DATALOGIC™

SOAR WITH FALCON

Falcon® Management Utility

User's Manual

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Falcon® Management Utility™
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Preface

Overview

This manual contains information about installing and operating the Falcon®
Management Utility (FMU). It covers both Microsoft Windows® CE and
Windows Mobile®(WM) operating systems.

> **NOTE:** **Depending on the version of your device's operating system, you might see some slight differences between your screen and those described in this manual.**

- This "Preface" describes the style and formatting conventions used in this manual.

- "Getting Started"on page 1 tells you how to install and set up FMU.

- "About FMU"on page 11 provides an overview of the FMU concepts and usage, as well as a description of the various components.

- "FMU Operation"on page 25 gives information on how to use FMU, including terminal configuration and how to transfer data to and from the portable device.

- "Configuration Settings"on page 41 provides details about the configuration settings available in FMU.

- "Terminal to FMU Server Communications"on page 49 provides instructions for direct connect and RF configuration of terminals.

- Appendix A, "SNMP Interface"on page 59, discusses the SNMP technology used in FMU.

- Appendix B, "DHCP Server Setup"on page 61, discusses setting up a DHCP Server so FMU can use DHCP Discovery.

- Appendix C, "Troubleshooting"on page 63 provides troubleshooting information and error messages. This section also includes contact information for Datalogic Mobile Technical Support.

- Appendix D, "Glossary"on page 77 lists selected terms used in this manual.

Reference the *Product Reference Guide (PRG)* for your terminal type to get
additional information specific to that model.

Registration

Please take a few moments to register electronically with the **Datalogic Product Registration Utility, or complete the Pr**oduct Registration form located on Datalogic's website (www.mobile.datalogic.com). Datalogic values your feedback. Registering ensures that you will be informed of the latest product news, software updates and future developments from Datalogic.

Style Conventions

Formatting conventions are used throughout this document to provide a consistent method for representing various screenshots, buttons, notes, and cautions while you are working with the FMU manual.

Manual Formatting Conventions

Keyboard Keys. When keyboard keys are Linked with a plus sign (for example, **SHIFT+ENTER**, or **Ctrl+C**), hold down the first key while pressing the second key once.

Keystrokes. Filenames, paths, field selections from a pull-down list, and data or keystrokes entered by the user are shown in this `monospaced` typeface.

Windows Controls. Windows controls including command bar sequences, prompts, dialog boxes, fields, pull-down lists, checkboxes and radio-buttons are printed in this **bold** typeface.

Input characters are usually given in lowercase (no capital letters); you may enter them in lowercase, uppercase, or a combination unless otherwise specified. When input characters are given in uppercase or a combination of lowercase and uppercase, enter the characters exactly as shown.

Cautions indicate an action where there is a possibility of damage to data integrity or data failure. Cautions always have the Caution icon to the left.

Notes provide additional information on a topic, including technical details, exceptions to instructions and other pertinent information. Notes have the notepad icon to the left.

Chapter 1
Getting Started

Quick Start

Following is a brief summary of the steps needed to set up FMU for configuring terminals. See the references to each section for further information.

1. **Read** "System Requirements" on page 4 and "Before You Begin" on page 5.

2. **Set Up Terminals**
   - Establish communication from terminal to host — see the *PRG* for your terminal type.
   - Enable FMU on terminal — see "Terminal to FMU Server Communications" on page 49.

3. **Install FMU**
   See "Installing FMU" on page 5.

4. **Set Up FMU**
   See "Firewalls and File Sharing" on page 6 and "Setting Up FMU" on page 8.

5. **Define Configuration Settings**
   See Chapter 4, "Configuration Settings" on page 41.

6. **Add Terminals to FMU**
   See "Adding Terminals" on page 37.

7. **Update Terminals**
   See "Updating Terminals" on page 51 and "Updating RF Terminals" on page 55.

!\
CAUTION — **FMU will override any previously-defined settings on a terminal.**

Overview

This section covers the following topics:

Introduction

Datalogic Mobile's Falcon Management Utility (FMU) is designed to help you install, configure, and manage your deployment of Windows-based Datalogic mobile computers and PDAs.

Advantages

FMU can manage multiple terminals simultaneously over a wireless network, on a USB bus, or via ActiveSync. FMU sets a new industry standard, using the latest technology to create a reliable, automated, and easy-to-use system for remote management of terminals.

- Lower deployment cost — new terminals are automatically configured.
- Lower maintenance cost — automated, rapid deployment of configuration, firmware and files.
- Better-maintained hardware.
- Faster recovery times.

Features

FMU is included with Windows-based Datalogic mobile computers. FMU provides administrators with tools for managing the deployment of terminals, including:

- Individual Diagnostic Terminal Update
- Group Terminal Update
- Wireless Connectivity
- Multiple Server Support
- On-Demand Updates
- Automated Terminal Updates
- Scheduled Terminal Updates

FMU encapsulates all aspects of terminal configuration into a single centralized interface. For example, FMU's intuitive user environment provides an interface that allows you to perform firmware upgrades, terminal configuration, network setup, and terminal monitoring via the Explorer-style interface. Administrators can manage their terminal deployment on either an individual or group basis. A group is a set of terminals that perform the same function (e.g. shipping, or cycle counting, or price verification).

FMU allows administrators to gain additional management capabilities. Specifically, administrators can now manage a deployment of PDTs across a wide-area-network (WAN) as well as take advantage of additional automation capabilities.

FMU is an essential tool for managing a large deployment of terminals, grouped into different functional categories. FMU makes managing the different groups easy. With groups of terminals, configuration settings can be applied once and distributed to each terminal in the group automatically. The distribution of applications to a group of terminals can be easily accomplished in the same one-step manner. Using wireless network technology, these functions can be accomplished without direct access to the terminal.

All of the benefits and capabilities of the Falcon Management Utility help you to lower your ownership costs of your portable data deployment by making the installation, configuration, and management of your deployment easier and more efficient.

System Requirements

Supported portables

FMU supports Windows® CE and Windows® Mobile PDTs and PDAs, including:

- Pegaso Industrial PDA
- Falcon 4400 Series (Laser & 2D Imager)
- Falcon 4220

System Requirements

Complete System/Workstation	
	Minimum
CPU	P3-600 MHz
Memory	256MB
Hard Disk	200MB
Server Only	
	Minimum
CPU	P3-600 MHz
Memory	128MB + 1MB for each Terminal being supported
Hard Disk	200MB

FMU is supported under the following operating systems:

- Microsoft® Windows® 2000 Professional
- Windows 2000 Server
- Windows 2000 Advanced Server
- Windows XP Home
- Windows XP Professional

Before You Begin

Establish Communication to Terminals

Before installing FMU, you must set up communication from the terminal(s) to the host. See "Terminal to FMU Server Communications" on page 49 for information.

Installing FMU

FMU Installation Options

Complete (Workstation + Server)

This option installs everything you need to run FMU on a single computer.

Server Only

This option is used when setting up a server to run on a separate computer from the FMU Console. The server is used to communicate between the FMU Console application and the terminals.

Workstation Only

This option is used to set up the FMU Console to run on a separate computer from the FMU Server. The FMU Console is the application used to manage and administer your terminal(s) using the remote FMU Servers.

To install FMU:

1. Insert the Product CD provided with your unit into the CD-ROM drive of the computer where you want to install it.
2. Click the link to **Falcon Management Utility (FMU)** to begin the installation.

If the installation window does not automatically open after you insert the CD (if you have disabled autorun on your computer), browse to the Contents folder on the CD and click on index.html to launch the interface.

3. After you agree to the EULA and click **Next**, the **Install Options** dialog will open.
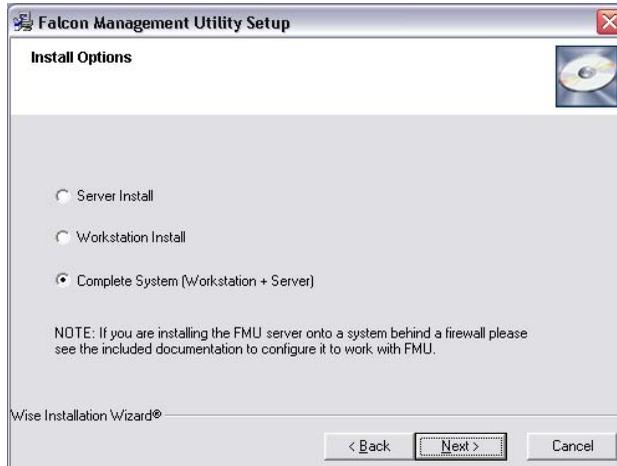
4. Select the type of install (**Server, Workstation**, or **Complete System (Workstation + Server)** you want to perform and click **Next**.

5. Continue to follow the on-screen instructions to complete the installation.

Firewalls and File Sharing

Using Firewalls

If you are using a firewall, FMU uses the following ports:

*   2151 UDP
*   2150 TCP
*   3453 TCP

These need to be open and enabled in order for FMU to communicate with Datalogic terminals. For instructions, refer to "Windows Firewall Issues" on page 65.

Setting Up File Sharing

File sharing must be enabled and a share created on the Server directory. Please consult your operating system manual for information on setting up file sharing.

Server Directory Share

After the FMU Server installation is complete, you will need to share the folder for the directory where the server files were installed (the default is C:\Program Files\Datalogic\FMU\Server). See the help documentation specific to your Windows operating system for directions on creating a share.

Network Shares (Shared Files)

You must enable sharing for each directory in your network containing files that will be sent to a terminal. The directory containing the files must have permissions set for FMU Server access.

File Shares in Local Workstation

You can also elect to copy files to be sent to the terminal into a folder on the FMU Workstation computer, and then share the directory on the local drive.

The FMU workstation installation allocates a folder for this. Unless you specified a different location during install, the default folder is `C:\Program Files\Datalogic\FMU\Workstation\Packages.`

NOTE **Since shared drives are tied to individual login names, if more than one login is used for the same workstation sharing must be enabled for each login name that will be using FMU.**

File Sharing with Windows XP Home

Special considerations are necessary if you are using Windows XP Home. Refer to "Creating a Share in Windows XP Home" on page 72 in the Troubleshooting section for more information.

File Sharing with Windows XP Professional

Under Windows XP Professional, you must enable file-sharing and give explicit permissions to the Domain users that will be accessing files (server).

Setting Up FMU

Depending on the type of install you selected (Server Install, Workstation Install, or Complete System), the process for setup will vary.

Complete System

If you did a Complete System install (both FMU Console and Server on the same computer), use the following steps to set up FMU.

1. Open **FMU Console** by choosing it from the **Start** menu.

2. A Default Group is created automatically for you during installation. If you want to assign terminals to a group other than the Default Group, create the group(s) to which you want to add the terminals before proceeding (see "Adding a Group" on page 29).

3. Set up terminals to communicate with FMU (see "Enabling a Terminal for FMU with Direct Connect" on page 50 and "Enabling Terminals for RF Connectivity" on page 52).

Separate Workstation/Server

If you have installed FMU Console on one computer and the FMU Server software on one or more other computers, use the following procedures:

1. Open **FMU Console** by choosing it from the **Start** menu.

2. Add a server (see "Adding a Server" on page 26).

3. A Default Group is created automatically for you when a server is added. To assign terminals to a group other than the Default Group, create the group(s) to which you want to add the terminals before proceeding (see "Adding a Group" on page 29).

