

Fujitsu Storage
ETERNUS LT140 Tape Library

User's Guide -Panel Operation-

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Preface

Fujitsu would like to thank you for purchasing our Fujitsu Storage ETERNUS LT140 Tape Library (hereinafter referred to as LT140).

The LT140 is designed to be connected to servers (such as PRIMEQUEST, PRIMERGY, or Fujitsu M12/M10).

This manual explains how to perform operation management and settings for the LT140 from the operator panel or the remote panel.

This manual is intended for use of LT140 in regions other than Japan.

Please carefully review the information outlined in this manual.

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About This Manual

Organization

This manual is composed of the following three chapters:

- Chapter 1 Overview

This chapter provides an overview of the operator panel and the remote panel.

- Chapter 2 Operator Panel

This chapter provides information about various operations that can be performed with the operator panel.

- Chapter 3 Remote Panel

This chapter provides information about various operations that can be performed with the remote panel.

The following content is described as an appendix:

- Library Configurations and IDs

Warning Notations

Warning signs are shown throughout this manual in order to prevent injury to the user and/or material damage. These signs are composed of a symbol and a message describing the recommended level of caution. The following section explains the symbols, their levels of caution, and their meanings as used in this manual.



This symbol indicates the possibility of serious or fatal injury if the LT140 is not used properly.



This symbol indicates the possibility of minor or moderate personal injury, as well as damage to the LT140 and/or to other users and their property, if the LT140 is not used properly.

■ **IMPORTANT**

This symbol indicates IMPORTANT information for the user to note when using the LT140.

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



△ The triangle emphasizes the urgency of the WARNING and CAUTION contents. Inside the triangle and above it are details concerning the symbol (e.g. Electrical Shock).



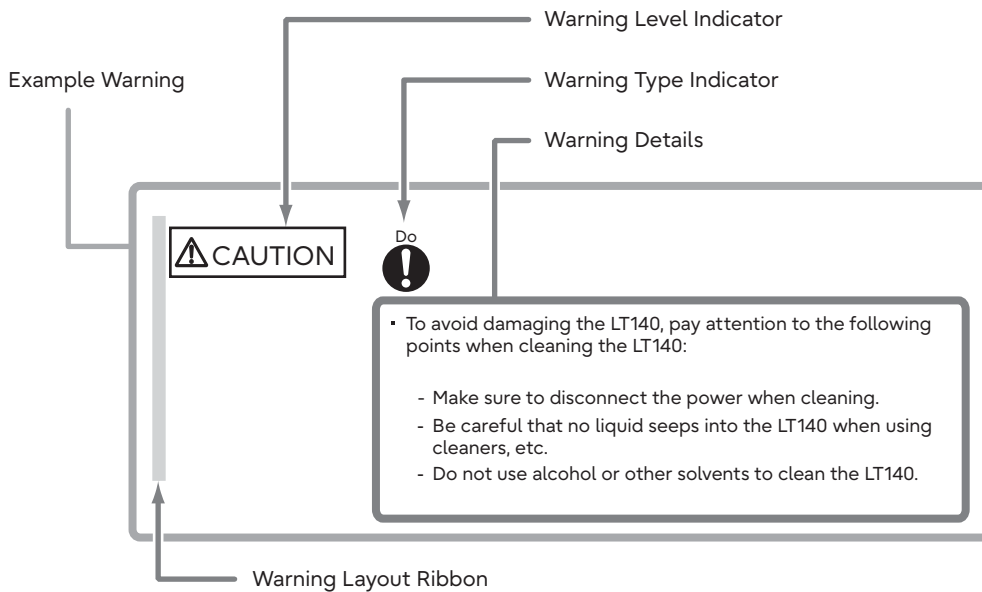
⊘ The barred "Do Not..." circle warns against certain actions. The action which must be avoided is both illustrated inside the barred circle and written above it (e.g. No Disassembly).



● The black "Must Do..." disk indicates actions that must be taken. The required action is both illustrated inside the black disk and written above it (e.g. Unplug).

How Warnings are Presented in this Manual

A message is written beside the symbol indicating the caution level. This message is marked with a vertical ribbon in the left margin, to distinguish this warning from ordinary descriptions. An example is shown here.



Naming Conventions

Symbols Used in This Manual

The following symbol is used throughout this manual:



This symbol alerts operators to particularly important information. Be sure to read this information.



Functions and know how which can be useful when setting up or operating the LT140.

Abbreviations Used in This Manual

- "LT140" refers to the Fujitsu Storage ETERNUS LT140 Tape Library.
- Trademark symbols such as ™ and ® are omitted in this document.

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Chapter 1

Overview

This chapter provides an overview of the operator panel and the remote panel.

1.1 Overview of Panel Operations

The library provides two main interfaces:

- Operator panel
By using the operator panel, the library can be monitored, configured, and controlled. All operations are performed using the buttons located on the front panel of the base module.
- Remote panel
By using the remote panel, the library can be monitored, configured, and controlled from a Web browser. The remote panel allows the use of functions for dedicated protected sites such as displaying the graphical library information. Excluding the top menu, the operation menu tree is displayed in the right pane.

The operations that are available in the operator panel differ with the remote panel.

1.1.1 Overview of the Operator Panel

The operator panel consists of a display and buttons that are located at the center of the front panel. It is possible to perform operations such as referencing/setting the library and tape drive status and opening the magazine or mailslot from the operator panel. Operations such as switching menus, selecting functions, and entering setting values can be performed by pressing the buttons on the operator panel.

For details about how to use the operator panel, refer to ["Chapter 2 Operator Panel" \(page 19\)](#). The windows on the operator panel before login can be roughly divided into the initialization window and login window.

■ Initialization window

Initialization is started when the library is turned on. After the power is turned on, the LCD panel displays the FUJITSU logo and then transitions to the initialization screen. In the initialization window, the progress status of the library initializing are displayed.

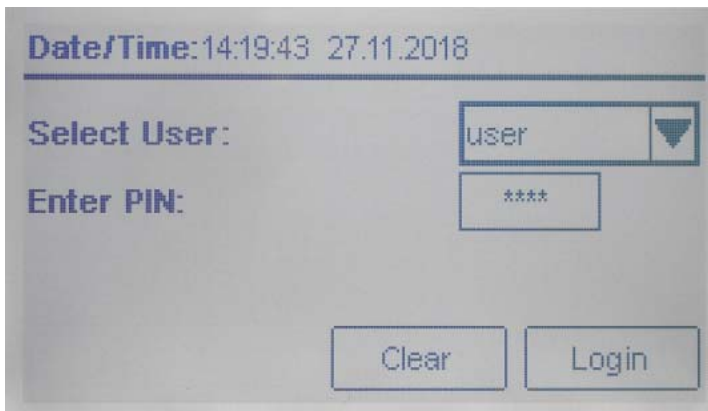
Figure 1.1 Initialization window



■ Login window

When initialization operation ends, the login window is displayed on the operator panel. If the screen saver is being displayed, press the Enter button. For details about the buttons, refer to ["2.1 Using the Operator Panel" \(page 19\)](#).

Figure 1.2 Login window



1.1.2 Overview of the Remote Panel

The remote panel can be used to perform operations such as referencing/setting the library and tape drive status and performing tape drive cleaning on a Web browser via the LAN. For details about how to use the remote panel, refer to ["Chapter 3 Remote Panel" \(page 59\)](#).

Note

- The recommended environment for the remote panel is as follows:
 - Web browser
Mozilla Firefox, Google Chrome, Safari
- Cookies and JavaScript are used for the remote panel. Cookies and JavaScript need to be enabled in your browser.

Before using the remote panel, network settings need to be performed on the operator panel to enable the IP address, the subnet mask, and the gateway so that the remote panel can be used. Specify the following URL on a Web browser after performing the settings:

```
http:// <IP address specified for the LT140>/
```

or

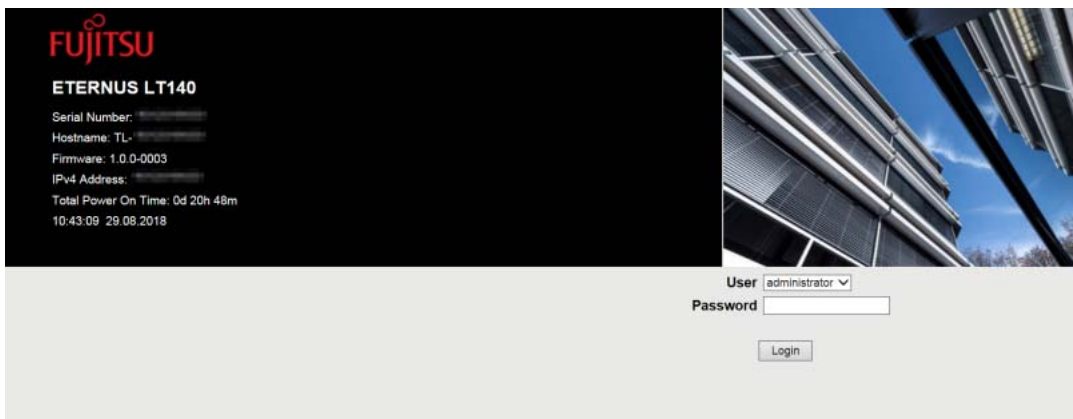
```
https:// <IP address specified for the LT140>/
```

Note

Use the https URL to connect to the remote panel for the LT140 when SSL is enabled. For details related to enabling SSL, refer to ["3.4.17 Configuring the Management Settings to Access the Remote Panel" \(page 106\)](#).

The following window is displayed when the LT140 is connected.

Figure 1.3 Remote panel starting window



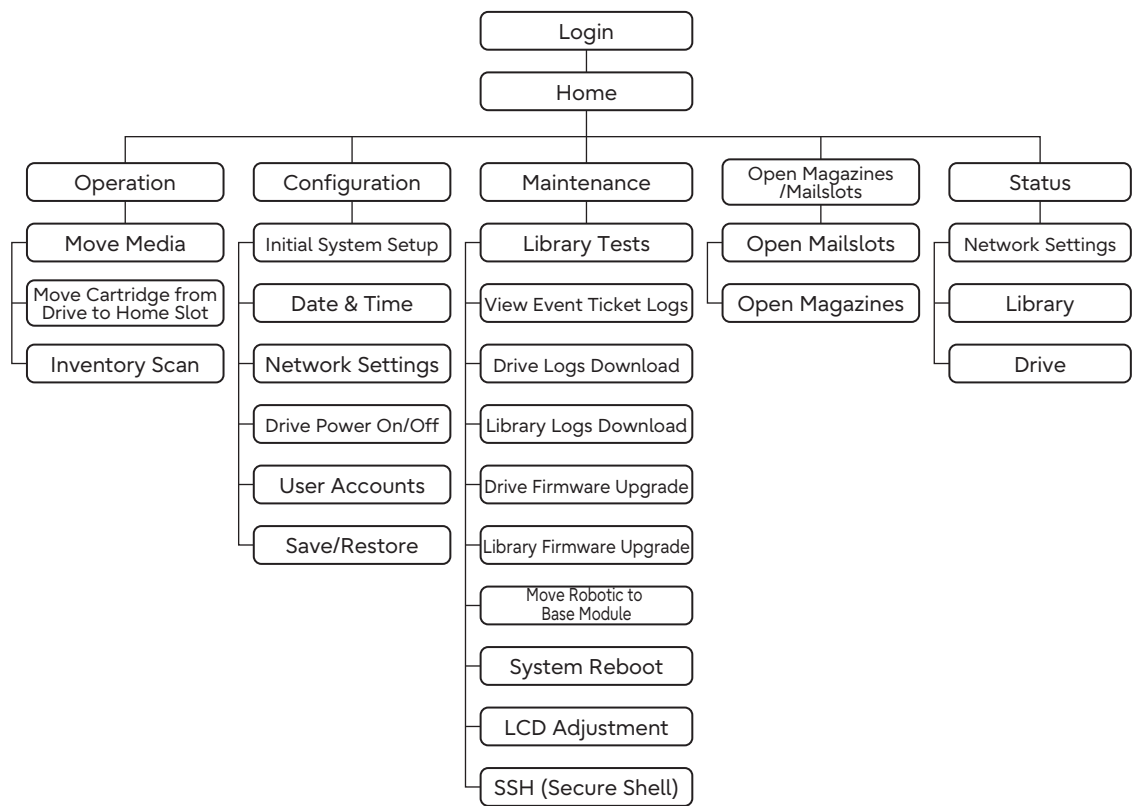
1.2 Menu Layout

This section describes the menu layout of the operator panel and the remote panel.

1.2.1 Menu Layout of the Operator Panel

The menu layout of the operator panel is as follows:

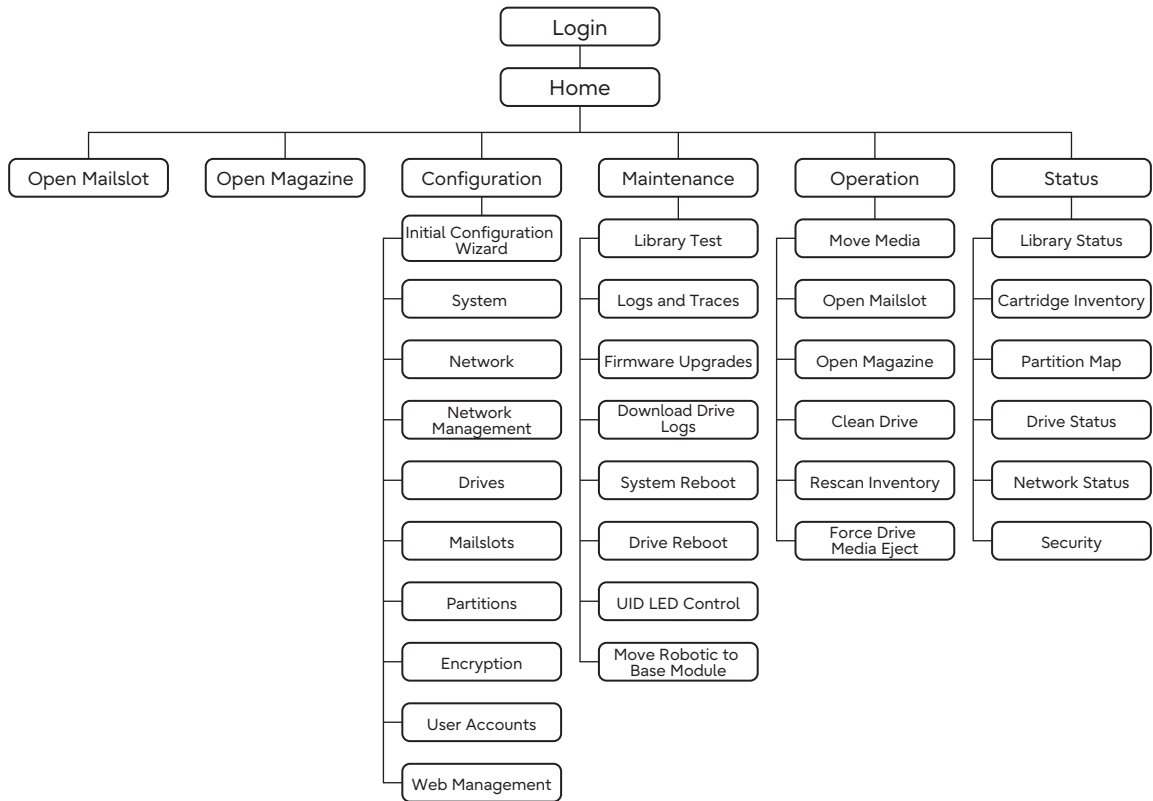
Figure 1.4 Menu layout of the operator panel



1.2.2 Menu Layout of the Remote Panel

The menu layout of the remote panel is as follows:

Figure 1.5 Menu layout of the remote panel



Although the Open Mailslot menu and the Open Magazine menu are in both the Home menu and the Operation menu, they are the same functions.

Chapter 2

Operator Panel

This chapter provides information about how to use the operator panel.

2.1 Using the Operator Panel

The operator panel consists of a power button, display, six operation buttons, left and right magazine open buttons, and five LEDs. The operator panel allows the user to use functions such as monitoring, configuring, and operating the library. All operator panel operations are performed using the buttons. LEDs indicate the library status based on the lighting state. The magazine open buttons are used to operate the magazines or indicate the status of the magazines based on the lighting state.

Figure 2.1 Operator panel

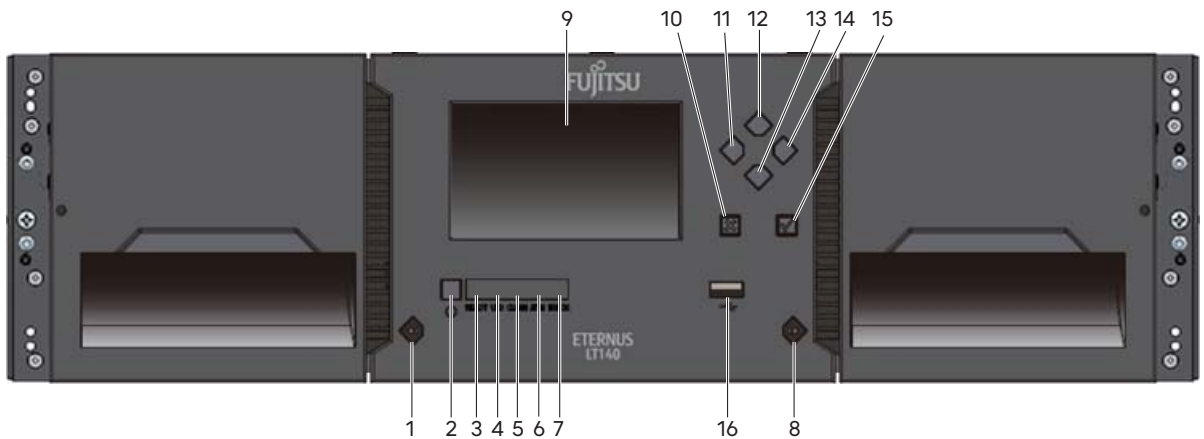


Table 2.1 Name of each component

No.	Component	Detail
1	Left magazine open button	Button with a status LED. Used for opening the left magazine. The status LED (blue) indicates the state of the left magazine.
2	Power button	The ON/OFF power button of the base module.
3	LED Panel	Ready LED (green)
4		Unit Identification LED (blue)
5		Clean LED (Amber)
6		Attention LED (Amber)
7		Error LED (Amber)

No.	Component	Detail
8	Button for opening the right magazine or Mailslot	Button with a status LED. Used for opening the right magazine or Mailslot. The status LED (blue) indicates the state of the right magazine or Mailslot.
9	LCD screen	Display screen for the operator.
10	Operation button	Back/Return [x] button
11		Left button
12		Up button
13		Down button
14		Right button
15		Enter [4] button
16	USB port	For maintenance. Not used for normal operations.

Table 2.2 Meanings of each LED (LT140 status)

No.	LED status		Meaning
1	Ready	Green	When the power is on, the green LED turns on. The LED flashes when the tape drive is ready or when the library robot is in operation.
2	Unit Identification	Blue	The LED of the Unit ID (UID) is controlled by the user with the [Maintenance > UID LED Control] screen of the operator panel or remote panel. The UID can be used for identifying the location of the data center library.
3	Clean	Amber	When a tape drive cleaning operation is required, the amber LED turns on.
4	Attention	Amber	The LED turns on or flashes when the user attention is required. However, the library can still perform most operations.
5	Error	Amber	The LED turns on when an unrecoverable tape drive or library error occurs. A corresponding error message is displayed on the screen of the operator panel. User intervention is required; the library is not capable of performing some operations.

Table 2.3 Magazine open button LED

Magazine state	LED status	Description
Closed	ON	Mailslot is enabled
Closed	Flashing (slow)	The magazine lock is being released
Closed	Flashing (fast)	The magazine is unlocked
Closed	Off	Mailslot is disabled
Opened	Off	The magazine is open

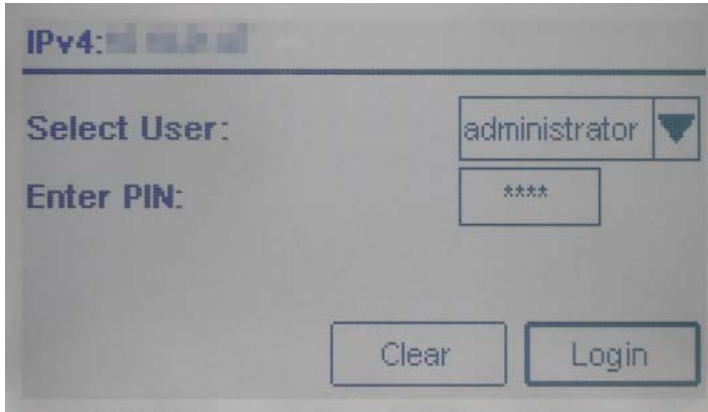
 **Note**

The operator panel screen may be initialized if time elapses without logging in or during the logout process. As a feature, the operator panel turns white for a few seconds during the initialization of the screen and then login screen appears.

2.1.1 Selecting a Menu

Menus can be selected using the operation buttons. Move the cursor over the target menu using the Up, Down, Left, and Right buttons and then press the Enter button to confirm. To cancel the selection or return to the previous screen, select the target menu or press the Back/Return button.

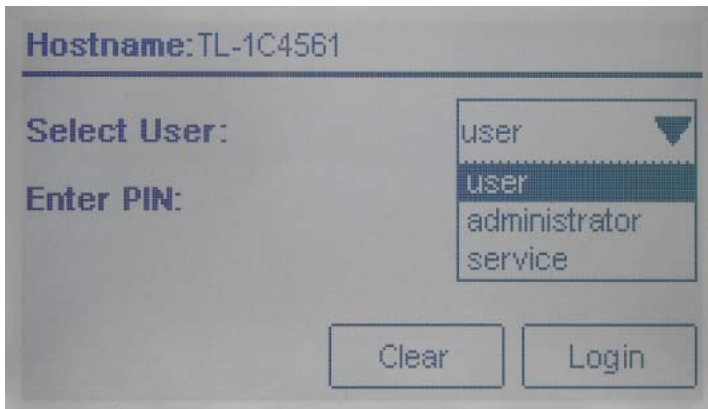
Figure 2.2 Menu selection example (selecting Login)



2.1.2 Selecting from the Drop-down List

Use the Up and Down buttons to make a selection from the drop-down list. Move the cursor over the target menu and press the Enter button to display the drop-down list. Use the Up and Down buttons to select an item with the cursor and then press the Enter button to confirm.

Figure 2.3 Drop-down list selection example (Account selection)



2.1.3 Entering Values

Values can be entered using the operation buttons (Up, Down, Left, and Right). Move the cursor over the target menu and press the Enter button to display the combo box. Select an input target item with the Left and Right buttons and then select a value with the Up and Down buttons. After the values are entered, press the Enter button to confirm.

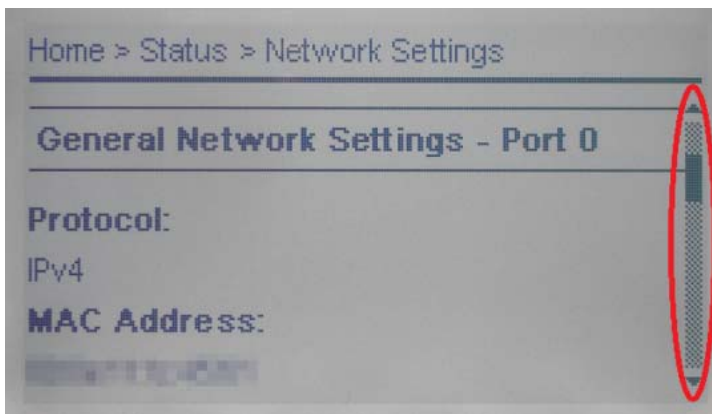
Figure 2.4 Example of entering values (entering a PIN)



2.1.4 Scrolling the Screen

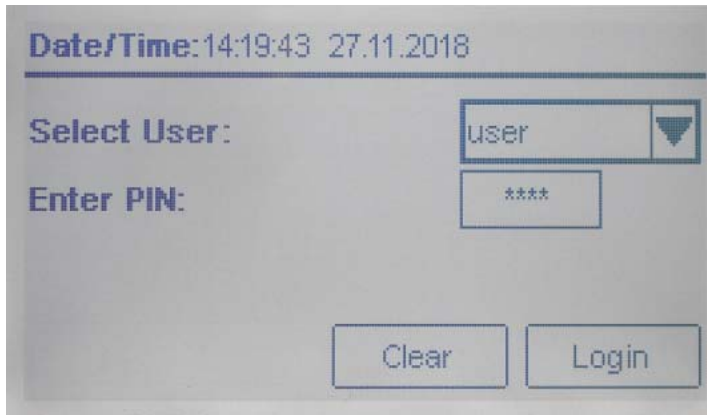
For screens with a scroll bar, they can be scrolled using the Up and Down buttons.

Figure 2.5 Example of the screen scrolling



2.2 Logging into the Library

Figure 2.6 Login screen



Procedure

- 1 Display the login screen.
Press the Enter button to exit the screen saver if it is being displayed on the operator panel.
- 2 Select a user.
- 3 If required, enter the PIN.
- 4 Select [Login].

End of procedure

The user levels are:

- user
The user account provides access to status information, but not configuration, maintenance or operation functions. There is no initial PIN. Log in to the library without entering a PIN. In addition, the administrator account can set a user account PIN, allow or deny the use of some operation functions. For more details, refer to ["2.5.5 Changing the PIN" \(page 38\)](#).
- administrator
The administrator PIN is required to login as the administrative account. There is no initial administrator PIN. Log in to the library without entering a PIN. The administrator account has access to all functionality except for the log configuration and Service features.

 **Caution**

For security purposes, changing the initial administrator PIN after starting the library is recommended.

During the initial login, the Initial System Setup function is used to configure the library and set the administrator PIN. The remote panel can be used by changing the administrator PIN and by configuring the network settings with this function.

For more details, refer to ["2.5.1 Using Initial System Setup" \(page 31\)](#).

- security

The "security" account cannot log in to the library from the operator panel. When logging in to the library with the "security" account, use the remote panel.

For more details, refer to ["3.2 Logging into the Library" \(page 60\)](#).

- service

Access to this user is by Service personnel only. The service PIN is set at the factory.

 **Note**

Basically, only one user can log in to the library regardless of whether the user logs in from the remote panel or operator panel.

If a user is currently logged in, a warning message appears. Select whether to continue the login process.

- Select "Leave" to stop the login process.
- Select "Login" to continue the login process and forcibly log the currently logged in user out.

As an exception, only the "user" account can log in to the library regardless of whether other users are logged in.

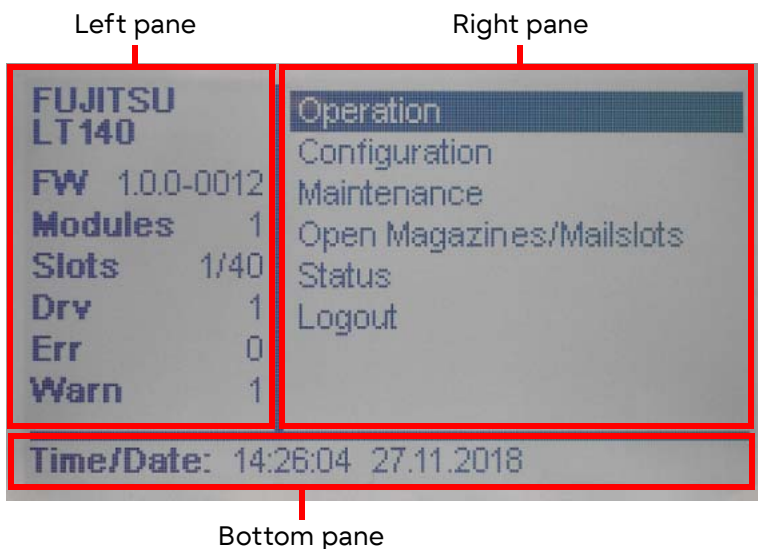
Note that if no operation is performed for a certain period of time, the user is forcibly logged out.

2.3 Using the Operator Panel Home Screen

The Home screen of the operator panel is configured in the following areas:

- Left pane
Displays a part of the library status.
- Bottom pane
Displays information such as the IP addresses that are set for the library or the date and time in sequence.
- Right pane
Displays the operation menu list.

Figure 2.7 Using the operator panel Home screen




■ Left Pane Elements

- FW
Displays the library firmware version.
- Modules
Displays the number of modules that configures the library.
- Slots
Displays the number of library slots and the number of used slots.
Displayed as "the number of library slots /the number of used slots".
- Drv
Displays the number of tape drives installed in the library.
- Err
Displays the number of detected Error statuses.
- Warn
Displays the number of detected Warning statuses.

■ Right Pane Elements

- Operation (non-user account)
Uses the operation function of the library. For more details, refer to ["2.4 Operating the Library" \(page 26\)](#).
- Operation (non-user account)
Configures the library. For more details, refer to ["2.5 Configuring the Library" \(page 31\)](#).
- Operation (non-user account)
Uses the maintenance function of the library. For more details, refer to ["2.6 Maintaining the Library" \(page 43\)](#).
- Open Magazines/Mailslots
Uses the magazines or Mailslots of the library. For more details, refer to ["2.7 Opening the Magazines/Mailslots" \(page 52\)](#).
- Status
References the library status information. For more details, refer to ["2.8 Viewing the Library Information" \(page 55\)](#).
- Logout
Logs out to return to the login screen.

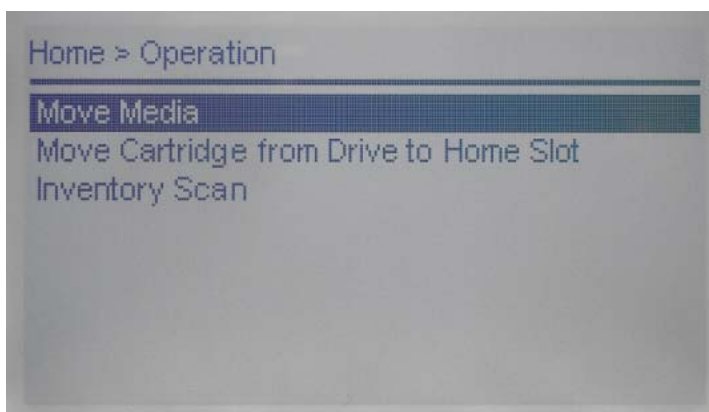
Note

A key mark  is displayed for the functions that cannot be used by the currently logged in account. These functions are not selectable.

2.4 Operating the Library

The library operation functions can be used from the menu displayed when [Operation] is selected in the Home screen.

Figure 2.8 Operation screen



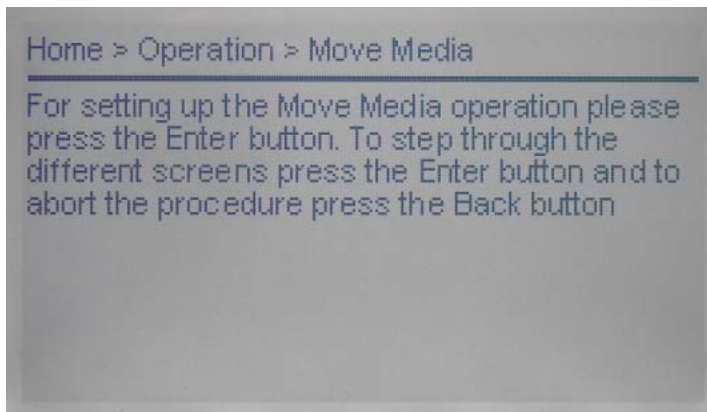
2.4.1 Moving Media

From the [Operation > Move Media] screen you can move a tape cartridge located in a source element to an available destination element within the same partition.

Procedure

- 1 Press the Enter button in the [Operation > Move Media] screen.

Figure 2.9 Move Media screen



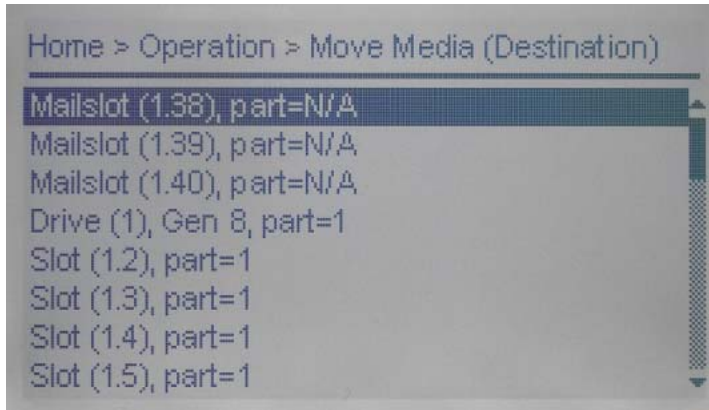
- 2 Select a tape cartridge from the Source Elements list.

Figure 2.10 Move Media (Source) screen



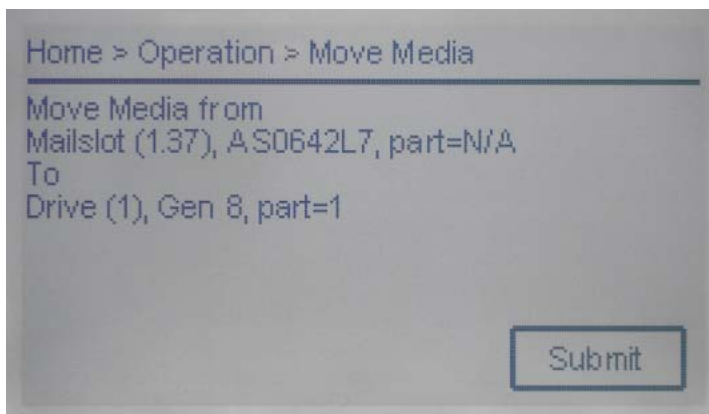
- 3 Select the destination location from Destination Elements list.

Figure 2.11 Move Media (Destination) screen



- 4 When the confirmation screen for the operation appears, select [Submit].

Figure 2.12 Move Media screen (confirmation screen)



End of procedure

2.4.2 Moving the Media from the Tape Drive to a Slot

In the [Operation > Move Cartridge to Home Slot] screen, the tape cartridge can be moved back to its original slot prior to being mounted in the tape drive.

Procedure

- 1 From the list of tape drives, select a tape drive to eject its tape cartridge and press the Enter button.

Figure 2.13 Tape drive selection



- 2 When a confirmation screen appears, press the Enter button.

Figure 2.14 Tape cartridge ejection confirmation screen



When the tape cartridge migration is completed, a confirmation screen appears.

- 3 Press the Enter button to finish.

Figure 2.15 Tape cartridge ejection completion screen

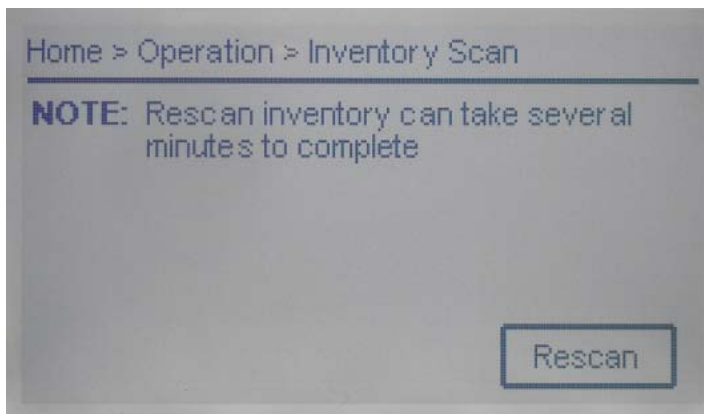


End of procedure

2.4.3 Rescanning the Tape Cartridge Inventory

Tape cartridges can be rescanned with the library by pressing the Enter button in the [Operation > Inventory Scan] screen.

Figure 2.16 Inventory rescan screen

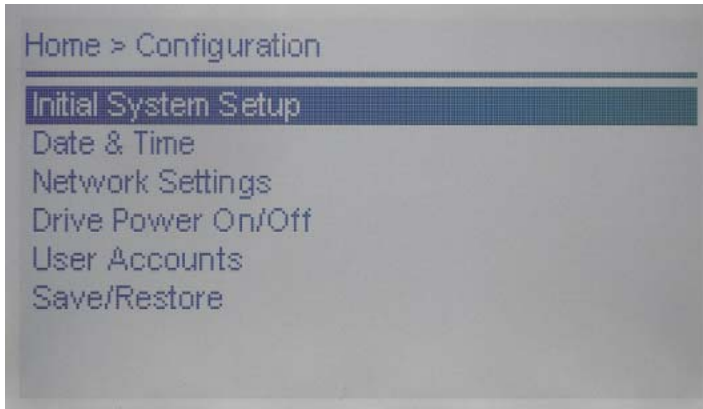


The library changes to the Scanning state. Other operations cannot be performed until the scan is completed.

2.5 Configuring the Library

A library can be configured from the menu displayed when [Configuration] is selected in the Home screen.

