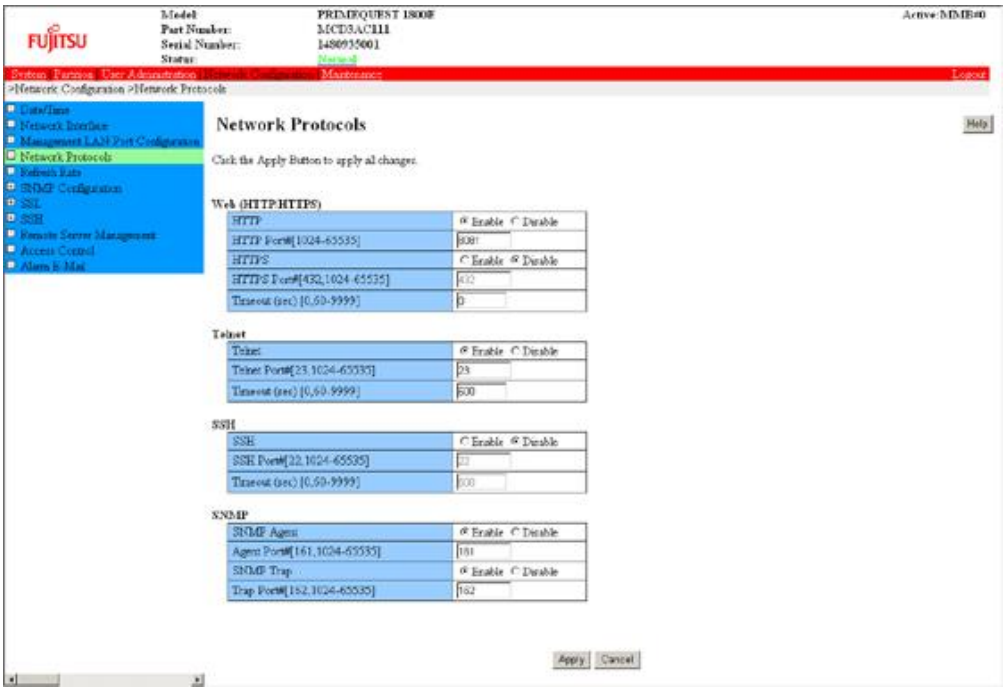


FIGURE 1.13 Network Protocols window

- Method for logging in to the MMB
  Specify the MMB IP address to log in remotely.

For details on the MMB CLI operations, see 2.1 Basic Operations with the CLI in the *PRIMEQUEST 1000 Series Tool Reference* (C122-E110EN).

Note

Before logging in to the MMB externally via telnet or SSH, you need to set the values of the required items to [Enable] in the [Network Protocols] window. Click [Network Configuration] - [Network Protocols] to access the window.

For details on the MMB CLI operations, see Chapter 2 MMB CLI (Command Line Interface) Operations in the *PRIMEQUEST 1000 Series Tool Reference* (C122-E110EN).

CHAPTER 2 UEFI Overview

This chapter provides an overview of the UEFI and describes how it operates.

2.1 About the UEFI

The UEFI is firmware used in booting the operating system (OS). The PRIMEQUEST 1000 series supports UEFI 2.1.

The main UEFI functions are as follows:

- OS boot functions
- Boot order control function
- Hardware setup function

2.2 OS Boot Functions

The UEFI loads and initializes various UEFI drivers required for boot processing. UEFI Boot Manager performs the OS boot process according to the set boot information.

2.2.1 Operating system types

In this chapter, operating systems that support UEFI are referred to as UEFI-aware OSs, and operating systems that do not support the UEFI are referred to as legacy OSs.
The PRIMEQUEST 1000/2000 series supports both UEFI-aware OSs and legacy OSs. For each operating system to be booted, the UEFI or the BIOS emulation function is selected.
Legacy OSs are booted using the BIOS emulation function.
When UEFI-aware OSs require operation that is the same as that of legacy OSs, operation is possible with the BIOS emulation function (legacy BIOS boot) setting. Note that legacy OSs cannot be installed via UEFI mode (UEFI boot).
For details on the setting method, see 5.4 [Boot Manager] Menu in the *PRIMEQUEST 1000 Series Tool Reference* (C122-E110EN).
For details on the difference between UEFI boot and legacy BIOS boot, see the OS documents.

The following table lists the operating system types.