4. Set up terminals to communicate with FMU (see "Enabling Terminals for RF Connectivity" on page 52).

FMU Server Architecture

Single Server Support

FMU is included with each supported Windows-based Datalogic terminal. FMU Console can connect to a single server and configure individual terminals. You can create groups within that server and assign as many terminals as desired to those groups.

FMU provides the ability to drag configuration settings from one group to another, where they can then be modified independently from the original settings. Package files can be shared across groups (see "Available Packages" on page 17 for more information).

Figure 1. FMU Single Server

FMU Console

Single Server
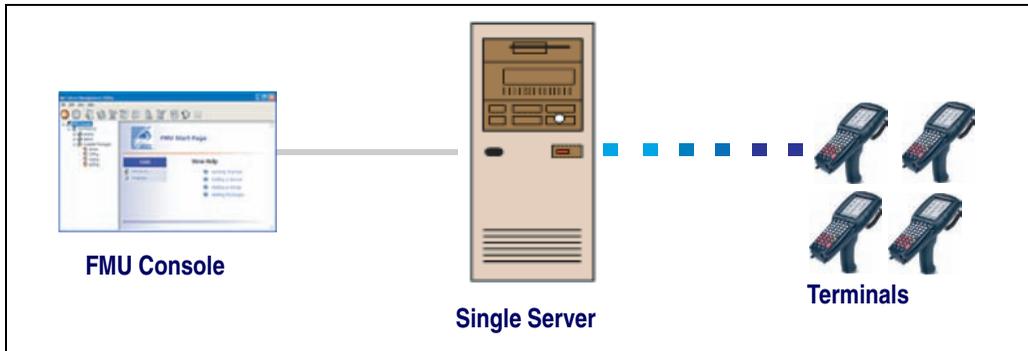
Terminals

> **NOTE** **FMU does not limit the number of terminals associated to one server; however, a maximum of 35 - 50 terminals per server is recommended for optimum performance.**

Multiple Server Support

FMU also enables administrators to manage more than one FMU server from a single console, making it easier and more efficient to manage a large distributed deployment of terminals.

Specifically, FMU can manage more than one FMU Server which supports WAN deployments. Additionally, FMU allows administrators to push configurations and applications to a group of terminals in a single process (vs. one-at-a-time approach). Terminals within a specified group can be updated automatically.

Figure 2. Multiple Server Support
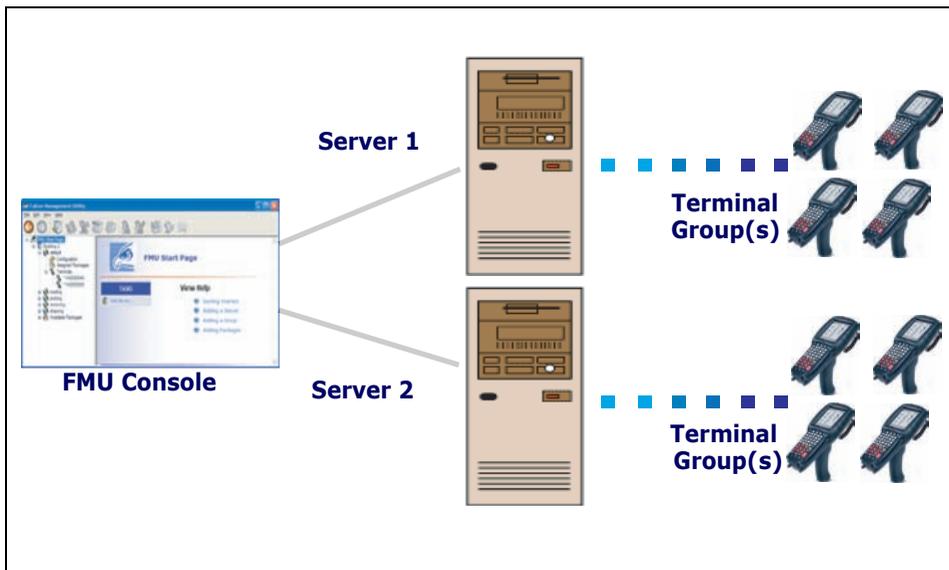
NOTE **FMU does not limit the number of servers associated to one console; however, a maximum of 3-4 servers per console is recommended for optimum performance.**

Chapter 2
About FMU

Overview

This chapter will introduce you to the concepts of FMU. You will find information that will help you to understand FMU's technology and interface. You will also find explanations of groups, packages and files and how FMU uses them to provide an easy-to-use automated system for configuring terminals. You will learn how you can update a few terminals in a local environment, or numerous terminals in multiple remote locations.

This section covers the following topics:

FMU's Technology

Microsoft® .NET Framework

FMU was developed using the Microsoft .NET Framework, which provides an environment for extensibility. Future revisions of FMU will allow the FMU Server components to be deployed on different platforms, as well as to interface with different wireless devices.

The Common Language Runtime provided by Microsoft to run applications is supported on a wide variety of devices. This simplifies the task of creating one application to run on multiple devices, making development fast and efficient. The Runtime also has security features which greatly enhance software reliability.

For more information on this topic, go to:

http://www.microsoft.com (Internet connection required).

XML
How is XML?

XML is defined as Extensible Markup Language (XML). Although it was originally created to be used for data on the web, it also provides a robust, non-proprietary, persistent, and verifiable file format for storing and/or exchanging data off the Web.

How does FMU use this technology?

XML has become an integral part of the Microsoft® Windows® DNA architecture for data distribution and communication between multiple tiers. FMU was designed as a multi-tier solution because of the flexibility and efficiencies this type of architecture adds. FMU uses this technology to provide the structured environment needed for data integrity.

XML is at the core of FMU's data management. Its use varies from generating dynamic forms to keeping track of terminal configurations. This is accomplished with use of XML schemas, providing the flexibility needed to encapsulate the data shared between different layers. For our long-term plans, this is also the best path to becoming platform independent. XML provides the ability to communicate with external computing systems that would otherwise be unattainable with conventional methods of data storage.

For more information on this topic, go to:

http://www.microsoft.com

http://www.w3.org/XML/

FMU Server and Client

SNMP

SNMP (Simple Network Management Protocol) is the standard protocol for managing devices on a network. FMU makes use of SNMP to send and receive configuration information to the terminals. The terminals constantly run SNMP, which allows FMU to interface with the terminal at any time without requiring user intervention on the terminal.

With an SNMP agent always running on the terminal, other SNMP-based network management tools, such as HP Openview**®**, IBM's Tivoli, Computer Associates' Unicenter, or CastleRock SNMPpc**®**, may also be used to configure/manage the terminals. To support this capability, Datalogic has released the Management Information Base (MIB) for Datalogic Windows-based terminals. The MIB is used by the SNMP management tools to allow them to interface with the SNMP agent provided on the terminals. This interface allows the management tool to configure the scanner controls or retrieve terminal type information.

For more information on SNMP, see "SNMP Interface" on page 59, or go to:

http://www.microsoft.com (Internet connection required).

Maintaining Current Files

FMU uses a proprietary file update system to maintain current files on the terminal. FMU uses this protocol to allow the FMU Server to compare files and firmware versions between the server and the terminal, and to update the terminal if it is not up to date. FMU provides the administrator the ability to update a single copy of a file or firmware image, and have that copy be distributed to all of the networked terminals with no further action required by the administrator. FMU ensures data integrity by verifying that the downloaded file is identical to the original prior to replacing the copy on the terminal, avoiding any possibility of corrupting the file.

User Interface

Windows® XP Interface

The FMU graphical user interface was designed to be consistent with the Windows XP GUI design practices and principles. The FMU User Interface is simple and intuitive, allowing you to perform tasks quickly and efficiently.

FMU's User Interface has a similar look and feel to standard Windows Explorer tree-view/list-view design. The left pane displays the Tree View listing the FMU components; the right pane displays the List View containing details and options available for the selected component.

Figure 3. FMU Interface
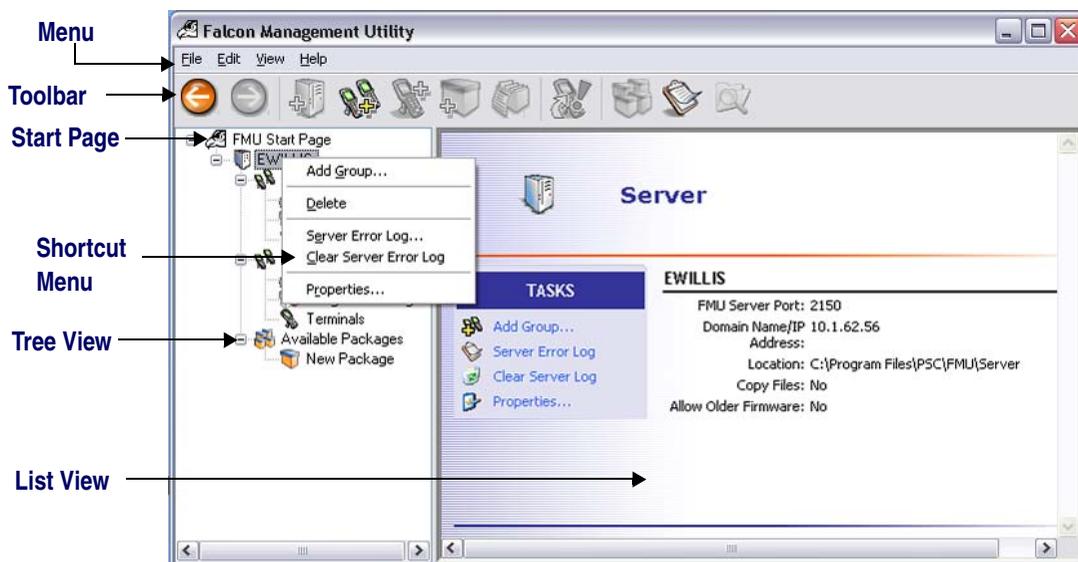
Most features of FMU can be accessed several different ways:

Menu

Access items from the Menu by clicking on the desired option, then selecting a command. See Menu for a detailed description of each menu item.

Toolbar

Buttons on the Toolbar provide shortcuts to commonly used features.

Tree View

Click on a component in FMU's left pane Tree View to access its features. Information and available options will display in the right pane List View.

List View

When an option is selected in the Tree View, the List View in the right pane will display available choices for that component.

Shortcut Menu

Right-click the selected item in Tree View to open a shortcut menu. Options relevant to the selected component will be displayed.

Options are enabled or disabled according to their relevance to the item selected in the Tree View.

FMU Components

This section contains the following items:

FMU Start Page

The top (root level) of the Tree View is the FMU Start Page. Servers are attached to the Start Page.

Figure 4. FMU Tree View

FMU Start Page ⟶

Server ⟶

Group ⟶

Available Packages ⟶

Configuration

Assigned P
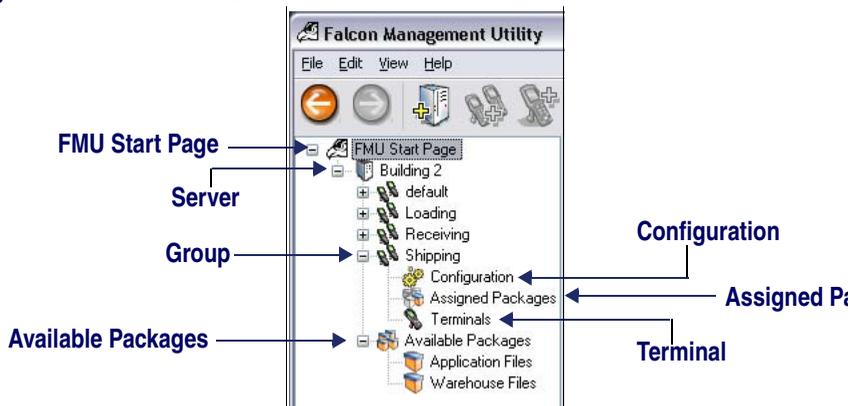
Terminal

Servers

A **Server** represents an FMU Server. Each server contains defined groups of terminals. The server component also contains an **Available Packages** directory, which holds defined sets of files.