Figure 2.17 Configuration screen



2.5.1 Using Initial System Setup

By using the wizard from the [Configuration > Initial System Setup] screen, the library network settings, the date and time, and the administrator PIN can be configured. If the network settings are completed, operations can be performed from the remote panel. During the initial login, performing a library configuration with this function is recommended.

Figure 2.18 Initial Configuration screen



Note

Items that can be set with this function can be set individually. If the settings are configured individually, perform a configuration by checking the following procedures or each setting method as necessary.

- Library network settings
["2.5.3 Configuring the Library Network Settings" \(page 36\)](#)
- Date and time
["2.5.2 Setting the Date and Time" \(page 35\)](#)
- Administrator PIN
["2.5.5 Changing the PIN" \(page 38\)](#)

In addition, these settings can be performed from the remote panel.

- Library network settings
["3.4.7 Configuring the Library Network Settings" \(page 80\)](#)
- Date and time
["3.4.3.2 Setting the Date and Time Format" \(page 74\)](#)
- Administrator PIN
["3.4.15 Configuring the Account Settings" \(page 98\)](#)

To set the library configuration, perform the following procedure:

Procedure

- 1 On the [Configuration > Initial System Setup] screen, select [Next] and then press the Enter button.

Note

Items whose settings are not changed can be skipped by selecting [Next] without entering a value.

- 2 Configure the network settings.

Figure 2.19 Network configuration screen



- Host Name
Enter a value.
- Domain Name
Enter a value.
- Protocol
Select a protocol to use from the drop down list.

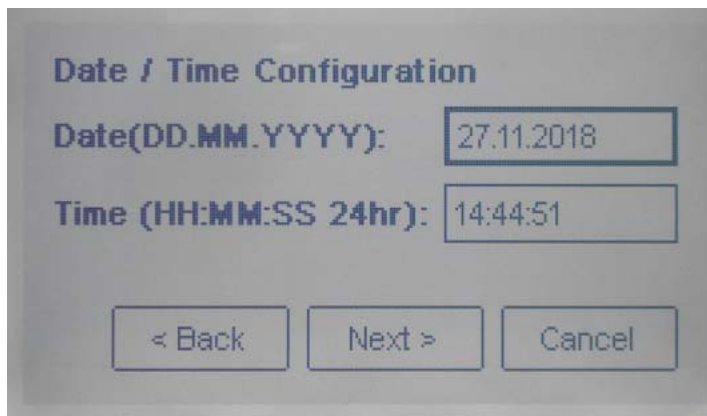
For the selected protocol, enter the remaining setting values.

Note

To automatically obtain an IP address for the library, select DHCP (for IPv4) or Stateless (for IPv6) in [Method].

- 3** When the input is completed, select [Next] and then press the Enter button.
- 4** Set a date and time setting.

Figure 2.20 Date and time setting screen



The screenshot shows a configuration screen titled "Date / Time Configuration". It has two input fields. The first is labeled "Date(DD.MM.YYYY):" and contains the text "27.11.2018". The second is labeled "Time (HH:MM:SS 24hr):" and contains the text "14:44:51". At the bottom of the screen, there are three buttons: "< Back", "Next >", and "Cancel".

- Date (DD.MM.YYYY)
Set the date. Enter the date in order of day, month, and year.
- Time (HH:MM:SS 24hr)
Set the time. Enter the time in order of hour, minute, and second.

When the input is completed, select [Next] and then press the Enter button.

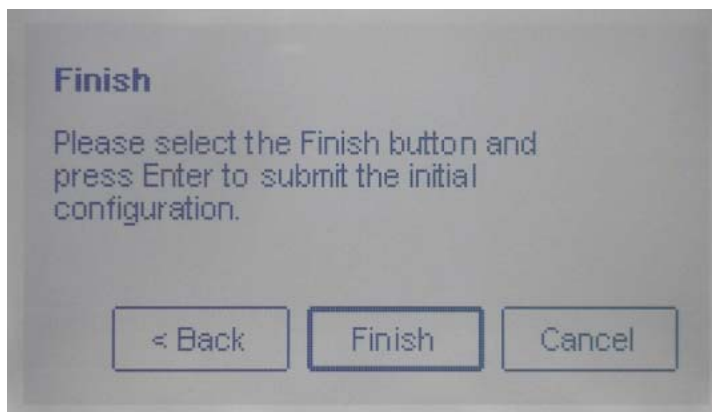
- 5 After entering the administrator PIN twice, select [Next] and press the Enter button.

Figure 2.21 Administrator PIN input screen



- 6 When a confirmation screen appears, select [Finish] and press the Enter button.

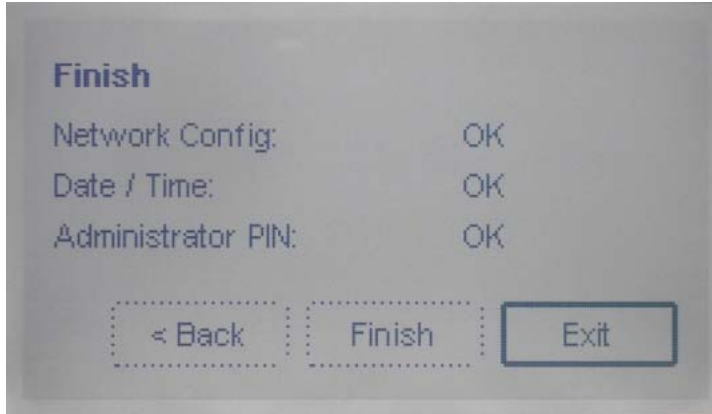
Figure 2.22 Administrator PIN input confirmation screen



The configuration is performed.

- 7 Select [Exit] and press the Enter button to finish.

Figure 2.23 Initial Configuration completion screen

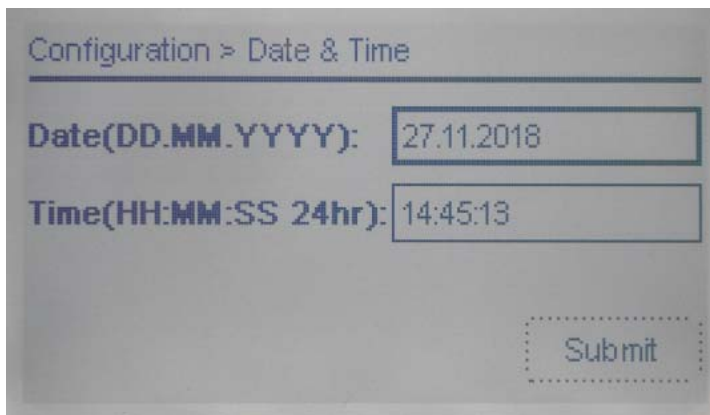


End of procedure

2.5.2 Setting the Date and Time

The date and time of the library can be set from the [Configuration > Date & Time] screen.

Figure 2.24 Date and time setting



Procedure

- 1 Enter the following items.
 - Date (DD.MM.YYYY)
Set the date. Enter the date in order of day, month, and year.
 - Time (HH:MM:SS 24hr)
Setting the time. Enter the time in order of hour, minute, and second.

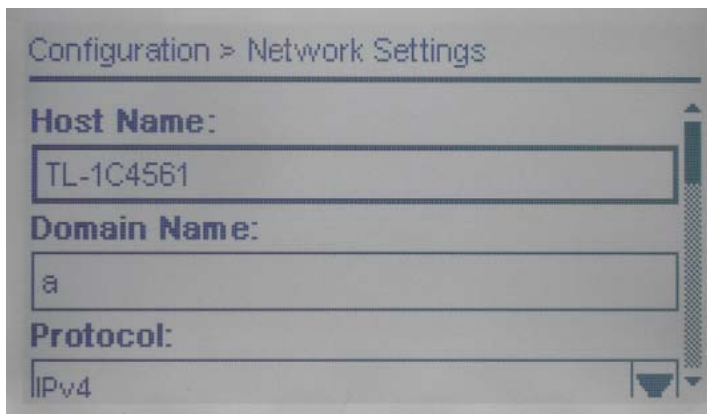
- 2 Select [Submit] and press the Enter button.

End of procedure

2.5.3 Configuring the Library Network Settings

From the [Configuration > Network Settings] screen, the library network settings can be configured.

Figure 2.25 Library network settings



Procedure

- 1 Enter the following items.
 - Host Name
Enter a value.
 - Domain Name
Enter a value.
 - Protocol
Select a protocol to use from the drop-down list.

For the selected protocol, enter the remaining setting values.

Note

To automatically obtain an IP address for the library, select DHCP (for IPv4) or Stateless (for IPv6) in [Method].

- 2 Select [Submit] and press the Enter button.

End of procedure

2.5.4 Operation of the Tape Drive Power

From the [Configuration > Drive Power On/Off] screen, the power of the tape drive installed in the library can be turned on or off.

Procedure

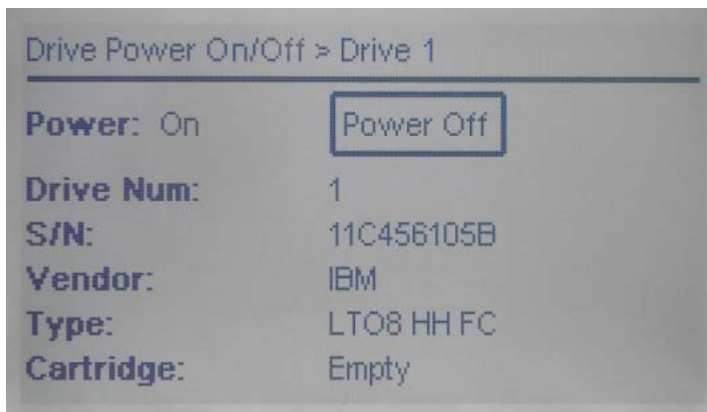
- 1 Select the target drive and press the Enter button.

Figure 2.26 Drive Power On/Off screen



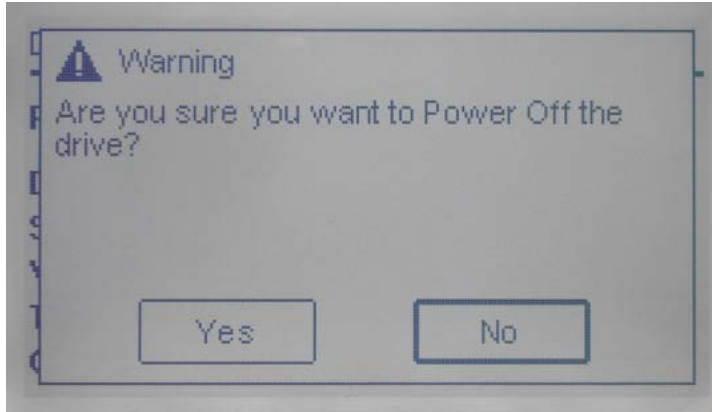
- 2 If there are no problems with the displayed information of the selected tape drive, press the Enter button.

Figure 2.27 Tape drive information



- 3 When the confirmation screen appears, select [Yes] and press the Enter button.

Figure 2.28 Drive Power On/Off confirmation screen

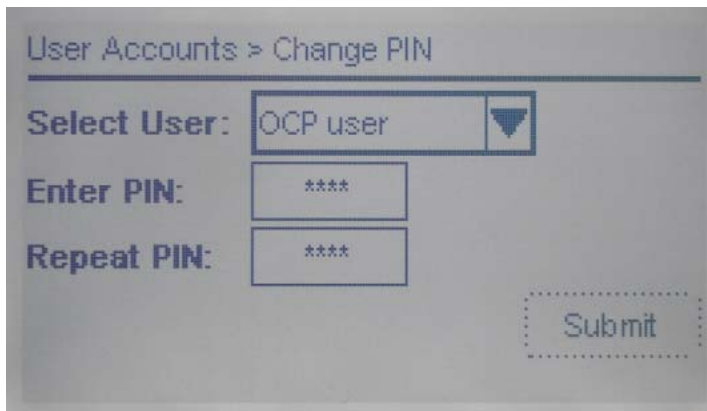


End of procedure

2.5.5 Changing the PIN

From the [Configuration > User Accounts > Change PIN] screen, the PIN of each account can be changed.

Figure 2.29 PIN modification screen



Procedure

- 1 Enter the following items.
 - Select User
Select the target user.
 - Enter PIN
Enter a new PIN.

Note

Access PINs are four-digit numbers with each digit representing a number between 0 to 9.

- Repeat PIN
Re-enter the same PIN.

2 Select [Submit] and press the Enter button.

Note

- PINs can also be changed from the remote panel. For more details, refer to ["3.4.15.4 Changing the account PIN" \(page 102\)](#) in ["3.4.15 Configuring the Account Settings"](#).
- By selecting "RMI user" or "RMI administrator" for "Select User", the password of each remote panel user or the administrator account can be changed. Change the password using the operator panel only when a locked account must be unlocked. Do not change the password from the operator panel for any other purposes. For more details, refer to ["3.4.16 Configuring Password Setting Requirements" \(page 104\)](#).
- If the PIN is set to "0000", the PIN input can be skipped when the user logs in. Because of this, the confirmation screen appears only when "0000" is specified. If there are no problems, select [Yes] and press the Enter button.
- The library can be continuously operated after the PIN setting is changed. However, to enable the new PIN, log out from the library and log in to it again.

End of procedure

2.5.6 Usage Restriction Setting of the Remote Panel

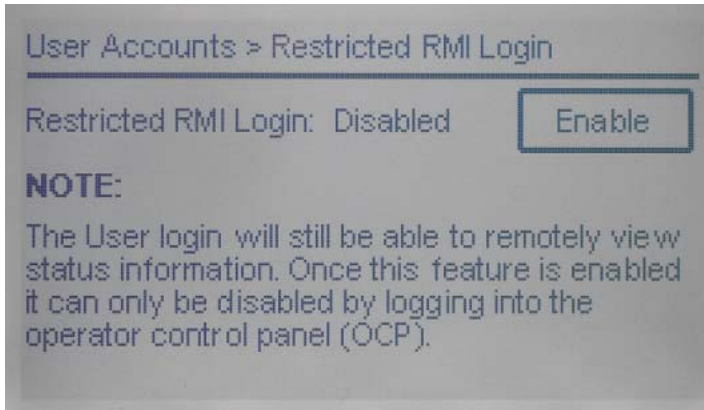
From the [Configuration > User Accounts > Restricted RMI Login] screen, the login restriction (Restriction mode) of the remote panel for the library can be switched.

If "Restriction mode" is enabled, access from the remote panel is restricted for the "administrator" and "security" accounts.

Procedure

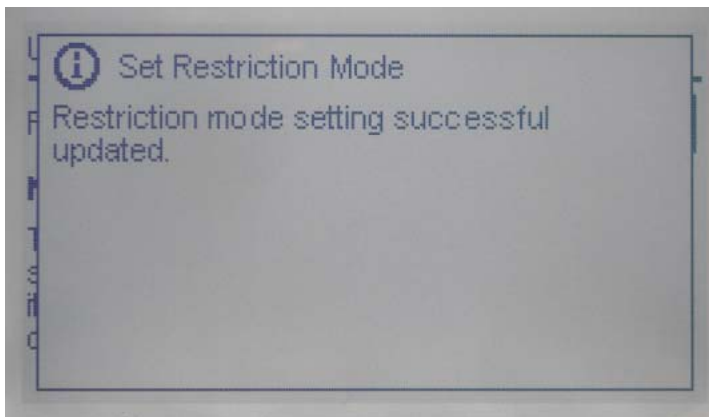
- 1** Press the Enter button in the [Configuration > User Accounts > Restricted RMI Login] screen.

Figure 2.30 [User Accounts > Restricted RMI Login] screen



- 2 The execution results are displayed.
The result window is automatically closed.

Figure 2.31 Execution results for Restricted RMI Login



When "Restriction mode" is "Enabled", "Disable" is displayed and when "Restriction mode" is "Disabled", "Enable" is displayed.

End of procedure

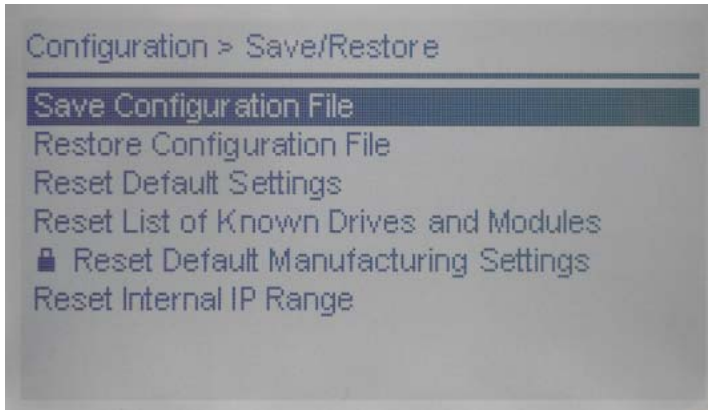
2.5.7 Saving, Restoring and Resetting the Library Configuration

For the menu of the [Configuration > User Accounts > Save/Restore] screen, the functions other than [Reset Internal IP Range] must not be used.

The library configuration can be saved and restored the remote panel.

For more details, refer to ["3.4.2 Saving, Restoring, and Resetting the Library Configuration" \(page 71\)](#).

Figure 2.32 Save/Restore screen



2.5.8 Resetting the IP Range

From the [Configuration > User Accounts > Save/Restore > Reset Internal IP Range] screen, the internal IP of the library can be reset. Use the Reset Internal IP Range function only if a network conflict occurs.

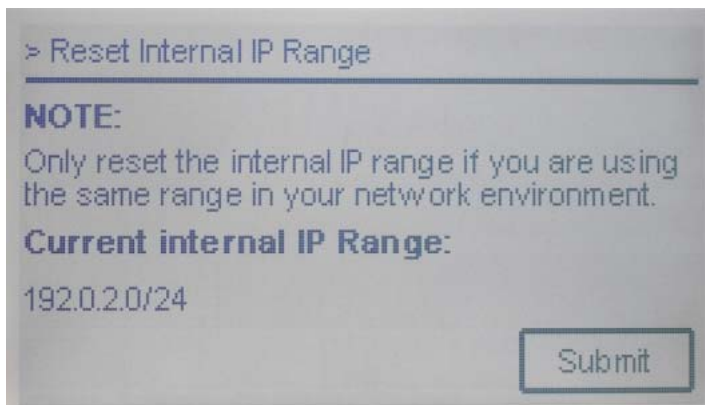
Note

For internal communication between modules, the tape library uses an Ethernet connection with an internal IP address range. To prevent a conflict between the external IP address and an address of the internal IP range, an internal IP range that is not being used by the tape library for the external Ethernet port must be selected.

Procedure

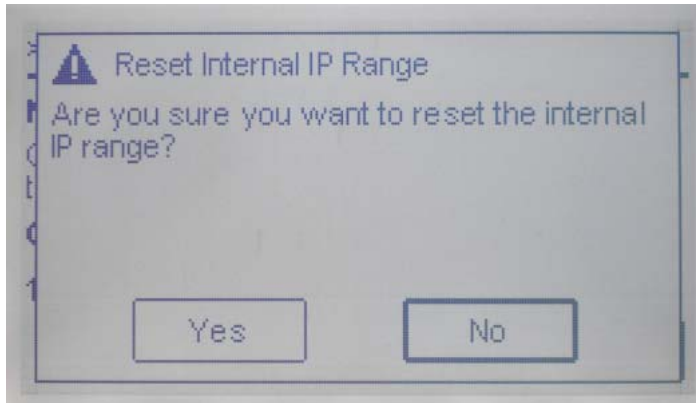
- 1 Press the Enter button in the [Configuration > User Accounts > Save/Restore > Reset Internal IP Range] screen.

Figure 2.33 [User Accounts > Save/Restore > Reset Internal IP Range] screen



- 2 When the confirmation screen appears, select [Yes] and press the Enter button.

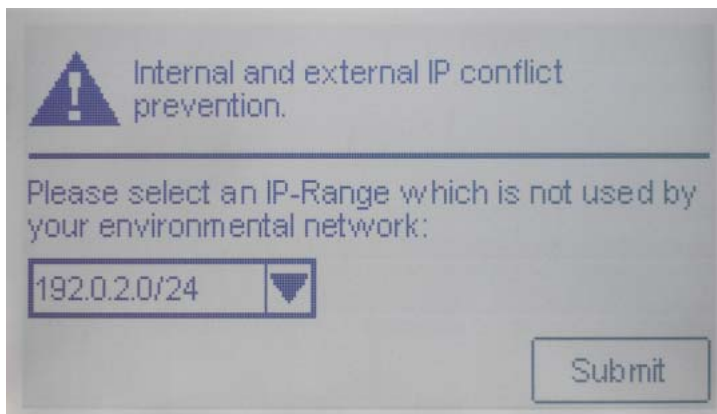
Figure 2.34 Reset Initial IP Range confirmation screen



The library automatically reboots. After the library reboots, the internal IP range setting screen appears.

- 3 Select an IP range from the drop-down list.

Figure 2.35 Internal IP range setting screen



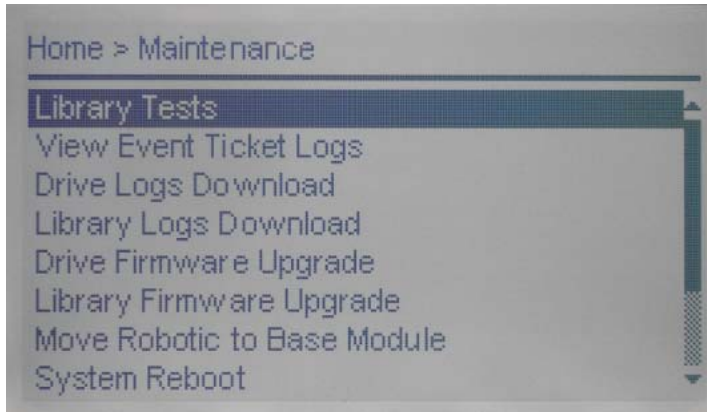
- 4 Select [Submit] and press the Enter button.
The library reboots again.

End of procedure

2.6 Maintaining the Library

Select [Maintenance] in the Home screen and perform a maintenance operation from the menu that is displayed.

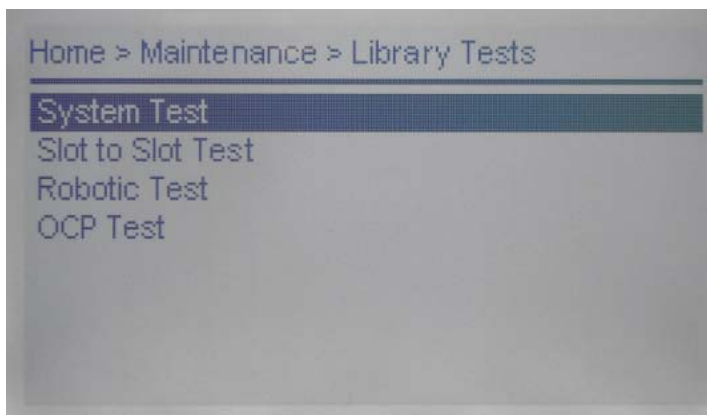
Figure 2.36 Maintenance screen



2.6.1 Library Tests

From the [Maintenance > Library Tests] screen, various tests of the library can be executed.

Figure 2.37 Library Tests screen



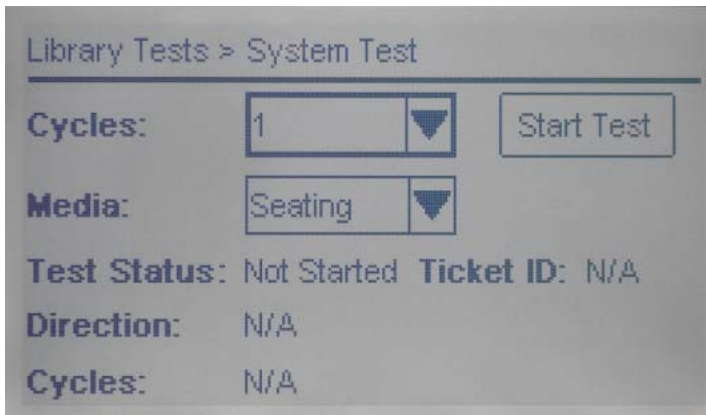
2.6.1.1 System Test

The system test exercises overall library functionality by moving tape cartridges within the library.

- During each cycle, the library moves the tape cartridges from their slot to an empty slot and then returns them to their original slot. The number of cycles for the test can be specified. If the test is canceled, the library will return the cartridge to its original slot.
- The library will not move cleaning cartridges during the test.
- The test operates over the whole library and does not take into account partition configuration.
- During the test, the library state is "Offline".

To execute a system test, select a cycle number in the [Maintenance > Library Tests > System Test] screen and then click [Start Test].

Figure 2.38 System test



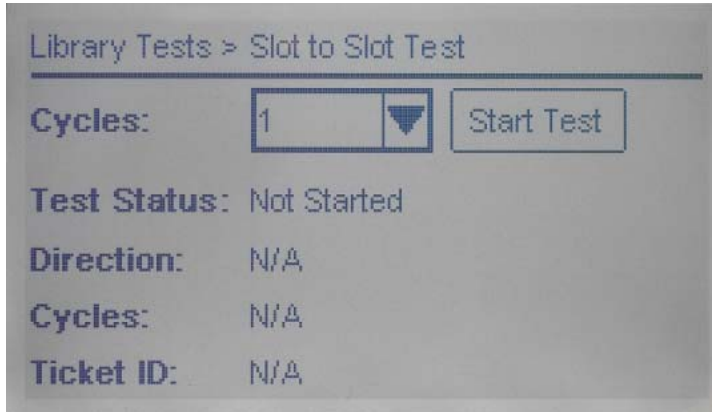
2.6.1.2 Slot to Slot Test

The slot to slot test randomly exchanges tape cartridges between slots to verify that the library is operating correctly. At the end of the test, the cartridges are NOT returned to their original slots. If a tape cartridge is moved to an incompatible tape drive, the tape drive will eject the tape cartridge.

- During each cycle, the library moves the tape cartridges from their slot to an empty slot and then returns them to their original slot. The number of cycles for the test can be specified. If the test is canceled, the library will return the tape cartridge to its original slot.
- The library will not move cleaning cartridges during the test.
- The test operates over the whole library and does not take into account partition configuration.
- During the test, the library state is "Offline".

To run the slot to slot test, select the number of cycles from the [Maintenance > Library Tests > Slot to Slot Test] screen and then click [Start Test].

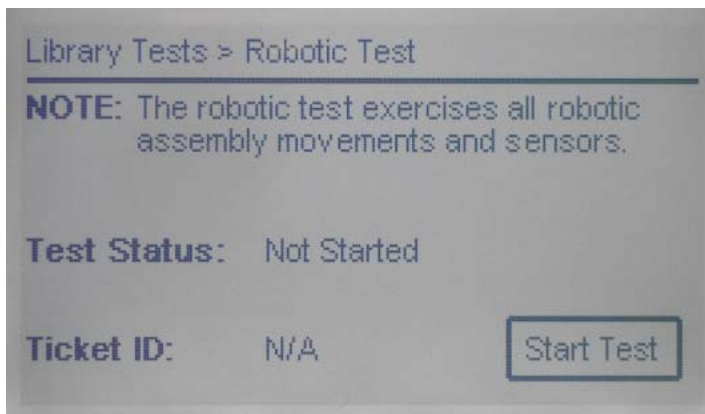
Figure 2.39 Slot to slot test



2.6.1.3 Robotic Test

The robotic test performs a full inventory and exercises all robotic assembly movements and sensors. During the test, the library state is "Offline". To execute the robotic test, select [Start Test] in the [Maintenance > Library Tests > Robotic Test] screen.

Figure 2.40 Robotic test

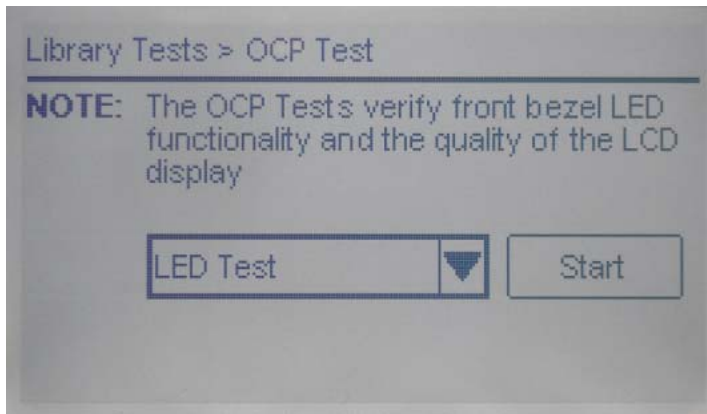


2.6.1.4 Operator Panel Test

The operator panel test checks if the lighting function is normal by turning on each LED of the front panel. During the test, the library state is "Offline".

To execute an operator panel test, select [Start] from the [Maintenance > Library Tests > OCP Test] screen.

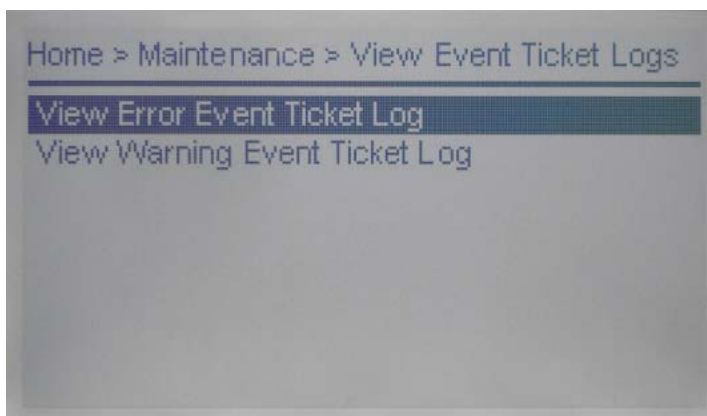
Figure 2.41 Operator panel test



2.6.2 Checking Event Logs

From the [Maintenance > View Event Ticket Logs] screen, event logs can be checked. Error and Warning level events can be checked from the operator panel.

Figure 2.42 Event log



Procedure

- 1 Select an event to check and press the Enter button.
 - [View Error Event Ticket Log]
Displays Error level event logs.
 - [View Warning Event Ticket Log]
Displays Warning level event logs.
- 2 Select an event using the Left and Right buttons and then check the contents.

Figure 2.43 Event log display example



- Ticket-No
Management number of an event.
- Event
Event code for an event that occurred.
- Time
Time when the event occurred.
- Comp.
The component type in which an event occurs.
- ID
An ID that indicates each component. An ID is assigned to each type of library components from bottom up.

Note

IDs have two numbers: a logical number that depends on the actual configuration and a fixed number that is unique and independent of the configuration. The value in front of the parentheses indicates a logical number and the value within the parentheses indicates a fixed number.

[Figure 2.43](#) shows the tape drive which has a logical number of "2" and a fixed number of "11".

Refer to "[Appendix A Library Configurations and IDs](#)" ([page 161](#)) for details.

- Description
Description for an event that has occurred.

End of procedure

2.6.3 Downloading Drive Logs

The use of [Maintenance > Drive Logs Download] is prohibited. Download the drive logs from the remote panel. For more details, refer to ["3.5.5 Downloading Drive Logs" \(page 127\)](#).

2.6.4 Downloading Logs and Trace Files

The use of [Maintenance > Library Logs Download] is prohibited. Download the logs and trace files of the library from the remote panel. For more details, refer to ["3.5.6 Downloading Logs and Trace Files" \(page 128\)](#).

2.6.5 Updating the Drive Firmware

The use of [Maintenance > Drive Firmware Upgrade] is prohibited. Update the drive firmware from the remote panel. For more details, refer to ["3.5.4 Managing Drive Firmware" \(page 126\)](#).

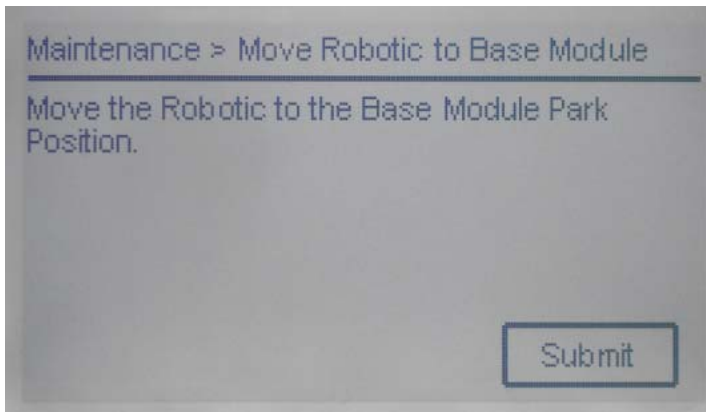
2.6.6 Managing the Firmware

The use of [Maintenance > Library Firmware Upgrade] is prohibited. Update the library firmware from the remote panel. For more details, refer to ["3.5.3 Managing System Firmware" \(page 125\)](#).

2.6.7 Moving the Robotic to the Base Module

From the [Maintenance > Move Robotic to Base Module] screen, the robot can be moved back to its park position in the base library module.

Figure 2.44 Moving the robot



Note

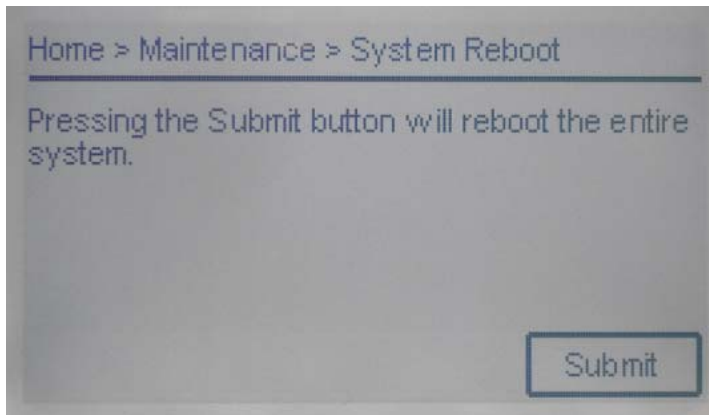
Before extending a module from the rack, the robotic assembly must return to its park position in the base module.

Under normal circumstances, when the library is powered off using the front power button the robot automatically parks and locks into the base module behind the operator panel. After powering off the library and before proceeding with extending a module from the rack, look inside the base module window to verify that the robotic assembly is behind the operator panel. If the robot does not return to its home position, it can be moved back into the home position with this function.

2.6.8 Rebooting the Library

To reboot the library, press the Enter button in the [Maintenance > System Reboot] screen.

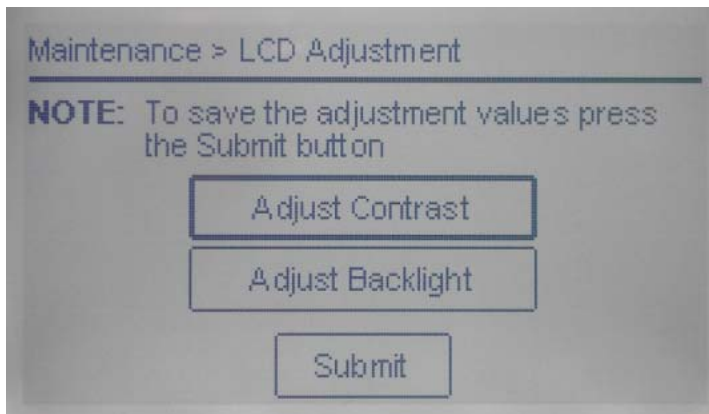
Figure 2.45 Rebooting the library



2.6.9 Adjusting the LCD Panel

The brightness and contrast of the LCD panel can be adjusted from the [Maintenance > LCD Adjustment] screen.

Figure 2.46 Adjusting the LCD panel

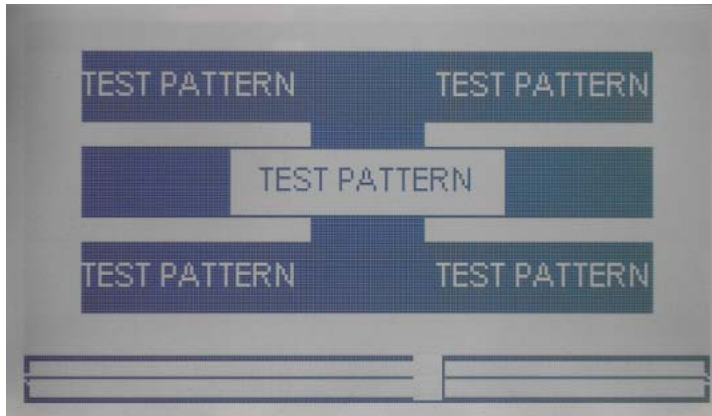


Procedure

- 1 Select [Adjust Contrast].

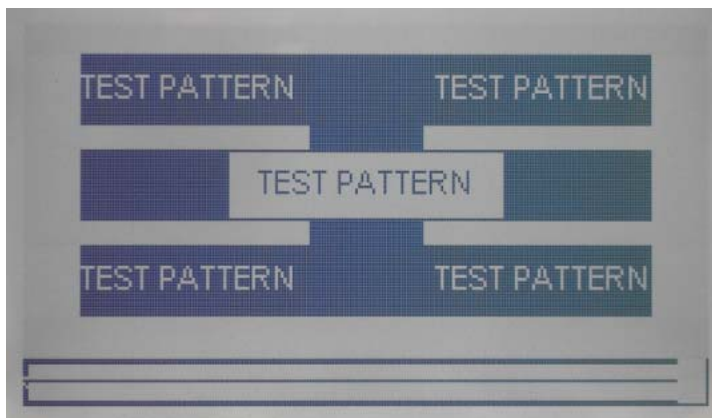
- 2 Adjust the contrast using the Left and Right buttons and press the Back/Return button to return to the previous screen.