TABLE 2.1 Operating system types

OS type	OS
UEFI Aware OS	Microsoft Windows Server 2008 (64-bit) Microsoft Windows Server 2008 R2 Red Hat Enterprise Linux 6 (for Intel64)
Legacy OS	Microsoft Windows Server 2008 (32-bit) Microsoft Windows Server 2003 (*) Microsoft Windows Server 2003 R2 (*) Red Hat Enterprise Linux 5

*: For Windows Server 2003 and Windows Server 2003 R2, SP2 and later are supported.

Note

For the latest information on the operating systems supported by the PRIMEQUEST 1000 series, contact the distributor where you purchased your product, or a Fujitsu sales representative.

2.3 Boot Order Control Function

Boot order control is a feature that controls the order of devices from which an operating system can be booted.

The boot order control feature provides the following functions:

- Function for changing the priority assigned to boot devices.
- Function for adding devices or deleting them from a group of boot devices.

For details on boot order control, see Chapter 5 UEFI Menu Operations in the *PRIMEQUEST 1000 Series Tool Reference* (C122-E110EN).

2.4 Screen Transitions from Power-on to Boot Manager Start

The following figure shows the screen transitions from system power-on to activation of the Boot Manager front page.

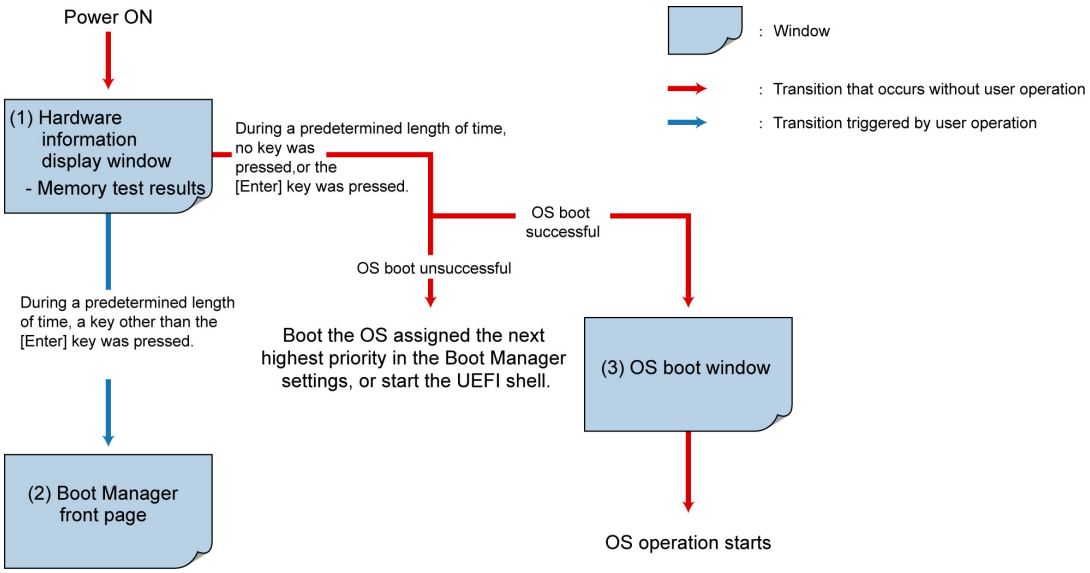


FIGURE 2.1 Screen transitions from power-on

Remarks

The Boot Manager front page can also be started from the MMB Web-UI [Power Control] window. To start it from the MMB Web-UI, reboot by selecting [Force boot into EFI Boot Manager] from [Boot Selector] on the [Power Control] window. For details, see 1.3.1 [Power Control] window in the *PRIMEQUEST 1000 Series Tool Reference* (C122-E110EN).

2.5 Overview of Screens That Appear before Boot Manager Front Page Starts

This section describes each screen that appears before Boot Manager front page starts.

2.5.1 Hardware information display

After power-on, the contents and result of the test conducted on the detected system memory are displayed.
The following figure shows an example of display of the memory test result.