- "Managing Servers" on page 25
- "SNMP Interface" on page 59
- "Adding and Assigning Packages" on page 31

Groups

Each **Group** represents a collection of specified terminals with common functionality. Each group contains settings for configuration (hardware, network and symbology settings), assigned packages, and a list of assigned terminals. You can create any number of groups on a server.

On installation of a server, a Default Group is created automatically. Expand the server component to view or change the settings for the Default Group.

See "Working with Groups" on page 29.

Configuration

Group **Configuration** allows you to view or change configuration items for the specified group.

Assigned Packages

Assigned Packages provides a list of those packages assigned to the selected group. When selected, the list of packages for that group will display in the List View.

Terminal

Terminals appear within the group to which they are attached. Each terminal represents a physical Device as specified by the administrator and confirmed by the server. Any number of terminals can be added to a group.

Available Packages

Available Packages represent a set of files that can be assigned to groups for terminal updates. Packages contain two types of files: basic files (drivers, configuration, system software etc.) and firmware image files. Firmware image files are system updates to the terminal firmware itself, and the others are those files required to execute an application.

See Also

-
-

Menu

Click on items in the menu to access the menu features.

File

Figure 5. File Menu

The following topics are covered in this section:

- Add
- Assign Packages
- Update Terminal(s) Now
- Exit

Add

Figure 6. Add Menu
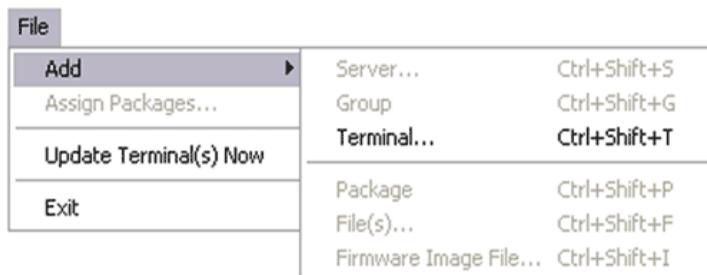
Add Server	Ctrl+Shift+S	Adds a new server to the FMU Tree View. See "Managing Servers" on page 25
Add Group	Ctrl+Shift+G	Adds a new group to the selected server. See "Working with Groups" on page 29
Add Terminal	Ctrl+Shift+T	Adds a new terminal to the selected group. See "Terminals" on page 36

Add Package	Ctrl+Shift+P	Adds a new package to the selected server. See "Adding a Package" on page 32
Add File(s)	Ctrl+Shift+F	Adds new files to the selected package. See "Adding Files to a Package" on page 32
Add Firmware Image File	Ctrl+Shift+I	Adds a firmware image file to the selected package. See "Adding a Firmware Image File" on page 34

Assign Packages

Adds or removes packages assigned to the selected group.

See "Assigning a Package" on page 36

Update Terminal(s) Now

Figure 7. Update Terminal(s) Now Menu

When **Update Terminal Now** is selected, the server will send a message to each terminal indicating that the terminal needs to be updated. The terminal operator will be instructed on how to proceed. The selected terminal or group is then updated immediately. See "Updating Terminals" on page 51 and "Updating RF Terminals" on page 55.

All terminals are updated automatically after a reset or reboot.

You can specify either an individual terminal or an entire group.

Exit

Quits the FMU application.

Edit

Figure 8. Edit Menu
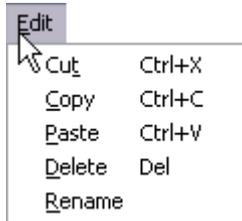
Cut (Ctrl+X)	Moves the selected data into the clipboard to be pasted in another location.
Copy (Ctrl+C)	Copies the selected data into the clipboard so it can be pasted in another group or server.
Paste (Ctrl+V)	Pastes data stored in the clipboard to the selected item within FMU (when applicable).
Delete (Del)	Deletes the selected data (when applicable).
Rename	Enter the desired text to rename the selected component.

View

Figure 9. View Menu
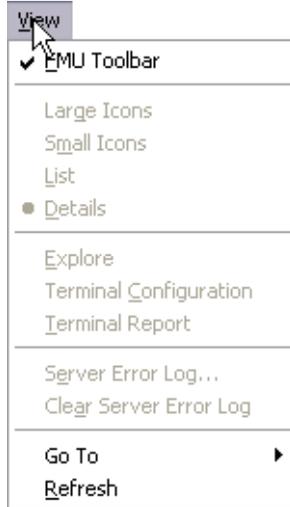
FMU Toolbar	Shows/hides the **Toolbar**.
Large Icons	Displays list view in **Large Icon** mode.
Small Icons	Displays list view in **Small Icon** mode.
List	Displays list view in **List Icon** mode.
Details	Displays list view in **Details** mode.
Explore	Initiates a connection with the selected terminal, allowing you to browse the terminal's contents. You can drag & drop files to or from a terminal. See **"Exploring an RF Terminal" on page 55**.
Terminal Configuration	Retrieves configuration data for the selected terminal. See **"Terminal Configuration Settings" on page 56**.
Terminal Report	Displays the **Terminal Report** for the selected terminal. See **"Terminal Report" on page 58** and **"Terminal Report" on page 58**.
Server Error Log	Displays the **Server Error Log Report** when a server is selected.
Clear Server Error Log	Removes previous entries from the **Server Error Log.**
Refresh	Refreshes the FMU User Interface.

Figure 10. Go To Menu

Back (Ctrl+B)	Will move the view back to the previous Tree View selection.
Forward (Ctrl+F)	Will move the Tree View selection forward if you clicked on **Back**.
Up One Level (Ctrl+U)	Will move the Tree View selection up to the selection's parent option.
Start Page (Ctrl+H)	Returns to the root level (FMU Start) page.

Help

Figure 11. Help Menu

The **Help** menu enables you to retrieve help information quickly. You can also print specific topics from the help system.

To access help about a specific dialog from within FMU, press F1.

Toolbar

The FMU Toolbar is provided as a way to access commonly-used functions.

Table 1. Toolbar Icons

Icon	Command	Reference
	Back	See **"" on page 22**
	Forward	See **"Forward (Ctrl+F)" on page 22**
	Add Server	See **"Adding a Server" on page 26**
	Add Group	See **"Adding a Group" on page 29**
	Add Terminal	See **"Adding Terminals" on page 37**
	Add Package	See **"Adding a Package" on page 32**
	Add File(s)	See **"Adding Files to a Package" on page 32**
	Update Terminal(s) Now	See **"Updating RF Terminals" on page 55**
	Assign Packages	See **"Assigning a Package" on page 36**
	View Report	See **"Sample Reports" on page 75**
	Explore	See **"Explore Terminal" on page 51**

Printing Reports

FMU allows you to view and print server log data as well as system reports for individual terminals. System reports include scanner, network, terminal, hardware configuration, and pertinent OS data.

NOTES

Chapter 3
FMU Operation

Overview

This section covers the following topics:

Managing Servers

This section contains the following information:

Adding a Server

If you installed the complete system, you do not need to specify the initial server information. During a complete install, a local server is automatically created for you. Additional servers can be added after installation.

> **NOTE** **To add a server you must select the FMU Start Page at the root level of the FMU Tree View.**

To add a server:

On the **File** menu, click **Add > Server** to open the **Add Server** dialog:

Figure 12. Add Server

Name	Enter the desired server Name.
Domain Name or IP Address	Enter the server's Domain Name or IP address.
Server Path	Enter the network location of the server, i.e., **\\myserver\company\FMU\server.**
*Copy files and images to server	When checked, the FMU remote server will keep a local copy of the files associated with packages. This eliminates the need for the FMU Workstation to be running during terminal updates.

*The server needs access/security permissions to the specified directory.
See the section entitled "Troubleshooting" for more information.

Allow older version firmware updates	Select to specify whether the server will allow older OS images to overwrite new ones, such as returning to a previous version when troubleshooting.

*The server needs access/security permissions to the specified directory.
See the section entitled "Troubleshooting" for more information.

Deleting a Server

To delete a server:

1. Select the server you want to delete.

2. Go to the **Edit** menu and click on **Delete**.

3. The server reference will be deleted from the FMU Tree View.

> **NOTE**
>
> **When a server is deleted, all groups, terminal settings and defined packages within it are removed from the Tree View. However, the server configuration files still reside on the server. An uninstall of the server must be performed to completely remove them.**

Server Error Log

FMU provides users with the ability to view and print error log data for each server. Use this log to identify problems that FMU encountered while updating terminals. The messages in the log will point you to possible solutions to resolve problems. The FMU administrator should check this error log on a regular basis to ensure that terminal updates are completing successfully.

Viewing or Editing Server Properties

The **Server Properties** dialog displays information about the selected server.

To access server properties:

1. Select the server you wish to view or edit in the FMU Tree View.

2. Click on **Properties** in the List View to view **Server Properties**.
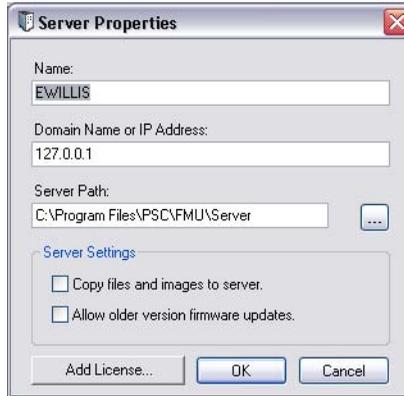
3. View or change information as desired.
4. Click **OK** to complete.

Name	Enter the desired server Name.
Domain Name or IP Address	Enter the server's Domain Name or IP address.
Server Path	Enter the network location of the server, i.e., `\\myserver\company\FMU\server.`
*Copy files and images to server	When checked, the FMU remote server will keep a local copy of the files associated with packages. This eliminates the need for the FMU Workstation to be running during terminal updates.
Allow older version firmware updates	Select to specify whether the server will allow older OS images to overwrite new ones, such as returning to a previous version when troubleshooting.
Add License	Click Add License to specify a license for the selected server. This feature applies when upgrading from WinCE 4.2 to WinCE 5.0 . Contact your reseller or Datalogic sales to purchase a license.

*The server needs access/security permissions to the specified directory.
See the section entitled "Troubleshooting" for more information.

Working with Groups

A **Group** is a defined set of terminals associated with a specific function, i.e. picking, receiving, etc. See "Groups" on page 16 for more information.

A Default Group is created with each server installation. If you want to create more groups, you can add them either before or after you add terminals.

Adding a Group

Add Group allows you to create a new group.

To add a group:

1. In the Tree View, select the server where you want to add the group.
2. On the **File** menu, click **Add > Group**.
3. Type a new name for the group and then press **Enter**.

Group Configuration Settings

The Tree View displays configuration items for the specified group. Each setting can be expanded to dynamically display all of the options available for group configuration.