Figure 2.47 Adjusting the contrast of the LCD Panel



- 3 Select [Adjust Backlight].
- 4 Adjust the brightness using the Left and Right buttons and press the Back/Return button to return to the previous screen.

Figure 2.48 Adjusting the brightness of the LCD panel



- 5 Select [Submit] and press the Enter button.

End of procedure

2.7 Opening the Magazines/Mailslots

To open the magazines or Mailslots, use the magazine/Mailslot open button after accessing [Open Magazines/Mailslots] of the Home screen.

Caution

To load a tape cartridge in the correct partition slot, make sure to eject the correct tape cartridge and make sure not to load a tape cartridge in the undefined partition slots. Otherwise, the ejected or loaded tape cartridge may not be recognized by applications such as the backup software.

Check the following points before opening the magazine or Mailslot.

- The number and position of the magazine or Mailslot to be opened
- The number and position of the slot where a tape cartridge is to be loaded or ejected
- The slot location of each partition

For details about how to check the above information, refer to ["3.7.3 Using Inventory Graphical View" \(page 150\)](#) and ["3.7.4 Partition Map Graphical View" \(page 152\)](#).

If the slot expansion license is not installed, only the magazine slots that includes the mailslots (1.21 to 1.40) on the right front of the library can be used. Note that other slots are not available because their partitions are not defined.

Figure 2.49 Home screen



Procedure

- 1 Select [Open Magazines/Mailslots] in the Home screen to display the [Open Magazines/Mailslots] screen.

Figure 2.50 [Open Magazines/Mailslots] screen



Note

User accounts can use this function only when permitted by the administrator to operate the magazines and Mailslots. The [Open Magazines/Mailslots] screen cannot be accessed without permission. For details about the permission settings, refer to ["3.4.15.3 Changing privileges of the account" \(page 101\)](#).

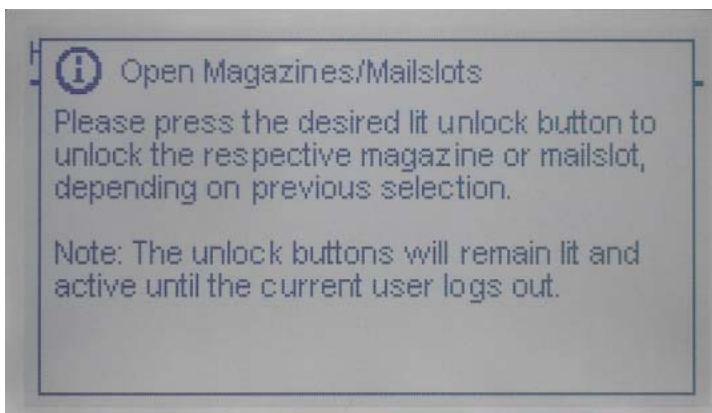
- 2 Select the target component to open.
To open a magazine, select [Open Magazines] and press the Enter button. To open a Mailslot, select [Open Mailslots] and press the Enter button.

Note

User accounts can select only the components that they are permitted to open.

The notification screen for opening the magazine/Mailslot is displayed and the open button LED of the target magazine/Mailslot is lit. The notification screen is automatically closed.

Figure 2.51 Open Magazines/Mailslots notification screen



- 3 Press the magazine/Mailslot open button that corresponds to the magazine and Mailslot to be unlocked and opened.

Figure 2.52 Magazine/Mailslot slot open button of the operator panel



Note

- For details about each part of the operator panel and the specifications of the buttons, refer to ["1.1.1 Overview of the Operator Panel" \(page 14\)](#).
- If the LED is on, magazines and Mailslots can be opened.
- If the currently logged in user logs out, the LED turns off and the magazines and Mailslot cannot be opened.

When the magazine or Mailslot is unlocked and opened, the message "Magazine/Mailslot unlocked" is displayed and the LED of the magazine/Mailslot open button flashes quickly.

- 4 After the lock is released, pull out the magazine or Mailslot.

Caution

Do not forcibly pull out the magazine or Mailslot until the lock is released.

End of procedure

2.8 Viewing the Library Information

The library information can be viewed from the menu displayed when [Status] is selected in the Home screen.

Figure 2.53 Status screen



2.8.1 Viewing Network Status

From the [Status > Network Settings] screen, the following network configuration and status can be referenced.

- Host Name
Host name set for the library.
- Domain Name
Domain name set for the library.
- Protocol
IPV4 or IPv6.
- MAC Address
A unique identifier for the library controller network interface.
- Link Status
Enabled or disabled.
- Link Speed
Speed of the Ethernet connection to the library.
- Duplex
Enabled or disabled.

■ IPv4 settings

- DHCP
When Enabled, the library requests an IP address from a DHCP server each time the library is powered on.
- Address
IP address in use by the library. If DHCP is enabled, this address was obtained from the DHCP server. When DHCP is not enabled, the address was configured.
- Netmask
The network mask of the library controller used when DHCP is not enabled.
- Gateway
The gateway used when DHCP is not enabled.
- DNS 1
The IP address of the DNS server.
- DNS 2
The IP address of the alternate DNS server that is used when DNS1 is unavailable.

■ IPv6 settings

- Stateless
When Enabled, the library will generate an address for itself based on the routing information obtained from a router advertisement and the MAC address. The library can manage up to five global addresses at the same time, which can be assigned from different routers.
- Static
When Enabled, the library will use a statically-configured address.
- Address
The IPv6 address when Static Addressing Enabled is On.

2.8.2 Displaying the Library state and the Module State

From the [Status > Library] screen, the following library, the configuration of each module, and the states can be referenced.

■ Library information

- Vendor
Library vendor information. The vendor is FUJITSU.
- Product ID
Library inquiry information. This information does not indicate the name of the library itself.
- Serial Number
Serial number of the library.
- Base Firmware Revision
Version of the currently installed library firmware.

- **Expansion Firmware Revision**
Version of the currently installed firmware for the expansion module. The firmware for expansion modules is bundled and installed with the library firmware.
- **Robotic Hardware Revision**
Version of the currently installed robotic assembly hardware.
- **Robotic Hardware Revision**
Version of the currently installed robotic assembly firmware. The robotic assembly firmware is bundled and installed with the library firmware.
- **Barcode Reader Hardware Revision**
Version of the currently installed barcode reader hardware.
- **Barcode Reader Firmware Revision**
Version of the currently installed barcode reader firmware. The barcode reader firmware is bundled and installed with the library firmware.
- **Library Type**
Library type information. This information does not indicate the product ID of the library.

■ Library status

- **Library status**
 - **Idle**
The library robotic is ready to perform an action.
 - **Moving**
The library robotic is moving a cartridge.
 - **Scanning**
The library robotic is performing an inventory of cartridges.
 - **Offline**
The robot assembly is being used or cannot be used.
- **Total Power On Time**
Total time that the base module has been powered on since it was manufactured.
- **Cartridge in Transport**
Displays the barcode label of the tape cartridge currently in the robotic assembly when a tape cartridge is being moved.
- **Odometer**
Robotic assembly move count.
- **Robotic Location**
Displays the module where the robotic is currently located.
- **Shipping Lock**
Indicates whether the robotic is unlocked or locked for shipment.

■ Module status

- Base Controller Revision/Expansion Controller Revision
Hardware revision of the controller board currently installed in the module.
- Power Supply Status
Displays the power status.
- Lower/Upper Power Supply
Displays the installation state of the power supplies.
- Drive Power Board
Displays the state of the tape drive power board in the module.

2.8.3 Tape Drive Status

In the [Status > Drive] screen, the configuration and status of the tape drives installed in the library can be referenced.

Chapter 3

Remote Panel

This chapter provides information about how to use the remote panel.

3.1 Using the Remote Panel


With the remote panel, you can monitor, configure, and operate most library functions from a web browser.

When possible, using the remote panel as the primary library interface is recommended because it provides access to additional features and the online help whereas the operator panel only provides basic functions. However, the remote panel is not required to use the product, except to configure advanced features, such as SNMP, IPv6, encryption, and partitions.

Before using the remote panel, the library network settings must be configured using the operator panel. For details about the setting method, refer to ["2.5.1 Using Initial System Setup" \(page 31\)](#) or ["2.5.3 Configuring the Library Network Settings" \(page 36\)](#).

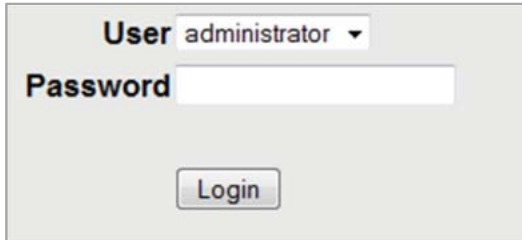
To start the remote panel, open the latest version of a supported web browser and enter the IP address of the library in the browser's address bar. Supported browsers include Firefox, Chrome, and Safari.

Note

Check the online help in the remote panel for additional information. The help pages are updated with firmware updates and often contain up-to-date technical details that might not be contained in this document. To access remote panel help, click the  icon on the right side of the remote panel top banner.

3.2 Logging into the Library

Figure 3.1 Login screen



Procedure

- 1 Display the login screen.
Open a supported web browser and enter the IP address of the library in the browser's address bar.
- 2 Select the account.
- 3 If required, enter the Password.
- 4 Click [Login].

End of procedure

The account levels are:

- user
The initial password is "std00001".
The user account provides access to status information, but not configuration, maintenance or operation functions. The administrator account can be used to set the user account password, and allow or forbid the use of some of the operation functions by the user account. See ["3.4.15 Configuring the Account Settings" \(page 98\)](#) for details.
- administrator
The administrator password is required to login as the administrator account. The initial administrator password is "adm00001".
The administrator account has access to all functionality except for the log configuration and Service features.

Caution

For security purposes, changing the initial password after starting the library is recommended.

Use the Initial Configuration Wizard when initially logging in to the library or change the password with the account settings.

For more details, refer to ["3.4.1 Using the Initial Configuration Wizard" \(page 67\)](#) or ["3.4.15 Configuring the Account Settings" \(page 98\)](#).

- security
The security administrator can use the functions that are available when logged in as the administrative account and set additional functions such as enabling or disabling SSL and managing encryption keys. After the Key Management Function Option is purchased, the setting for the key management function is available.
The initial password is "security".

 **Caution**

For security purposes, changing the initial password after starting the library is recommended.

When logging in to the library with the "security" account for the first time, change the password with the account settings.

See ["3.4.15 Configuring the Account Settings" \(page 98\)](#) for details.

- service
Access to this user is by Service personnel only. The service password is set at the factory. The same service password is used for the remote panel and operator panel. Both the administrator and service passwords are required for a service person to enter the service area.

 **Note**

Basically, only one user can log in to the library regardless of whether the user logs in from the remote panel or operator panel.

If a user is currently logged in, a warning message appears. Select whether to continue the login process.

- Select Leave to stop the login process.
- Select Login to continue the login process and forcibly log the currently logged in user out.

As an exception, only the "user" account can log in to the library regardless of whether other users are logged in.

Note that if no operation is performed for a certain period of time, the user is forcibly logged out.

■ Notes

When logged in to the remote panel after the replacement work of the library controller (for the base module) (*1) is performed by your maintenance engineer, the message "This site can't be reached" may be displayed as follows depending on the used network environment. In this case, the "ping" command to the LT140 will timeout.

*1: Refer to "Chapter 1 Hardware Configuration" of "Fujitsu Storage ETERNUS LT140 Tape Library User's Guide -Site Planning- (P3AG-3712)".

Figure 3.2 When a connection fails in Internet Explorer

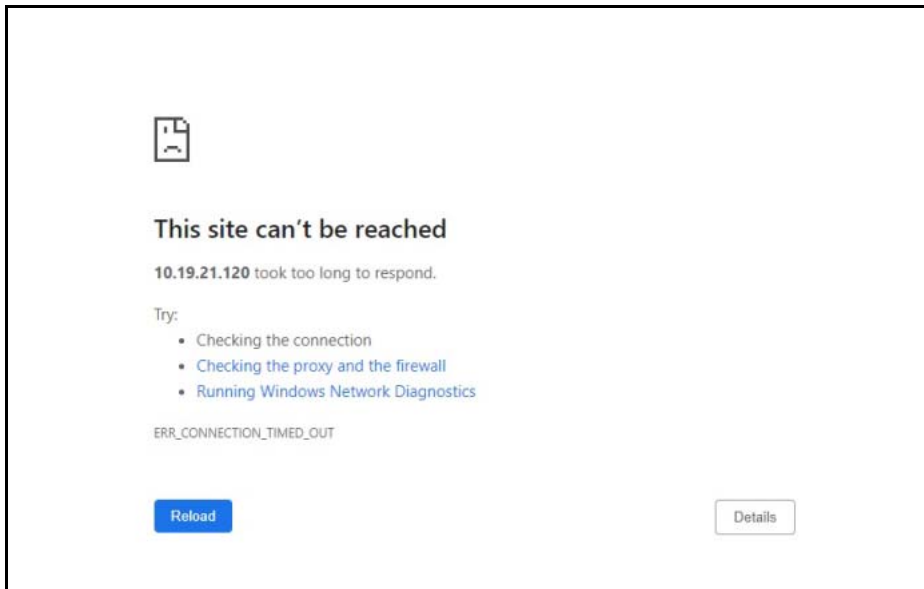
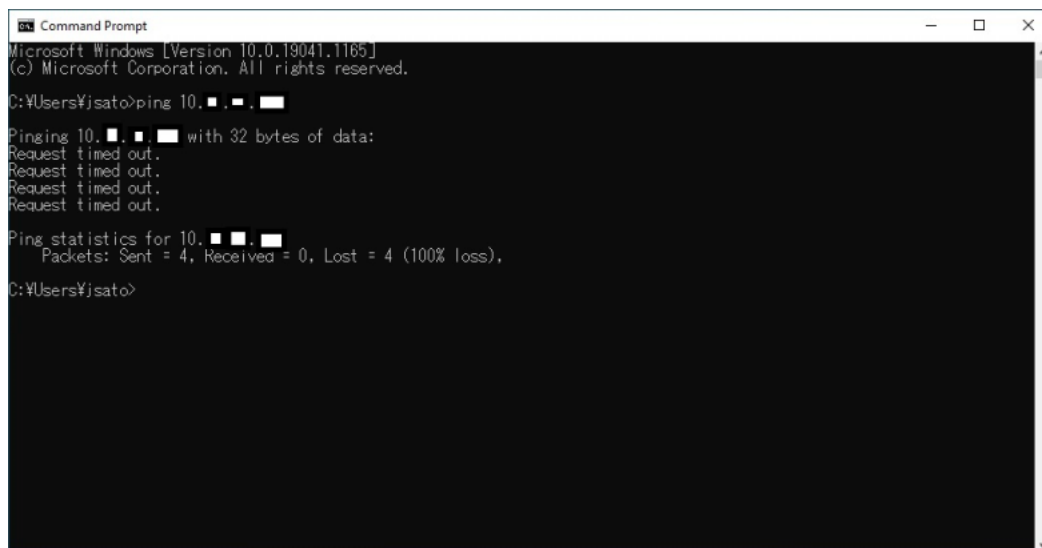


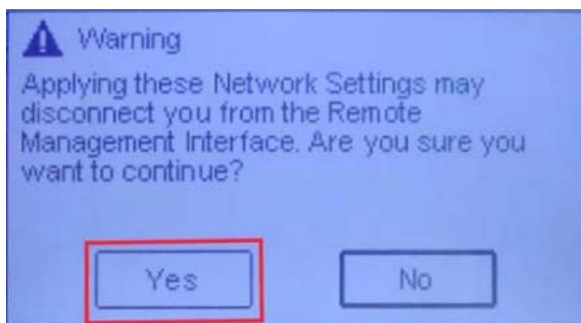
Figure 3.3 Timeout of the "ping" command



In this case, refer to ["2.5.3 Configuring the Library Network Settings" \(page 36\)](#) and execute the following procedure.

Procedure

- 1 In the [Configuration > Network Settings] screen, select Host Name and then press the [Enter] button twice.
- 2 Confirm that the [Submit] button is activated (the button frame changes from a dotted line to a solid line) and select [Submit].
- 3 When the [Enter] button is pressed and the following warning screen is displayed, select [Yes].



- 4 Press the [Enter] button to finish the configuration.

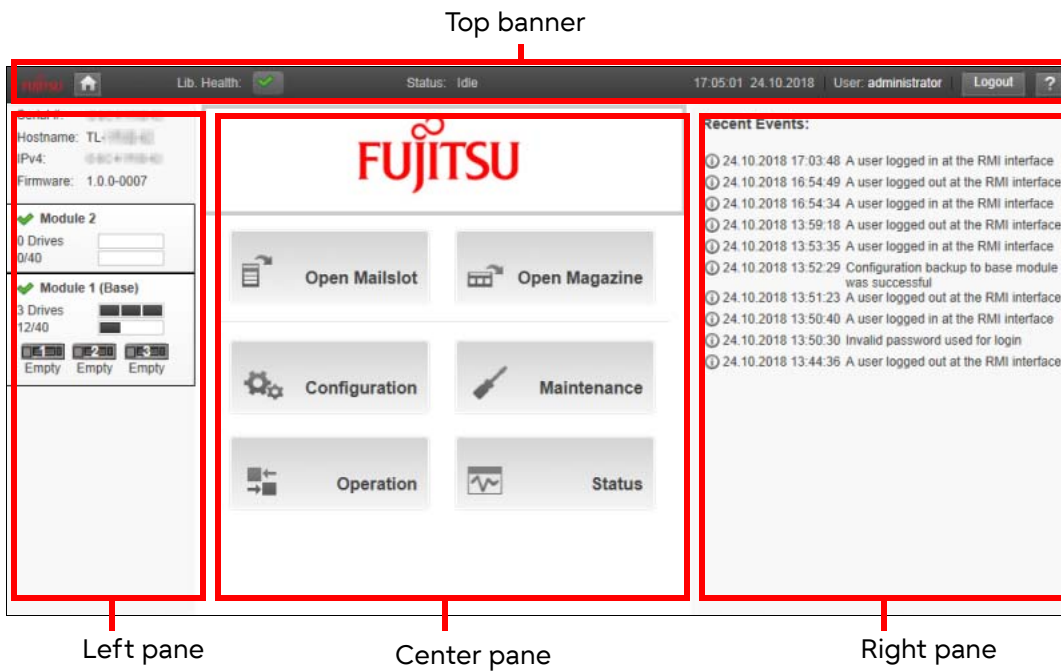
End of procedure

3.3 Using the Remote Panel Home Screen





The Home screen of the remote panel is configured with the following areas:


- Top banner
Contains the home button and displays the overall status and information about the library and user.
- Left pane
Displays the library identity and module status.
- Center pane
Provides access to operate and configure the library and to view additional status information.
- Right pane
Displays a log of recent events.

Figure 3.4 Home screen of the remote panel






3.3.1 Top Banner Elements

-  (Home Icon)
Returns to the Home screen.
- Library Health
An icon indicating the overall health status of the library.
 -  The green check mark Status OK icon indicates that all library components are fully operational and that no user intervention is required.
 -  The yellow triangle exclamation point Status Warning icon indicates that user attention is necessary, but that the library can still perform most operations. Click the icon to display the event ticket log.
 -  The red circle X Status Error icon indicates that user intervention is required and the library is not capable of performing some operations. Click the icon to display the event ticket log.
- Status
The status of the library robotic
 - Idle
The library robotic is ready to perform an action.
 - Moving
The library robotic is moving a tape cartridge.

- Scanning
The library robotic is performing an inventory of tape cartridges.
- Offline
The library is using the robot assembly or the robot assembly cannot be used.
- Library Time & Date
Helpful when analyzing event logs and support tickets, and might be needed when contacting support.
- User
The account used to log in to this session.
- Logout
Logs out of this session.
- 
Accesses online help.

3.3.2 Left Pane Elements

- Library status
Overall library confirmation and status
 - Serial #
The base module serial number
 - Hostname
The library hostname
 - Network Configuration
The IP version (IPv4 or IPv6) and IP address
 - Firmware
The library firmware version
- Module Status Overviews
A summary of each module's configuration and health. Click or tap the module status area to select the module.
 - Module Health Icon
 - 
The green check mark Status OK icon indicates that the module and each of its components are fully operational and that no user intervention is required.
 - 
The yellow triangle explanation point Status Warning icon indicates that user attention is necessary, but that the library can still perform most operations.
 - 
The red circle X Status Error icon indicates that user intervention is required and the module is not capable of performing some operations.
 - Module Number
Modules are numbered based on their location in the physical library. The bottom module is Module 1. The base module is annotated with (Base).

- Tape Drive Status
The number of tape drives installed in the module and the health of each tape drive. Click or tap on the tape drive to display tape drive configuration and status information in the center pane.
 - A black square indicates that the tape drive is fully operational and that no user intervention is required.
 - A yellow square indicates that user attention is necessary, but that the tape drive can still perform most operations.
 - A red square indicates that user intervention is required or the tape drive is not capable of performing some operations.
- Magazine Slot Usage
The number of cartridge slots available and the number in use.
- Tape Drive Operation Status
The current drive activity of each tape drive within the module. The tape drive operation status is only displayed for the selected module.
 - Write
The tape drive is performing a write operation.
 - Read
The tape drive is performing a read operation.
 - Idle
A tape cartridge is in the tape drive but an operation is not being executed.
 - Empty
The tape drive is empty.
 - Encrypt
The tape drive is writing encrypted data.

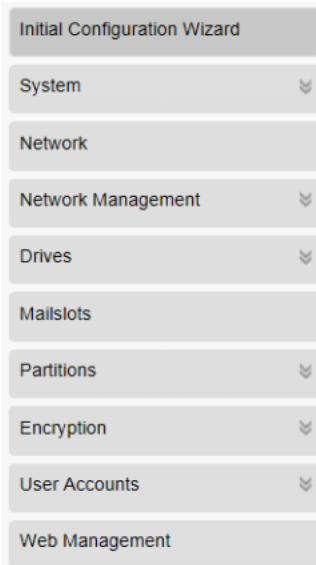
3.3.3 Center Pane Elements

- Open Mailslot (non-user account)
Unlocks the Mailslot of the selected module. Mailslots must be enabled before the slots can be used as Mailslots. For details, refer to ["3.4.12 Enabling or Disabling Mailslots" \(page 92\)](#).
- Open Magazine (non-user account)
Unlocks the magazines of the selected module. Only one magazine in the library can be open at a time. For details, refer to ["3.6.3 Opening a Magazine" \(page 138\)](#).
- Configuration (non-user account)
Configures the library. For details, refer to ["3.4 Configuring the Library" \(page 67\)](#).
- Maintenance (non-user account)
Accesses the maintenance functions. For details, refer to ["3.5 Maintaining the Library" \(page 116\)](#).
- Operation (non-user account)
Accesses the operation functions. For details, refer to ["3.6 Operating the Library" \(page 135\)](#).
- Status
Accesses the status information. For details, refer to ["3.7 Viewing Status Information" \(page 143\)](#).

3.4 Configuring the Library

To access the library configuration function, click [Configuration] in the Home screen. From the displayed list in the right pane, select the target item. Items that have sub menu can be expanded by clicking them.

Figure 3.5 Configuration menu



3.4.1 Using the Initial Configuration Wizard

Setting the administrator password by using the wizard. The time zone, the date and time, and the library network setting can be configured. During the initial login, performing a library configuration with this function is recommended.

Note

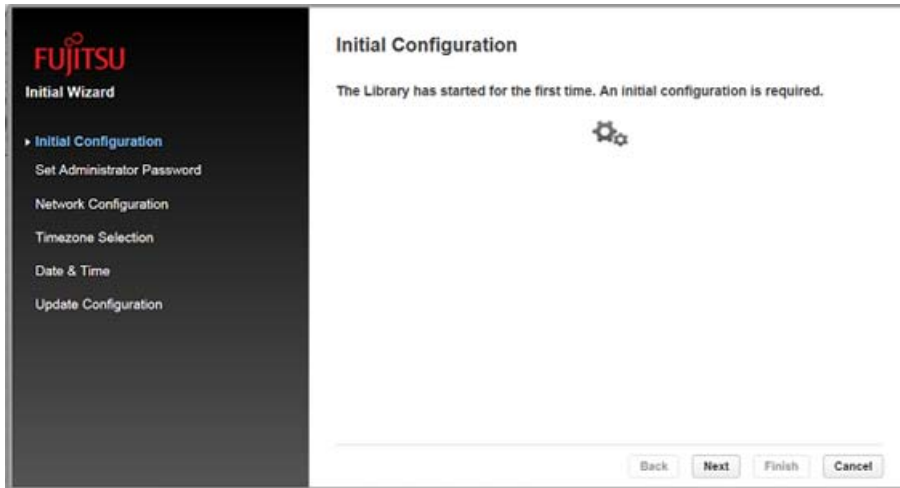
Items that can be set with this function can be set individually. If the settings are configured individually, refer to the following as required.

- Administrator password
["3.4.15 Configuring the Account Settings" \(page 98\)](#)
- Time zone
["3.4.3.1 Setting the Time Zone" \(page 73\)](#)
- Date and time
["3.4.3.2 Setting the Date and Time Format" \(page 74\)](#)
- Library network settings
["3.4.7 Configuring the Library Network Settings" \(page 80\)](#)

To set the library configuration, perform the following procedure:

Procedure

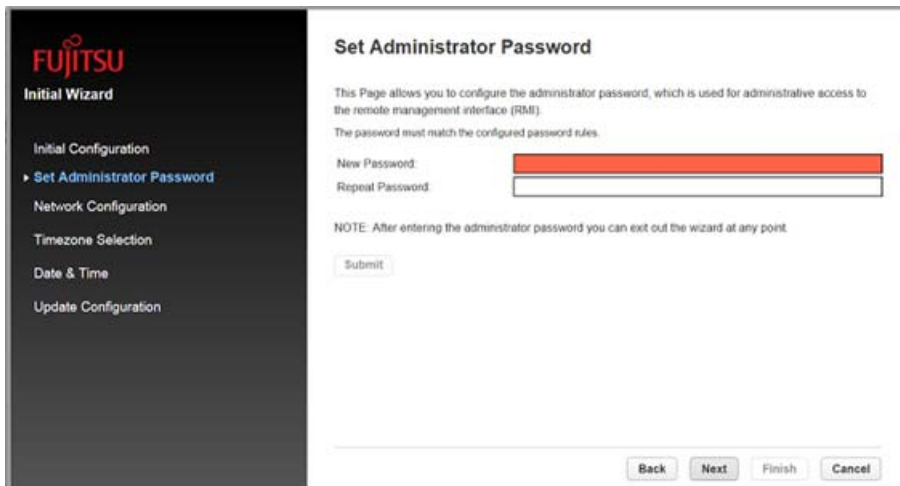
- 1 Run the wizard by clicking "Initial Configuration Wizard" in the right pane of the [Configuration > System] screen.
- 2 Click [Next].



Note

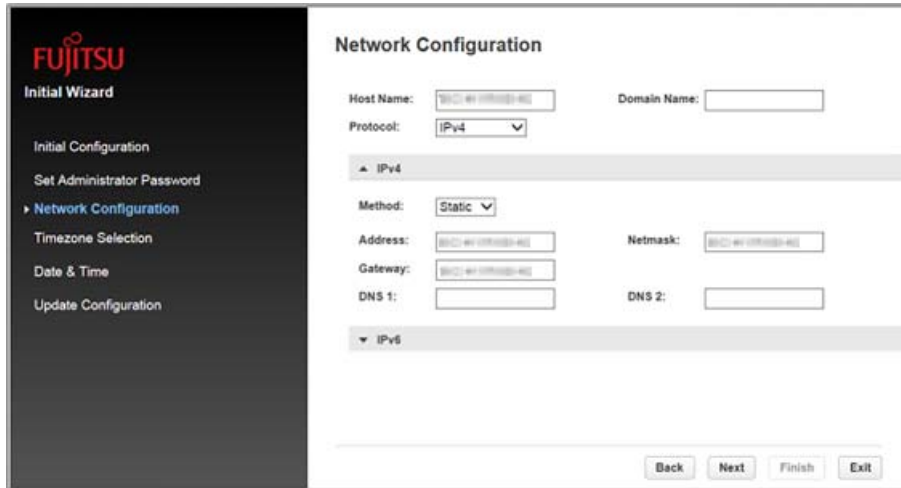
If this setting is omitted from this stage onwards, click [Next] without inputting anything. To return to the previous page, click [Back]. To stop the configuration, click [Cancel].

- 3 Set the password for an administrator.
Enter the new password in both boxes and click [Submit]. After the setting is completed, click [Next].



4 Configure the network settings.

Enter a desired value into the items intended to be changed. After entering all the values, click [Next].

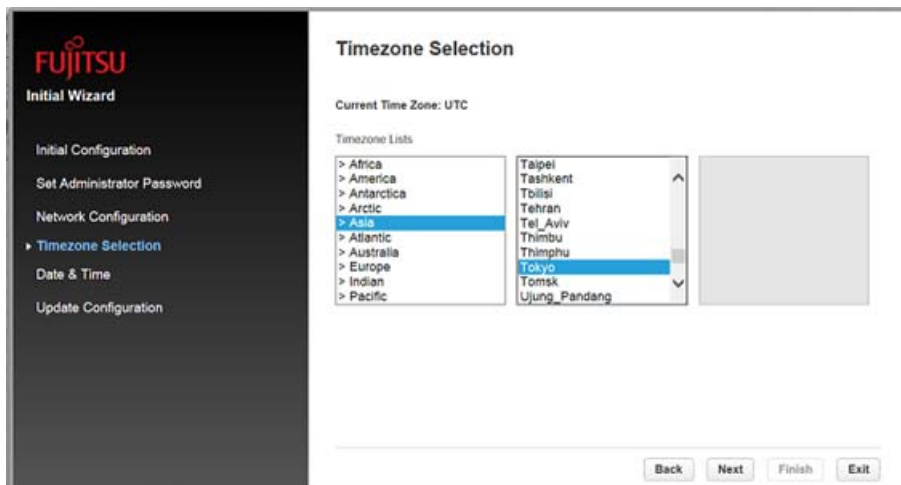


Note

Enter the setting values for the protocol that is selected in [Protocol]. When entering the address manually, select "Static" in [Method] and enter the desired value into each item. To obtain an Internet address automatically from the DHCP server, select the DHCP (for IPv4) or Stateless (for IPv6).

5 Configure the time zone settings.

Select the time zone area from [Timezone Lists]. If the selected region starts with ">", a submenu is displayed in the right pane and a more detailed region can be selected. After completing the selection, click [Next].

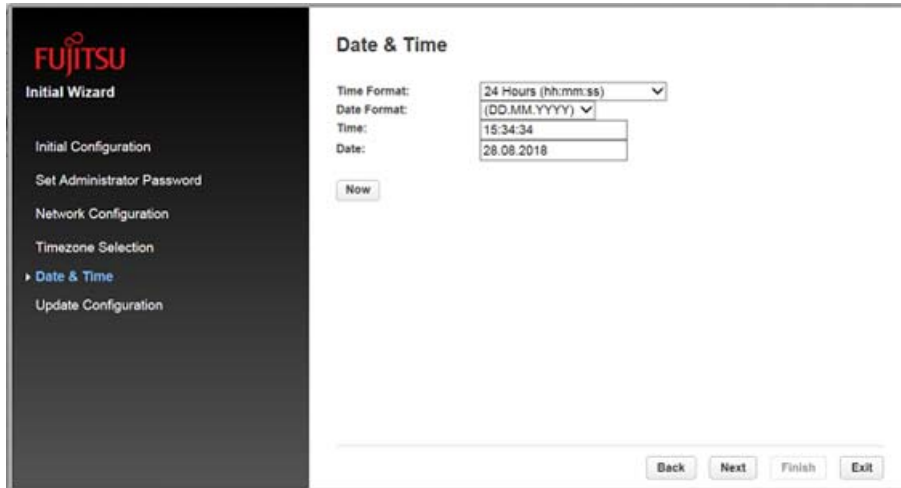


Note

For example, select [Asia > Tokyo] to set the timezone to Japan Standard Time.

6 Set the date and time.

Select a time format for [Time Format] and a date format for [Date Format] and then enter the date and time. After entering the date and time, click [Next].

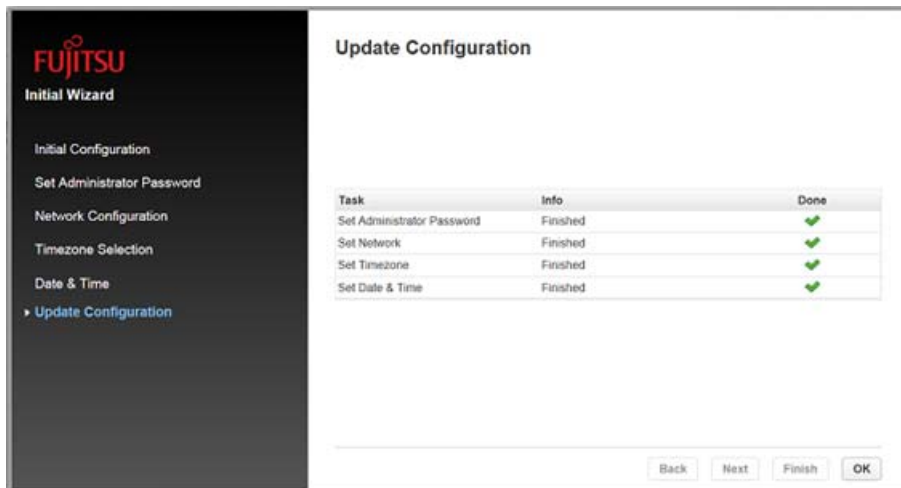


Note

The date and time are automatically entered to the synchronized PC by clicking [Now].

7 Click [Finish].

8 Confirm that the configuration result is correct and click [OK] to complete the configuration.



End of procedure

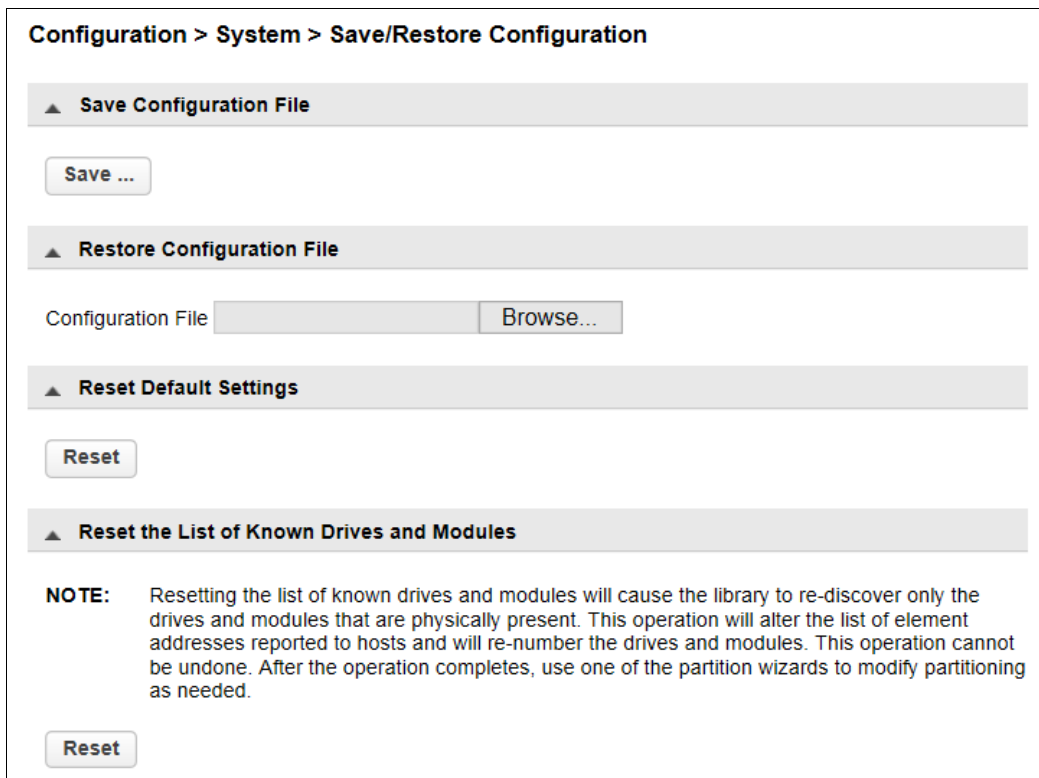
3.4.2 Saving, Restoring, and Resetting the Library Configuration

From the [Configuration > System > Save/Restore Configuration] screen you can save the library configuration settings to a file, restore the settings, or reset the library configuration. The saved configuration database will make it easier to recover the library configuration if you need to replace the base module or base module controller.