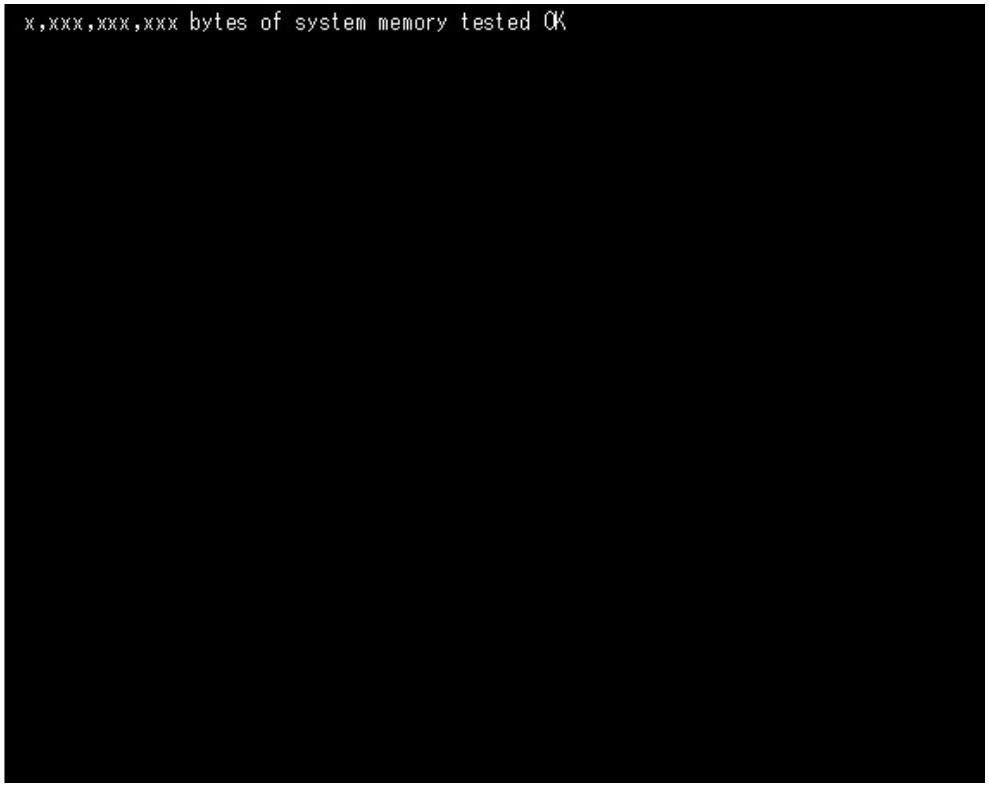


FIGURE 2.2 Memory test result (example)

2.5.2 Logo display

The logo is displayed at the center of the screen. The progress bar is displayed at the bottom of the screen. The system accepts key input while the progress bar is displayed. Depending on the key pressed, processing advances to activation of the Boot Manager front page or automatic operating system startup.
The progress bar starts at the left end of the screen and moves to the right. The default logo display time is 10 seconds. You can change the logo display time from the UEFI menu. For details on how to set the logo display time, see 5.6.3 [Set Boot Delay Time] menu in the *PRIMEQUEST 1000 Series Tool Reference* (C122-E110EN).

FIGURE 2.3 Logo display (example)

2.5.3 Boot Manager front page display

The Boot Manager front page is the top UEFI menu page. Activating the Boot Manager front page displays the screen below.

For details on how to activate the Boot Manager front page, see 2.6 Activating the Boot Manager Front Page.