To access group configuration settings:

1. Expand the group you want to configure by clicking on the plus sign (+) to the left of the group.
2. Double-click **Configuration**.
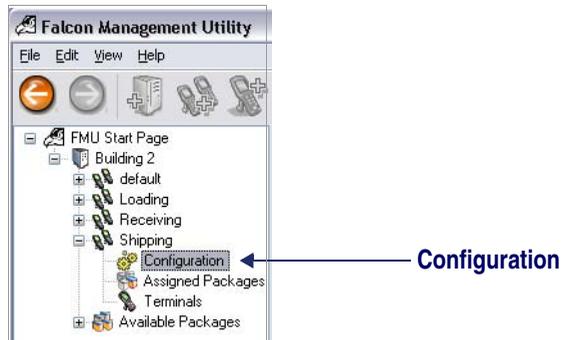
3. The **Configuration Settings** dialog will open:
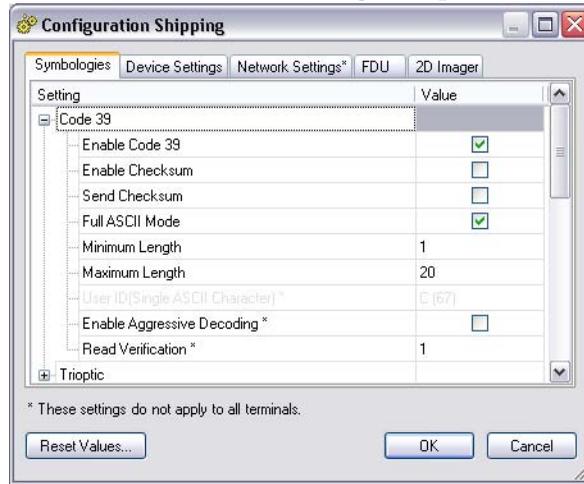
Within this dialog you can modify configuration values. The changes will be applied to all terminals within the selected group the next time the terminals are updated.

See "Configuration Settings" on page 41 for a detailed description of each configuration option.

Deleting a Group

To delete a group:

1. In Tree View, click on the group you want to delete.

2. On the **Edit** menu, select **Delete**.

3. The group will be deleted.

If a group containing defined terminals is deleted, data associated with the terminals will be deleted also. Those terminals will then be automatically assigned to the Default Group the next time they update. The Default Group cannot be deleted, but can be renamed.

You cannot undo this function once it has been performed. Any defined configuration settings (device-specific, network, symbology, and FDU settings) will be lost upon deletion of a group.

CAUTION

Renaming a Group

To rename a group:

1. In Tree View, click on the group you want to rename.
2. On the **Edit** menu, select **Rename**.
3. Type a new name for the group and then click **OK**.

Adding and Assigning Packages

A **Package** is a collection of files that will be sent to a terminal (or group of terminals) when you assign the package to a group.

Package definitions are made at the server level. You can define the list of files and configure the filter parameters for updating. When adding files to a package, you will be prompted for file source locations and the destination folder on the terminal(s). When you click on a package in the Tree View, the contents of the package will be displayed in the List View.

The actual files being referenced can be kept on the FMU Console workstation or on a shared network drive. You can also specify that a copy be stored on each local server, allowing for updates even if the network connection to the PC where package files are stored is not available. Packages can be shared between different groups, and package definitions can contain other packages.

NOTE **Remote servers need sharing permission for directories that the package files reside in. Do not include files larger than the terminal disk space or the files will be ignored.**

See Also

- "Available Packages" on page 17
- "Working with Files" on page 39

Adding a Package

Use **Add Package (Ctrl+Shift+P)** to create a new package definition and specify its contents.

To add a package:

1. In Tree View, click on **Available Packages** on the server to which you want to add a new package.

2. On the **File** menu, click **Add > Package**.

3. Type in the name of the new package and then press **Enter**.

The package will now be available for assignment to any groups that reside on that server.

Adding Files to a Package

To add files to a package:

1. In the Tree View, click on the package to which you want to add files.

2. On the **File** menu, click **Add > File(s)** to open the **Add File(s)** dialog. Refer to Figure 13.

Figure 13. Add Files Dialog
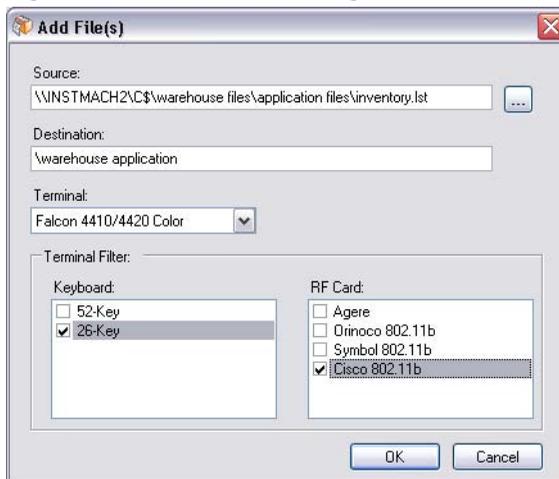
Source	Enter the filename or browse to the location of the file(s) you want to add.
Destination	Enter in the file's directory on the terminal.
Terminal	Select a terminal type from this list to specify that files will only be down-loaded to terminals of that type. If [Any] is selected, all terminals will be updated with the specified file(s).
Keyboard	When you select a keyboard type from this list, files will only be down-loaded to terminals that have a keyboard of that type.
RF Card	Select an RF Card type from this list to specify that the file will only be downloaded to terminals that have an RF Card of that type.

If you include files larger than the terminal disk space, the files will be ignored.

You can include directories by selecting all files or multiple files using Shift or Ctrl keys within a specific directory.

Adding a Firmware Image File

To add Firmware Image files to a package:

1. In Tree View, click on the package to which you want to add firmware image files.

2. On the **File** menu, click on **Add > Firmware Image File** to open the **Add Firmware Image** dialog. Refer to Figure 14.

Figure 14. Add Firmware Image

Select firmware image based on terminal type	Select to have FMU automatically detect images in the Workstation\Devices directory.
Terminal	Choose the image file from the dropdown menu.
Manually select image	When selected, allows you to enter the filename or browse to the location where the firmware image is located.
Select image file	Enter in the `path\filename`, or browse to the file's location and select it.
Firmware information	Displays the version of the firmware image and the type of terminal it is for.

Viewing a File List

The List View displays the files contained within the **Package** selected in the Tree View.

To view a file list:

Click on a Package to view the files contained in it.

Source	Destination	Terminal	Keyboard	RF Card	Language	File Type	File Version
c:\warehouse\inv.txt	\Warehouse Application	[Any]	[Any]	[Any]		TEXT	
c:\warehouse\wa.exe	\Warehouse Application	[Any]	[Any]	[Any]		BINARY	

Source	Displays the filename and the full path to the file.
Destination	Displays the file's destination on a terminal.
***Terminal**	The file will only be sent to terminals that are the specified model.
***Keyboard**	The file will only be sent to terminals that have the specified keyboard.
***RF Card**	The file will only be sent to terminals that have the specified RF Card.
Language	This option applies only to firmware image files.
File Type	Identifies file types.
File Version	Displays version data for firmware image files.

*If not specified, files will be sent to all terminals.

Assigning a Package

Assign packages allows you to assign packages to the selected group. All packages that are available to the selected group will appear.

To assign packages:

1. Select the group or package to which you want to assign a package.

2. From the **File** menu, select **Assign Packages** to open the **Assign Packages** dialog. This displays available packages within the server.

3. Select or deselect package(s) by checking or unchecking the boxes next to the package names.

4. Click **OK** to assign the selected packages.

CAUTION

It is recommended that you do not assign two or more packages containing the same model of firmware image to the same group. You could experience undesired results.

Terminals

Terminals represent a physical unit attached to a server, as specified by the administrator. Terminals can be connected through a wireless network, or physically attached to the FMU Server via a Datalogic Dock.

Terminal Group Assignments

Terminals are assigned to a group within FMU. If no group is specified, the terminal will automatically become part of the Default Group. Terminals can easily be moved from one group to another using cut and paste, drag and drop, or by changing the group assignment within **Terminal Properties**. You can also change the group on the terminal itself.

Adding Terminals

Terminal Setup

Before a terminal can be added to FMU for the first time, the terminal must be set up to recognize FMU. See "Enabling a Terminal for FMU with Direct Connect" on page 50 and "Enabling Terminals for RF Connectivity" on page 52 for detailed information. Once you have enabled a terminal for FMU, you will not need to perform this step again.

To add a terminal to FMU

1. Select the group to which you want to add the terminal.

2. On the **File** menu, click **Add > Terminal**.

Figure 15. Adding a Terminal

Serial Number	Enter the serial number for device[1].
IP Address	Enter the IP Address of the terminal.
Assigned Group	Displays the group to which the terminal will be attached.

1. See the *PRG* for your terminal for instructions on finding the serial number.

Terminal Check-in

After a terminal has been enabled for FMU, it communicates with the FMU Server upon reboot, when placed in a dock, or when requested by the server. The server uses the defined group settings to update the terminal at the next specified update. See "Updating Terminals" on page 51 and "Updating RF Terminals" on page 55.

Delete Terminal

To delete a terminal from a group:

1. On the Tree View, click on the terminal you want to delete from the selected group.

2. On the **Edit** menu, select **Delete**, or press the Delete key on your computer keyboard.

The terminal will be removed from the group.

Terminal Properties

The **Terminal Properties** dialog displays properties for the selected terminal. See "Adding Terminals" on page 37 for more information.

Figure 16. Terminal Properties
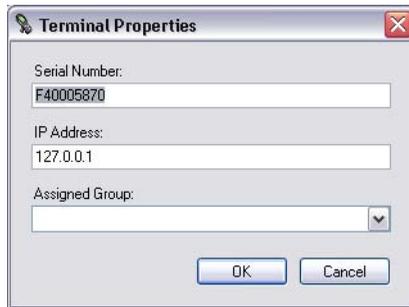
Serial Number	View or change the serial number for device.
IP Address	View or change the IP address of the terminal.
Assigned Group	View or change the group to which the terminal is assigned.

Working with Files

File Properties

Figure 17. File Properties
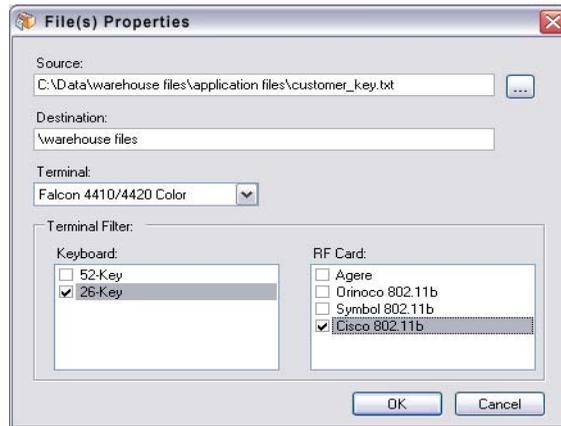
Source	Displays the location of the file(s) you have selected.
Destination	View or change the file's destination.
Terminal	View or change the terminal type specified, which determines which terminals will be updated. If [Any] is selected, all terminals will be updated with the specified file(s).
Keyboard	View or change the keyboard type for the terminal to which files will be sent.
RF Card	View or change the RF Card type for the terminal to which the specified file(s) will be sent.