Caution

When the library is configured or set after purchasing the LT140 or when the library configuration or setting is changed during operation, make sure to save the library configuration settings as a file. The saved library configuration setting file can be restored in the library using the remote panel. Keep the latest library configuration setting file in a safe location. This file may be required for maintenance.

Figure 3.6 Saving, restoring, and resetting the library configuration



■ Saving the library configuration to a file

Procedure

- 1 Navigate to the [Configuration > System > Save/Restore Configuration] screen as shown above.
- 2 Under [Save Configuration File], click [Save].

- 3 When [Download] appears, click it and then select the destination location.

End of procedure

■ Restoring the library configuration from a file

▶ Caution

If the Key Management Function Option is used, the master key and the encryption key are deleted when the library setting information is recovered.
If the master key or the encryption key is deleted, the encrypted data cannot be read. Ask the security administrator to export the master key and the encryption key in advance and keep them in a safe location.
For more details, refer to "2.2 Backing Up the Setting Information" in "Fujitsu Storage ETERNUS LT140 Tape Library Key Management Function Option User's Guide".

Procedure

- 1 Navigate to the [Configuration > System > Save/Restore Configuration] screen.
- 2 Under [Restore Configuration File], click [Browse]. Then select the location of the configuration file.
- 3 Click [Upload File & Restore].

● Note

If the library configuration is restored, the library is rebooted.

End of procedure

■ Resetting the library configuration information

To reset the library configuration information, click [Reset] in [Reset Default Settings] and select [Yes].

● Note

If the library configuration information is reset, the library reboots.

■ Resetting the list of the tape drives and modules

To reset the list of tape drives and modules, click [Reset] in [Reset the List of Known Drives and Modules] and select [Yes].

Note

After the following operations, the pre-modification tape drive information or module information may remain on the panel. If this occurs, use this function.

- A tape drive installed in the library is removed
- An FH drive is installed to the location where an HH drive was installed
- A library expansion module is removed

Resetting the list of known tape drives and modules with this function will cause the library to re-discover only the tape drives and modules that are physically present. This operation will alter the list of element addresses reported to hosts and will re-number the drives and modules. This operation cannot be undone. After the operation is completed, use the partition wizard as necessary to reconfigure the partitions.

3.4.3 Configuring the Date and Time Format

To configure date and time format parameters and to use an SNTP server, from the Configuration area, navigate to the [System > Date and Time Format] screen.

Caution

The library does not adjust its time for daylight saving time; the time must be adjusted manually.

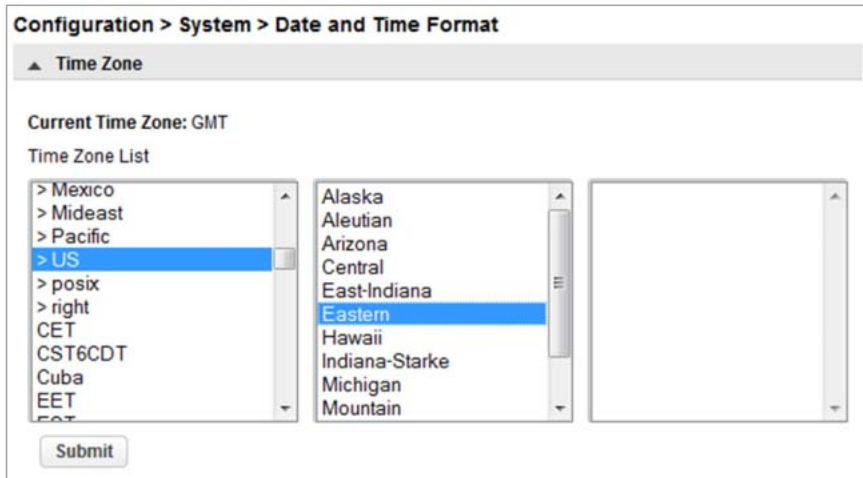
3.4.3.1 Setting the Time Zone

Procedure

- 1 Click [Time Zone].

A list of continents, countries, and regions is displayed. When an item preceded with ">", for example "> US", is selected, a submenu is displayed in the next column.

Figure 3.7 Setting the time zone



- 2 Expand the time zone list, as necessary, until a location with the appropriate time zone is visible. Select a location with the appropriate time zone.

Note

For example, select [Asia > Tokyo] to set the timezone to Japan Standard Time.

- 3 Click [Submit].

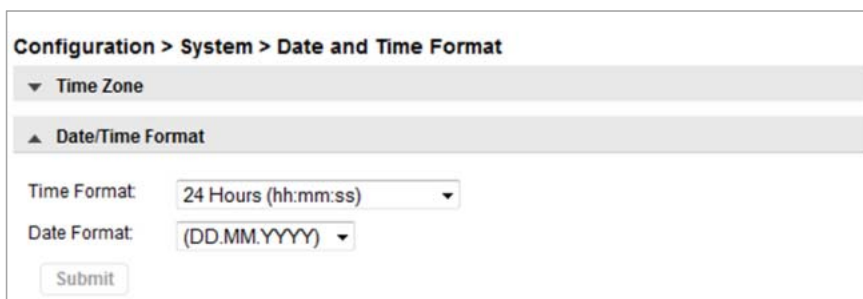
End of procedure

3.4.3.2 Setting the Date and Time Format

Procedure

- 1 Click [Date/Time Format].

Figure 3.8 Setting the date and time format



- 2 Select a time format.

- 3** Select a date format.
For example, July 30, 2018 is displayed as:
 - DD.MM.YYYY - 30.07.2018
 - MM/DD/YYYY - 07/30/2018
 - YYYY-MM-DD - 2018-07-30
- 4** Click [Submit].

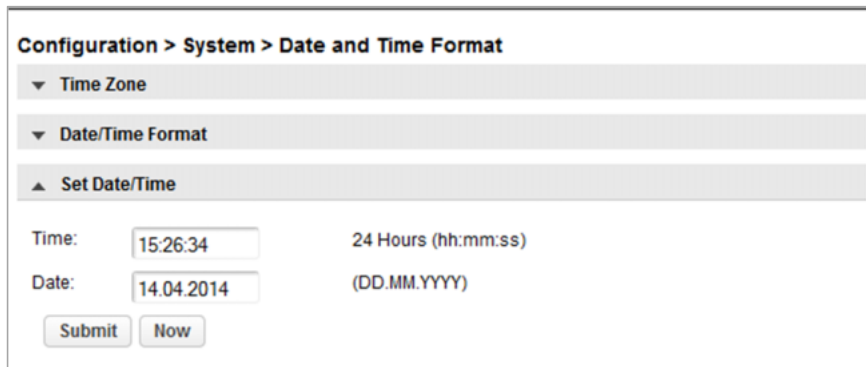
End of procedure

3.4.3.3 Setting the Date and Time

Procedure

- 1** Click [Set Date/Time].

Figure 3.9 Setting the date and time



Configuration > System > Date and Time Format

▼ Time Zone

▼ Date/Time Format

▲ Set Date/Time

Time: 24 Hours (hh:mm:ss)

Date: (DD.MM.YYYY)

- 2** Enter the date and time.
 - Manual Input:
Enter the time in [Time] and the date in [Date].
 - Automatic Input:
Click [Now].
The time and date information is entered automatically by the synchronization to the computer running the remote panel.
- 3** Click [Submit].

End of procedure

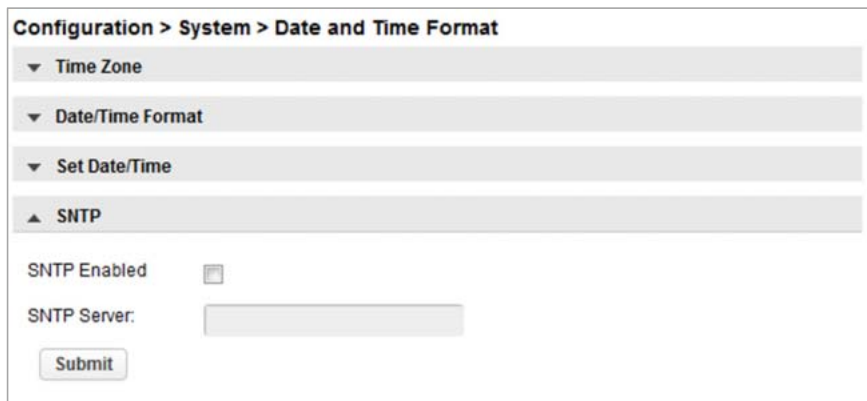
3.4.3.4 Enabling SNTP (Simple Network Time Protocol) Synchronization

The library must have network access to an SNTP server.

Procedure

- 1 Click [SNTP].

Figure 3.10 SNTP



The screenshot shows a web interface for configuring system settings. The breadcrumb trail is "Configuration > System > Date and Time Format". There are four expandable sections: "Time Zone", "Date/Time Format", "Set Date/Time", and "SNTP". The "SNTP" section is expanded, showing a checkbox for "SNTP Enabled" which is currently unchecked, and a text input field for "SNTP Server:". A "Submit" button is located at the bottom of the form.

- 2 Select the "SNTP Enabled" checkbox.
- 3 Enter the SNTP server address.
- 4 Click [Submit].

End of procedure

Note

Synchronization with an SNTP server is performed every eight hours. The synchronization mode (Step mode or Slew mode) is automatically selected based on the time lag.

3.4.4 Configuring Media Barcode Compatibility Checking

From the [Configuration > System > Media Barcode Compatibility Check] screen, the barcode media ID check can be enabled or disabled.

Figure 3.11 Configuring media barcode compatibility checking

Configuration > System > Media Barcode Compatibility Check

Barcode Media ID Restriction
When the box is checked, the Media Barcode Compatibility feature is enabled. This feature uses the media barcode identifier (the Media ID is the last two characters of the barcode) to verify the media is compatible with the tape drives installed.

NOTE: It is recommend to leave this option enabled (checked).

Submit

When Barcode Media ID Restriction is enabled, the library allows only appropriate tape cartridges to be loaded into tape drives. The barcode media ID is the last two characters of the barcode. For example, an LTO-8 labeled cartridge are not be allowed to move into an LTO-7 tape drive.

When disabled, the library moves any tape to any tape drive. If the cartridge is incompatible with the tape drive, the library displays a message.

Caution

- It is strongly recommended that all cartridges have barcode labels with the correct media ID, and that the Barcode Media ID Restriction is enabled.
- If a barcode label with the wrong media ID is used, the tape cartridge with this label may be moved to an incompatible tape drive.

3.4.5 Configuring Allow Unlabeled Media Setting (Firmware Version 1.0.0-D000 Only)

Although it is strongly recommended to use labeled media, the tape library is capable to detect cartridges without barcode label within the inventory scan. This function enables the library to detect and use cartridges unlabeled or difficult to read labels.

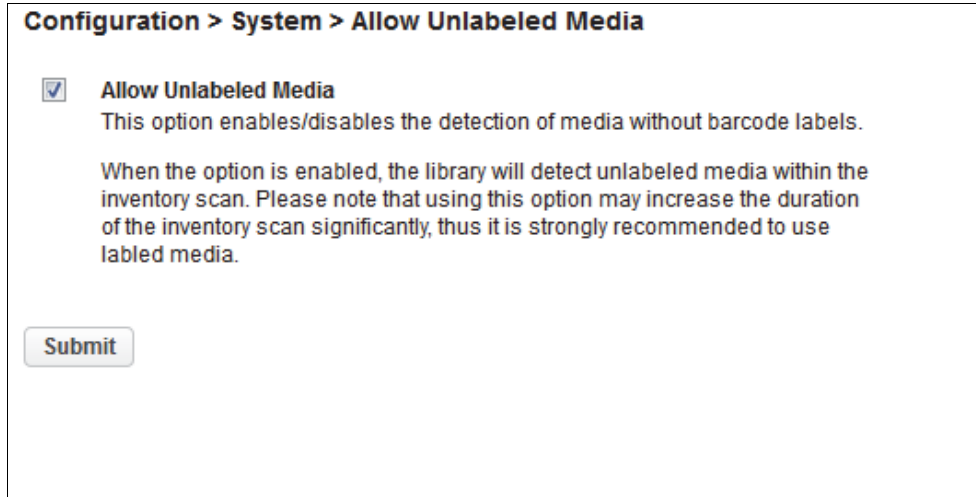
To enable detection of cartridges unlabeled or difficult to read labels navigate to [Configuration > System > Allow Unlabeled Media].

Procedure

- 1 Select the "Allow Unlabeled Media" checkbox.

2 Click [Submit].

Figure 3.12 Allow unlabeled media



End of procedure

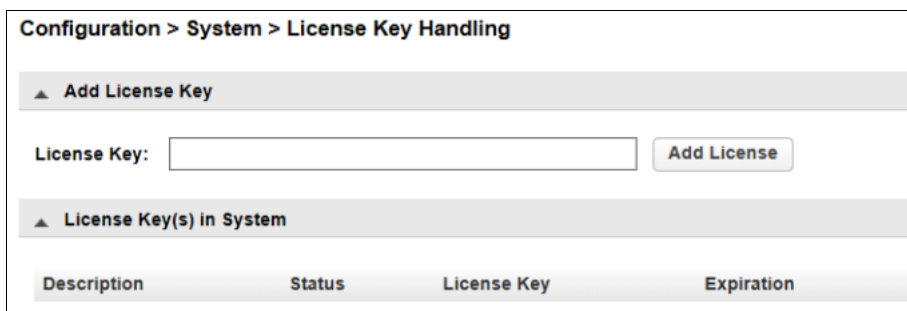
Note

This function is fixed to the enabled setting in firmware version 1.0.1-B000 and later, and has been removed from the menu.
There are no effects from deleting this menu.

3.4.6 Configuring License Key Handling

To add a license key, navigate to the [Configuration > System > License Key Handling] screen.

Figure 3.13 License key handling



■ Add a license key

Procedure

- 1 Enter license key.
The license key needs to have a length of 15 characters.
- 2 Click [Add License].

End of procedure

Note

To use the functions added with license keys, configurations are required for their intended purpose. Refer to the following sections for the procedures according to the options.

- Slot expansion license option
Refer to "[3.4.13 Configuring Library Partitions](#)" (page 93) when adding slots in the partition to be used.
- Logical library option
Refer to "[3.4.13 Configuring Library Partitions](#)" (page 93) when configuring partitions.
- Key management function option
Refer to "[3.4.14 Configuring Key Management Function](#)" (page 97) and "Fujitsu Storage ETERNUS LT140 Tape Library Key Management Function Option User's Guide" when configuring the encryption key option.

3.4.7 Configuring the Library Network Settings

From the [Configuration > Network] screen you can configure the library network settings.

Figure 3.14 Network setting

Configuration > Network

▲ General Network Settings

Host Name: Domain Name:

▲ Primary Network Port

MAC Address: **00:0e:11:1c:45:61** Link Status: **Enabled**
Link Speed: **100 Mbit/s** Duplex: **Enabled**

Protocol: Max. Link Speed:

▲ IPv4

Method:

Address: Netmask:
Gateway:
DNS 1: DNS 2:

▼ IPv6

▼ Secondary Network Port

▼ Reset internal IP Range (in case of conflict)



- If the network setting is incorrect, the system may not work properly. When configuring the network settings, disconnect the LAN cable in advance. Reconnect the LAN cable to the library after the network setting is complete.

■ Configuring or updating the Host Name and Domain Name.

Procedure

- 1 (When the menu has not been expanded) Click [General Network Settings].
- 2 Enter a desired host name in "Host Name" and a desired domain name in "Domain Name".

Note

The remote panel URL is <Host Name>.<Domain Name>

- 3 Click [Submit].
When the confirmation screen appears, click [Yes].

End of procedure

■ Configuring or updating the network address

Procedure

- 1 (When the menu has not been expanded) Click [Primary Network Port].
- 2 Select the Internet protocol and the linking speed to use for the library.
- 3 (When the menu has not been expanded) Perform the setting for the selected Internet protocol. Click [IPv4] or [IPv6].
When manually entering the setting values, select "Static" in [Method] and enter the desired value for each item. To obtain an Internet address automatically from the DHCP server, select DHCP (for IPv4) or Stateless (for IPv6).
- 4 Click [Submit].
When the confirmation screen appears, click [Yes].

End of procedure

Caution

"Secondary Network Port" must not be used. Set only the "Primary Network Port" setting.

■ Resetting the IP Range

From the [Reset Internal IP Range(in case of conflict)] screen, the internal IP of the library can be reset.

Use the Reset Internal IP Range function only if a network conflict occurs.

● Note

For internal communication between modules, the tape library uses an Ethernet connection with an internal IP address range. To prevent a conflict between the external IP address and an address of the internal IP range, an internal IP range that is not being used by the tape library for the external Ethernet port must be selected.

Procedure

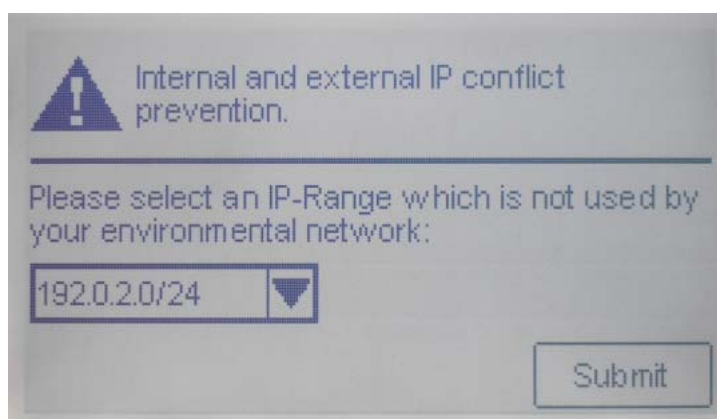
- 1 (When the menu has not been expanded) Click [Reset Internal IP Range (in case of conflict)].
- 2 Click [Submit].
- 3 When the confirmation screen appears, click [Yes].
The library automatically reboots. After the library reboots, the internal IP range setting screen appears.

▶ Caution

Execute the remaining steps from the operator panel.

- 4 Select an IP range from the drop-down list.

Figure 3.15 Internal IP range setting screen



- 5 Select [Submit] and press the Enter button.
The library reboots again.

End of procedure

3.4.8 Configuring SNMP

This operation can be executed from only remote panel operation.

Use the [Configuration > Network Management > SNMP] screen to enable and configure SNMP (Simple Network Management Protocol), which allows applications to manage the device. The library supports both SNMP configuration and SNMP traps.

The monitoring server can receive SNMP traps if the "ETERNUS SF Storage Cruiser" management software is set up on the server. Refer to the ETERNUS SF Storage Cruiser manuals for details.

Table 3.1 Management software

Software name	Supported function
FUJITSU Storage ETERNUS SF Storage Cruiser	SAN management, fault monitoring

For information about ETERNUS SF Storage Cruiser versions that support the LT140, contact your sales representative.

Figure 3.16 SNMP

Configuration > Network Management > SNMP

SNMP

SNMP Enabled: Download MIB File

Community Name:

Notification Level:

SNMP Targets

IP/Hostname	Port	Version	Community	Action
	162	SNMPv1	public	Edit Delete

The configuration options below are only needed when using SNMPv3.

Limit all library SNMP communication to SNMPv3:

SNMPv3 Security Level:

Authentication User Name:

Authentication Password:

NOTE: Needed for security levels authNoPriv and authPriv (8 -31 characters)

Authentication Protocol:

NOTE: Needed for security levels authNoPriv and authPriv

Privacy/Encryption Protocol:

NOTE: Needed for security level authPriv

Submit Clear SNMPv3 Options

- **SNMP Enabled**
When checked, the library can be managed by computers listed in the [SNMP Target IP Addresses] field.
- **Download MIB File**
When the button is clicked, the MIB file is downloaded.
- **Community Name**
A string used to match the SNMP management station and library. It must be set to the same name on both the management station and the library. The default community name is *public*.
- **Notification Level**
The types of events for which the library should send.
 - Inactive
No events are sent.
 - Critical
Only critical events are sent.

- + Warnings
Only critical and warning events are sent.
- + Configuration
Only critical, warning, and configuration events are sent.
- + Information
All events are sent.
- SNMP Targets
List of configured SNMP targets.

The following are optional settings for SNMPv3. Set them when using SNMPv3.

- Limit all library SNMP communication to SNMPv3
If the checkbox is selected, the usable SNMP version can be limited to SNMPv3. If this setting is enabled, the SNMP Targets that are set with SNMPv1 and SNMPv2 are deleted. When the checkbox is selected, the confirmation screen appears. Click [Yes].
- SNMPv3 Security Level
The SNMP communication security level of SNMPv3.
 - noAuthNoPriv
No authentication or encryption is used for SNMP communication.
 - AuthNoPriv
Authentication is used for SNMP communication.
 - AuthPriv
Authentication and encryption are used for SNMP communication.
- Authentication User Name
The username that is used for SNMPv3 communication. Required when SNMPv3 is used.
- Authentication Password
An eight or more character password that is used for SNMP communication authentication. This is required when AuthNoPriv and AuthPriv is selected for [SNMPv3 Security Level].
- Authentication Protocol
The authentication method for SNMP communication. Required when AuthNoPriv and AuthPriv is selected for [SNMPv3 Security Level].
 - SD5
 - SHA
 - NONE
Authentication is not performed. If noAuthNoPriv is selected for [SNMPv3 Security Level], this setting is automatically selected. Otherwise, this cannot be selected.
- Privacy/Encryption Protocol
The encryption protocol used for encrypted SNMP communication. Required if AuthNoPriv is selected for [SNMPv3 Security Level].
 - DES
 - AES128
 - NONE
Encryption is not performed. This setting is automatically selected when an option other than AuthPriv is selected for [SNMPv3 Security Level]. Otherwise, this cannot be selected.
- Privacy/Encryption Passphrase
An eight or more character password that is used for encrypted SNMP communication. Required if AuthNoPriv is selected for [SNMPv3 Security Level].

- To add an SNMP target or edit information for an SNMP target

Procedure

- 1 Click [Edit] for the appropriate SNMP target. When adding an SNMP target, click [Edit] next to a target without an IP/Hostname.
- 2 Enter the target IP address or hostname.
- 3 Enter the port.
- 4 Select the SNMP version.
- 5 Enter the SNMP community string for the target.
- 6 (When using SNMPv3) Enter values for the optional settings of SNMPv3.
- 7 Click [Submit].

End of procedure

- To delete an SNMP target

Procedure

- 1 Click [Delete] for the target to be deleted.
- 2 Click [Submit].

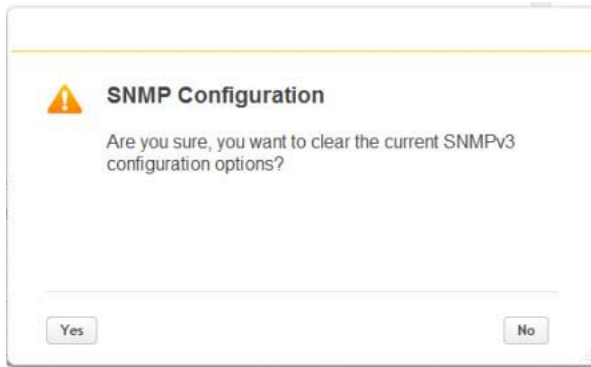
End of procedure

- To clear SNMPv3 Options

Procedure

- 1 Click [Clear SNMPv3 Options].
To confirm that you want to clear the SNMPv3 Options, click [Yes].

Figure 3.17 SNMPv3



2 Click the [Yes] button.

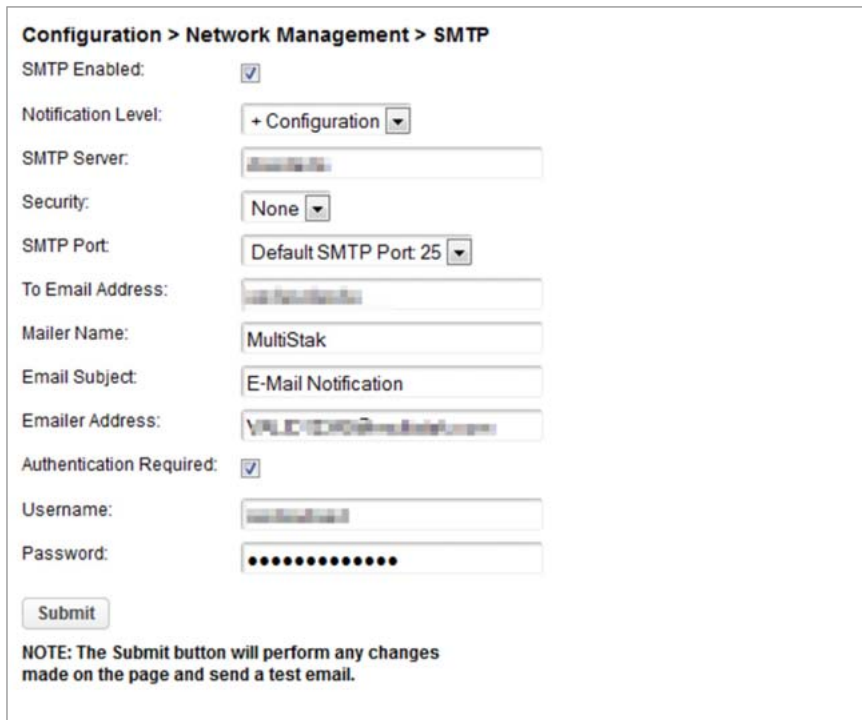
End of procedure

3.4.9 SMTP Settings

This operation can be executed from only remote panel operation.

From the [Configuration > Network Management > SMTP] screen you can enable SMTP (Simple Mail Transfer Protocol) functionality and configure E-mail notification of library events. The library must have network access to an SMTP server.

Figure 3.18 SMTP

A screenshot of the "Configuration > Network Management > SMTP" settings page. It contains several fields and checkboxes:

- SMTP Enabled:
- Notification Level: + Configuration (dropdown)
- SMTP Server: [Empty text field]
- Security: None (dropdown)
- SMTP Port: Default SMTP Port 25 (dropdown)
- To Email Address: [Empty text field]
- Mailer Name: MultiStak
- Email Subject: E-Mail Notification
- Mailer Address: VALUE@EXAMPLE.COM
- Authentication Required:
- Username: [Empty text field]
- Password: [Empty password field with dots]

At the bottom, there is a "Submit" button and a note: "NOTE: The Submit button will perform any changes made on the page and send a test email."

- SMTP Enabled
Check to enable SMTP. If the checkbox is selected, the items intended to be configured later on are activated.
- Notification Level
The types of events for which the library sends E-mail.
 - Inactive
No events are sent.
 - Critical
Only critical events are sent.
 - + Warnings
Only critical and warning events are sent.
 - + Configuration
Only critical, warning, and configuration events are sent.
 - + Information
All events are sent.
- SMTP Server
Hostname or IP address of the SMTP server
- Security
Security protocol for accessing the SMTP server
 - None
 - SSL/TLS
 - STARTTLS
- SMTP Port
SMTP server port. The default port for the selected protocol will be selected. Select one of the default ports or configure a custom port.
- To Email Address
The address to receive the reported events (for example *firstname.lastname@example.com*). Only one email address can be configured.
- Mailer Name
Name of the sender of the E-mail
- Email Subject
Subject line for the E-mail message
- E-mail Address
Return address to use for the E-mail message
- Authentication Required
When checked, a username and password are required to access the SMTP server.
- Username
Username for logging into the SMTP server when authentication is required.
- Password
Password associated with the Username when authentication is required.

3.4.10 Configuring the Remote Logging Function

This operation can be executed from only remote panel operation.

Use the [Configuration > Network Management > Remote Logging (rsyslog)] screen to enable and configure the Remote Logging function, which allows the library to send logs to the rsyslog server and allows remote log collections. To use this function, the library must have network access to the rsyslog server.

Figure 3.19 Configuring the rsyslog server

Configuration > Network Management > Remote Logging (rsyslog)

Remote Logging

Remote Logging Enabled:

Notification Level: Inactive

Remote Logging Server:

Remote Logging Port: Default Remote Logging Port: 514

Transport Protocol: UDP

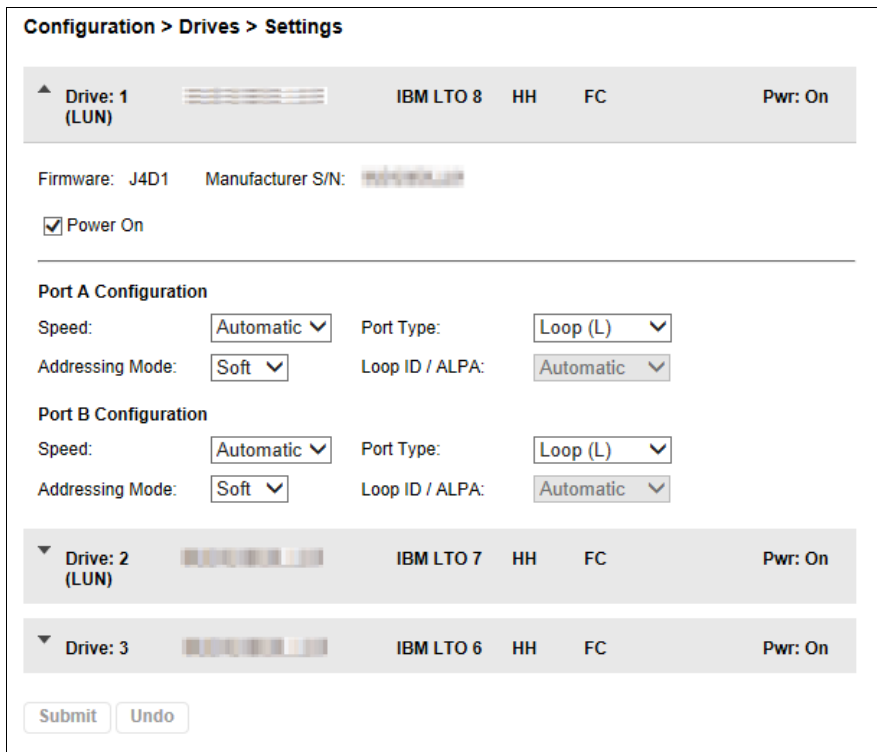
Submit

- Remote Logging Enabled
To enable "Remote Logging", select the checkbox. If the checkbox is selected, the items intended to be configured later on are activated.
- Notification Level
Event types of when the library sent the log.
 - Inactive
No events are sent.
 - Critical
Only critical events are sent.
 - + Warnings
Only critical and warning events are sent.
 - + Configuration
Only critical, warning, and configuration events are sent.
 - + Information
All events are sent.
- Remote Logging Server
Host name or IP address of the rsyslog server.
- Remote Logging Port
Port of the rsyslog server. Select one of the default ports or configure a custom port.
- Transport Protocol
Transfer protocol for sending the log to the rsyslog server.
 - UDP
 - TCP

3.4.11 Configuring Tape Drives

From the [Configuration > Drives > Settings] screen you can see and modify tape drive configuration.

Figure 3.20 Tape drive settings



- Tape drive number
Tape drives are numbered from the bottom of the library up beginning with one. The tape drive currently hosting the SCSI communication for the library is designated with (LUN).
- Serial number
The serial number assigned to the tape drive by the library. This serial number is reported to host applications. The serial number cannot be modified.
This is not the serial number assigned to the tape drive by the manufacturer; the serial number assigned by the manufacturer is shown in Manufacturer S/N.
- LTO generation
 - LTO 7
Ultrium Tape Drive
 - LTO 8
Ultrium Tape Drive
 - LTO 9
Ultrium Tape Drive

- Tape drive form factor
 - HH
Half height
 - FH
Full height
- Tape drive interface
 - FC
Fibre Channel
 - SAS
Serial Attached SCSI
- (Modified)
When present indicates that a setting has been changed. To apply the changes, click [Submit]. To reset all changed fields to their previously saved values, click [Undo].
- Pwr
Indicates whether the tape drive is currently powered on or off.
- Firmware
The version of firmware currently installed on the tape drive.
- Manufacturer S/N
The serial number assigned to the tape drive when it was manufactured. Use this serial number when working with your Service.
- Power On
Checked when the tape drive is powered on.

 **Caution**

Always power off a tape drive before removing it from the library or moving it to a new location within the library.

- Port X Configuration (FC only)
Configure the tape drive port. Perform this setting for Port A only. The use of Port B is prohibited.
 - Speed
The currently selected speed. The default is Automatic.
 - Port Type
 - Automatic
 - Loop(L)
Enables selection of the Addressing Mode.
 - Fabric(N/F)
 - Addressing Mode
When Port Type is set to Loop, Addressing Mode can be set to Soft, Hard, or Hard Autoselect.
 - Loop ID/ALPA
When Addressing Mode is set to Hard, you can choose an ALPA address from the drop down list.

- To modify the configuration of one or more tape drives

Procedure

- 1 Modify any of the configurable values.
- 2 Click [Submit].

End of procedure

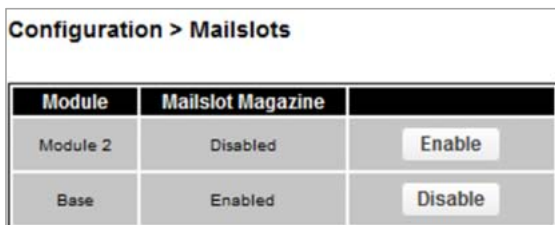
Note

To configure the number of barcode characters to report to the host application and whether to report them from the left or right end of the label, use either the Basic Partition Wizard or Expert Partition Wizard. For more details, refer to "[3.4.13.1 Using the Basic Partition Wizard](#)" (page 94) or "[3.4.13.2 Using the Expert Partition Wizard](#)" (page 95).

3.4.12 Enabling or Disabling Mailslots

The [Configuration > Mailslots] screen lists each of the mailslots and shows whether each is enabled or disabled. To change the state, click the button for the mailslot and then click [Submit]. Slots not enabled as mailslots are available as storage slots.

Figure 3.21 Enabling or disabling mailslots



Module	Mailslot Magazine	
Module 2	Disabled	Enable
Base	Enabled	Disable

Caution

While using backup software, do not change the enable/disable setting of the mailslots. When a change is required, stop the backup software and then change the setting.

3.4.13 Configuring Library Partitions

This operation can be executed from only remote panel operation.

The LT140 has less-restricted adaptable partitioning methods.

- The license option is necessary to create more than 2 partitions.
- Each partition must have at least one tape drive. One tape drive in each partition will host the library LUN for the partition.
- The maximum number of partitions is 21.
- Magazine slots are allocated in five-slot groups.
 - Mailslots must be enabled for a module before they can be allocated to a partition.
 - A partition does not need to have a mailslot. If a partition does not have a mailslot, the magazine must be accessed to import or export cartridges. If a magazine is opened, the state of the library becomes offline.
 - Although the mailslot magazine is shared between partitions, the mailslot elements are assigned individually to partitions.

Wizards guide you through the partition configuration process. The wizards are only accessible from the remote panel.

- **Basic Partition Wizard**
If you specify the number of partitions, the wizard removes the current partition configuration and assigns the tape drives and storage slots as evenly as possible to the partitions. Any extra tape drives or slots are assigned to the first partition.

Use the Basic Partition Wizard to configure partitions that will have similar resources or to configure the number of barcode characters to report to the host application and whether to report them from the left or right end of the label for a library with a single partition.

- **Expert Partition Wizard**
You can add or remove partitions from the current partition configuration and then edit each partition configuration to add or remove library resources.

Use the Expert Partition Wizard to configure partitions that will have different resources or to adjust resource assignments for existing partitions or those created with the Basic Partition Wizard.

Caution

- The library status is changed to Offline during the configuration of the partitions. Ensure that all host operations are idle before running a partition wizard.
- To use backup software, leave the automatic cleaning function disabled (default setting). Enabling the setting causes a conflict error between the automatic cleaning function and the cleaning function of the backup software.
For operations with the LTFS option, the automatic cleaning function can be enabled. For details, refer to "3.7 Cleaning the Tape Drive" in "Fujitsu Storage ETERNUS LT series Tape Libraries LTFS Option User's Guide".

3.4.13.1 Using the Basic Partition Wizard

Procedure

- 1 Click [Configuration > Partition > Basic Wizard] to start the wizard.
The [Information] screen displays the existing partitions, which will be deleted by the wizard.
- 2 Click [Proceed].
- 3 Click [Next].
The [Create Partition Scheme] screen displays the number of slots, mailslots, tape drives, and maximum available partitions for the library.

Note

To enable or disable the mailslots, cancel out of the wizard and update the mailslot configuration before configuring partitioning.

- 4 Select the number of partitions.
- 5 Select the number of barcode characters reported to the host application.
This option provides interchange compatibility with libraries with more limited barcode reading capabilities. The maximum length is 15 and the default is 8. This configuration will apply to all partitions.

Note

The industry standard length for LTO barcode labels is eight characters. Barcode labels longer than eight characters might scan incorrectly, particularly if they are not high quality labels.

- 6 Select whether to report the barcode characters from the left or right end of the barcode label to the host application when reporting fewer than the maximum number of characters.
For example, when reporting only six characters of the barcode label "12345678", if alignment is left, the device will report 123456. If alignment is right, the device will report 345678. The default is left.
- 7 For operations with the backup software, the automatic cleaning function of the tape drive must not be used. Leave the [Auto Clean] checkbox unselected.