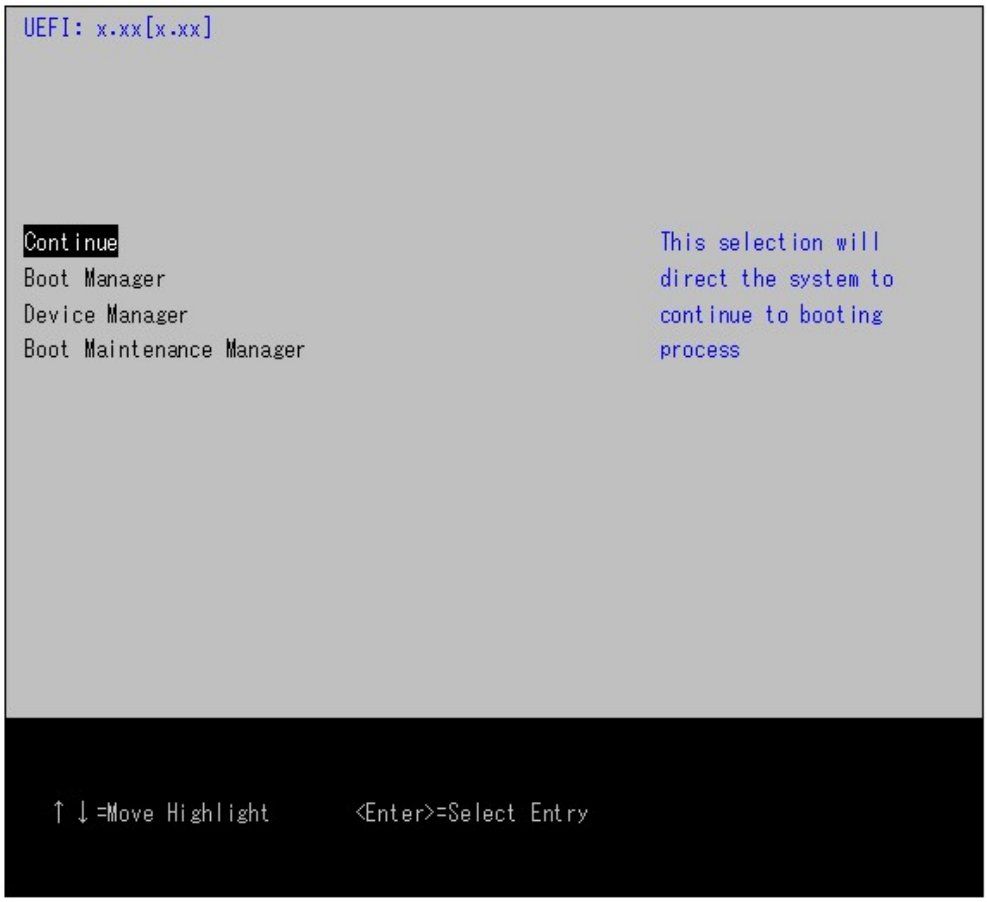


FIGURE 2.4 Boot Manager front page display

2.6 Activating the Boot Manager Front Page

Activate the Boot Manager front page as follows.

1. Press a key other than the [Enter] key (such as the [Space] key) while the FUJITSU logo screen is displayed.

Remarks

The Boot Manager front page can also be started from the MMB Web-UI [Power Control] window. To start it from the MMB Web-UI, reboot by selecting [Force boot into EFI Boot Manager] from [Boot Selector] on the [Power Control] window. For details, see 1.3.1 [Power Control] window in the *PRIMEQUEST 1000 Series Tool Reference* (C122-E110EN).

2.7 Automatic OS Boot

There are two methods of automatically booting the operating system:

- Waiting until the logo display ends before pressing any key
- Pressing the [Enter] key while the logo is displayed

If you wait until the logo display ends before pressing any key, the operating system will boot after the logo display ends.
If you press the [Enter] key while the logo is displayed, the logo display is interrupted, and the operating system boots immediately.
In an environment where startup is possible from multiple operating systems, the operating system assigned the highest boot priority will boot.
For details on how to specify boot priority, see 5.6.1 [Boot Options] menu in the *PRIMEQUEST 1000 Series Tool Reference* (C122-E110EN).
If the selected operating system fails to boot, the operating system assigned the next highest priority will boot. The UEFI shell also starts according to this priority.
Immediately after the UEFI shell starts, you can boot the boot option with the next highest priority by executing the exit command from the UEFI shell prompt.

The exit command syntax is as follows.

```
Shell> exit
```

If all operating systems fail to boot, the Boot Manager front page appears.