About Files

File selections are simple file lists selected from a standard Windows dialog box. Files are defined and manipulated at a package level. See "Adding and Assigning Packages" on page 31 and "Adding Files to a Package" on page 32.

Firmware Image Files

FMU has an integrated mechanism for updating the firmware image on specified terminals. Firmware updates can be included in a package. See "Adding a Firmware Image File" on page 34.

NOTES

Chapter 4
Configuration Settings

Overview

This section covers the following topics:

Configuration Settings

Each configuration screen contains fields that allow you to customize the configuration settings for each item. You can make changes to any or all of the settings.

Reset Values

Globally resets all values in the selected **Configuration** dialog.

Figure 18. Reset Values

Factory Default	Returns all Configuration items to their factory default settings.
All Off	Turns every on/off parameter off and sets all min/max lengths to their lowest values
*All On	Turns every On/Off parameter on and sets all min/max lengths to their highest values.
*This default set is normally used only for troubleshooting. It gives the best chance of reading an unknown bar code symbology and also identifies the symbology of each bar code scanned.	

Symbology Settings

Symbology Settings in FMU allow you to select desired symbologies and options for terminal bar code scanning. Settings can be applied to entire groups using the **Group Configuration** feature. For troubleshooting purposes, terminal configurations can be applied to individual terminals.

Figure 19. Configure Symbology Settings
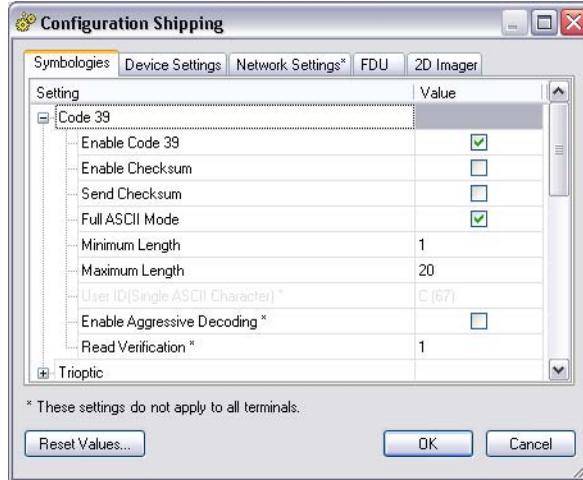
Please refer to *Bar Code Parameters* in the *PRG* for the specific terminal model you are using for more information.

Device Settings

FMU's **Device Settings** configuration capabilities allow you to perform central-
ized, automated updates of selected terminal settings automatically.

Figure 20. Configure Device Settings
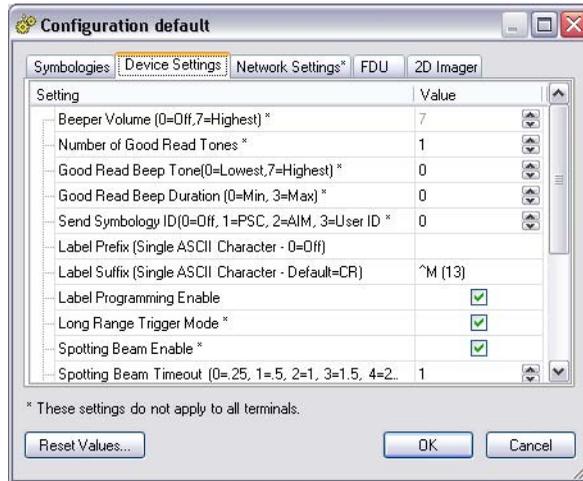
Refer to the *PRG* for the specific terminal model to see the parameters avail-
able under **Device Settings**. These will vary based upon the device you are
using. Select the settings you want to change or enable.

Network Settings

Click the **Network Settings** tab to view and select available options.

Figure 21. Network Configuration Settings
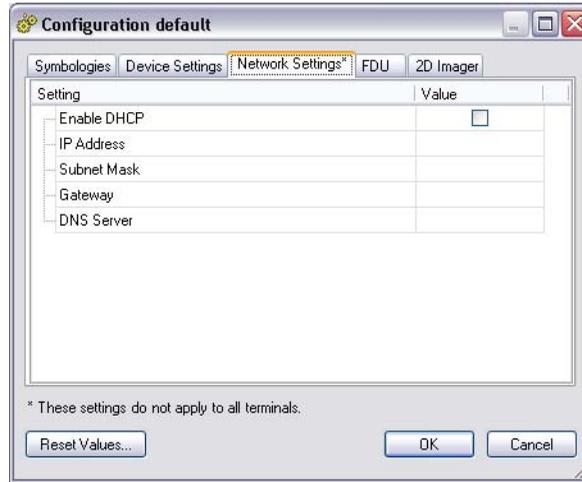
Table 2. Network Configuration Settings

Network Settings	Description	Action
Enable DHCP	Automates configuring of computers using TCP/IP.	Check to enable.
IP Address	Network address of a computer on a network.	Enter value.
Subnet Mask	Number used to identify a subnetwork so an IP address can be shared on a Local Area Network (LAN).	Enter value.
Gateway	System (bridge) for exchanging information across networks.	Enter value.
DNS Server	Domain Name Server aka Domain Name Service, server that resolves IP addresses from host names.	Enter value.

NOTE

Network configuration settings only apply during Direct Connect Dynamic Terminal configuration, they do not apply to RF connections.

FDU Configuration Settings

Falcon Desktop Utility (FDU) allows administrators to configure Windows CE or Windows Mobile terminals to control individual user access. See the *PRG* for your terminal type for detailed information about each parameter.

Figure 22. FDU Configuration Settings
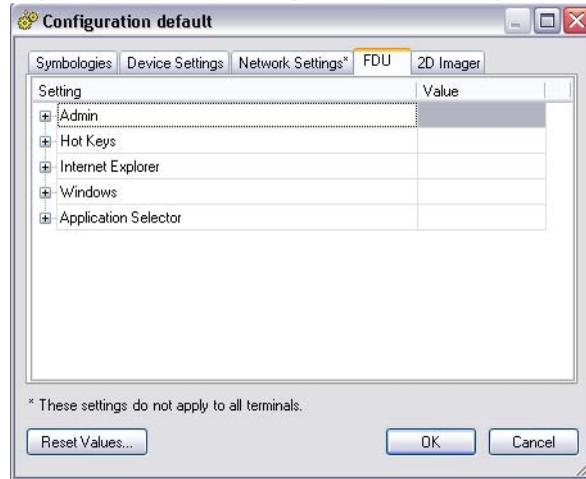
Table 3. FDU Configuration Settings

FDU	Description
Admin	Enable/disable Falcon Desktop to activate FDU functions. Once enabled, define an optional password by entering it into the field.
Hot Keys	Use Hot Keys to associate specific keys with specific applications. You can also create new Hot Key combinations.
Internet Explorer	Allows you to set IE configuration options.
Windows	Use Windows controls to allow or restrict access to Windows system functions.
Application Selector	When Application Selector is enabled, it replaces the Desktop and allows only use of authorized applications.

2D Imager Settings

This panel contains settings for 2D bar code symbologies, as well as configuration items for Image Capture. **2D Imager Settings** in FMU allow you to set additional symbologies beyond those listed in the Symbology tab. These configuration items are supported only by units with the 2D Imager module.

Figure 23. 2D Imager Configuration Settings
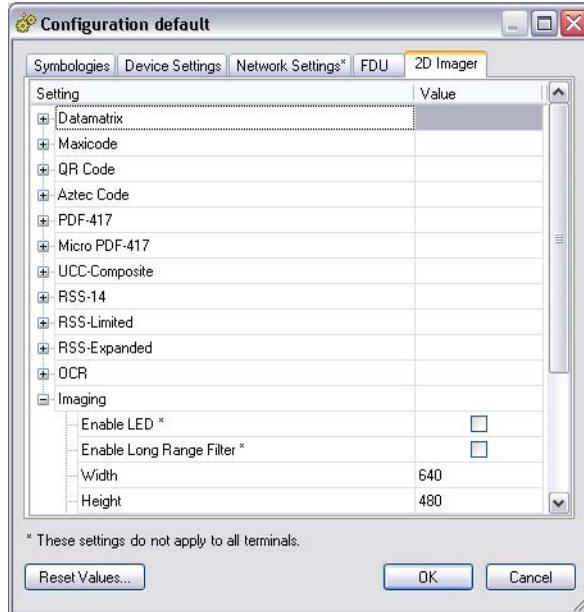
Refer to the *PRG* for your device to see descriptions of the available parameters. Select the settings you want to change or enable.

NOTES

Chapter 5
Terminal to FMU Server Communications

Overview

Prior to installing FMU for the first time, you should set up terminals to communicate with FMU. This requires the completion of two steps:

1. Establish communication from the terminal(s) to the host computer. Set up a connection using either an RF connection or using Direct Connect with a Datalogic Dock. See the *PRG* for your terminal type for specific information.

2. Enable FMU on the terminal. See either "Direct Connect" on page 50 or "RF Connection" on page 52.

This section covers the following topics:

Direct Connect

For terminals using a physical connection, communication needs to be established with the computer where the FMU Server will be installed. Please refer to the *PRG* for your terminal type, included on the Datalogic Mobile Product CD, for specific installation and configuration instructions.

Requirements for a physical connection may vary depending on the terminal model. Refer to your terminal's *PRG*.

Enabling a Terminal for FMU with Direct Connect

Use Direct Connect with terminals that use a dock.

Enable a terminal for FMU using Direct Connect

1. On the terminal you want to set up:

    WinCE:

    Go to **Start > Programs > Falcon Management > FMUinit**.

    Windows Mobile:

    Tap 🎨 **> Settings > System > Falcon Config.**

2. Check **Enable FMU Client**.

3. Select **Direct** from the drop-down list for the **Connection** field.

4. Enter the group to which you want to add the terminal. If you leave the field blank, the terminal will automatically be assigned to the Default Group.

5. Tap **OK** to complete the setup.
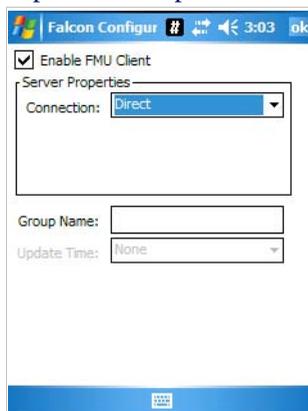
Enable FMU Client	Select to enable the terminal to work with FMU.
Connection	Select `Direct`.
Group Name	Enter a group name, or leave blank to select the Default Group.
Update Time	This feature is disabled with Direct Connection. To enable, you must have an RF connection. See **"RF Connection" on page 52**.

Explore Terminal

Use the Microsoft ActiveSync Explore option to view directory structure on direct connect terminals. Refer to the *PRG* for your terminal for instructions on establishing a direct connection between the terminal and PC.

NOTE **On direct connect terminals, the FMU Explore option is not available. Use the Microsoft ActiveSync Explore option for access to the terminal's directory structure. See the documentation for ActiveSync for information on this feature.**

Updating Terminals

Placing the terminal in the dock will trigger an update. ActiveSync will initiate when the unit is in place. Next, the **FMU Update** dialog will appear and will remain active while the unit remains in the dock. See ActiveSync instructions in the terminal's *PRG*.

NOTE **Scheduled Update is not available on direct connect terminals. Updates are initiated each time the unit is docked and successfully connects to the host computer via ActiveSync.**

CAUTION **Terminals should not be removed from the dock during the update process. Wait until you see the FMU Update and FMU FAST Update indicating 'Idle.'**

RF Connection

For RF units, terminal(s) need to have existing communication to a wireless network. See the *PRG* for your terminal for complete information.