Note

For operations with the LTFS option, the automatic cleaning function can be enabled. For details, refer to "3.7 Cleaning the Tape Drive" in "Fujitsu Storage ETERNUS LT series Tape Libraries LTFS Option User's Guide".

- 8 Click [Next].

- 9 The [Finish Configuration] screen displays the proposed allocation of library resources into partitions.
 - To update the configuration, click [Back].
 - To have the wizard configure partition as shown, click [Finish].
After the wizard reconfigures the partition, the library will come on line automatically.
 - To exit the wizard, click [Cancel] or [Exit].

End of procedure

Note

The Expert Partition Wizard can be used to adjust the allocation of resources after creating the partitions with the Basic Partition Wizard.

3.4.13.2 Using the Expert Partition Wizard

Use the wizard to configure one partition at a time.

Note

To enable or disable the mailslots, Cancel out of the wizard and update the mailslot configuration before configuring partitioning.

- To add or edit partitions

Procedure

- 1 Click [Configuration > Partition > Expert Wizard] to start the wizard.
The [Create Partition Scheme] screen lists the current partitions, if any, and the free resources.
- 2 To add a partition, click [Add].
To edit an existing partition, select a partition and click [Edit].

Note

The [Add] button is activated only when there are available resources. If there are no available resources, either edit a partition and release resources from it or remove a partition that contains extra resources.

- 3 Click [Next].
- 4 Enter a partition name in "Partition Name".

- 5 In "Barcode Label Length Reported To Host", select the number of barcode characters reported to the host application.
This option provides interchange compatibility with libraries with more limited barcode reading capabilities. The maximum length is 15 and the default is 8. This configuration will apply to all partitions.

 **Note**

The industry standard length for LTO barcode labels is eight characters. Barcode labels longer than eight characters might scan incorrectly, particularly if they are not high quality labels.

- 6 In "Barcode Label Length Reported To Host", select whether to report the barcode characters from the left end or right end of the barcode label to the host application when reporting fewer than the maximum number of characters. For example, when reporting only six characters of the barcode label "12345678", if alignment is left, the device will report 123456. If alignment is right, the device will report 345678. The default is left.

- 7 When enabling the key management function for partitions, select the [Encryption Mode] checkbox (only when the key management function option is used).

 **Note**

This setting can only be changed by the security administrator account. As an exception, administrator accounts that are granted privileges by the security administrator can change this setting. For details, refer to "2.1.3.2 Setting the Key Management Function for Each Logical Library (Partition)" in "Fujitsu Storage ETERNUS LT140 Tape Library Key Management Function Option User's Guide".

- 8 For operations with the backup software, the automatic cleaning function of the tape drive must not be used. Leave the [Auto Clean] checkbox unselected.

 **Note**

For operations with the LTFS option, the automatic cleaning function can be enabled. For details, refer to "3.7 Cleaning the Tape Drive" in "Fujitsu Storage ETERNUS LT series Tape Libraries LTFS Option User's Guide".

- 9 Click [Next].

- 10 In the [Assign Storage Slots] screen, use the [>>] and [<<] buttons to assign slots to the new partition and then click [Next].

 **Caution**

No more than the available number of slots can be specified for slots. If the slot expansion license is not installed, the total number of slots in the entire partitions and mailslots cannot exceed 20. In addition, the slots that are available at this time are the ones from the front of the library to the right side (1.21 to 1.40) including the mailslots. If slots other than those are included in the partitions, the operation is not guaranteed.

- 11** In the [Assign Mail Slots] screen, use the [>>] and [<<] buttons to assign Mailslots to the new partition and then click [Next].

Individual Mailslot elements cannot be shared between partitions. Importing or exporting cartridges in a partition without an assigned Mailslot will require magazine access. Opening a magazine takes the library offline.

 **Caution**

No more than the available number of slots can be specified for mailslots. If the slot expansion license is not installed, the total number of slots in the entire partitions and mailslots cannot exceed 20.

- 12** In the [Assign Drives] screen, use the [>>] and [<<] buttons to assign tape drives to the new partition and then click [Next].
- 13** If the partition has multiple tape drives, select the tape drive that will host the SCSI communication for the partition and then click [Next].
The lowest numbered tape drive in the partition is the default.
- 14** Verify the partition configuration and then click [Finish].
After the wizard reconfigures the partition, the library will come on line automatically.

End of procedure

- To remove a partition

Procedure

- 1** Select the partition, click [Remove] and then click [Next].
- 2** Verify that you want to remove the partition and then click [Finish].
After the wizard removes the partition, the library automatically becomes online.

End of procedure

3.4.14 Configuring Key Management Function

After logging in with the security account, the [Configuration > Encryption] screen can be selected.

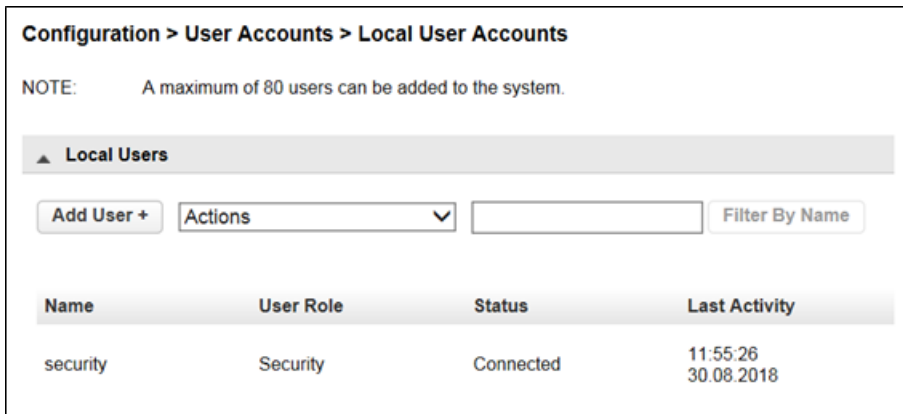
For the default library state, the hardware encryption function of the tape drive is set to be used according to the backup software. To use the hardware encryption function of a tape drive with a single library, the Key Management Function Option is required.

For details about how to use the Key Management Option, refer to "Fujitsu Storage ETERNUS LT140 Tape Library Key Management Function Option User's Guide".

3.4.15 Configuring the Account Settings

From the [Configuration > User Accounts > Local User Accounts] screen you can add accounts, change privileges, and configure account settings such as the password.

Figure 3.22 Account settings



On the [Configuration > User Accounts > Local User Accounts] screen, a list of accounts that can be configured for the currently logged in accounts is displayed. The following contents are displayed:

- Name
The account name.
- User Role
The account type.
 - User
Although a user account can reference the status information of the library, the functions for configuring, maintaining, or operating the library cannot be used. The initial password of the library is "std00001". Setting a user password restricts access to status information to only those who know the user password.
 - Administrator
An administrator account provides access to almost all the administrator functions of the library from the remote panel or operator panel. By setting a password, access to the administrator functions is restricted to only users who know the administrator password. The initial administrator password of the library is "adm00001".
 - Security
With a security administrator account, in addition to the functions that are available when logged in as the administrative account, you can also enable or disable SSL and manage encryption keys. After the Key Management Function Option is purchased, the setting for the key management function is available. The initial password is "security".
- Status
The login state of the account.
 - Connected
The account is logged in.
 - Disconnected
The account is not logged in.

- Disconnected/Locked
The account is locked and cannot be logged in.
- Last Activity
The last date and time the account was accessed.

Note

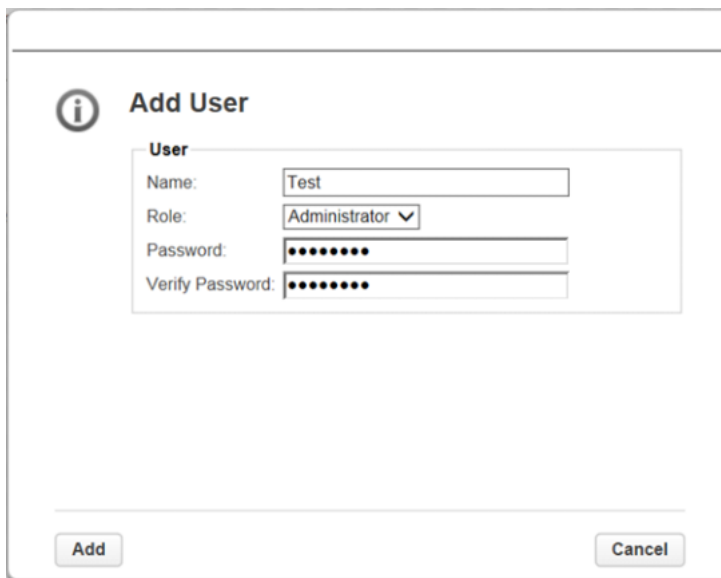
The configurable account type differs depending on the account used to log in. The administrator account can configure the "User" and "Administrator" accounts and the security administrator account can configure the "Security" account. In addition, for the password setting, passwords that do not satisfy the specified requirements cannot be used. This requirement can be changed to meet your security requirements. For details, refer to ["3.4.16 Configuring Password Setting Requirements" \(page 104\)](#).

3.4.15.1 Adding an account

Procedure

- 1 Click [Add User +].
- 2 When the input window expands, enter an account name to add in [Name] and select an account type in [Role].
- 3 Enter a password twice.
- 4 Click [Add].

Figure 3.23 Adding an account



End of procedure

Note

The password set here is for the initial login. For a new account, the user must set a new password when logging in for the first time. Follow the instructions to set the password.

Caution

Accounts with a User Role of Administrator or Security can use most of the library's functions. For security purposes, keep the number of accounts added to a minimum and issue accounts only for reliable users.

3.4.15.2 Changing account passwords

Procedure

- 1 Click an account to change the password.
- 2 From [Actions], select [Modify Password].
- 3 When the input window expands, enter your password twice.
- 4 Click [Modify].

Figure 3.24 Changing account passwords

The screenshot shows a dialog box titled "Modify User Password". It contains a "User" section with three input fields: "Name" (containing "administrator"), "Password" (masked with dots), and "Verify Password" (masked with dots). At the bottom of the dialog are two buttons: "Modify" and "Cancel".

End of procedure

 **Note**

If the account targeted for a password change is locked, changing password will release the lock. If the account targeted for a password change is locked, changing password will release the lock. For details about locking the account, refer to "[3.4.16 Configuring Password Setting Requirements](#)" (page 104).

If the user account whose password is to be changed and the account used to change it is different (for example, when the administrator changes the password of a user account), the user must set a password again when logging in for the first time after the password is changed. Follow the instruction to set the password.

3.4.15.3 Changing privileges of the account

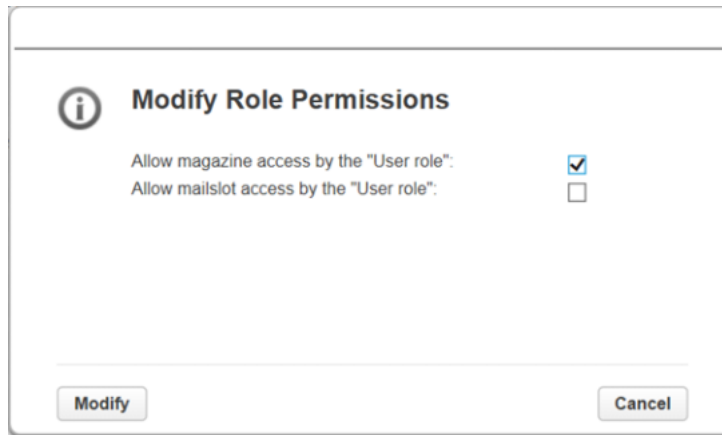
 **Caution**

User accounts can also eject tape cartridges from the library if the magazine/Mailslot operation is permitted. For security purposes, keep the number of authorizations to a minimum and give permission only to reliable users.

Procedure

- 1 From [Actions], select [Modify Role Permissions].
- 2 The window is expanded, so select the privilege to change.
 - Allow magazine access by the "User role"
The magazine operation with the User account is permitted.
 - Allow mailslot access by the "User role"
The mailslot operation as the User account is permitted.
- 3 Click [Modify].

Figure 3.25 Changing privileges of the account



End of procedure

3.4.15.4 Changing the account PIN

Note

PINs are four-digit numbers that are used when each account logs in to the library from the operator panel.

PINs can also be changed directly from the operator panel. See ["2.5.5 Changing the PIN" \(page 38\)](#) for details.

Procedure

- 1 From [Actions], select [Modify Role Permissions].
- 2 An input window appears, so select an account type and enter the new PIN into both boxes.
- 3 Click [Modify].

Figure 3.26 Changing the account PIN

Modify Operator Panel PIN

The PIN may be required to log into the operator panel at the front of the library. The PIN must be 4 digits long and contain only numbers.

Name: administrator

PIN: ●●●●

Verify PIN: ●●●●

Modify Cancel

End of procedure

3.4.15.5 Deleting the account

Procedure

- 1 Click the account to delete it.
- 2 From [Actions], select [Remove User].
- 3 When the confirmation screen appears, click [Yes].


Figure 3.27 Deleting the account

Remove User

Are you sure you want to remove this user?

Yes No

End of procedure

 **Note**

Only accounts that are added can be deleted. Accounts that are registered by default (user, administrator, security) cannot be deleted.

3.4.16 Configuring Password Setting Requirements

From the [Configuration > User Accounts > User Accounts Settings] screen, requirements for setting account passwords can be configured. This configuration is applied to all accounts. The requirements that can be configured are as follows. After selecting the requirements, click [Submit] to reflect the settings.

- **Minimum Number Of Characters**
This sets the minimum number of characters for passwords. This can be set from 8 to 20 characters.
- **Minimum Number Of Upper Case Alphabetic Characters (A-Z)**
This sets the minimum number of uppercase characters. This can be set from 0 to 3 characters.
- **Minimum Number Of Lower Case Alphabetic Characters (a-z)**
This sets the minimum number of lowercase characters. This can be set from 0 to 3 characters.
- **Minimum Number Of Numeric Characters (0-9)**
This sets the minimum number of numeric characters. This can be set from 0 to 3 characters.
- **Minimum Number Of Special Characters (!@#\$%^&*()_+ -= {}|[]\;:'"<>?,./)**
This sets the minimum number of special characters. This can be set from 0 to 3 characters.
- **Maximum Number Of Identical Consecutive Characters**
This sets the maximum number of identical consecutive characters. This can be set from 1 to 3 characters. If [Unlimited] is selected, there is no limit.
- **Maximum Number Of Failed Logins Before Password Is Locked**
This sets the maximum number of consecutive failed logins before the account is locked. This can be set from 1 to 10. If [Unlimited] is selected, there is no limit.
- **Maximum Number Of Days Before Password Must Be Changed**
This sets the maximum number of days the same password can be used. The password must be changed during this period. This can be set up to 365 days. If [Unlimited] is selected, there is no limit.
- **Minimum Number Of Days Before Password Can Be Changed**
After the password is changed, this sets the period until the password can be changed again. The password cannot be changed during this period. This can be set up to 365 days. If [Unlimited] is selected, there is no limit.
- **Number Of Password Changes Before An Old Password Can Be Used Again**
A conditional setting that allows the use of a password that was used in the past. This can be set up to six for the number of password changes. If 0 is set, passwords can be used without any restrictions.



- If [Maximum Number Of Failed Logins Before Password Is Locked] is not set to [Unlimited], the account is locked if the number of failed login attempts reaches the set value.
If the account becomes locked, you may not be able to log in to the remote panel depending on the account so be careful when entering the password.
If an account lock occurs or you cannot log in due to lost passwords, take the following action for each account:
 - user
Contact the administrator and request a password reset.
 - administrator
Reset the password from the operator panel. For more details, refer to ["2.5.5 Changing the PIN" \(page 38\)](#).
 - security
Because the security account has the highest security level, its password cannot be reset. If you cannot log in with this account, initialize the library to the factory default.
Save the setting information and export the encryption key before contacting your maintenance engineer.

Figure 3.28 Password setting requirements

Configuration > User Accounts > User Accounts Settings

▲ Password Rules

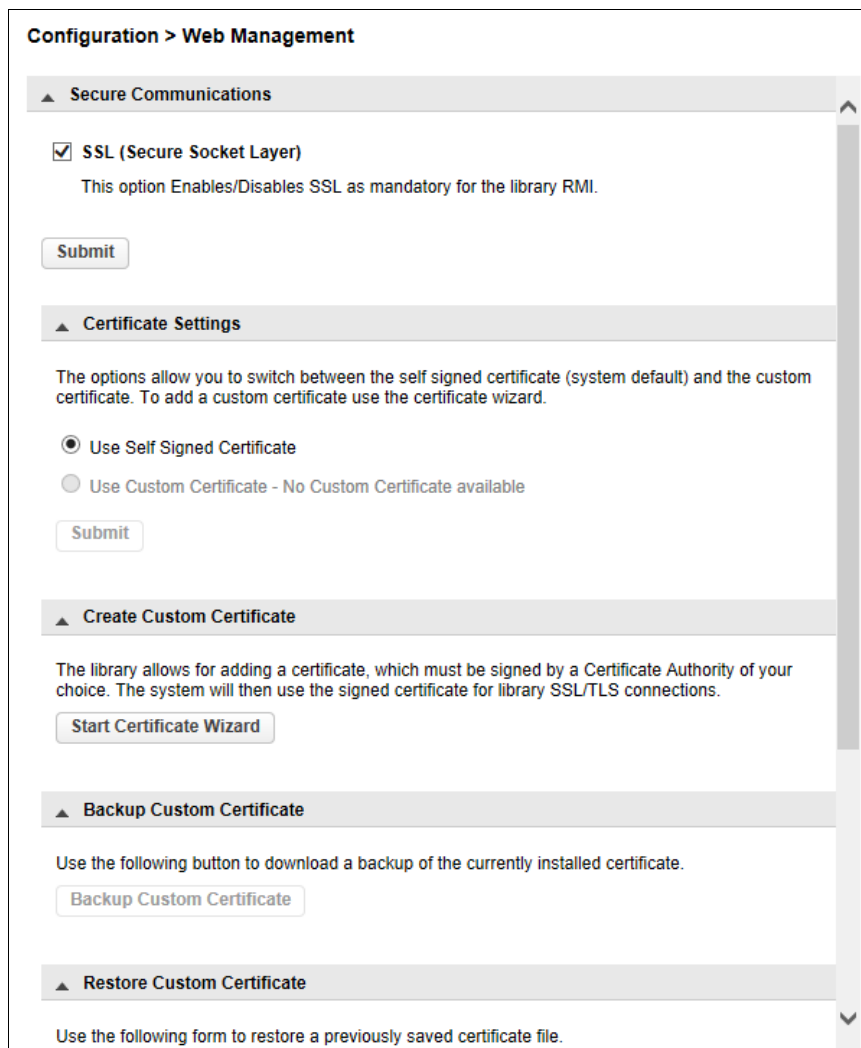
Minimum Number Of Characters:	8
Minimum Number Of Upper Case Alphabetic Characters (A-Z):	1
Minimum Number Of Lower Case Alphabetic Characters (a-z):	1
Minimum Number Of Numeric Characters (0-9):	1
Minimum Number Of Special Characters (!@#\$%^&*()_+~{} []\:"'<>?,./):	1
Maximum Number Of Identical Consecutive Characters:	2
Maximum Number Of Failed Logins Before Password Is Locked:	5
Maximum Number Of Days Before Password Must Be Changed:	30
Number Of Password Changes Before An Old Password Can Be Used Again:	5

Submit

3.4.17 Configuring the Management Settings to Access the Remote Panel

From the [Configuration > Web Management] screen, you can configure the management settings to access the remote panel.

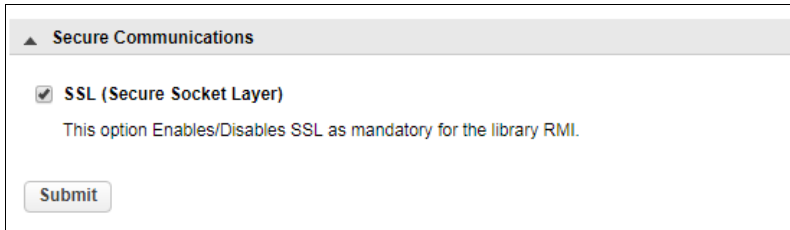
Figure 3.29 Configuring the management settings to access the remote panel



3.4.17.1 Enabling SSL

In [Secure Communications] on the [Configuration > Web Management] screen, access to the remote panel using encrypted communication via Secure Socket Layer (SSL) can be enabled or disabled. It is disabled by default. To enable SSL, select the checkbox and click [Submit]. If SSL is enabled, https must be used to connect to the remote panel.

Figure 3.30 Enabling the SSL setting

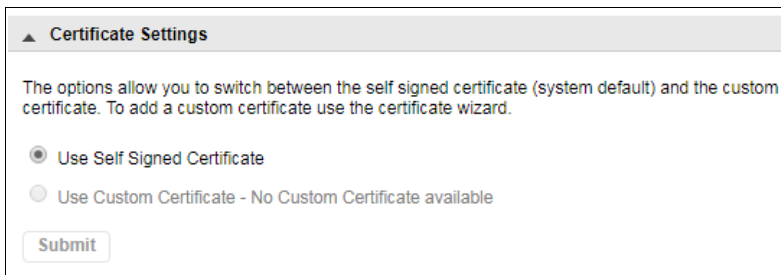


3.4.17.2 Setting Certificates

In [Certificate Settings] on the [Configuration > Web Management] screen, enable SSL and select a self-signed certificate to use when https connections are used. To reflect the selection, click a radio button and then click [Submit].

- Use Self Signed Certificate
Use the default self-signed certificate of the library.
- Use Custom Certificate
Use the self-signed certificate created by a user. If a self-signed certificate has not been created, a selection cannot be made.
For details about how to create self-signed certificates, refer to ["3.4.17.3 Creating self-signed certificates" \(page 107\)](#).

Figure 3.31 Setting certificates



3.4.17.3 Creating self-signed certificates

In [Create Custom Certificate] on the [Configuration > Web Management] screen, create a self-signed certificate for the LT140.

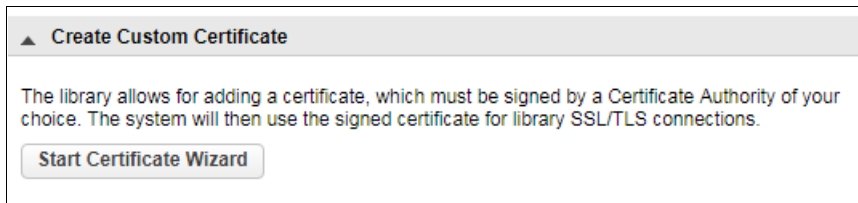
Caution

- Set the RMI timeout value to 30 minutes by following the procedure in ["3.4.17.5 Setting the session timeout of the remote panel" \(page 113\)](#).
- Before establishing an https connection to RMI with the created self-issued certificate, the CA public certificate (root certificate) that was used to sign the self-issued certificate of the LT140 must be saved in the Trusted Root Certification Authorities store of the client computer.

Procedure

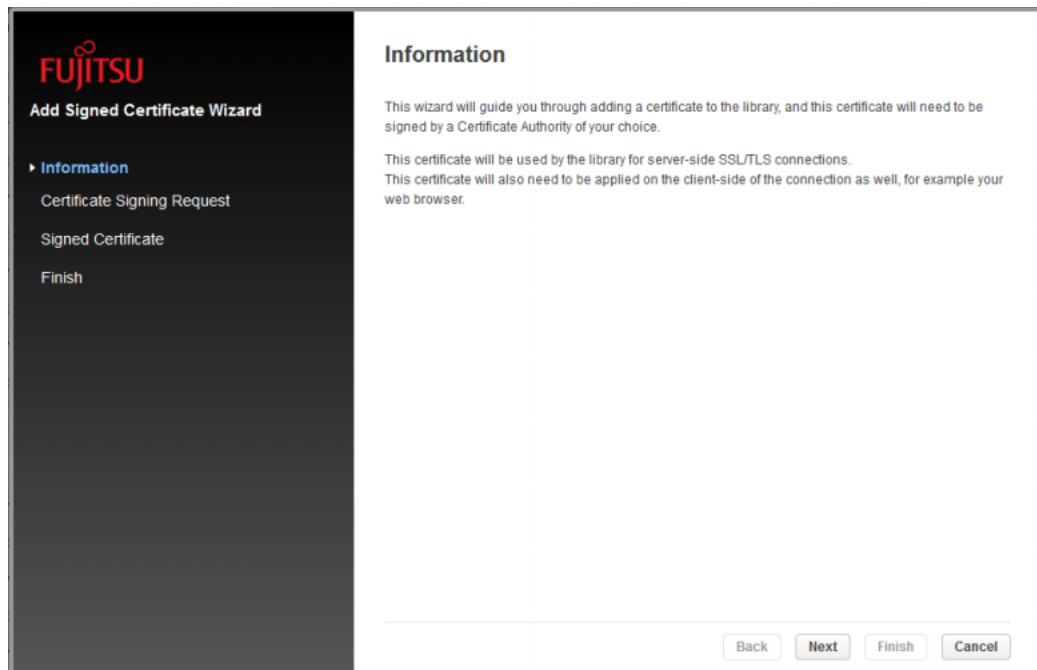
- 1 On the [Create Custom Certificate] screen, click [Start Certificate Wizard].

Figure 3.32 Self-signed certificate creation screen



- 2 The wizard is started and when the [Information] screen appears, click [Next].

Figure 3.33 Information



- 3 On the [Certificate Signing Request] screen (Figure 3.34), enter the appropriate information in the seven fields and then generate a Certificate Sign Request (CSR).

For the required information, contact the security administrator. Filling in all seven fields enables [Generate CSR]. Click [Generate CSR] to generate a CSR.

Figure 3.34 Certificate signing request - 1

FUJITSU
Add Signed Certificate Wizard

Information
▶ **Certificate Signing Request**
Signed Certificate
Finish

Certificate Signing Request

Certificate Request Data

Distinguished Name (DN) Town/City
Business Name / Organization Country
Department Name / Organizational Unit E-mail address
Province, Region, County or State

Click the Generate CSR button to have the library create CSR.

Generate CSR

Once the CSR is created, you need to select and copy the entire certificate and then paste the certificate wherever it will be signed. When you have copied the certificate, click Next.
NOTE: Be sure to include the "-----BEGIN CERTIFICATE REQUEST-----" and "-----END CERTIFICATE REQUEST-----" lines in your selection.

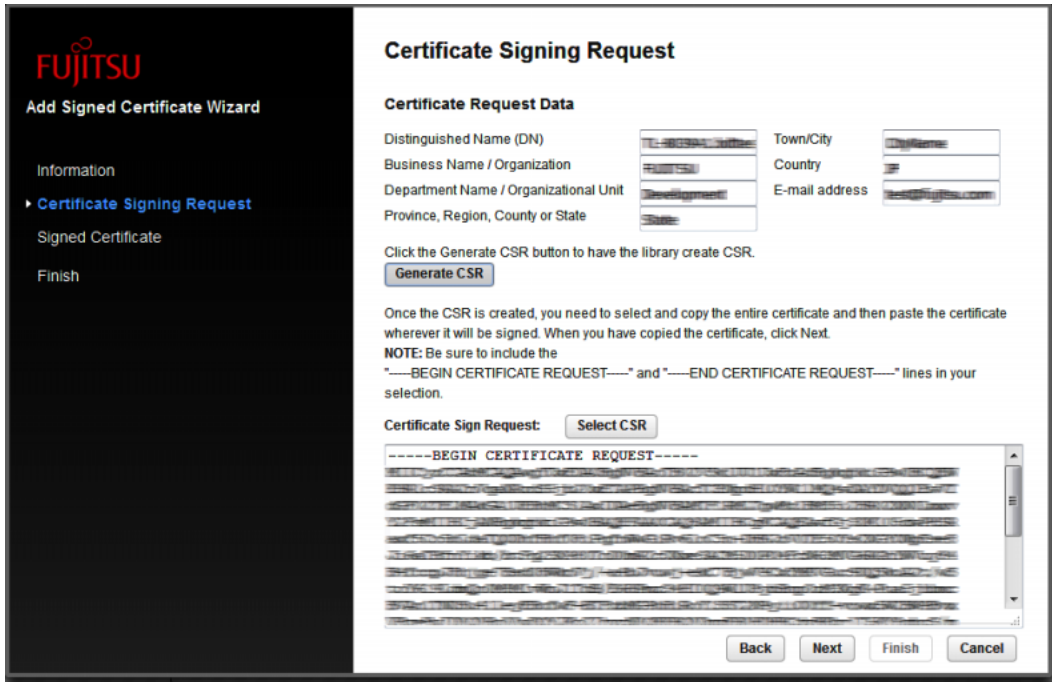
Certificate Sign Request:

- 4 Copy the generated CSR, which is displayed in the Certificate Sign Request field.
- 5 Create a Signed Certificate with the copied CSR.
For details on creating a Signed Certificate, contact the security administrator.
- 6 Click [Next].

Caution

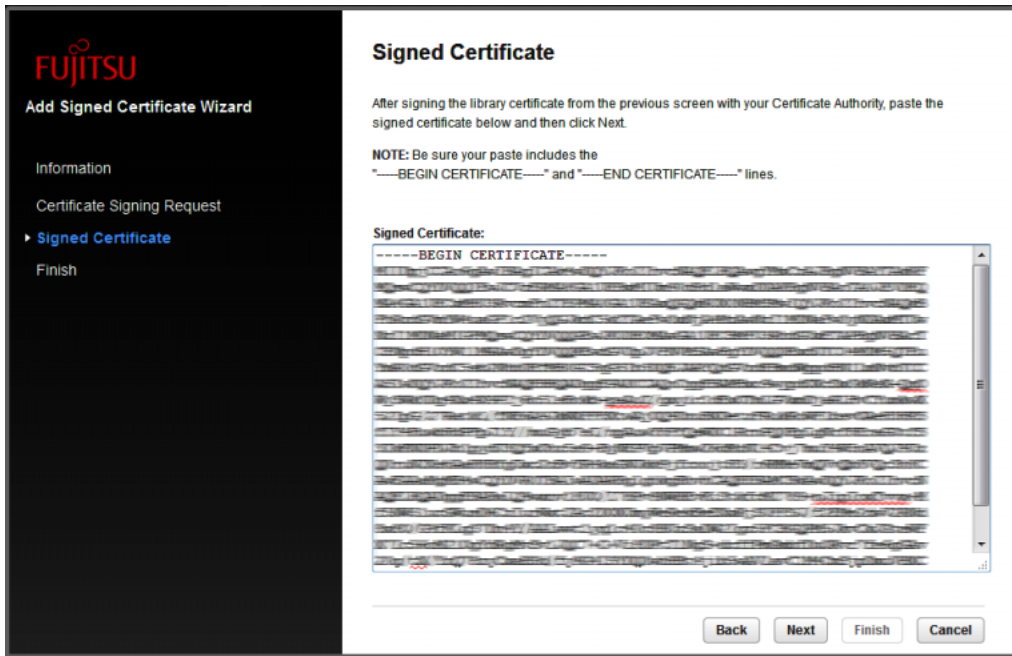
When creating a Signed Certificate in Certificate Signing Request, complete all the steps up to [Step 7](#) of this procedure in under 30 minutes. After 30 minutes, the CSR information created in [Step 3](#) is disabled due to the RMI timeout setting. The disabled CSR information is no longer valid. The procedure must be restarted from [Step 3](#).

Figure 3.35 Certificate signing request - 2



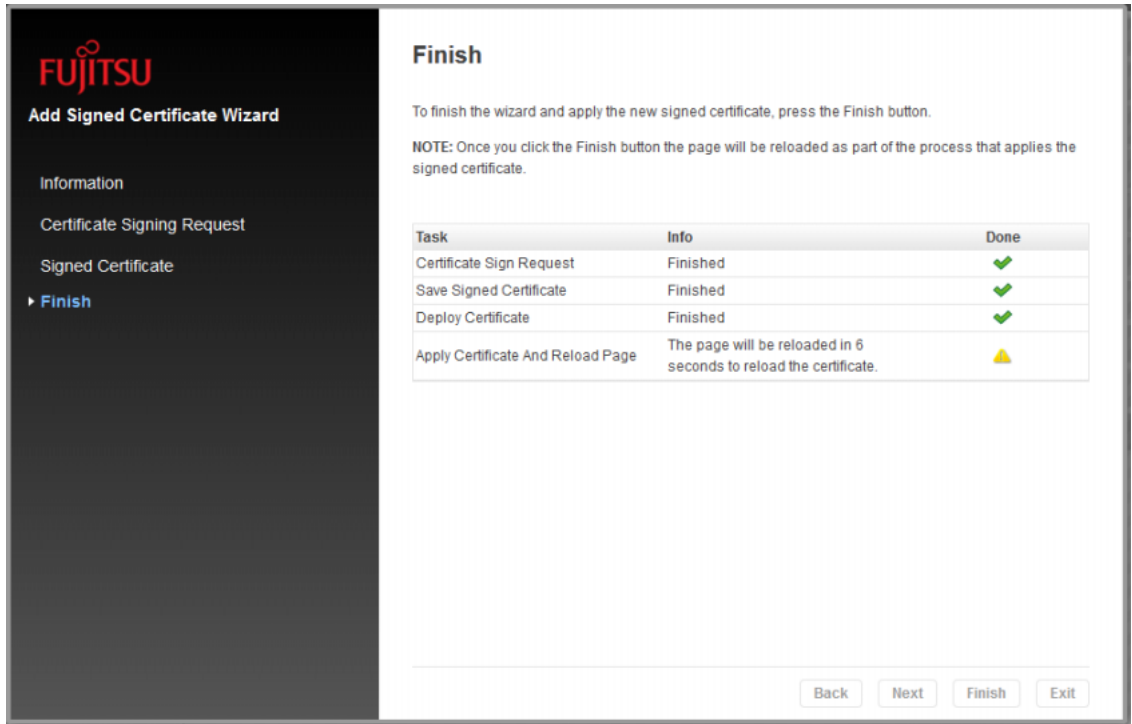
- 7 Paste the Signed Certificate in the Signed Certificate field and then click [Next].

Figure 3.36 Signed certificate



- 8 When the [Finish] screen (Figure 3.37) displays the process that applies the self-signed certificate, click [Finish].
Part of the [Apply Certificate And Reload Page] tasks is executed after [Finish] is clicked.

Figure 3.37 Finish



End of procedure

3.4.17.4 Backing Up and Restoring Created Self-signed Certificates

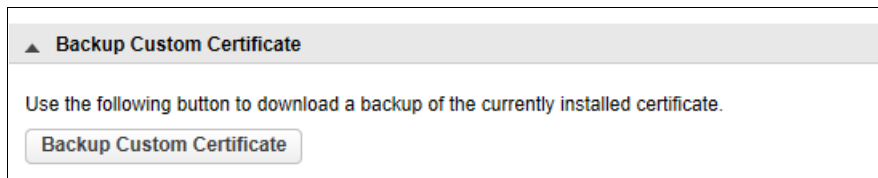
In [Backup Custom Certificate] and [Restore Custom Certificate] of the [Configuration > Web Management] screen, you can back up and restore self-signed certificates of the LT140 that you created.

- To back up self-signed certificates

Procedure

- 1 Click [Backup Custom Certificate].

Figure 3.38 Backing up self-signed certificates



- 2 Specify a destination and save the self-signed certificate as a file.

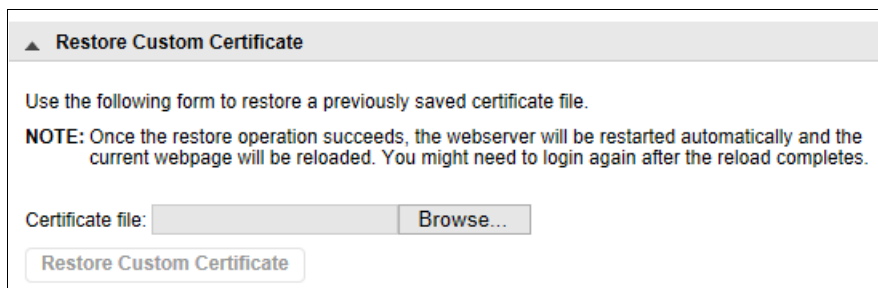
End of procedure

- To restore the self-signed certificate

Procedure

- 1 Under [Restore Custom Certificate], click [Browse] and then select the location where the self-signed certificate is saved.

Figure 3.39 Restoring self-signed certificates



- 2 Click [Restore Custom Certificate].

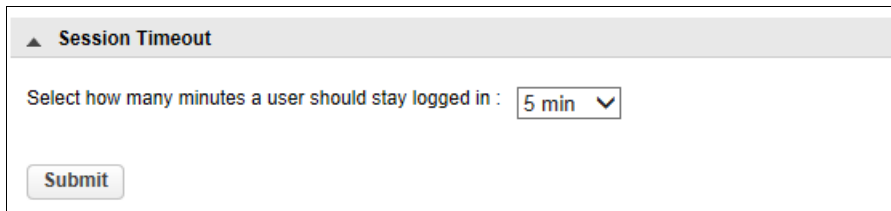
End of procedure

3.4.17.5 Setting the session timeout of the remote panel

From [Session Timeout] of the [Configuration > Web Management] screen, set the session timeout of the remote panel. When logged in to the remote panel, if the time exceeds the specified timeout, the session is automatically logged out. The default setting value is 5 minutes.