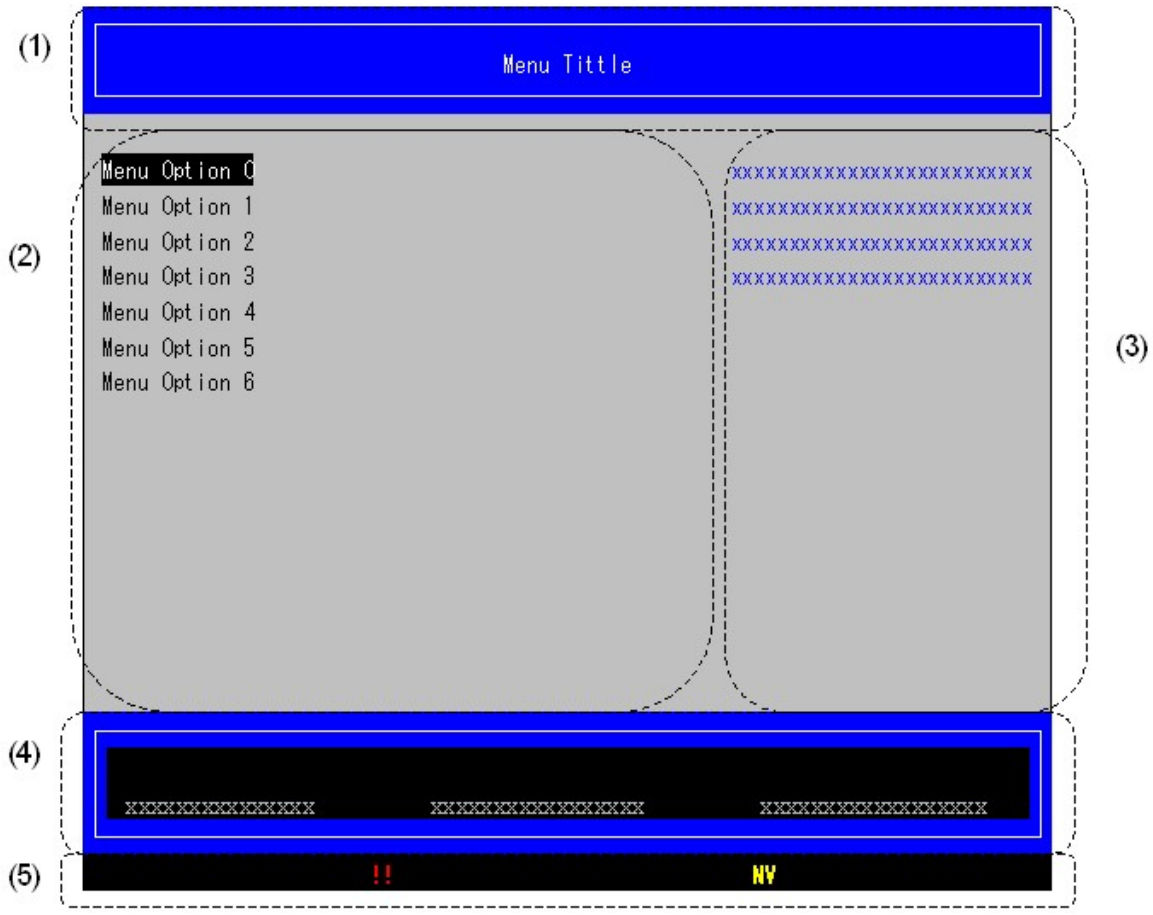
2.8 Standard Screen Layout

This section describes the standard layout of UEFI menu screens. For details on the screen layout of the Boot Manager front page, see 2.9 Screen Layout of the Boot Manager Front Page.

2.8.1 Screen areas

This section describes the five screen component areas. For details on these areas, see the following sections:

- 2.8.2 Page information display area
- 2.8.3 Menu selection area
- 2.8.4 Help display area for menu selection
- 2.8.5 Help display area for operations
- 2.8.6 Status information display area



No.	Description
(1)	Page information display area
(2)	Menu selection area
(3)	Help display area for menu selection
(4)	Help display area for operations

No.	Description
(5)	Status information display area

FIGURE 2.5 Standard screen layout

2.8.2 Page information display area

The page information display area displays the title of the menu that is currently displayed.

2.8.3 Menu selection area

The menu selection area lists the operation items in the menu.
The highlighted portion, called the cursor, is over [Menu Option 0] in FIGURE 2.6 Scroll bar display below. It indicates an item that the user can select by performing the defined operation.
If there are too many operation items to display at the same time, a scroll bar appears as shown in the following figure (at the center of the screen).

FIGURE 2.6 Scroll bar display

2.8.4 Help display area for menu selection

The help display area for menu selection displays detailed information on the highlighted cursor item.
The following table lists the items displayed in the Boot Maintenance Manager menu.

TABLE 2.2 Details of menu selection help

Display item	Description (displayed English text)
Boot Options	Modify system boot options
Boot From File	Boot system from a file
Set Boot Delay Time	Modify automatic boot time-out value
Reset System	Reset System

2.8.5 Help display area for operations

The help display area for operations displays help information about page operations.
The following table provides some examples of help information that is displayed with the Boot Maintenance Manager menu.

TABLE 2.3 Operation help information (example)

Display item	Help information
↑↓=Move Highlight	Use the up or down arrow key to move the cursor up or down.
<Enter>=Select Entry	Press the [Enter] key to select an item.