Enabling Terminals for RF Connectivity

Each terminal that you want to connect to FMU must be enabled for FMU. This only needs to be done once for each terminal upon initial installation.

To enable a terminal for FMU:

1. On the terminal you want to set up:

    WinCE:

    Go to **Start > Programs > Falcon Management > FMUinit.**

    Windows Mobile:

    Tap 🏁 **> Settings > System > Falcon Config.**

2. Select **Enable FMU Client**.

3. Select **Network** for the **Connection** field.

4. Choose the Discovery method by selecting **Manual** or **DHCP** in the **Discovery** field.

    *   Select **Manual** to specify the FMU Server manually (see Figure 24A).
    *   Select **DHCP** to allow the FMU Server settings to be obtained automatically using DHCP Discovery (see Figure 24B). Refer to Appendix B on page 61 for information on configuring your network to support DHCP Discovery.

5. Enter the server name or IP address in the **IP Address** field.

Figure 24. FMU Client Settings - RF
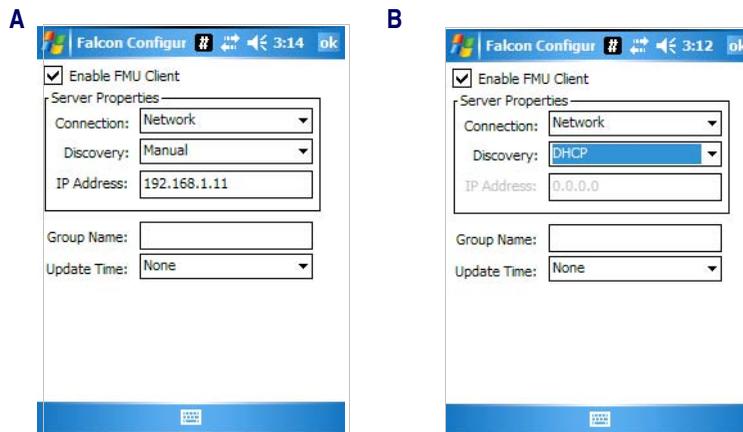
Enable FMU Client	Check to enable the terminal to work with FMU.
Connection	Select Network.
Discovery	Select **Manual** or **DHCP.**
IP Address	Enter the server name or IP address.
Group Name	Enter a group name, or leave blank for the Default group.
Update Time	Select a time from the 24-hour clock to indicate when the terminal will attempt to contact the FMU Server. The terminal must be ON in order for the update to run.

An alarm can be set to wake the terminal at the scheduled update time.
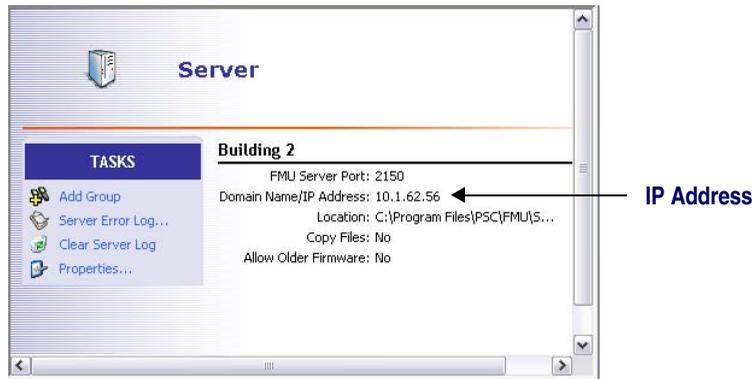
6. On the terminal, enter the group to which you want to add the terminal. If you leave the field blank the terminal will automatically be assigned to the Default Group.

> **NOTE** You can easily change the group assignment for a terminal after it has been added to FMU. See **"Terminal Group Assignments" on page 36.**

7. If you want to set a specific update time, select a time in the drop-down box for **Update Time**. The terminal will attempt to contact the FMU Server at the selected time.

> **NOTE** The terminal must have a valid RF connection and be ON in order for a scheduled update to occur. See **"Updating Terminals" on page 51** and **"Updating RF Terminals" on page 55.**

8. Click **OK** to complete the setup.

See Also

- "Managing Servers" on page 25
- "Working with Groups" on page 29
- "Adding and Assigning Packages" on page 31
- "Terminals" on page 36
- "Working with Files" on page 39
- "Network Settings" on page 45

Exploring an RF Terminal

You can use FMU to view the contents of a terminal's memory, similar to the way you view files in Windows Explorer. FMU uses FTP technology to establish communication with the terminal.

ActiveSync must be installed on the machine where the FMU Server resides. See your documentation for Microsoft ActiveSync for more information.

To Explore an RF Terminal:

1. From the Tree View, select the terminal you wish to explore.

2. On the **View** menu, click **Explore**.

3. The contents of the terminal's memory will be displayed in a new Explorer window.

Figure 25. Exploring a Terminal
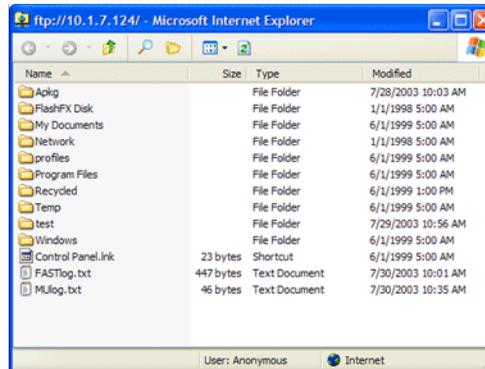
Updating RF Terminals

Updating terminals will transfer group configuration settings and assigned packages to the specified terminal(s). You can specify update settings from the FMU console, and also from the terminal itself.

Update Terminal(s) Now

This option is available for groups and individual terminals. When **Update Terminal(s) Now** is selected, the server will send a message to each terminal indicating that the terminal needs to be updated. The terminal operator will receive a prompt requesting to proceed with the update as shown in Figure 26.

Figure 26. Terminal Updater prompt

If the operator taps **Yes**, the terminal will be immediately updated.

Scheduled Update Time

A second option is available only on the terminal itself. This option is configurable from the **Falcon Config** application on the terminal. See "Enabling Terminals for RF Connectivity" on page 52.

If an update was scheduled on the terminal, the FMU client on the terminal will automatically trigger an update within the specified hour. The terminal needs to be on in order for the update to proceed. It is advised that the unit be left in its Datalogic Dock if unattended.

Terminal Configuration Settings

For diagnostic purposes, you can display an individual terminal's configuration settings. This view is similar to the group configuration view; however, the data within this view reflects settings on the selected terminal.

NOTE **Since terminal settings are superseded by group settings, the next time the terminal is updated the defined group settings will be applied, overwriting changes made with Terminal Configuration.**

NOTE **On units with Direct Connection, wait until the FMU Update or Mgmt. Utility Client dialog on the terminal indicates 'Idle' mode before selecting this option.**
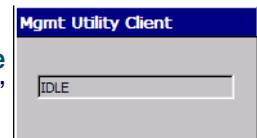
To access terminal configuration settings:

  1. Expand the view of the terminal you want to configure by clicking on the plus sign (+) to the left of the terminal.

2. Click on **Terminal Configuration** in the terminal List View pane.
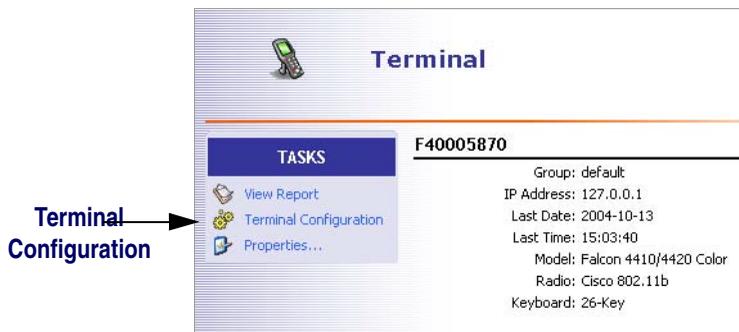
3. **Terminal Configuration** will open:
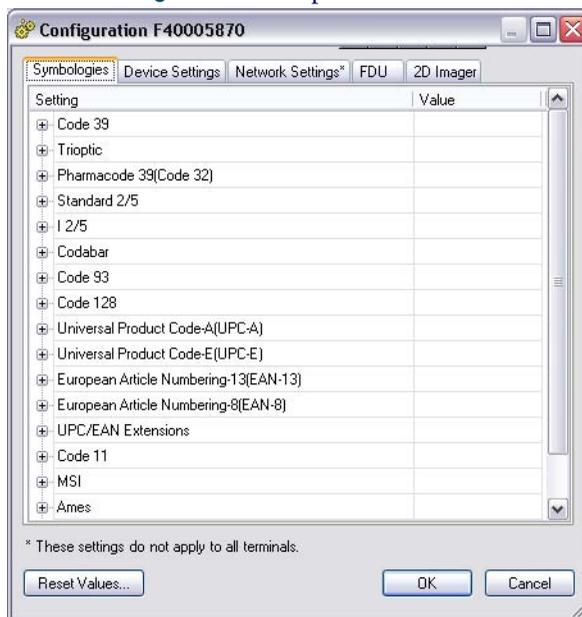
Within this dialog you can modify configuration values for the selected terminal. See "Configuration Settings" on page 41 for a detailed description of each configuration option.

When exiting, click **OK** to save any changes to the terminal configuration.

NOTE — **Since terminal settings are superseded by group settings, the next time the terminal is updated the defined group settings will be applied, overwriting changes made with Terminal Configuration.**

Terminal Report

On units with Direct Connection, wait until the FMU Update or Mgmt. Utility Client dialog on the terminal indicates 'Idle' mode before selecting this option.
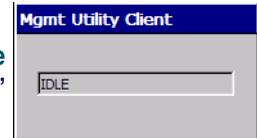
A **Terminal Report** lists the following information:

- Scanner settings
- Device settings
- Network settings
- FDU settings

To access a terminal report:

1. Expand the view of the terminal you want to configure by clicking on the plus sign (+) to the left of the terminal.

2. Click on **View Report** in the terminal List View pane.
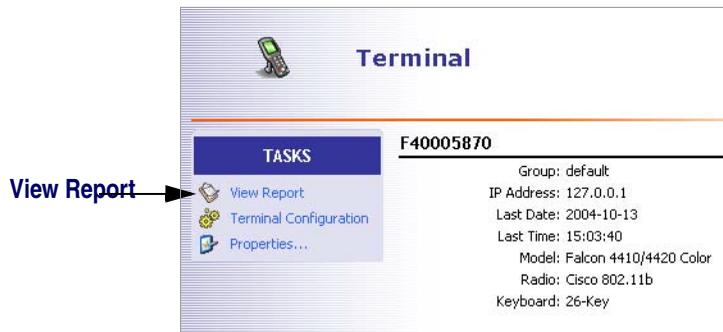
See Appendix C, "Terminal Report" on page 75 to view a sample report.

Appendix A
SNMP Interface

Overview

SNMP Concepts

The Simple Network Management Protocol (SNMP) is a standardized proto-col for network management services using a client/server model. The network management program (client) issues queries and commands to the remote device (agent/server). The protocol itself defines a number of variable types and structures, and the rules for using them for data transfer. Using these vari-able types and rules, there are a number of standard variables that are sup-ported by all SNMP agents. These standards include network addressing (IP address, subnet mask, etc.), and network statistics (total packets, bad packets, etc.).