To change the session timeout, select a time from the [Select how many minutes a user should stay logged in] dialog box and click [Submit]. You can select 5 or 30 minutes.

Figure 3.40 Session timeout setting



▲ Session Timeout

Select how many minutes a user should stay logged in : 5 min ▼

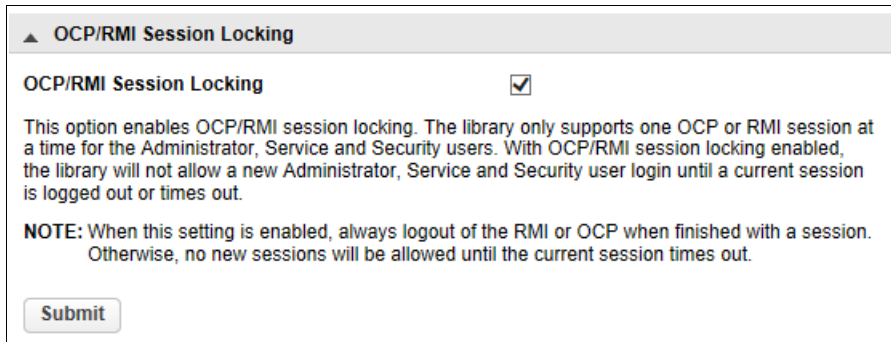
Submit

3.4.17.6 Setting the login session locking function

In [OCP/RMI Session Locking] of the [Configuration > Web Management] screen, exclusive login to the remote panel and the operator panel can be enabled or disabled. It is disabled by default. To enable the login session locking function, select the checkbox and click [Submit].

When the login session locking function is enabled, account users other than those who belong to the user group cannot log in to the operator panel/remote panel until other user logs out.

Figure 3.41 Setting the login session locking function



▲ OCP/RMI Session Locking

OCP/RMI Session Locking

This option enables OCP/RMI session locking. The library only supports one OCP or RMI session at a time for the Administrator, Service and Security users. With OCP/RMI session locking enabled, the library will not allow a new Administrator, Service and Security user login until a current session is logged out or times out.

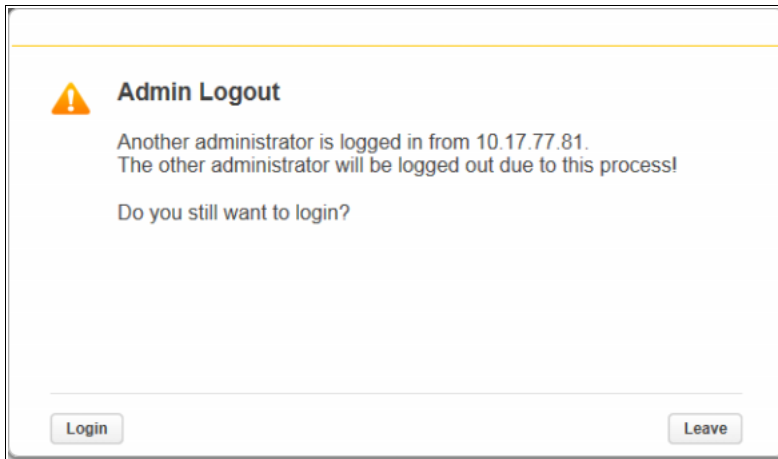
NOTE: When this setting is enabled, always logout of the RMI or OCP when finished with a session. Otherwise, no new sessions will be allowed until the current session times out.

Submit

■ When the login session locking function is disabled

If you attempt to log in while another user is logged in, a message is displayed warning you that another user is logged in. If you click [Login], the currently logged in user is forcibly logged out and you can then log in.

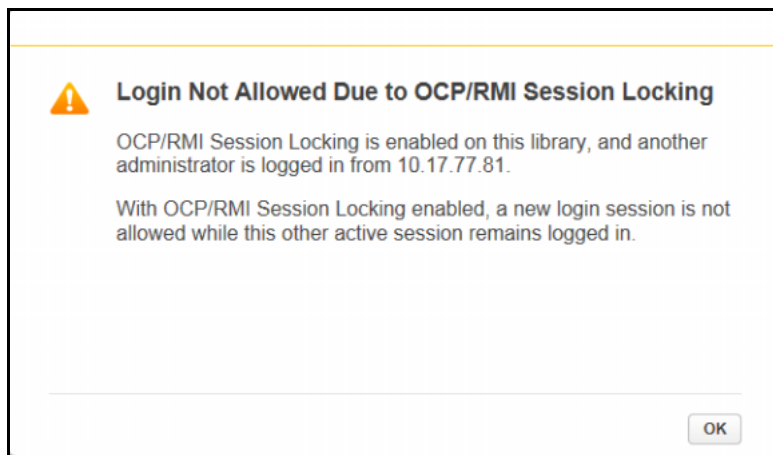
Figure 3.42 Login session locking function disabled



■ When the login session locking function is enabled

If you attempt to log in while another user is logged in, a message is displayed warning you that another user is logged in. you cannot log in until the currently logged in user logs out.

Figure 3.43 Login session locking function enabled



3.4.17.7 Setting the usage restriction of the remote panel

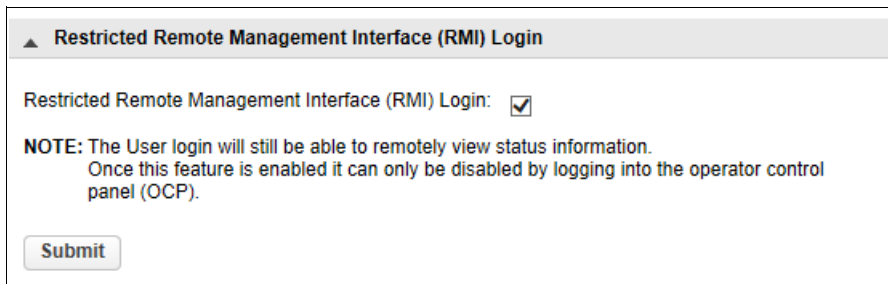
In [Restricted Remote Management Interface (RMI) Login] of the [Configuration > Web Management] screen, enable the setting that restricts the use of the remote panel. It is disabled by default. To enable the usage restriction of the remote panel, select the checkbox and click [Submit].

If the usage restriction of the remote panel is enabled, account users other than those who belong to the user group cannot log in to the remote panel. Logging in with a user account to check library status information is possible.

 **Caution**

All operations other than a status check using the remote panel cannot be performed. Perform library operations from the operator panel. Refer to "[2.5.6 Usage Restriction Setting of the Remote Panel](#)" (page 39) for details about how to cancel the setting.

Figure 3.44 Setting the usage restriction of the remote panel



▲ Restricted Remote Management Interface (RMI) Login

Restricted Remote Management Interface (RMI) Login:

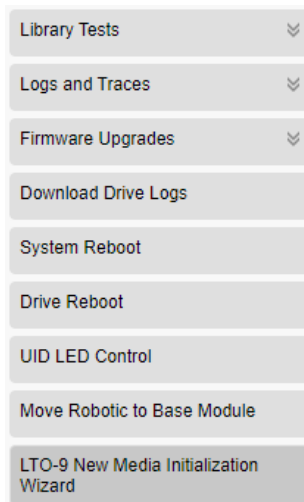
NOTE: The User login will still be able to remotely view status information.
Once this feature is enabled it can only be disabled by logging into the operator control panel (OCP).

Submit

3.5 Maintaining the Library

From the Home screen click [Maintenance] to access the library maintenance features. From the displayed list in the right pane, select a desired function. Items that have sub menus can be expanded by clicking them.

Figure 3.45 Maintenance menu



3.5.1 Library Tests

3.5.1.1 System Test

The system test exercises overall library functionality by moving tape cartridges within the library.

- During each cycle, the library moves the tape cartridges from their slot to an empty slot and then returns them to their original slot. The number of cycles for the test can be specified. If the test is canceled, the library will return the cartridge to its original slot.
- The library will not move cleaning cartridges during the test.
- The test operates over the whole library and does not take into account partition configuration.
- During the test, the state of the library is "Offline".

To execute a system test, select a cycle number in the [Maintenance > Library Tests > System Test] screen and then select [Start Test].

Figure 3.46 System test

Maintenance > Library Tests > System Test

NOTE: The System Test loads cartridges from slots into drives, then returns each cartridge to its original slot a user-specified number of times. The test requires at least one compatible cartridge for each generation of tape drive in the library. The tape drives must be empty before starting the test, and at least one slot needs to be full. For more information, see the online help.

Cycles:
Media:

Test Status
Direction :
Cycles : of
Status :

3.5.1.2 Slot to Slot Test

The slot to slot test randomly exchanges cartridges between slots to verify that the library is operating correctly. At the end of the test the cartridges are NOT returned to their original slots. If a tape cartridge is moved to an incompatible tape drive, it will eject the tape cartridge.

 **Caution**

The test can move cartridges between partitions.

To run the slot to slot test, navigate to the [Maintenance > Library Tests > Slot to Slot Test] screen, select the number of cycles and click [Start Test].

Figure 3.47 Slot to slot test

Maintenance > Library Tests > Slot to Slot Test

NOTE: The Slot to Slot Test randomly exchanges cartridges between slots a user-specified number of times. The test requires at least one cartridge in any slot and at least one empty slot in the library. For more information, see the online help.

Cycles:

Test Status
Direction :
Cycles : of
Status :

3.5.1.3 Element to Element Test

The element to element test moves a selected cartridge to a selected slot or tape drive, and then returns it to the original slot. You can select the number of times to move the selected cartridge to the destination location and back.

The element to element test is intended to show that the library is operating correctly. To diagnose problems with the robotic assembly or verify that it has been correctly replaced, use the robotic test.

Figure 3.48 Element to element test

Maintenance > Library Tests > Element to Element Test

NOTE: The Element to Element Test moves cartridges between two user-defined element locations a user-specified number of times. The test requires at least one cartridge. If moving a cartridge to or from a tape drive, the cartridge must be compatible with the generation of the tape drive. One of the selected element locations must be empty, and one of the selected element locations must be full, before starting the test. For more information, see the online help.

Filter On
All

Source Elements				Destination Elements			
Element	Barcode	Module	Part.	Element	Status	Module	Part.
Slot (1.2)	AS0637L7	1	1	Drive (1)	Gen. 8	1	1
Slot (1.3)	LTO021L7	1	1	Slot (1.7)		1	1
Slot (1.4)	LTO074L7	1	1	Slot (1.8)		1	1
Slot (1.5)	LTFS83L7	1	1	Slot (1.9)		1	1
				Slot (1.10)		1	1
				Slot (1.12)		1	1
				Slot (1.13)		1	1
				Slot (1.14)		1	1
				Slot (1.15)		1	1
				Slot (1.17)		1	1
				Slot (1.18)		1	1
				Slot (1.19)		1	1
				Slot (1.20)		1	1
				Slot (1.22)		1	1
				Slot (1.23)		1	1
				Slot (1.24)		1	1
				Slot (1.25)		1	1
				Slot (1.27)		1	1

Selected Source: Slot (1.2)
Selected Destination: Slot (1.7)

Cycles:

Test Status:

Direction:

Cycles: of

Status:

- To run the element test

Procedure

- 1** Navigate to the [Maintenance > Library Tests > Element to Element Test] screen.
- 2** Select a cartridge from the Source Elements list.
To select from a subset of the cartridges:
 - 2-1** Click [Filter On].
 - 2-2** Enter characters into the search box and then click [Search].
The Source Elements list is updated to only include cartridges with a barcode label including the search characters.
- 3** Select a location from the Destination Elements list.
- 4** Select the number of cycles.
- 5** Click [Start Test].

End of procedure

3.5.1.4 Position Test

The position test moves the robotic assembly vertically between two elements. The number of movements can be specified.
This test does not move cartridges.

Figure 3.49 Position test

Maintenance > Library Tests > Position Test

NOTE: The Position Test moves the robotic assembly vertically between two element locations a user-specified number of times. The test does not move cartridges. For more information see the online help.

Filter On | All

Source Elements				Destination Elements			
Element	Barcode	Module	Part.	Element	Barcode	Module	Part.
Mailslot (1.36)		1	1	Mailslot (1.36)		1	1
Mailslot (1.37)		1	1	Mailslot (1.37)		1	1
Mailslot (1.38)		1	1	Mailslot (1.38)		1	1
Mailslot (1.39)		1	1	Mailslot (1.39)		1	1
Mailslot (1.40)		1	1	Mailslot (1.40)		1	1
Slot (1.1)		1	1	Slot (1.1)		1	1
Slot (1.2)		1	1	Slot (1.2)		1	1
Slot (1.3)		1	1	Slot (1.3)		1	1
Slot (1.4)		1	1	Slot (1.4)		1	1
Slot (1.5)		1	1	Slot (1.5)		1	1
Slot (1.6)		1	1	Slot (1.6)		1	1
Slot (1.7)		1	1	Slot (1.7)		1	1
Slot (1.8)		1	1	Slot (1.8)		1	1
Slot (1.9)		1	1	Slot (1.9)		1	1
Slot (1.10)		1	1	Slot (1.10)		1	1
Slot (1.11)		1	1	Slot (1.11)		1	1
Slot (1.12)		1	1	Slot (1.12)		1	1
Slot (1.13)		1	1	Slot (1.13)		1	1

Selected Source: _____ Selected Destination: _____

Cycles: Test Status: _____
 Direction: _____
 Cycles: _____ of _____
 Status: _____

- To run the position test

Procedure

- 1 Navigate to the [Maintenance > Library Tests > Position Test] screen.

- 2** Select a cell from the Source Elements list.
To select from a subset of the cell:
 - 2-1** Click [Filter On].
 - 2-2** Enter characters into the search box and then click [Search].
The Source Elements list is updated to only include cartridges with a barcode label including the search characters.
- 3** Select a destination cell from the Destination Elements list.
- 4** Select the number of cycles.
- 5** Click [Start Test].

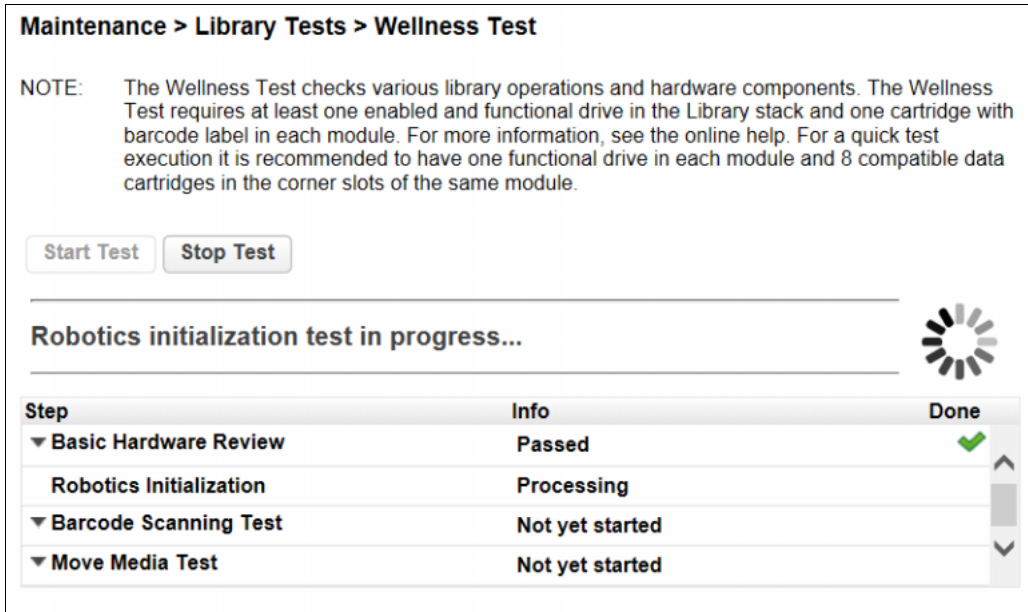
End of procedure

3.5.1.5 Wellness Test

- The wellness test exercises a general health check on the library functionality by running the following partial tests:
 - Basic Hardware Review
 - Robotics Initialization Test
 - Barcode Scanning Test
 - Move Media Test
- Running the test requires at least one tape drive and one tape cartridge in the library.
- After the test has been started the [Stop Test] button is active. Clicking the button will abort the wellness test but not before the current partial test has been completed.
- The test operates over the whole library and does not take into account partition configuration.
- During the test the library goes offline.
- The Info column notifies the user about the status and result of each partial test.

To run the wellness test, navigate to the [Maintenance > Library Tests > Wellness Test] screen, and then click [Start Test].

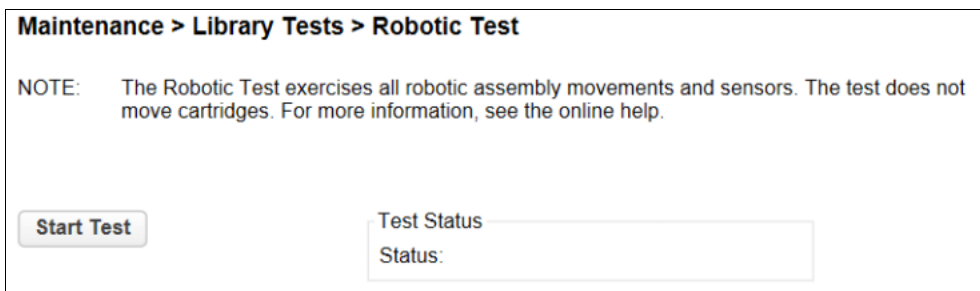
Figure 3.50 Wellness test



3.5.1.6 Robotic Test

The robotic test performs a full inventory and exercises all robotic assembly movements and sensors. To run the robotic test, navigate to the [Maintenance > Library Tests > Robotic Test] screen, then click [Start Test].

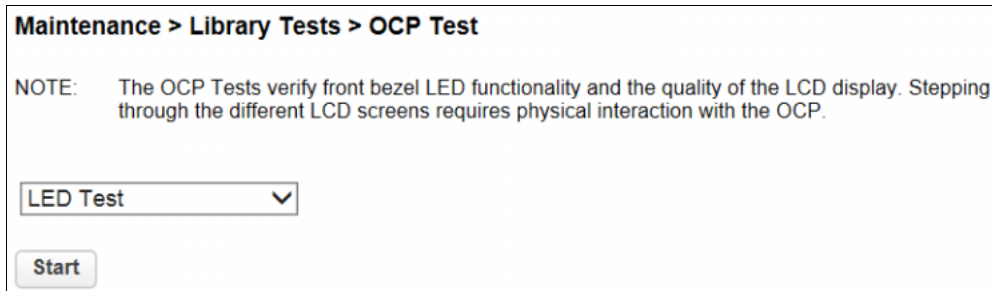
Figure 3.51 Robotic test



3.5.1.7 Operator Panel Test

To execute an operator panel test, navigate to the [Maintenance > Library Tests > OCP Test] screen, select the test operation and then click [Start]. Follow the instructions on the screen.

Figure 3.52 Operator panel test



- LED Test
Illuminates each of the front panel LEDs.
- Reset LCD Adjustment
The settings such as brightness of the LCD panel of the front panel can be adjusted from the front panel. The settings can be configured from the operator panel. For more details, refer to ["2.6.9 Adjusting the LCD Panel" \(page 50\)](#).

3.5.2 Viewing Log Files

To view the library log files, navigate to the [Maintenance > Logs and Traces > View Logs] screen and then select one of the logs.

The available logs are shown below. If [Show All] is selected, all the log files are displayed.

- Event Ticket Log
Records library error and warning events.
- Information Log
Records library information warnings.
- Configuration Log
Records configuration changes.

If [Close all open tickets] is clicked, all the logs that are being displayed become hidden. After the [Include closed tickets] checkbox is selected, the logs that were hidden by clicking [Close Ticket] or [Close all open tickets] are also displayed. If the Attention LED is on, clicking [Close Ticket] or [Close all open tickets] turns the Attention LED off.

Caution

Do not click [Clear log]. If [Clear log] is clicked, all the required information for a maintenance is cleared.

Figure 3.53 View logs

Maintenance > Logs and Traces > View Logs

Event Ticket Log

Close all open tickets Clear log Include closed tickets Event Ticket Log ▼

Total (246)

Ticket-No	Time	Event	Description	State	Component	Component ID	Severity
1096	31.07.2018 06:22:33	2015	Top cover is missing	Resolved	Module	1 (4)	CRITICAL
1095	20.06.2018 03:39:53	9000	A tape alert flag was reported by a drive	Resolved	Drive	2 (11)	INFO
1094	20.06.2018 03:33:48	9000	A tape alert flag was reported by a drive	Resolved	Drive	2 (11)	INFO
1093	20.06.2018 03:27:41	9000	A tape alert flag was reported by a drive	Resolved	Drive	2 (11)	INFO
1092	20.06.2018 03:20:45	9000	A tape alert flag was reported by a drive	Resolved	Drive	2 (11)	INFO

The log entries are displayed in order of most recent to oldest. The log entries contain a date and time code, event code, severity, component identifier and event details. The format for the date and time is: *DD.MM.YYYY HH.MM.SS*

- DD.MM.YYYY
The date displayed as Day.Month.Year
- HH.MM.SS
The time displayed as Hour.Minute.Second

When the displayed log is clicked, the detailed information is displayed.

Figure 3.54 Detailed view example for logs

Event Ticket Details

Event: 2022 - Drive has been hot removed while in active status as LUN master

Ticket-No : 22
 Time: 19.10.2018 18:51:17
 State: Resolved
 Severity: CRITICAL
 Component: Drive
 Component ID: 2 (11)
 ERRORCODE: Active drive has been removed from library (DRIVE_HOT_REMOVED)
 SEVERITY: CRITICAL
 SYS_COMPONENT: DRIVE
 PHY_NUM: 2 (11)

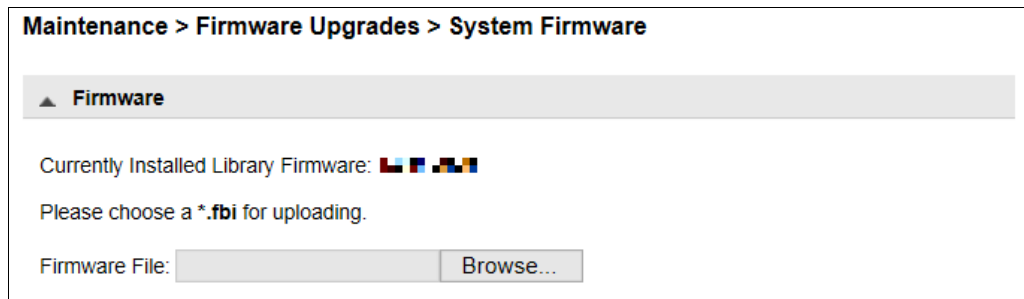
Close Ticket Troubleshooting Close

When [Close Ticket] is clicked, the log is hidden.
When [Close] is clicked, the detailed view screen is closed.

3.5.3 Managing System Firmware

The firmware version currently installed on the library is displayed in the library status area on the Home page. Update the library firmware from the [Maintenance > Firmware Upgrades > System Firmware] screen.

Figure 3.55 Upgrades system firmware

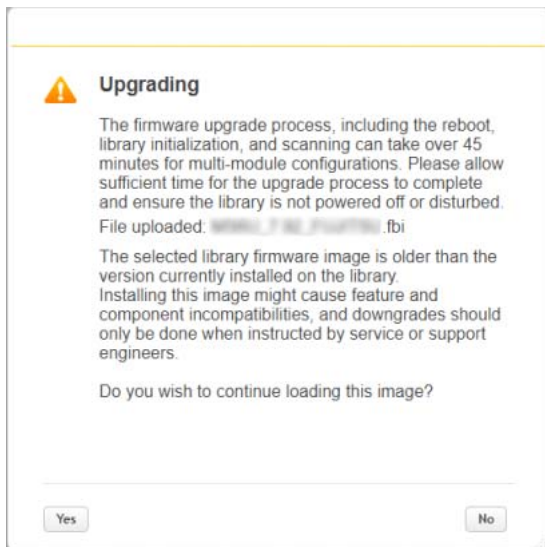


To update library firmware from the remote panel, click [Browse] and select the firmware file from the local computer.

When the firmware of the library is updated, the library will update the firmware of the expansion modules to the same version as the base module.

Note

The following confirmation screen appears if the firmware version loaded for the upgrade is older than the version installed in the library. Click "Yes" to continue or "No" to cancel the upgrade.



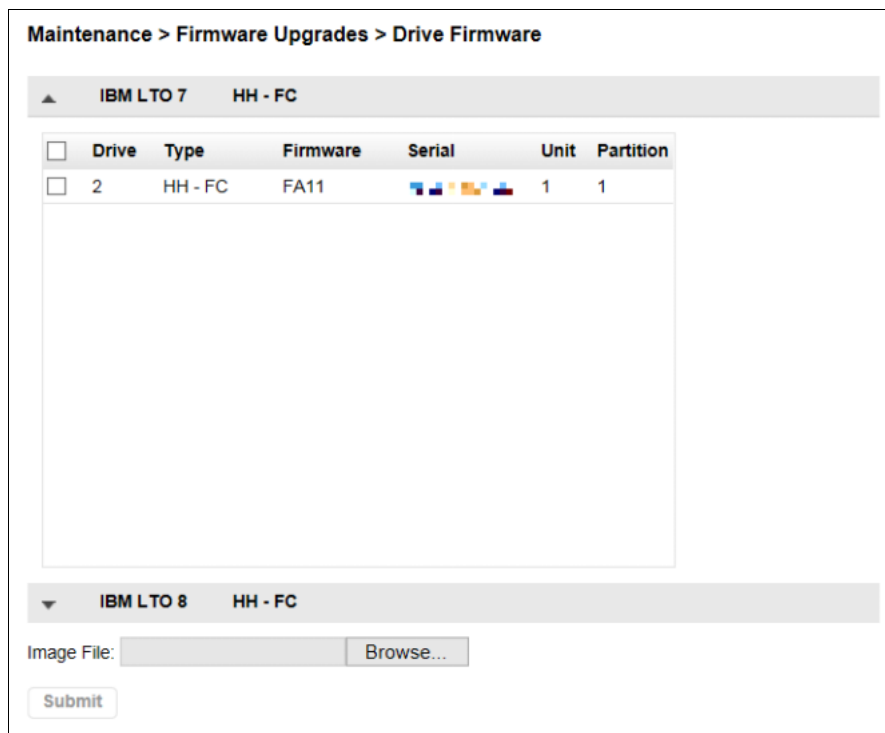
However, if the LT140 model "LT14AC" is being used, firmware version 1.0.1-B000 or earlier cannot be applied.

3.5.4 Managing Drive Firmware

Drive firmware can be updated on multiple tape drives of the same type at the same time. Drive firmware can only be updated from the remote panel. Each tape drive will only accept appropriate firmware.

To see the firmware version currently installed on the tape drives, navigate to the [Status > Drive Status] screen.

Figure 3.56 Upgrades drive firmware



- To update drive firmware from the remote panel

Procedure

- 1 Navigate to the [Maintenance > Firmware Upgrades > Drive Firmware] screen. The tape drives are organized by drive type.
- 2 Expand the appropriate tape drive type and select one or more of the tape drives.
- 3 Click [Browse], and then select the file from the local computer.
- 4 Click [Submit].

End of procedure

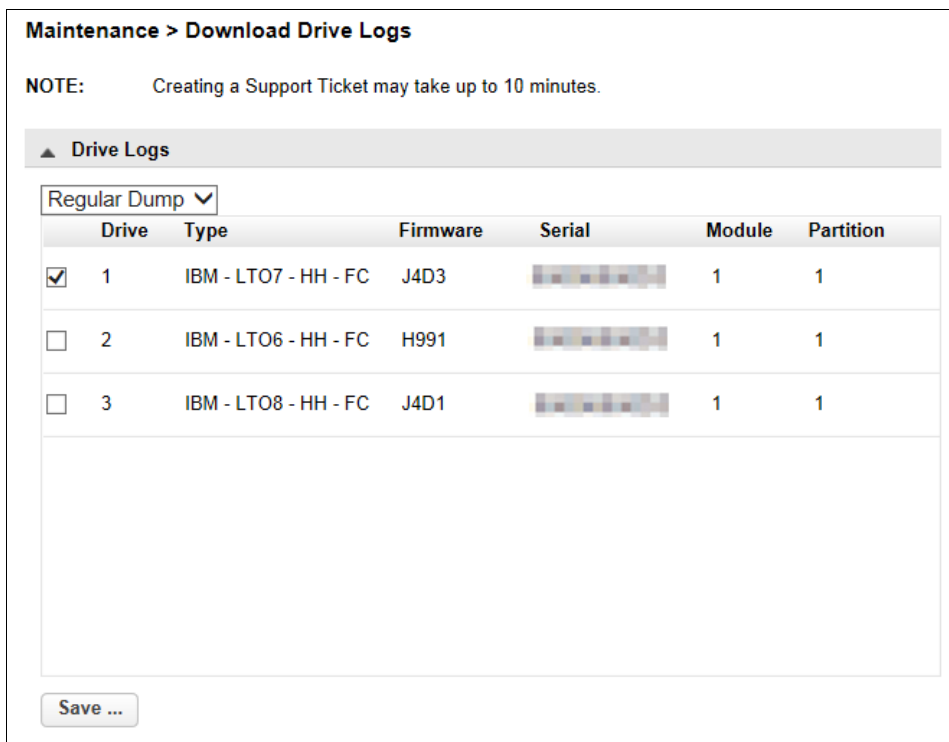
3.5.5 Downloading Drive Logs

From the [Maintenance > Download Drive Logs] screen, logs can be downloaded from any tape drive.

Note

Your maintenance engineer may ask you to collect the log files when troubleshooting the error.

Figure 3.57 Downloading drive logs



Procedure

1 Select a tape drive to download the log.

The following items are displayed in the list of drive logs.

- Drive
The tape drive number. Based on the physical library configuration, tape drives are numbered from the bottom up starting from one.
- Type
The tape drive form factor and interface.
- Firmware
The current drive firmware version
- Serial
Serial number of the tape drive.

- Module
The module containing the tape drive
- Partition
The logical library (or partition) associated with the tape drive

2 Select a log to download.

- Regular Dump
Saves the error information of the tape drive that is saved to non-volatile memory. The errors that occur just before saving may not be saved.
- Forced Dump
Saves the error information up to the point when the Dump was executed. Since the size of the memory that is used for recording is small, if a considerable amount of time elapses after the error occurred, there may be cases when the error information is not saved.

Note

Use of [Dump to Flash] is prohibited.

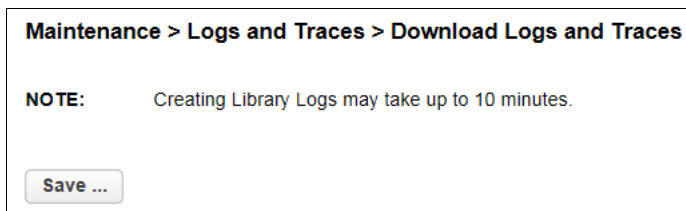
3 Confirm the tape drive and click [Save].

End of procedure

3.5.6 Downloading Logs and Trace Files

This operation can be executed from only remote panel operation.

Figure 3.58 Download logs and traces



To download the library log and trace files from the remote panel, navigate to the [Maintenance > Logs and Traces > Download Logs and Traces] screen and then click [Save].

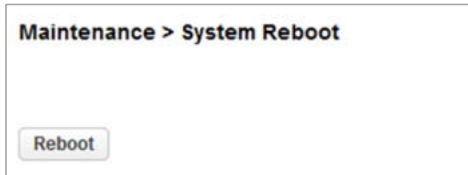
Note

Your maintenance engineer may ask you to collect the log files when troubleshooting the error.

3.5.7 Rebooting the Library

From the [Maintenance > System Reboot] screen, click [Reboot].

Figure 3.59 Library reboot



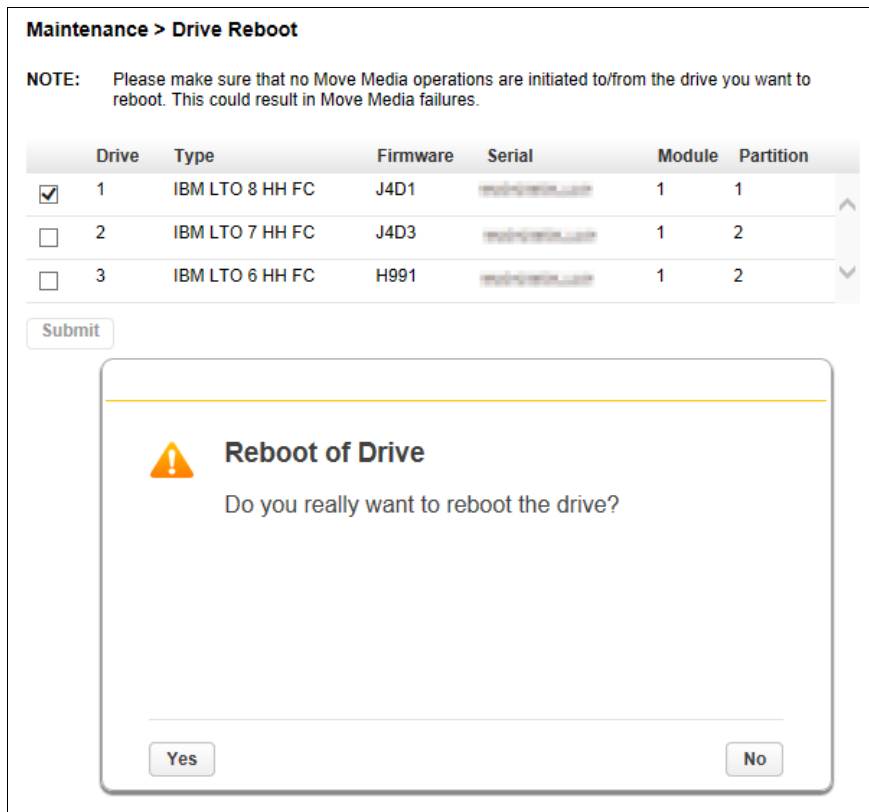
3.5.8 Rebooting the Tape Drive

Tape drives can be rebooted from the [Maintenance > Drive Reboot] screen. Only one tape drive can be rebooted at a time.

Procedure

- 1 Select the tape drive to reboot.

Figure 3.60 Rebooting the tape drive



- 2 In the pop-up dialog box, click [Yes].
The rebooting process is started.

End of procedure

3.5.9 Controlling the UID LED

UID LEDs are blue LEDs located on the operator panel and the library controller. The UID LEDs are useful for identifying the library in a data center. The UID LEDs are operated synchronously and controlled by the user. From the [Maintenance > UID LED Control] screen, you can select the target LED to switch the status between on and off.

Procedure

- 1 Select the library controller whose UID LED is to be controlled from the Component Controller.

Note

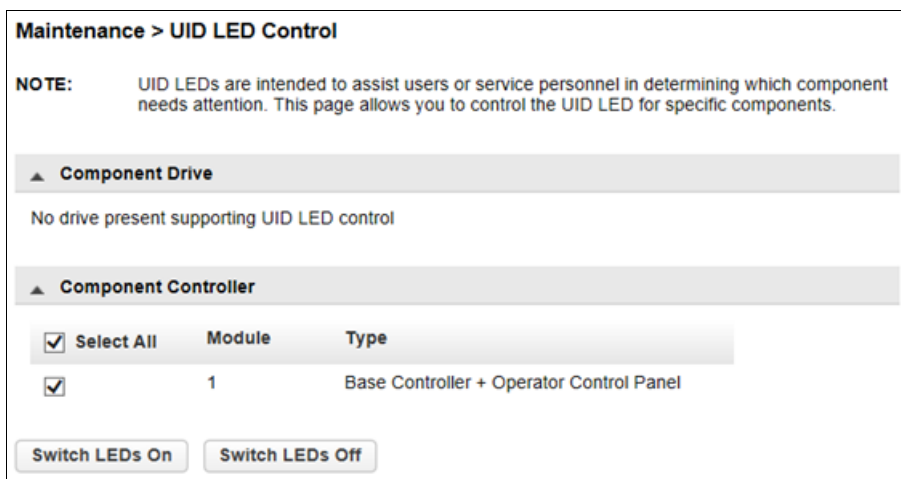
If the controller of the base module is selected, the UID LED of the operator panel is controlled synchronously.

- 2 Click [Switch LEDs ON] or [Switch LEDs OFF].

Note

Component Drive is unavailable.