2.8.6 Status information display area

The status information display area displays the menu status information. The following table lists status information that is displayed.

TABLE 2.4 Status descriptions

Display item	Description
NV	Indicates that the setting has been changed in the menu.
!!	Indicates that the setting in the menu contains an error.

2.8.7 Pop-up windows

A pop-up window may appear when you select a menu. Pop-up windows are displayed for the following purposes:

- Displaying an error message
- Displaying multiple menu items so that the user can select one
- Changing the priority

If a pop-up window has too many operation items to fit in one screen, a scroll bar appears in the pop-up window. When selecting an item, use the up and down arrow keys to move the cursor.

2.9 Screen Layout of the Boot Manager Front Page

The Boot Manager front page is the top UEFI menu page. This screen has the following functions:

- Continue: Directs the system to continue the boot process.
- Boot Manager: Displays the Boot Manager menu.
- Device Manager: Displays the Device Manager menu.
- Boot Maintenance Manager: Displays the Boot Maintenance Manager menu.

The following figure shows an example of the Boot Manager front page display.

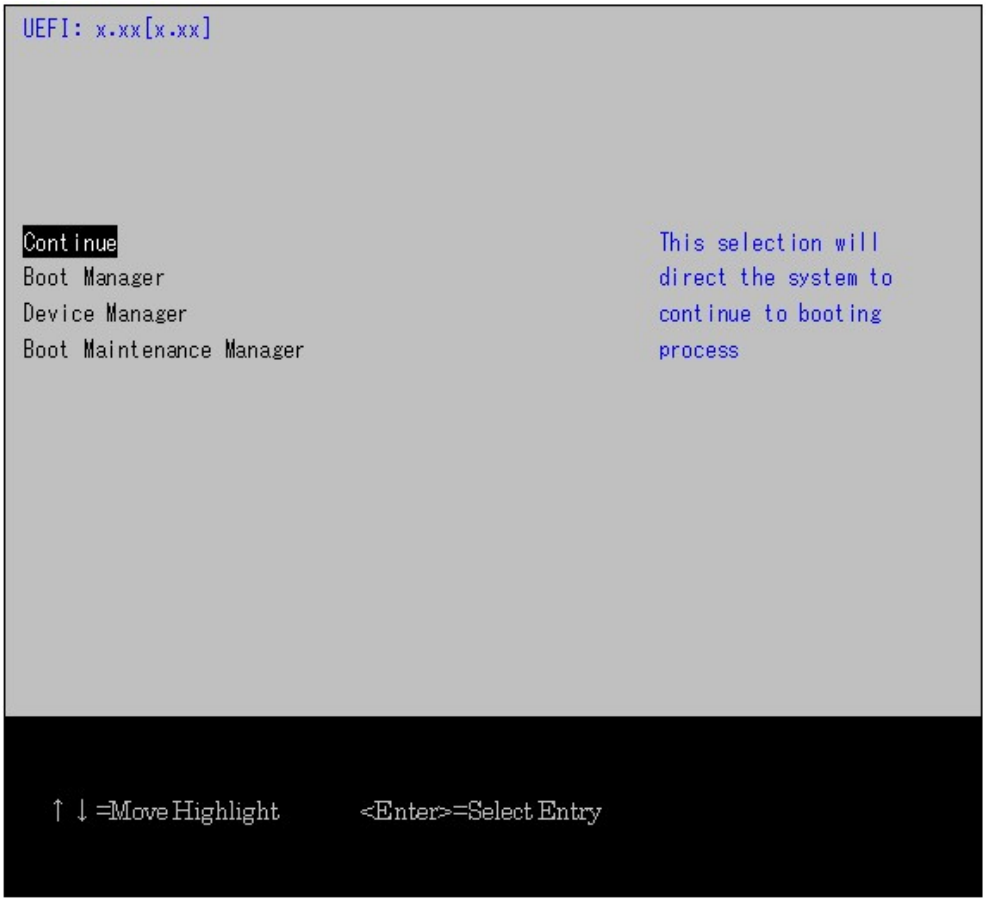


FIGURE 2.7 Boot Manager front page display (example)

2.9.1 Screen areas

This section describes the four screen component areas.