FMU uses Simple Network Management Protocol (SNMP) to perform many of its functions. When the Terminal Configuration or Terminal Report func-tion is selected, SNMP is used to query the terminal for its current configura-tion settings, as well as current status information such as battery status and memory usage. In the same function, SNMP is used to update terminal con-figuration settings when directed. SNMP is also used by FMU servers to per-form automated group updates.

MIB Files

A Management Information Base (MIB) is a file that defines a set of SNMP variables, and their types and usage. There are a number of standard MIBs available, depending on the information being managed.

Datalogic MIBs

Beyond the standard values, SNMP allows manufacturers to define their own private MIBs. For example, Datalogic has been assigned a MIB by the Internet Assigned Numbers Authority that allows Datalogic to define SNMP values relating specifically to devices that we manufacture. Within the Datalogic MIB, several categories of values have been defined including scanner configurations, terminal power configurations and terminal network parameters.

The format of a MIB follows rules laid out in the appropriate standards, allowing the manufacturers of network management tools such as HP OpenView, IBM's Tivoli, Computer Associates' Unicenter, and CastleRock SNMPc to make use of the MIBs developed by manufacturers. The MIB can be processed by following the procedures used by the management tool, allowing for the proper display of SNMP values retrieved from the agent.

For example, if the Datalogic MIB is loaded into OpenView, the administrator can then view all of the values defined by Datalogic using the names assigned by Datalogic, as well as a brief explanation of what each value represents. This will also allow the administrator to update most values, and provides range checking information for the tool to take advantage of. The current Datalogic MIB can be found on the Datalogic Mobile website at www.mobile.datalogic.com in the Downloads area.

Additional Resources

Additional information on SNMP can be found at the following websites:

www.snmplink.org

www.snmpworld.com

www.simpleweb.com

Appendix B
DHCP Server Setup

Setting up your DHCP Server

In order for FMU to be able to use DHCP Discovery, the network DHCP Server must be configured to provide an FMU server address. To set up your DHCP Server to supply the FMU Server information to each terminal, you will need to add a new DHCP option.

Option "233" is the default option used by the terminal if FMU DHCP Discovery is enabled. This option should contain the string "*FMUserver*", where *server* is either the IP address or hostname of the FMU Server where auto-discovering terminals will associate (for example, *FMU127.0.0.1*). See "Enabling Terminals for RF Connectivity" on page 52 for details on setting up a terminal for DHCP.

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Appendix C
Troubleshooting

Overview

This section contains the following information:

RF Connectivity

Use the RF Connectivity Troubleshooting Flowchart when experiencing problems connecting a Datalogic terminal to a host. If you have questions, please call Datalogic Mobile Technical Support.

Figure 27. RF Connectivity Troubleshooting Flowchart
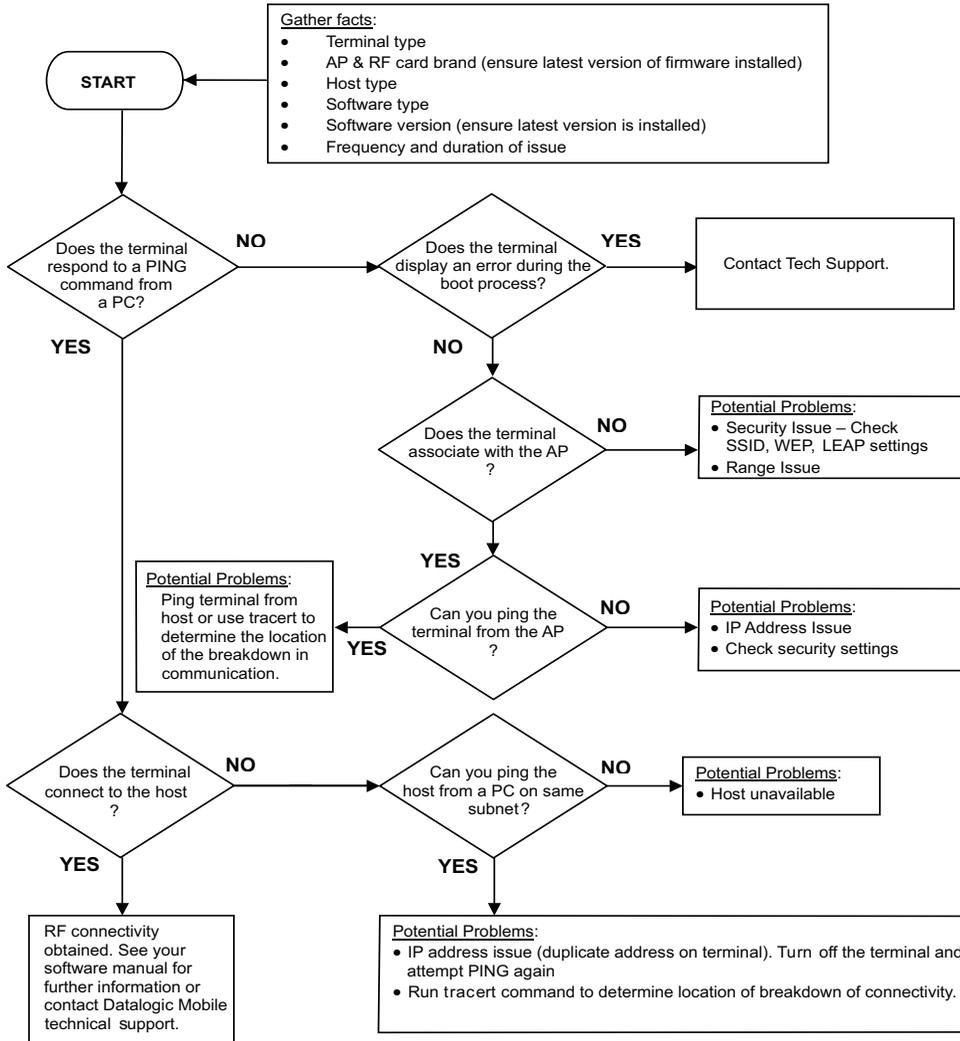
(*For more information on the Ping command, go to the command prompt on the PC and type PING.* For more information on the trace route command, go to the command prompt on the PC and type *tracert.*)

Windows Firewall Issues

How to Open Ports in the Windows Firewall

To work correctly, the FMU server must be able to send and receive information over the network. The information enters your computer through an *inbound port*. After you turn on a firewall, the firewall will not allow FMU to use these inbound ports. You must make some adjustments for FMU Server to communicate with the terminals. The host PC must have the correct inbound ports open in the firewall to allow this information to pass through.

Table 4 is a list of ports with instructions on manually opening the ports that the Host PC can communicate correctly with the terminals. Following Table 4 are step-by-step instructions for manually opening ports in Windows Firewall. These instructions are specific to *Windows XP with Service Pack 2 (SP2)* installed. For other types of firewalls, or Windows Firewall prior to SP2, please refer to the documentation for your product.

Table 4. Inbound PC Ports

Used by	Ports	Notes
FMUFast	TCP 3453	This port is used by the FMU server to communicate with terminals. Required for file transfers and firmware updates.
FMUTrapshot	UDP 2151	Required for file transfers. Required for terminal-server communications.
FMUWorkstation	TCP 2150	This port is used for communication between the FMU workstation and server.

CAUTION

Opening ports in a firewall can create a security risk and leave your computer vulnerable. Only open ports that are absolutely needed.

To manually open ports in the Windows Firewall with Windows XP SP2 installed:

1. Go to **Start > Control Panel > Security Center.**

2. Click on **Windows Firewall**.

Manage security settings for:

Internet Options   System   Windows Firewall

3. On the **General** tab, uncheck the **Don't allow exceptions** checkbox.

NOTE
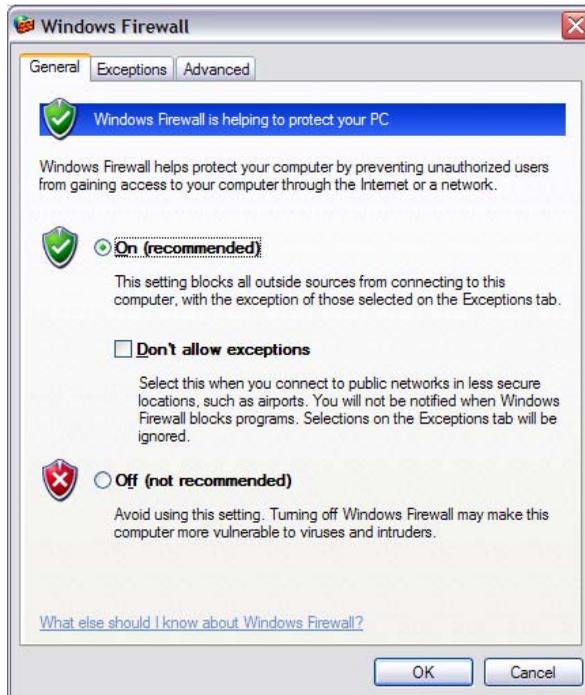
If "Off" is selected, the computers within your network may be secured by an external firewall. Consult your network administrator before making any changes.

4. Click on the **Exceptions** tab. If you want to view the Port number for a service, click **Edit**.

5. Click **Add Port**.
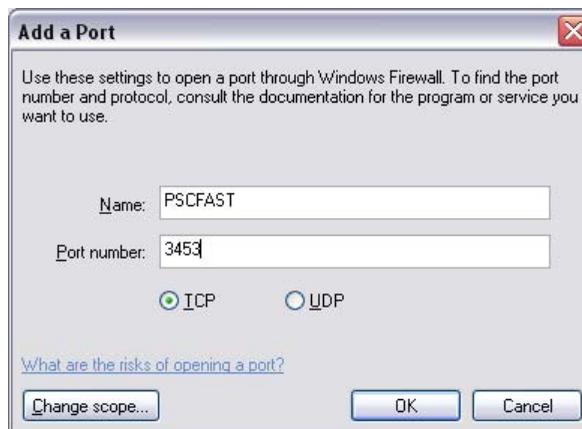
6. Enter the Port number (refer to Table 4 on page 65). In the **Name** field, enter a name to identify the port you want to open.

   Enter a name that will help you remember the service and the port, such as those listed in Table 4 on page 65. You can use any name that you want. The name does not have any effect on the functionality. It is only to help you identify this exception.

7. Select either **TCP** or **UDP**, and then click **OK**.

8. Click **OK** to save your changes. Once ports have been added, make sure they are enabled (checked).

9. Repeat this process for ports 2150(TCP) and 2151(UDP).

If you are using ActiveSync to communicate with the terminals, you will need to ensure that your firewall allows ActiveSync Connection Manager to send/receive data over the network. Refer to your documentation for more details on this.

Network Domain File Transfer Troubleshooting

If any of the files to be sent to a terminal are located on a computer other than the one designated as the FMU Server, those files need to be shared. Because FMU Server runs as a Windows service, you must set up sharing using the following steps:

1. On the computer where FMU Server is installed, go to the **Start** menu and click on **Control Panel** > **Administrative Tools**.