Figure 3.61 Controlling the UID LED



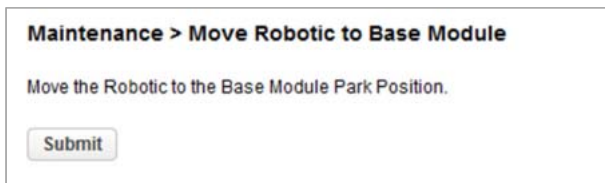
End of procedure

3.5.10 Moving the Robotic to the Base Module

Before extending a module from the rack, the robotic assembly must return to its park position in the base module. Under normal circumstances, when the library is powered off using the front power button the robot automatically parks and locks into the base module behind the operator panel. After powering off the library and before proceeding with extending a module from the rack, look inside the base module window to verify that the robotic assembly is behind the operator panel.

If the library did not move the robotic assembly to its park position, you can do so from the [Maintenance > Move Robotic to Base Module] screen.

Figure 3.62 Move robotic to base module



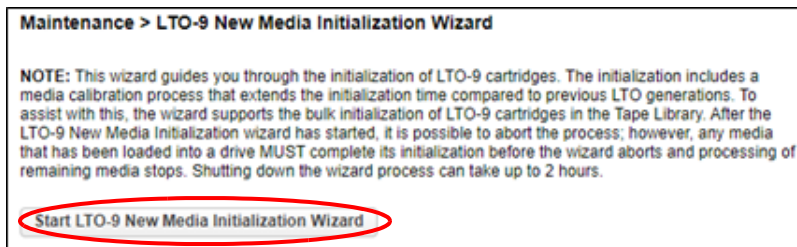
3.5.11 Initializing LTO9 Tape Cartridges

Before using an LTO9 tape cartridge, initialization of the tape cartridge is required. Initialization can be executed from the [Maintenance > LTO-9 New Media Initialization Wizard] screen.

Procedure

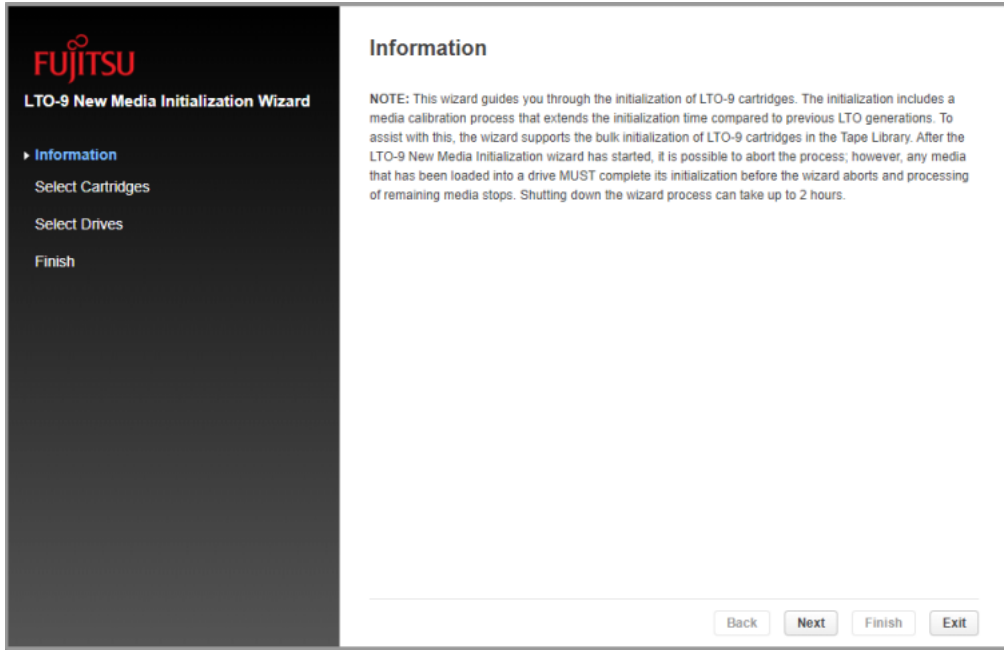
- 1 Click [Start LTO-9 New Media Initialization Wizard].

Figure 3.63 Start screen of the LTO-9 New Media Initialization Wizard



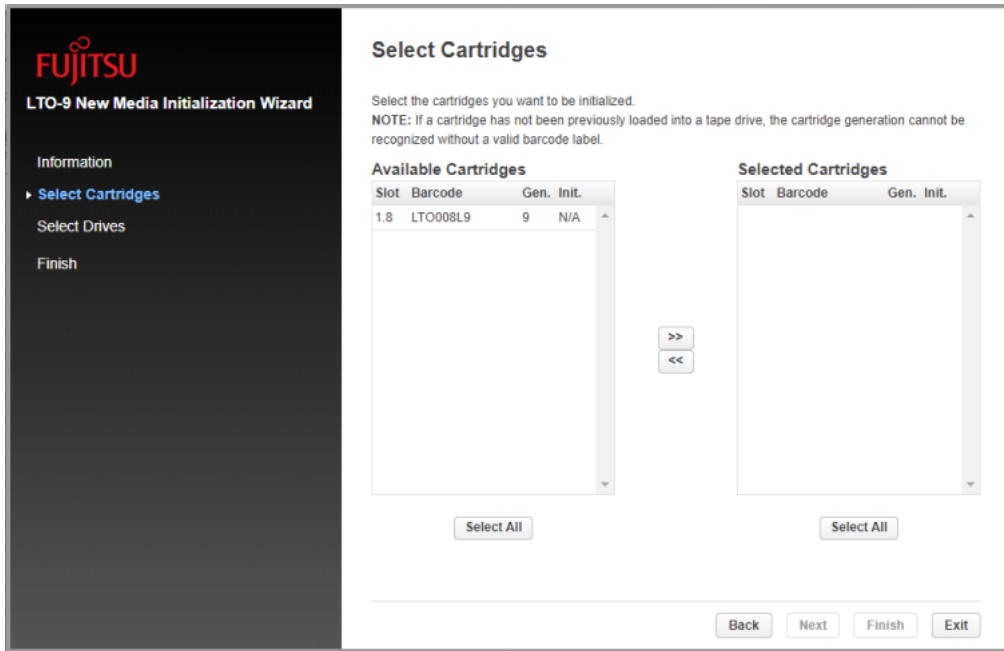
- 2 The wizard is started and when the [Information] screen appears, click [Next].

Figure 3.64 Information



- 3 In the [Select Cartridges] screen, use the [>>] and [<<] buttons to select the LTO9 tape cartridge to be initialized and then click [Next].

Figure 3.65 Select Cartridges

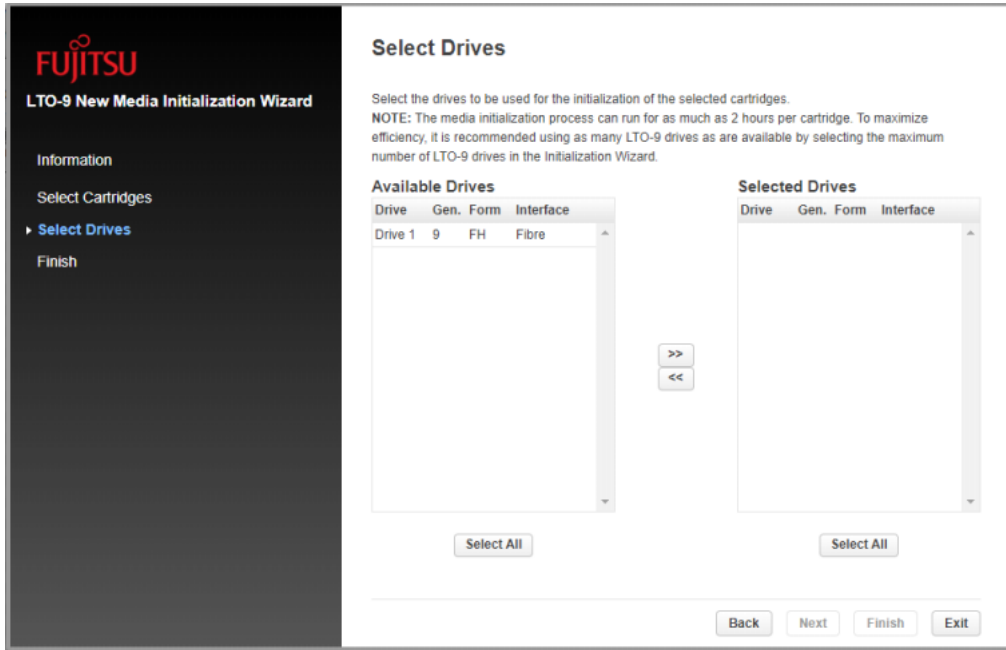


Note

Tape cartridges with a check mark in the "Init" field have already been initialized.

- 4 In the [Select Drives] screen, use the [>>] and [<<] buttons to select the LTO9 tape drive to be used for initialization and then click [Next].

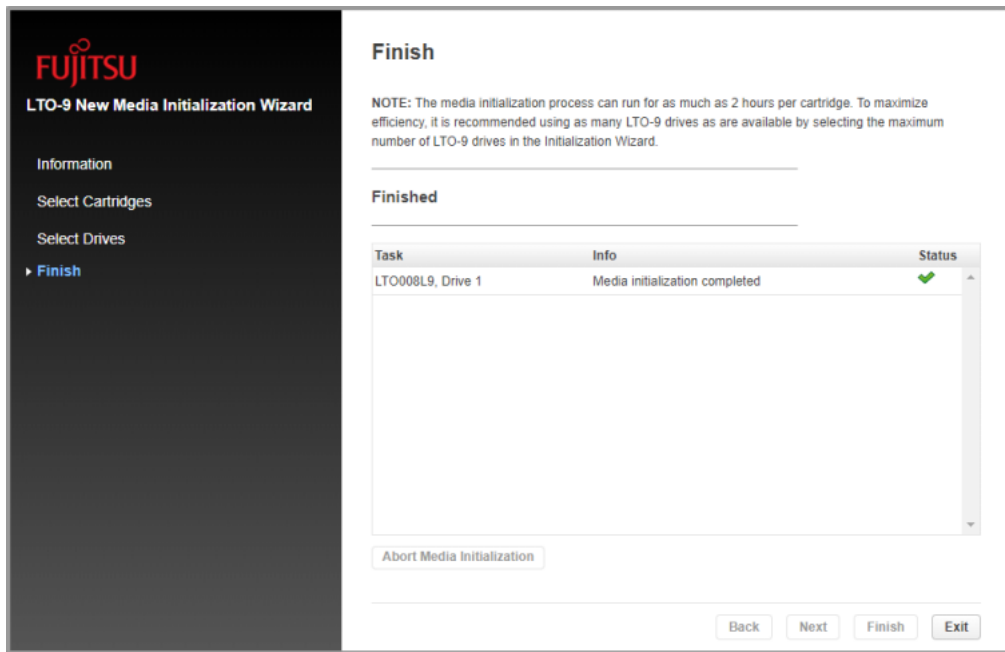
Figure 3.66 Select Drives



5 Click [Finish].

Initialization of the LTO9 tape cartridges starts. After the initialization is completed, a result appears.

Figure 3.67 Finish



Caution

The time to initialize an LTO9 tape cartridge is as follows.

- For an LTO9 HH tape drive: approximately 2 hours
- For an LTO9 FH tape drive: approximately 1 hour

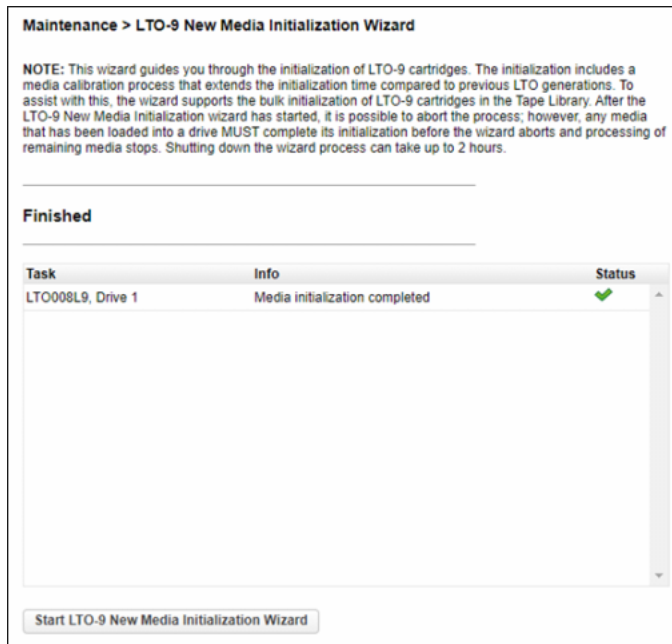
6 Click [Exit] to close the wizard.

End of procedure

Note

Even if the initialization process takes a long time and the user is logged out from the remote panel before the process is completed, the result can be checked from the [Maintenance > LTO-9 New Media Initialization Wizard] screen.

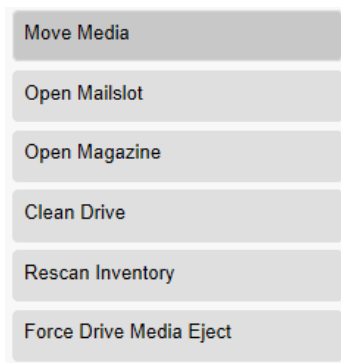
Figure 3.68 [Maintenance > LTO-9 New Media Initialization Wizard] result screen



3.6 Operating the Library

Click [Operation] in the Home screen and select a desired function from the displayed list on the right.

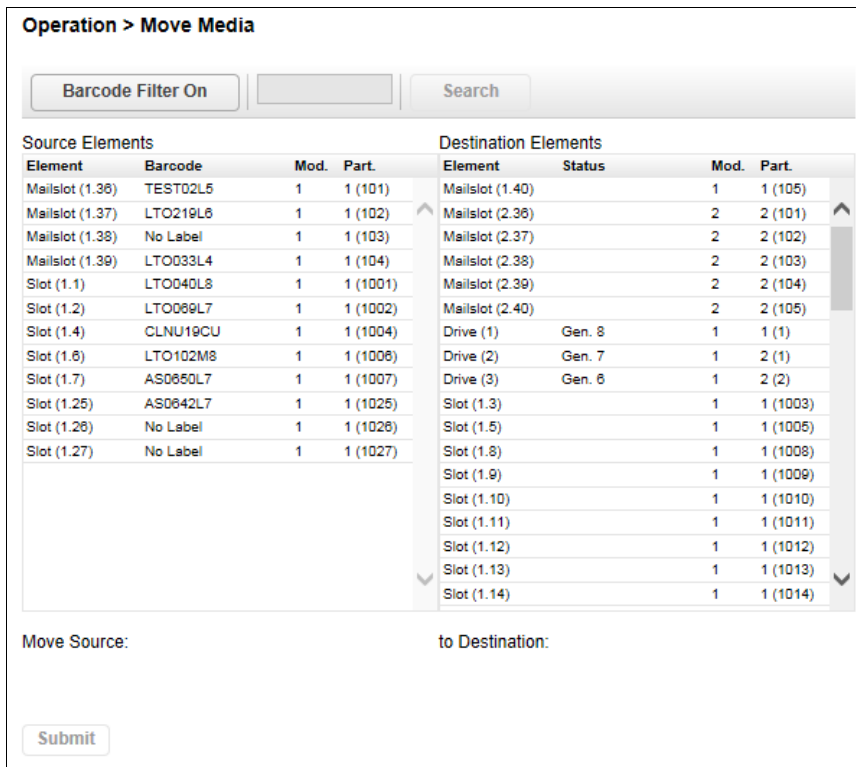
Figure 3.69 Operation menu



3.6.1 Moving Media

From the [Operation > Move Media] screen you can move a tape cartridge located in a source element to an available destination element within the same partition.

Figure 3.70 Moving media



- Source Elements
Tape drives, enabled mailslots, and storage slots that contain a tape cartridge
- Destination Elements
Tape drives, enabled mailslots, and storage slots that do not contain a tape cartridge

Tape drives are listed at the top of each element list and listed in the order of their tape drive numbers.

Tape drives are numbered from the physical bottom of the library starting with Drive (1).

Slots are listed in the order of the slot numbers. Slots are numbered *m.s*, where *m* is the module number and *s* is the slot within the module.

■ Filtering Based on Barcode

This function can be used from only remote panel operation.

To see a subset of the cartridges in the library, enter some or all of the barcode label characters in the search area and click [Search]. The Source Element list updates to display only the cartridges with labels that include the characters in the search box.

To perform a different search or display all of the available cartridges, click [Barcode Filter Off].

■ Moving a cartridge

Procedure

- 1 Select a cartridge from the Source Elements list.
- 2 Select the destination location from Destination Elements list.
- 3 Click [Submit].

End of procedure

3.6.2 Opening the Mailslot

From the [Operation > Open Mailslot] screen you can see the status and unlock any enabled mailslots in the library.

Note

This function can be used directly from [Open Mailslot] on the Home screen without going through the [Operation] screen.

Caution

Make sure to eject the target tape cartridge and load a tape cartridge in the slot of the correct partition.

Check the following points before opening the Mailslot.

- The number and position of the Mailslot to be opened
- The number and position of the slot where a tape cartridge is to be loaded or ejected
- The slot location of each partition

For details about how to check the above information, refer to ["3.7.3 Using Inventory Graphical View" \(page 150\)](#) and ["3.7.4 Partition Map Graphical View" \(page 152\)](#).

Figure 3.71 Opening the mailslot



To open a mailslot, click [Open] for the appropriate mailslot. The library will release the lock. You can then pull the mailslot out of the library to access the mailslot.

 **Note**

The mailslot must be enabled before it can be opened and the mailslot will relock after 30 seconds.

For information on how to enable Mailslots, refer to ["3.4.12 Enabling or Disabling Mailslots" \(page 92\)](#).



Do Not



- Hazardous moving parts exist inside this product. Do not insert tools or any body parts into the interior of the library through the safety door of the Mailslot.

3.6.3 Opening a Magazine

From the [Operation > Open Magazine] screen you can unlock any magazines.

 **Note**

This function can be used directly from [Open Magazine] on the Home screen without going through the [Operation] screen.

Make sure to eject the target tape cartridge and load a tape cartridge in the slot of the correct partition.

Check the following points before opening the magazine.

- The number and position of the magazine to be opened
- The number and position of the slot where a tape cartridge is to be loaded or ejected
- The slot location of each partition

For details about how to check the above information, refer to ["3.7.3 Using Inventory Graphical View" \(page 150\)](#) and ["3.7.4 Partition Map Graphical View" \(page 152\)](#).

Figure 3.72 Opening a magazine



To unlock a magazine, click [Open] for the magazine. You can then open the door and pull the magazine out of the library to access the storage slots.

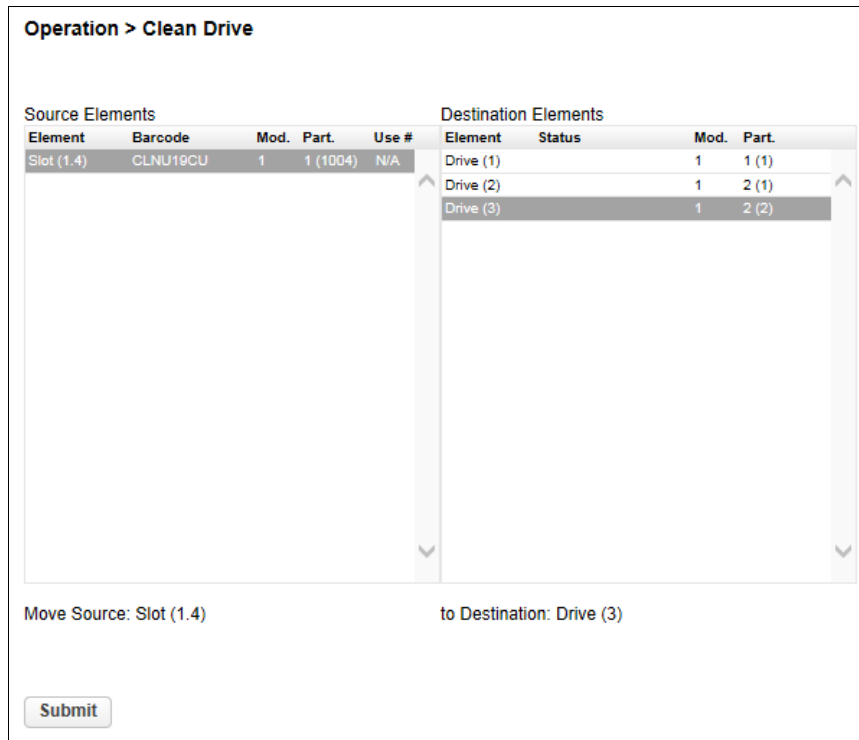
Note

- If a magazine is open, the state of the library becomes offline.
- The magazines are relocked after 30 seconds.

3.6.4 Cleaning a Tape Drive

From the [Operation > Clean Drive] screen you can initiate a manual tape drive cleaning operation. You must perform regular cleanings according to the operation. For details on how to use the auto-cleaning function, refer to ["3.4.13 Configuring Library Partitions" \(page 93\)](#) and ["5.5.1 Auto-Cleaning Function"](#) in ["Fujitsu Storage ETERNUS LT140 Tape Library Overview"](#).

Figure 3.73 Cleaning a tape drive



Procedure

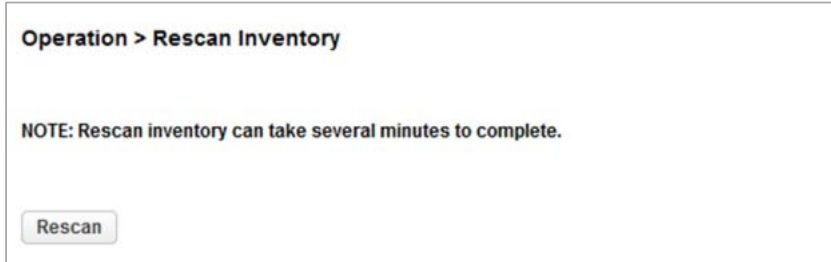
- 1 Select a cleaning cartridge from the Source Elements list.
The library uses the barcode label to identify cleaning cartridges.
If no cleaning cartridges are available, add one into a mailslot or magazine slot.
- 2 Select the tape drive to be cleaned from the Destination Elements list.
Tape drives currently containing a cartridge are not listed. To clean a tape drive not listed, move the tape cartridge out of the tape drive.
- 3 Click [Submit].

End of procedure

3.6.5 Rescanning the Cartridge Inventory

Rescan the tape cartridge by using the library from the [Operation > Inventory Scan] screen.

Figure 3.74 Rescanning the cartridge inventory



To have the library rescan the cartridges, navigate to the [Operation > Rescan] screen and click [Rescan].

The library changes to the Scanning state. Other operations cannot be performed until the scan is completed.

3.6.6 Forcing a Tape Drive to Eject a Cartridge

The force drive media eject operation attempts to force the tape drive to eject the cartridge and place it into an open slot.

Before performing this option, it is recommended that you attempt to eject the tape using the backup software or library move media operation. While a tape drive is being forcibly ejected, a window indicating the progress of the process is displayed. No operations will be available until the force eject completes.

Caution

If the tape drive has difficulty ejecting the cartridge, the media is possibly bad or damaged.

Figure 3.75 Forcing a tape drive to eject a cartridge

Operation > Force Drive Media Eject

Barcode Filter On Search

Source Elements				Destination Elements			
Element	Barcode	Mod.	Part.	Element	Status	Mod.	Part.
				Mailslot (1.36)		1	1 (101)
				Mailslot (1.37)		1	1 (102)
				Mailslot (1.38)		1	1 (103)
				Mailslot (1.39)		1	1 (104)
				Mailslot (1.40)		1	1 (105)
				Slot (1.1)		1	1 (1001)
				Slot (1.2)		1	1 (1002)
				Slot (1.3)		1	1 (1003)
				Slot (1.4)		1	1 (1004)
				Slot (1.5)		1	1 (1005)
				Slot (1.6)		1	1 (1006)
				Slot (1.7)		1	1 (1007)
				Slot (1.8)		1	1 (1008)
				Slot (1.9)		1	1 (1009)
				Slot (1.10)		1	1 (1010)
				Slot (1.11)		1	1 (1011)
				Slot (1.12)		1	1 (1012)
				Slot (1.13)		1	1 (1013)

Move Source: _____ to Destination: _____

Procedure

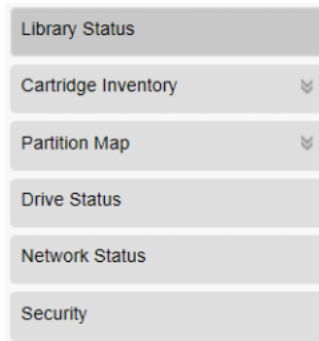
- 1 Navigate to the [Operation > Force Drive Media Eject] screen.
- 2 Select the tape drive in the Source Elements list.
- 3 Select the destination in the Destination Elements list.
- 4 Click [Submit].

End of procedure

3.7 Viewing Status Information

To access the status area, from the Home screen, click [Status]. From the displayed list in the right pane, select a desired function. Items that have sub menus can be expanded by clicking them.

Figure 3.76 Status menu



3.7.1 Displaying the Library and the Module Status

Summary information and status is displayed in the top banner and left side bar. For additional library module configurations and detailed status information, refer to the [Status > Library Status] screen in the [Figure 3.77](#).

Figure 3.77 Displaying the library and the module status

Status > Library Status

▲ Library Information

Vendor:	FUJITSU	Product ID:	ETERNUS LT260
Serial Number:	XXXXXXXXXX		
Base Firmware Revision:	1.0.0-0007	Expansion Firmware Revision:	0.30
Robotic Hardware Revision:	6	Robotic Firmware Revision:	0.19
Barcode Reader Hardware Revision:	SE-625	Barcode Reader Firmware Revision:	PAAAMC00-002-N09D0
Library Type:	40		

▲ Library Status

Library Status:	Idle	Total Power On Time:	5d 6h 13m
Cartridge in Transport:	None	Odometer:	27
Robotic Location:	Module 1 (Base)	Shipping Lock:	Unlocked

▲ Module 2

Expansion Controller Revision:	E000	Power Supply Status:	N/A
Lower Power Supply:	Not Present	Upper Power Supply:	Not Present
Drive Power Board:	OK		
Left Magazine Status:	Closed	Right Magazine Status:	Closed
Mailslot Status:	Closed		

▲ Module 1 (Base)

Base Controller Revision:	B000	Power Supply Status:	OK
Lower Power Supply:	Present	Upper Power Supply:	Not Present
Drive Power Board:	OK		
Left Magazine Status:	Closed	Right Magazine Status:	Closed
Mailslot Status:	Closed		

■ Library information

- Vendor
Library vendor information. The vendor is FUJITSU.
- Product ID
Library inquiry information. This information does not indicate the name of the library itself.
- Serial Number
Serial number of the library.

- **Base Firmware Revision**
Version of the currently installed library firmware.
- **Expansion Firmware Revision**
The currently installed version of the firmware for the expansion module. The firmware for expansion modules is bundled and installed with the library firmware.
- **Robotic Hardware Revision**
Version of the currently installed robotic assembly hardware.
- **Robotic Firmware Revision**
Version of the currently installed robotic assembly firmware. The robotic assembly firmware is bundled and installed with the library firmware.
- **Barcode Reader Hardware Revision**
Version of the currently installed barcode reader hardware.
- **Barcode Reader Firmware Revision**
Version of the currently installed barcode reader firmware. The barcode reader firmware is bundled and installed with the library firmware.
- **Library Type**
Information that indicates the library type. This information does not indicate the product ID of the library.
- **Library Config/Spooling**
Configuration information for each product ID of the library. "48U/48U" indicates the "LT14AC" library and the other values indicate the "LT14AB" library.

■ Library status

- **Library status**
 - Idle
The library robotic is ready to perform an action.
 - Moving
The library robotic is moving a cartridge.
 - Scanning
The library robotic is performing an inventory of cartridges.
 - Offline
The library is using the robot assembly or the robot assembly cannot be used.
- **Total Power On Time**
Total time that the base module has been powered on since it was manufactured.
- **Cartridge in Transport**
When applicable, displays the barcode label of the cartridge currently in the robotic assembly.
- **Odometer**
Robotic assembly move count.
- **Robotic Location**
Displays the module where the robotic is currently located.
- **Shipping Lock**
Indicates whether the robotic is unlocked or locked for shipment.

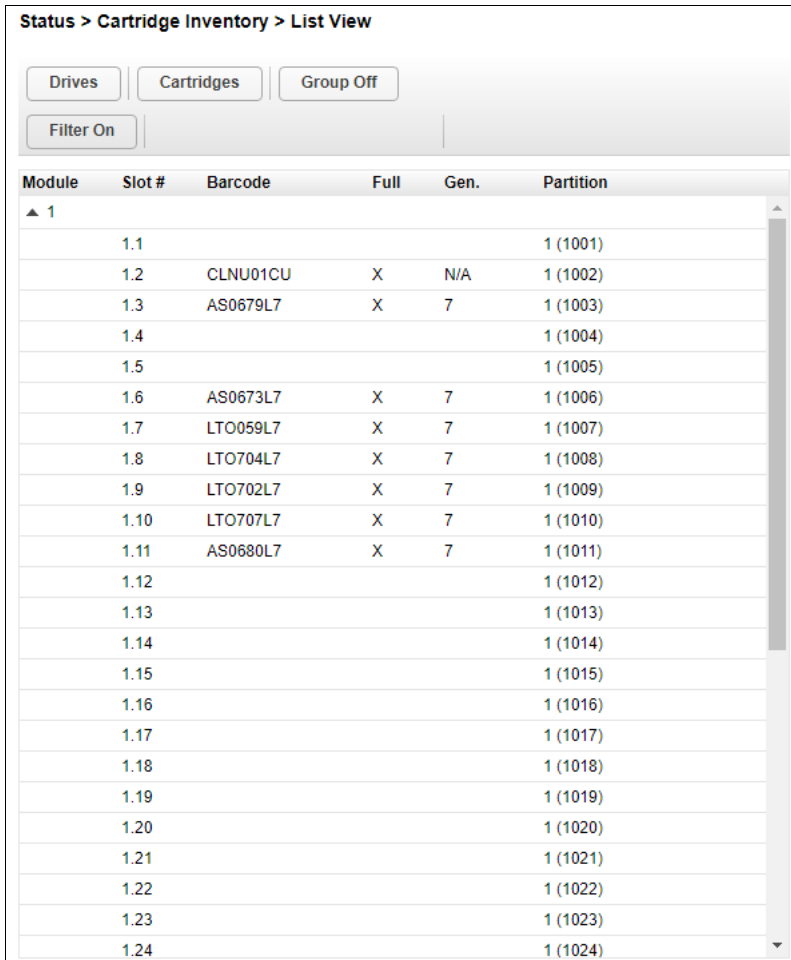
■ Module status

- Base Controller Revision/Expansion Controller Revision
Hardware revision of the controller board currently installed in the module.
- Power Supply Status
Displays the power status.
- Lower/Upper Power Supply
Displays the installation state of the power supplies.
- Drive Power Board
Displays the state of the tape drive power board in the module.
- Left Magazine Status
Displays the state of the left magazine.
- Right Magazine Status
Displays the state of the right magazine.
- Mailslot Status
Displays the state of the Mailslot.

3.7.2 Using Inventory Lists

The inventory lists display each of the elements, such as slots and tape drives, with information about the cartridge stored in the element. To see the elements organized by module, from [Status], navigate to [Cartridge Inventory > List View]. To see the elements organized by logical library (or partition), from [Status], navigate to [Partition map > List View].

Figure 3.78 Inventory list



The screenshot shows a web interface for 'Status > Cartridge Inventory > List View'. At the top, there are three buttons: 'Drives', 'Cartridges', and 'Group Off'. Below them is a 'Filter On' button. The main content is a table with the following columns: Module, Slot #, Barcode, Full, Gen., and Partition. The table lists 24 rows of data, with a scroll bar on the right side.

Module	Slot #	Barcode	Full	Gen.	Partition
▲ 1					
	1.1				1 (1001)
	1.2	CLNU01CU	X	N/A	1 (1002)
	1.3	AS0679L7	X	7	1 (1003)
	1.4				1 (1004)
	1.5				1 (1005)
	1.6	AS0673L7	X	7	1 (1006)
	1.7	LTO059L7	X	7	1 (1007)
	1.8	LTO704L7	X	7	1 (1008)
	1.9	LTO702L7	X	7	1 (1009)
	1.10	LTO707L7	X	7	1 (1010)
	1.11	AS0680L7	X	7	1 (1011)
	1.12				1 (1012)
	1.13				1 (1013)
	1.14				1 (1014)
	1.15				1 (1015)
	1.16				1 (1016)
	1.17				1 (1017)
	1.18				1 (1018)
	1.19				1 (1019)
	1.20				1 (1020)
	1.21				1 (1021)
	1.22				1 (1022)
	1.23				1 (1023)
	1.24				1 (1024)

Clicking any tape drive or slot in the list displays additional information for the installed media.

Figure 3.79 Inventory list (additional information)

Module	Slot #	Barcode	Full	Gen.	Partition
▲ 1					
	1.1				1 (1001)
	1.2	CLNU01CU	X	N/A	1 (1002)
	1.3	AS0679L7	X	7	1 (1003)
	1.4				1 (1004)
	1.5				1 (1005)
	1.6	AS0673L7	X	7	1 (1006)
	1.7	LTO059L7	X	7	1 (1007)
	1.8	LTO704L7	X	7	1 (1008)
	1.9	LTO702L7	X	7	1 (1009)
	1.10	LTO707L7	X	7	1 (1010)
	Media Loads: 341 Encryption: Not Encrypted Media Type: Data Write Protect Status: No Media Initialized: N/A LT Encryption Key: Auto				
	1.11	AS0680L7	X	7	1 (1011)
	1.12				1 (1012)
	1.13				1 (1013)
	1.14				1 (1014)
	1.15				1 (1015)
	1.16				1 (1016)
	1.17				1 (1017)
	1.18				1 (1018)
	1.19				1 (1019)
	1.20				1 (1020)

In the Inventory List you can see:

- **Module**
The module number.
- **Slot #**
The slot number in the form <module>.<slot>, where module is the module number and slot is the slot number.
- **Barcode**
Barcode label.
- **Full**
X if a cartridge is using the element.
- **Gen.**
LTO generation of the cartridge.
- **Partition**
The partition number.

- **Media Loads**
The number of media loads.
- **Encryption**
Indicates whether data on this media is encrypted.
- **Media Type**
The type of the media that is applicable.
- **Write Protect Status**
Indicates whether Write Protect is enabled on this media.
- **Media Initialized**
Indicates whether initialization has been completed if the applicable media is an LTO9 tape cartridge. For tape cartridges other than LTO9, N/A is displayed.
- **LT Encryption Key**
The type of the encryption key when the Key Management Function Option is used.

■ Filtering by Barcode Label

To filter the list based on barcode label, enter characters in the filter box and then click [Search].

Procedure

- 1** Click [Filter On].
The search box is displayed.
- 2** Enter characters into the search box and then click [Search].
The characters can be anywhere in the barcode label. The search characters are not case sensitive. There are no wildcards.

End of procedure

To disable filtering, click [Filter Off].

■ Listing Just Tape Drives or Cartridges

To limit the list to tape drives, click [Drives].
To limit the list to cartridges, click [Cartridges].
To see all elements, click [Partition] or [Slots].

■ Viewing Elements by Group

When the list is grouped, you can expand or contract the list for each group by clicking the triangle next to the number in the first column. Grouping is enabled by default.

To disable grouping, click [Group Off].
To enable grouping, click [Group On].

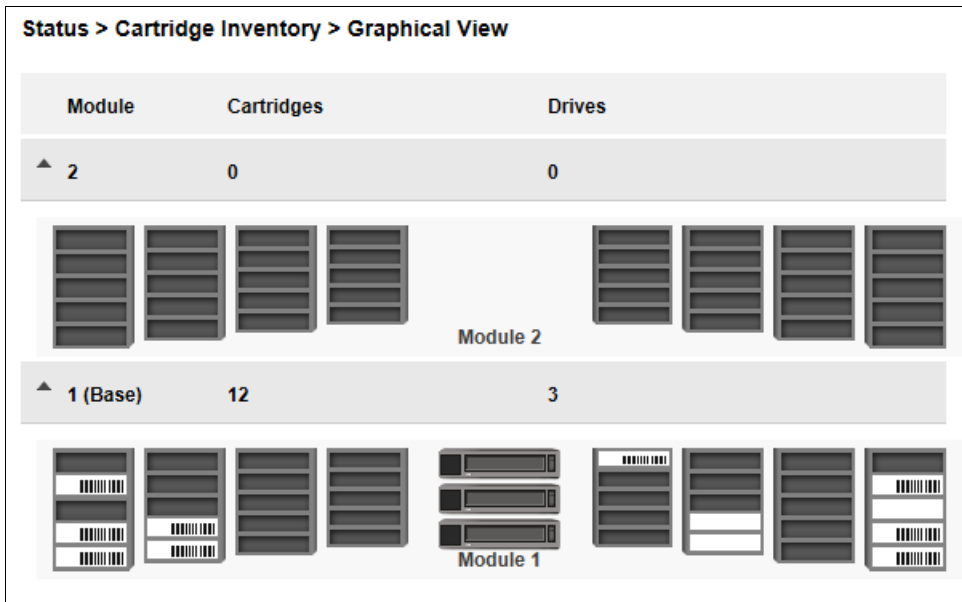
3.7.3 Using Inventory Graphical View

The inventory graphical view displays each of the elements, such as slots and tape drives, with information about the cartridge stored in the element. To see the elements organized by module, from [Status], navigate to [Cartridge Inventory > Graphical View]. To see the elements organized by logical library (or partition), from [Status], navigate to [Partition Map > Graphical View].