For details on these areas, see the following sections:

- 2.9.2 System information display area
- 2.9.3 Menu selection area
- 2.9.4 Help display area for menu selection
- 2.9.5 Help display area for operations

No.	Description
(1)	System information display area
(2)	Menu selection area
(3)	Help display area for menu selection
(4)	Help display area for operations

FIGURE 2.8 Screen layout of the Boot Manager front page

2.9.2 System information display area

The system information display area displays the UEFI version.

2.9.3 Menu selection area

The menu selection area displays the selected menu. The following table lists the menus displayed.

TABLE 2.5 Menus

Item	Description
Continue	Directs the system to continue the boot process in the specified order.

Item	Description
Boot Manager	Displays the Boot Manager menu.
Device Manager	Displays the Device Manager menu.
Boot Maintenance Manager	Displays Boot Maintenance Manager.

2.9.4 Help display area for menu selection

The help display area for menu selection displays an explanation of the highlighted cursor item. The following table lists the displayed items and their help information.

TABLE 2.6 Items displayed in the help display area for menu selection

Item	Description (displayed English text)
Continue	This selection will direct the system to continue to booting process
Boot Manager	This selection will take you to the Boot Manager
Device Manager	This selection will take you to the Device Manager
Boot Maintenance Manager	This selection will take you to the Boot Maintenance Manager

2.9.5 Help display area for operations

The help display area for operations displays help information that will be useful for manipulating the Boot Manager front page.

TABLE 2.7 Operation help information

Display item	Description
↑↓=Move Highlight	Moves the cursor up or down.
<Enter>=Select Entry	Selects an entry.

2.10 UEFI Key Input

Key input on the UEFI is treated as input from a US keyboard. This means that if you use a Japanese-language keyboard, some output key codes may be different from their respective keyboard key labels. The following table lists the output key codes that are different from their respective keyboard key labels.

TABLE 2.8 Output key codes different from their respective keyboard key labels

Input key code	Output key code
^	=
@	[
[	]
:	'
]	\
Shift + 2	@
Shift + 6	^
Shift + 7	&
Shift + 8	*
Shift + 9	(
Shift + 0	)
Shift + -	_
Shift + ^	+
Shift + @	{
Shift + [	}
Shift + ,	:
Shift + :	"
Shift +]	|

The following table lists the key codes that are ignored even if entered.

TABLE 2.9 Ignored key codes

Input key code
\
\
Shift + \
Shift + \

2.11 Menu-specific Operations

For details on individual menu operations, see Chapter 5 UEFI Menu Operations in the *PRIMEQUEST 1000 Series Tool Reference* (C122-E110EN).

2.12 UEFI Shell and UEFI Commands

The PRIMEQUEST 1000 series supports the UEFI shell functions that enable users to execute commands from the UEFI console. The following figure shows the screen display when the UEFI shell starts.

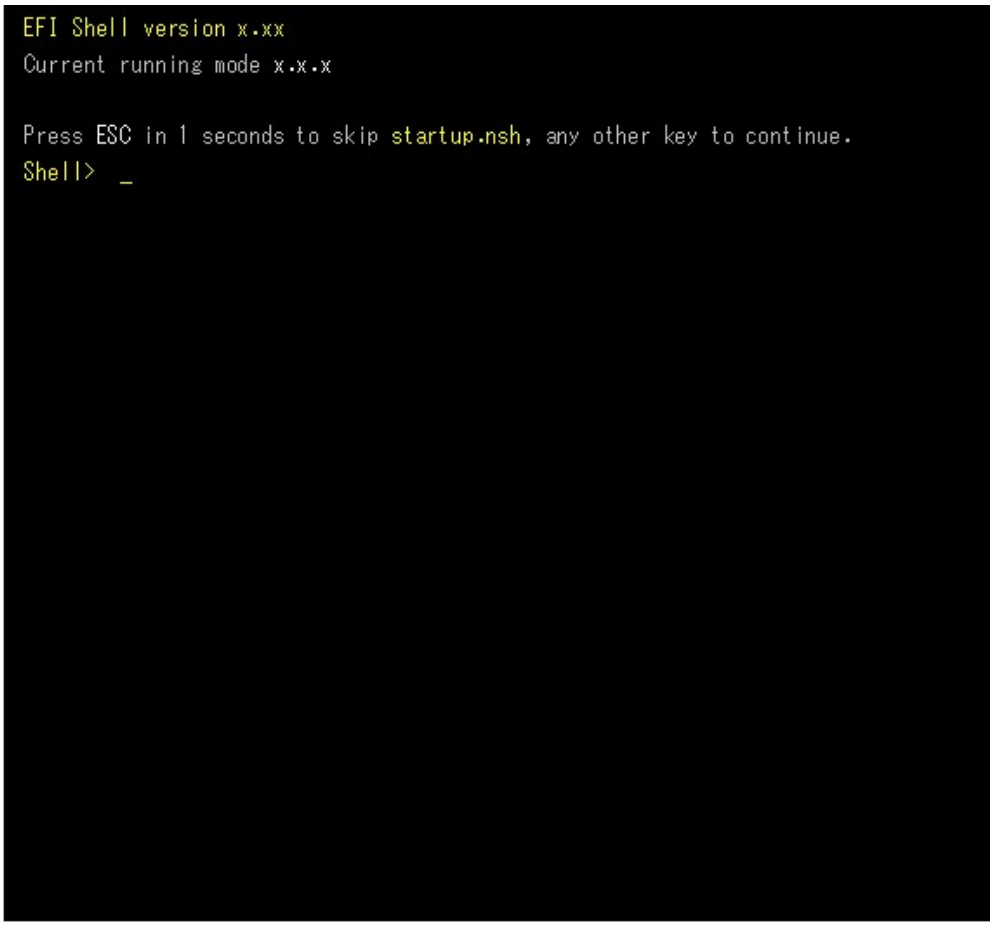


FIGURE 2.9 Screen display immediately after the UEFI shell starts (example)

2.12.1 Automatic startup file

Immediately after the UEFI shell starts, the UEFI shell checks whether the startup.nsh file is included in the defined execution path.
The execution path is the directory path specified in the shell environment path variable.
You can view and set this directory path by using the set command.

If the startup.nsh file exists, the shell runs the commands specified in the file and then waits for command input from the console. If the startup.nsh file does not exist, the shell does nothing.

2.12.2 UEFI shell command syntax

You can view and set shell environment variables by using the set command.
To access an environment variable value as an argument for a shell command, enclose the variable name in percent signs (%) as shown below.

```
%myvariable%
```

Remarks

- The UEFI shell has a special variable called "lasterror." This variable holds the return value from the last executed shell command.
- "The following characters are wildcard characters: * ? [ ]. They can be used in a file name specified as a shell command argument.
  The following table provides examples of using wildcard characters.

TABLE 2.10 Examples of using wildcard characters

Sample character string	Meaning
*	Matches zero or more characters in the file name.
?	Matches exactly one character in the file name.
[*character string*]	Matches any of the characters enclosed in brackets [ ] (e.g., [a-z A-Z]).

2.12.3 Output redirection

The UEFI shell command output can be redirected to a file.
The following table lists types of output redirection and append as well as sample syntax.

TABLE 2.11 Output redirection

Character string	Meaning	Sample syntax
>	Redirects the standard output to a Unicode file.	Command > unicode_output_file_pathname
>a	Redirects the standard output to an ASCII file.	Command >a ascii_output_file_pathname
1>	Redirects the standard output to a Unicode file.	Command 1> unicode_output_file_pathname
1>a	Redirects the standard output to an ASCII file.	Command 1>a ascii_output_file_pathname
2>	Redirects the standard error output to a Unicode file.	Command 2> unicode_output_file_pathname
2>a	Redirects the standard error output to an ASCII file.	Command 2>a ascii_output_file_pathname
>>	Appends the standard output to a Unicode file.	Command >> unicode_output_file_pathname
>>a	Appends the standard output to an ASCII file.	Command >>a ascii_output_file_pathname
1>>	Appends the standard output to a Unicode file.	Command 1>> unicode_output_file_pathname
1>>a	Appends the standard output to an ASCII file.	Command 1>>a ascii_output_file_pathname

Remarks

- The UEFI shell enables you to redirect the standard output or standard error output to a single file.
- You can redirect the standard output or standard error output to the same file.
  Note that you cannot redirect the standard output or standard error output to multiple files at the same time.

2.12.4 UEFI shell commands

For a list of UEFI shell commands, see Chapter 6 UEFI Command Operations in the *PRIMEQUEST 1000 Series Tool Reference* (C122-E110EN).

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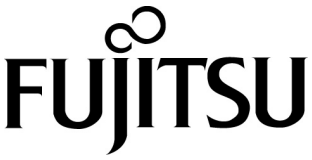
FUJITSU