■ Inventory Graphical View

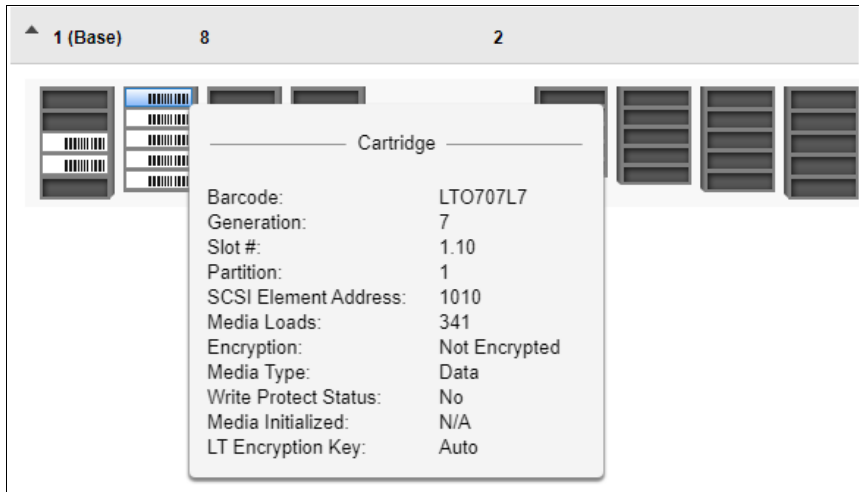
To see the elements with the graphical view, from [Status], navigate to [Cartridge Inventory > Graphical View].

Figure 3.80 Inventory graphical view



When the mouse pointer is moved over a tape drive or tape cartridge, additional information is displayed.

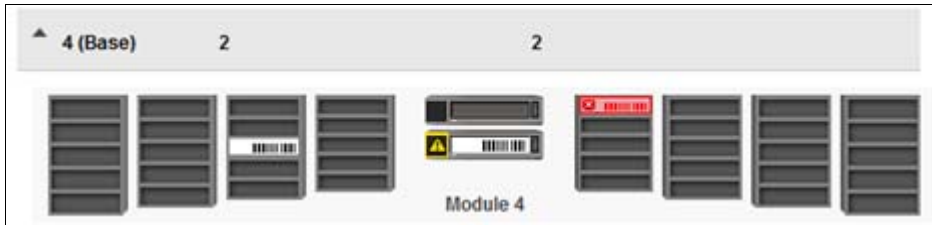
Figure 3.81 Inventory graphical view (display status)



- Drive
LTO generation and format of the tape drive.
- Drive #
The tape drive number.
- Serial #
The serial number of the tape drive.
- Slot #
The slot number in the form <module>.<slot>, where module is the module number and slot is the slot number.
- Barcode
Barcode data on label.
- Generation
LTO generation of cartridge.
- Partition
The partition number.
- Media Loads
The number of media loads.
- Encryption
Indicates whether data on this media is encrypted.
- Media Type
The type of the media that is applicable.
- Write Protect Status
Indicates whether Write Protect is enabled on this media.
- Media Initialized
Indicates whether initialization has been completed if the applicable media is an LTO9 tape cartridge. For tape cartridges other than LTO9, N/A is displayed.

- LT Encryption Key
 The type of the encryption key when the Key Management Function Option is used. Warning state and error state for a specific tape drive or cartridge are indicated with icons.

Figure 3.82 Inventory graphical view (display error status)

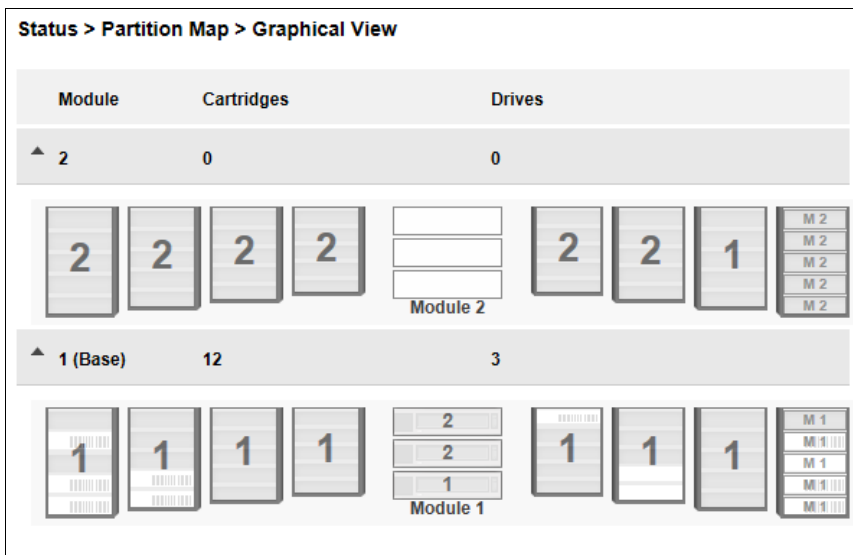


3.7.4 Partition Map Graphical View

To see the elements organized by logical library (or partition), from [Status], navigate to [Partition Map > Graphical View].

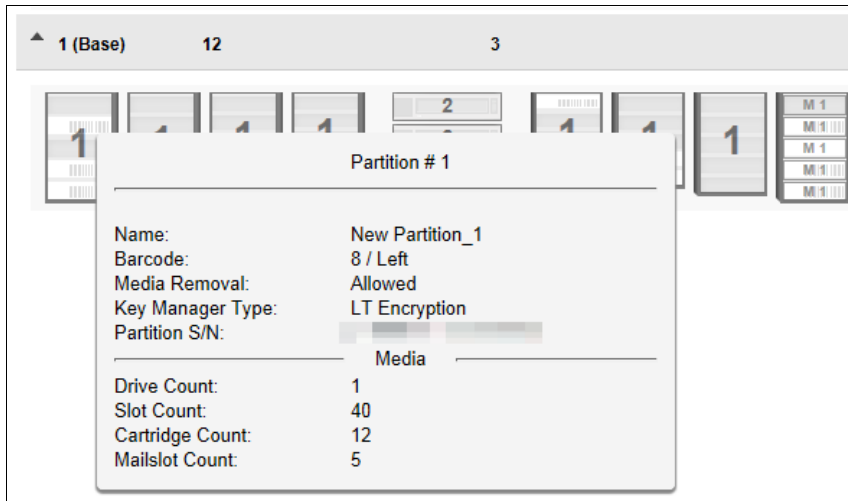
The graphical view of the partition map displays all the elements corresponding to a partition number. For the slots, a partition number is displayed for every five slots. When they are configured as mailslots, a mail slot obtains an "M" which is set before the partition number. When they are not configured as mailslots, the partition number is displayed for each slot.

Figure 3.83 Partition map graphical view



When the mouse pointer is moved over a partition layer, the following additional information is displayed.

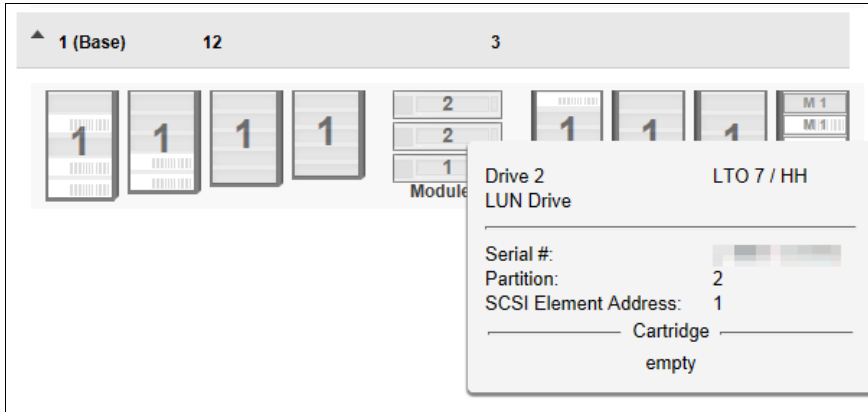
Figure 3.84 Partition map graphical view (display partition information)



- Name
Partition name.
- Barcode
Barcode orientation.
- Media Removal
Indicates whether media removal is allowed or prevented by the host.
- Key Manager Type
Encryption type.
- Partition S/N
Serial number of the partition.
- Drive Count
The number of tape drives assigned to this partition.
- Slot Count
The number of slots assigned to this partition.
- Cartridge Count
The number of cartridges assigned to this partition.
- Mailslot Count
The number of mailslots assigned to this partition.

When the mouse pointer is moved over a tape drive, additional information such as the following is displayed.

Figure 3.85 Partition map graphical view (display tape drive information)



- Drive
LTO generation and format of the tape drive.
- Drive #
The tape drive number.
- Serial #
The serial number of the tape drive.
- Partition
The partition number.

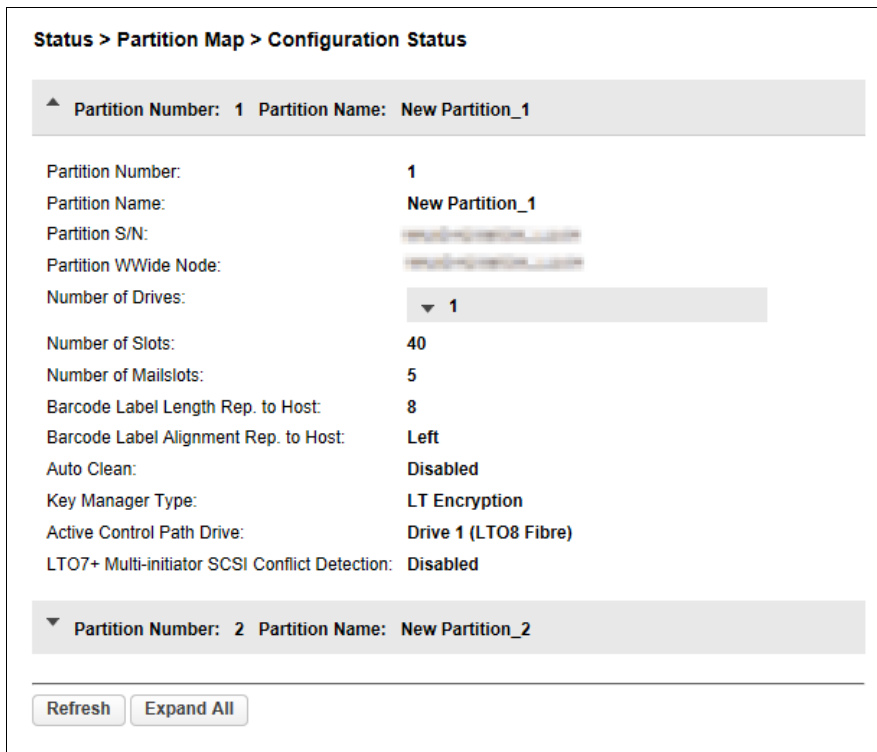
If a cartridge is loaded in this tape drive, additional information about the cartridge is displayed such as:

- Barcode
Barcode data on label.
- Generation
LTO generation of the cartridge.
- Partition
The partition number.
- Media Loads
The number of media loads.
- Encryption
Indicates whether data on this media is encrypted.
- Media Type
The type of the media that is applicable.
- Media Initialized
Indicates whether initialization has been completed if the applicable media is an LTO9 tape cartridge. For tape cartridges other than LTO9, N/A is displayed.
- LT Encryption Key
The type of the encryption key when the Key Management Function Option is used.

3.7.5 Using Partition Map Configuration Status

To see the configuration of a partition, the elements and their status, from [Status], navigate to [Partition Map > Configuration Status].

Figure 3.86 Using partition map configuration status



In the configuration status list you can see:

- **Partition Number**
The partition number.
- **Partition Name**
Partition name.
- **Partition S/N**
Serial number of the partition.
- **Partition WWide Node**
A worldwide unique identifier that is reported by the library via SCSI. This identifier can be used by operating systems or software applications to identify and track the library. This identifier is assigned to each partition.
- **Number of Drives**
The number of tape drives assigned to this partition. When the number is clicked, detailed information of the tape drive is displayed.
- **Number of Slots**
The number of slots assigned to this partition.

- **Number of Mailslots**
The number of mailslots assigned to this partition.
- **Barcode Label Length Rep. to Host**
Barcode length reported to the host.
- **Barcode Label Alignment Rep. to Host**
Barcode alignment reported to the host.
- **Auto Clean**
Indicates whether automatic cleaning of tape drives is enabled or disabled.
- **Key Manager Type**
Encryption type.
- **Active Control Path Drive**
LUN drive for this partition.
- **LTO7+ Multi-initiator SCSI Conflict Detection**
The setting values related to multiple SCSI connections. The default is Disable and cannot be changed.

3.7.6 Viewing Tape Drive Status

In the [Status> Drive Status] screen, the configuration and status of each tape drive installed in the library can be referenced.

Figure 3.87 Viewing tape drive status

Status > Drive Status

▲ 1	S/N: 8036C02BB7	IBM LTO 8 HH FC	✔	Empty	On
-----	-----------------	-----------------	---	-------	----

Vendor:	IBM	Personality:	00 22
Firmware:	J4D1	Manufacturer S/N:	XXXXXXXXXX
Powered:	On	WWNN:	XXXXXXXXXXXX
Temperature:	38 °C	Partition:	1 (Library LUN)
Encryption:	Enabled	Cartridge:	N/A
IP Address:	N/A	Media Removal:	Allowed
Module Loc:	1	Data Compression:	Enabled
Cooling Fan Status:	Active	Product ID:	ULTRIUM-HH8
SCSI Element Addr.:	1		

Port A Status (WWPN: XXXXXXXXXXXX)

Speed:	N/A	Port Type:	N/A
Interface:	No light detected	Port ID:	N/A

Port B Status (WWPN: XXXXXXXXXXXX)

Speed:	N/A	Port Type:	N/A
Interface:	No light detected	Port ID:	N/A

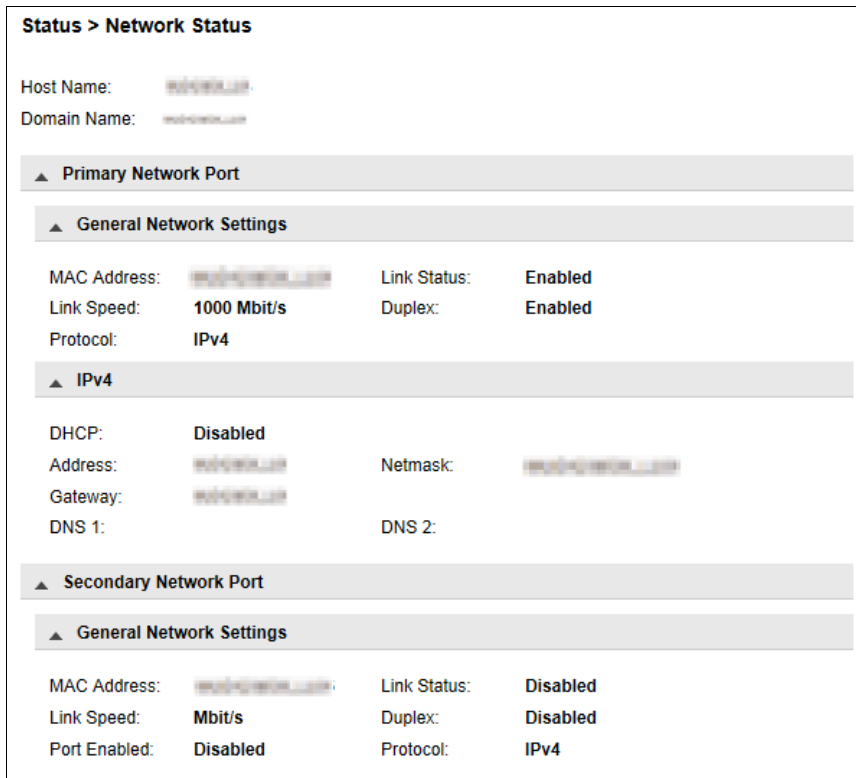
▼ 2	S/N: XXXXXXXX	IBM LTO 7 HH FC	✔	Empty	On
▼ 3	S/N: XXXXXXXX	IBM LTO 6 HH FC	✔	Empty	On

Refresh Expand All

3.7.7 Viewing Network Status

In the [Status > Network Status] screen you can see the network configuration and status.

Figure 3.88 Network status



In the [Network Status] screen you can see:

- Host Name
The host name set for the library.
- Domain Name
The domain name set for the library.
- Protocol
IPV4 or IPv6.
- MAC Address
A unique identifier for the library controller network interface.
- Link Status
Enabled or disabled.
- Link Speed
Speed of the Ethernet connection to the library.
- Duplex
Enabled or disabled.

■ IPv4 settings

- DHCP
When Enabled, the library requests an IP address from a DHCP server each time the library is powered on.
- Address
IP address in use by the library. If DHCP is enabled, this address was obtained from the DHCP server. When DHCP is not enabled, the address was configured.
- Netmask
The network mask of the library controller used when DHCP is not enabled.
- Gateway
The gateway used when DHCP is not enabled.
- DNS 1
The IP address of the DNS server.
- DNS 2
The IP address of the alternate DNS server that is used when DNS 1 is unavailable.

■ IPv6 settings

- Stateless
When Enabled, the library will generate an address for itself based on the routing information obtained from a router advertisement and the MAC address. The library can manage up to five global addresses at the same time, which can be assigned from different routers.
- Static
When Enabled, the library will use a statically-configured address.
- Address
The IPv6 address when Static Addressing Enabled is On.
- DNS 1
The IP address of the DNS server.
- DNS 2
The IP address of the alternate DNS server that is used when DNS 1 is unavailable.

3.7.8 Viewing Security Status

In the [Status > Security] screen, the encryption status of the library is displayed in a list. For more details on display contents of the Key Management Option, refer to "Fujitsu Storage ETERNUS LT140 Tape Library Key Management Function Option User's Guide".

Figure 3.89 Viewing security status

The screenshot shows the 'Status > Security' interface. It contains several sections: 'Security Encryption Status' with KMIP (Disabled, Licensed) and LT Encryption (Enabled, Licensed); 'Partition Encryption Status' with a sub-section 'Partitions' listing two partitions (1 and 2) with their names and S/Ns, and their encryption configuration (LT Encryption); and 'Drive Encryption Status' with a table showing Drive 1, Drive 2, and Drive 3, all with 'Enabled' encryption and corresponding partition numbers (1, 2, 2). A 'Refresh' button is located at the bottom left.

Partition Number:	Partition Name and S/N:	Encryption Configuration:
1	New Partition_1, [redacted]	LT Encryption
2	New Partition_2, [redacted]	LT Encryption

Drive	Encryption	Partition No.
Drive 1	Enabled	1
Drive 2	Enabled	2
Drive 3	Enabled	2

Appendix A

Library Configurations and IDs

The LT140 allocates identifiers (IDs) to identify components such as cabinets and tape drives. IDs are assigned in order from the bottom to the top of the library and have two numbers: a logical number that depends on the actual configuration and a fixed number that is unique and independent of the configuration.

The fixed number is set according to the maximum configuration and varies depending on the product ID of the library.

[Table A.1](#) shows an example of fixed numbers for the base module and the tape drives that are installed in it.

Table A.1 Fixed numbers for the base module and the tape drives that are installed in it

Product ID	Base module	Drive
LT14AB	4	10, 11, 12
LT14AC	9	25, 26, 27

[Figure A.1](#) through [Figure A.4](#) show examples of the corresponding logical numbers and fixed numbers for modules and tape drives in each configuration.

Figure A.1 Single base module configuration

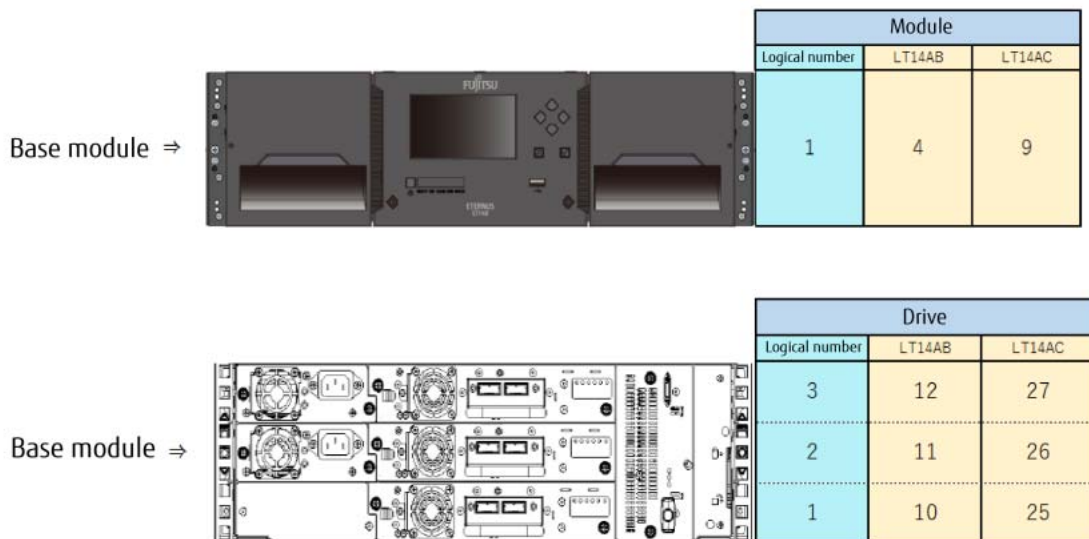
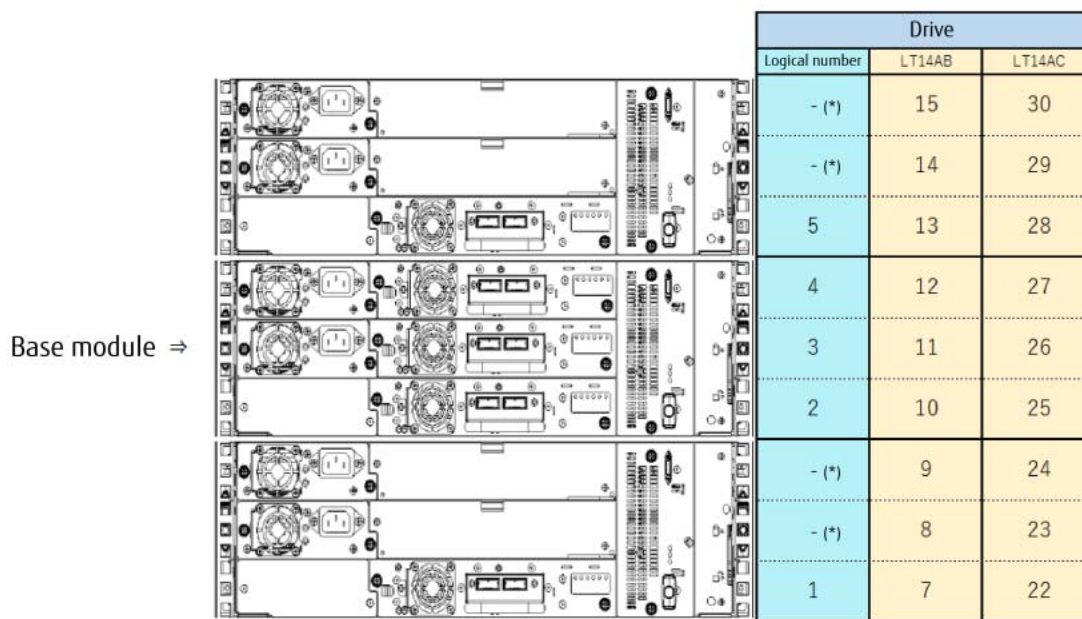
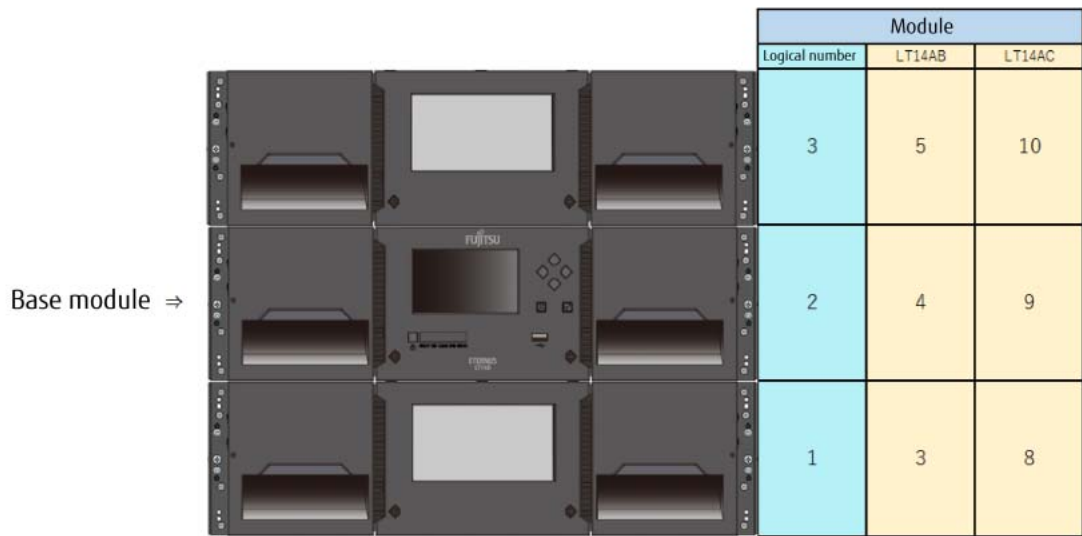
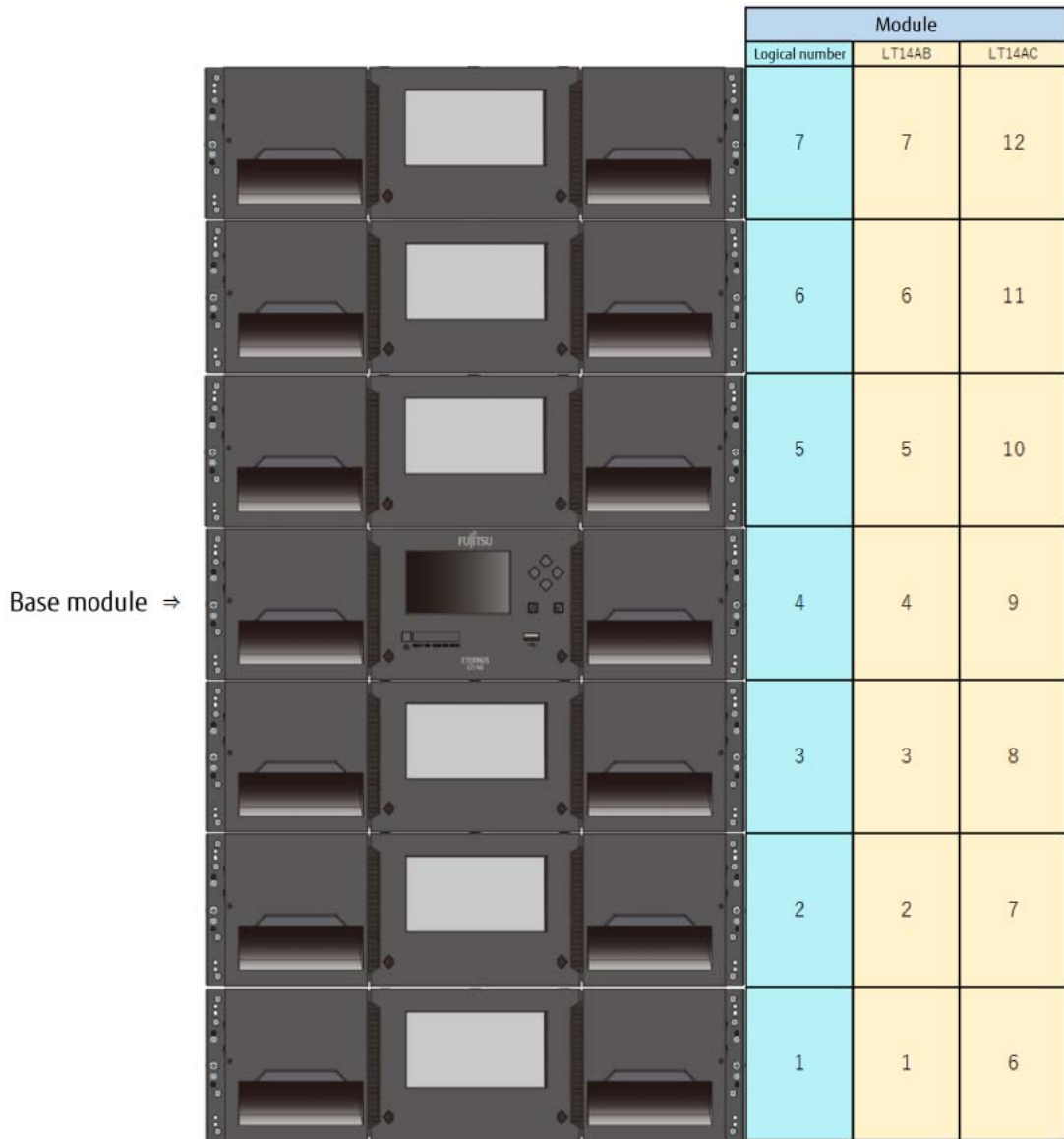


Figure A.2 Configuration with a base module and two expansion modules



*: Example of when some tape drives are not installed

Figure A.3 Configuration with a base module and six expansion modules (maximum configuration for the LT14AB)



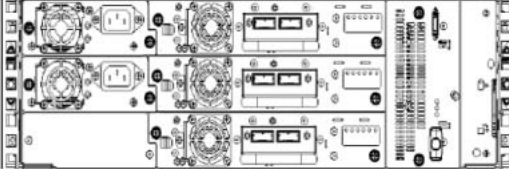
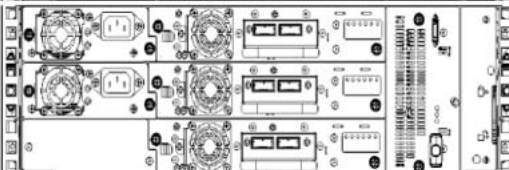
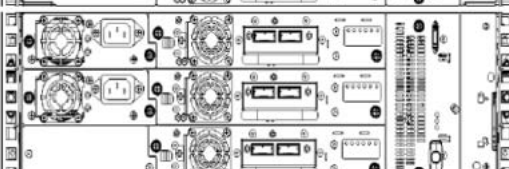
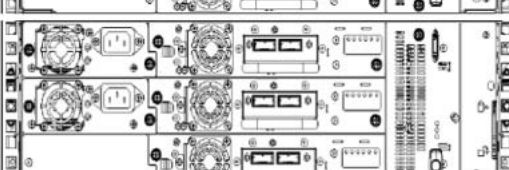
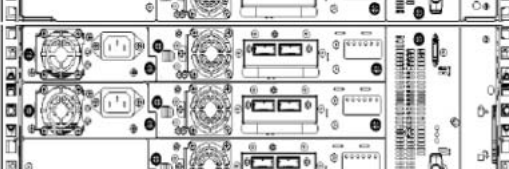
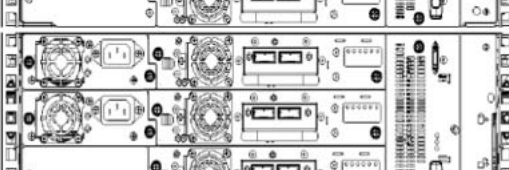
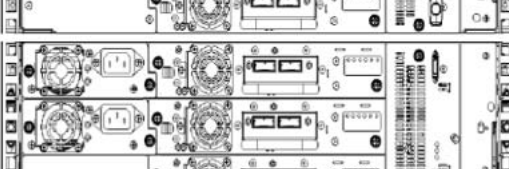
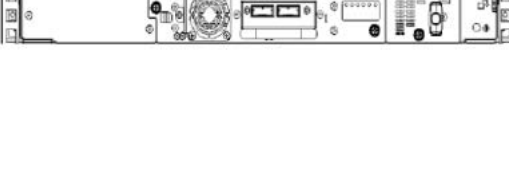



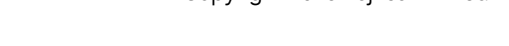
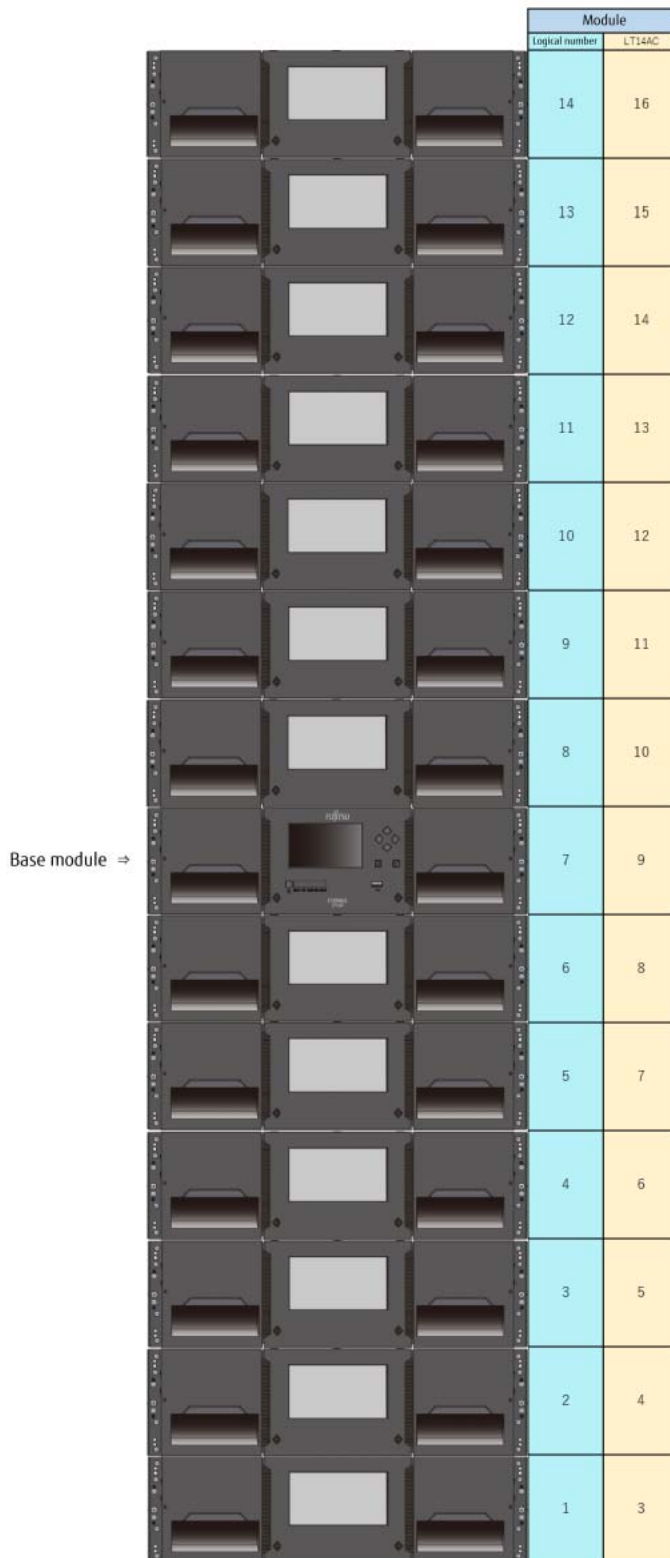
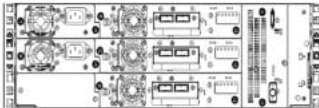
		Drive		
		Logical number	LT14AB	LT14AC
Base module ⇒		21	21	36
		20	20	35
		19	19	34
		18	18	33
		17	17	32
		16	16	31
		15	15	30
		14	14	29
		13	13	28
		12	12	27
		11	11	26
		10	10	25
		9	9	24
		8	8	23
		7	7	22
		6	6	21
		5	5	20
		4	4	19
		3	3	18
		2	2	17
		1	1	16

Figure A.4 Configuration with a base module and 13 expansion modules (maximum configuration for the LT14AC)



	Drive	
	Logical number	LT14AC
	42	48
	41	47
	40	46
	39	45
	38	44
	37	43
	36	42
	35	41
	34	40
	33	39
	32	38
	31	37
	30	36
	29	35
	28	34
	27	33
26	32	
25	31	
24	30	
23	29	
22	28	
21	27	
20	26	
19	25	
18	24	
17	23	
16	22	
15	21	
14	20	
13	19	
12	18	
11	17	
10	16	
9	15	
8	14	
7	13	
6	12	
5	11	
4	10	
3	9	
2	8	
1	7	

Base module ⇒

Fujitsu Storage ETERNUS LT140 Tape Library
User's Guide -Panel Operation-

P3AG-3732-07ENZO

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