2. Double-click the **Services** icon.
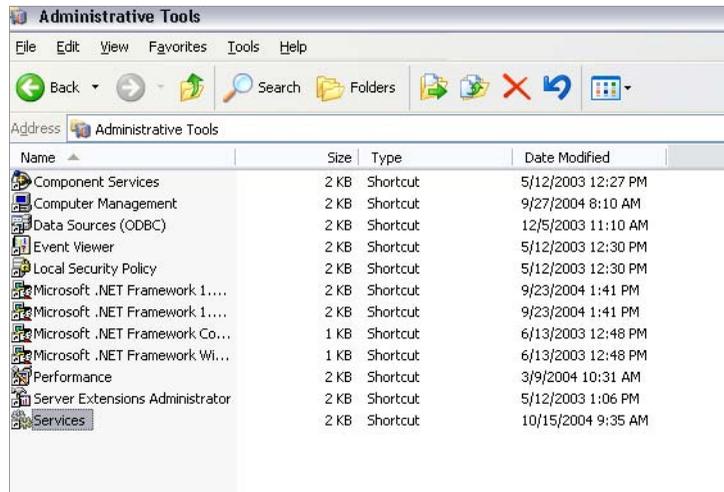
3. Double-click **FMU Server** to display its Properties.
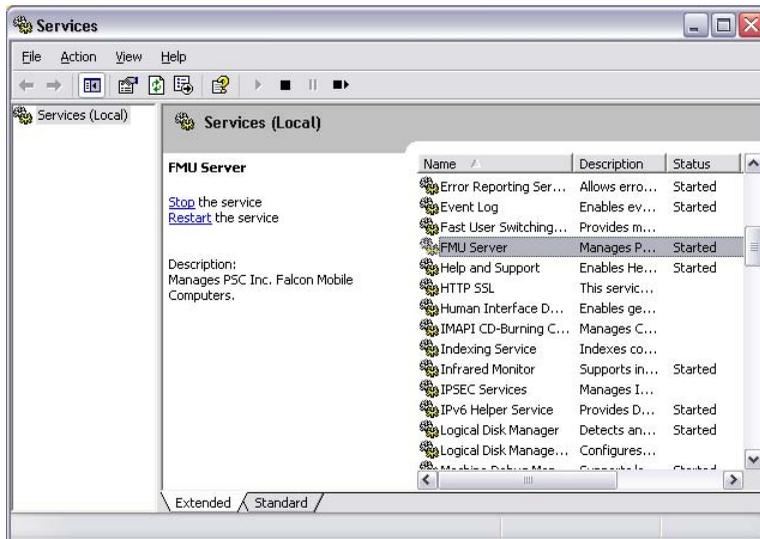
4. Click the **Log On** tab and choose **This account:**. Enter a valid domain user name and password.
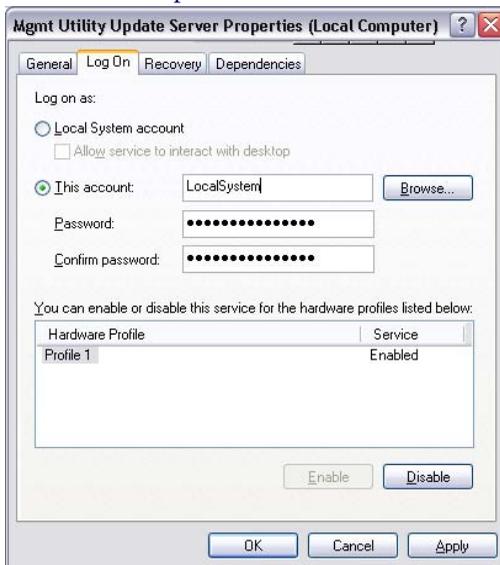
You can browse the domain users by clicking **Browse** and selecting the domain where the FMU server is located.

5. Once the domain users information is entered, click **OK**. This will enable the server to retrieve files from a remote computer within the Domain. You must have file sharing enabled on the remote computer where the files are located.

6. If you are running **Windows XP Professional** on the workstation you must enable file sharing and give the Domain user exclusive rights to the files. If you want to retrieve files from a computer inside another domain you will have to copy the files to the computer within the Domain where the server is located.

7. To ensure security, shares should be created and permissions given to the Administrator specified in step 6. See documentation for your Windows operating system for information.

NOTE **It is recommended that the default Packages folder, located at `C:\Program Files\Datalogic\FMU\Workstation`, be used to collect any files that need to be transferred to the terminals and the server. This folder will need to be shared.**

Windows XP Home

Creating a Share in Windows XP Home

Installing the Server Only component using XP Home

The following procedure is only necessary if you are installing the Server component to a separate computer from the FMU Workstation. If you have performed a Complete Install and FMU Workstation and Server are on the same computer, no additional steps are necessary unless you intend to allow access from external workstations.

Windows XP Home Setup

Windows XP Home does not allow for an Active Directory domain. If installing on a system running Windows XP Home for a separate Server component, you must complete the following additional steps to prepare it for FMU. This will create a network share on the server that stores the .xml files.

1. Open **Windows Explorer** or **My Computer.**

2. Go to the **Tools** menu and select **Map Network Drive** to open the **Map Network Drive** dialog.

Drive	Specify what drive letter to assign the new network drive.
Folder	This is the network path to the server. You will need to enter or browse to the network path as specified by your network administrator.
Reconnect at logon	Recreates and connects the share every time you login.

Falcon® Management Utility (FMU)

3. Select a drive letter that is available.

4. Make sure the **Reconnect at logon** checkbox is checked.

5. Enter the network path for the server's shared directory. (Example: **\\myserver\server**, where myserver is the name of the server and server is the shared directory.) Click **Browse** to find the shared directory of the server manually. Click **OK**.

6. Click **Finish** to close the **Map Network Drive** dialog.

7. If the **Enter Network Password** dialog appears, enter your user name and password.

8. Click **OK** to complete the setup.

This creates the share between your computer and the server's configuration files. You are now ready to use FMU.

Technical Support

Datalogic Mobile Website Support

The Datalogic Mobile website (www.mobile.datalogic.com) is the complete source for technical support and information for Datalogic products. The site offers the Datalogic TekForum, product support, product registration, warranty information, product manuals, product tech notes, software updates, demos, and instructions for returning products for repair.

Datalogic Mobile Website TekForum

Search for information on the TekForum on the Datalogic home page. Browse the TekForum to find answers to your questions about common technical issues.

Reseller Technical Support

An excellent source for technical assistance and information is an authorized Datalogic reseller. A reseller is acquainted with specific types of businesses, application software, and computer systems and can provide individualized assistance.

Telephone Technical Support

If you do not have internet or email access, you may contact Datalogic technical support at (541) 743-4802.

Sample Reports

Terminal Report

See "Terminal Report" on page 58 for information about accessing a Terminal Report.

Figure 28. Sample Terminal Report

Terminal Report: F00000001

Symbologies	

Code 39	
Enable Code 39	Yes
Enable Checksum	No
Send Checksum	No
Full ASCII Mode	Yes
Minimum Length	0
Maximum Length	20
User ID(Single ASCII Character)	C

Trioptic	
Enable	No
User ID(Single ASCII Character)	X

Pharmacode 39(Code 32)	
Enable	No
Send Checksum	No
Send Start Stop	No
User ID(Single ASCII Character)	Y

Standard 2/5	
Enable	No
Minimum Length	6

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Appendix D
Glossary

Many definitions for this Glossary were taken directly from the Microsoft Developer's Network website at http://msdn.microsoft.com/library/default.asp.

1D Bar Code A traditional linear bar code. The code itself contains no information about the item to which it is assigned but represents a string of identifying numbers or letters.

2D Bar Code Two-dimensional (2D) bar codes permit the encoding of information about an item in addition to an identifying code. Two axes, or directions, are used for recording and reading the codes and the bar size is reduced, increasing the space available for data.

ActiveSync Microsoft Windows communication application that synchronizes a Windows CE or Windows Mobile device with a Microsoft Windows-based host PC. ActiveSync can use RS-232, IrDA, and USB.

AP Access Point used for RF applications.

ASCII American Standard Code for Information Interchange; a code for information exchange between computers made by different companies; a string of 7 binary digits represents each character; used in most microcomputers. Any member of the standard code for representing characters by binary numbers.

Check Digit A character included within a string of data whose value is used for the purpose of performing a mathematical check to ensure the accuracy of that data.

Checksum A summation of check digits used to determine if an error has occurred in the transmission of data.

CLSI CLSI, Inc., developer of the "LIBS 100 scanning and decoding system". The "Convert to CLSI" parameter refers to formatting a Codabar bar code label in the manner defined by CLSI, Inc.

Context Sensitive Help Context sensitive help can tell where you are in a program and can provide assistance with the specific problems you might be having.

Control A standardized part of the window that can be manipulated by the user to perform an action or display information. The most common controls are buttons that allow the user to select options and scroll bars that allow the user to move through a document or position text in a window.

Device Partnership	A registry key on a Windows CE device that a desktop computer uses to identify the device when it is connected. The key defines values for synchronization, file conversions, and backup and restore information, which enable multiple Windows CE devices to connect to the same desktop computer. A device partnership is created the first time you connect a Windows CE device to a host PC.
DHCP	Dynamic Host Configuration Protocol, used to automate the configuration of computers that use TCP/IP.
DNS Server	Domain Name Server (aka Domain Name Service) is a server that resolves IP addresses from host names.
Falcon Config	Falcon Config is a control panel on Windows Mobile that encapsulates FMU, and can optionally also contain FDU.
Falcon Desktop Utility (FDU)	Falcon® Desktop Utility (FDU) allows Datalogic Windows® administrators to configure Falcon Windows®CE terminals to control individual user access.
Falcon Management Utility (FMU)	A Datalogic Windows-based management application for managing the configuration settings and updating the operating system and applications automatically from a server using the wireless network system on the terminal.
FAST	Part of Datalogic's Falcon Management Utility (FMU) application for the terminal that updates the operating system and applications automatically from a server using the wireless network system.
Firmware Image	Operating System files for the PDT.
FMU Console	The administrative component of the FMU application, installed on the Workstation.
FMU Server	FMU Component that performs terminal updates.
Gateway	System (bridge) for exchanging information across networks.
Group	A group of terminals associated with a specific function, i.e. picking, receiving, etc.
Invalid Characters	Characters that cannot be entered into a field in FMU. Identified invalid characters are ',>,<&".
IrDA	A communications protocol using an Infrared device to communicate with the Host PC.
ISBN	International Standard Book Number. A unique number assigned to each book to allow ease of ordering from any source: local bookstore, online book dealers, or directly from the publisher. The ISBN number is usually printed on the back cover of a book, near the bar code but can also appear within the book.

ISSN	International Standard Serial Number. An ISSN consists of eight digits comprising two groups of four digits each, separated by a hyphen. The eighth digit is a check digit used as a computer validity check; it consists of a number between 0 and 9 or an uppercase X (for the arabic numeral 10).
List View	The data that appears in the right pane when an option is selected in Tree View.
MIB (Management Information Base)	A Management Information Base (MIB) is a file that defines a set of SNMP (Simple Network Management Protocol) variables, their types and usage. There are a number of standard MIBs available, depending on the information being managed. The MIB is used by the management tools to allow them to better support the configuration values provided on the terminals, such as scanner controls and terminal type information.
Network ID	Here used to mean that you should configure the Windows user settings, such as the user name, password, and domain name. Microsoft's definition includes some wireless network IDs as equivalent to SSIDs.
Packages	A grouping of files, packages and firmware images.
Portable Data Assistant (PDA)	A handheld Windows-based computer that can be synchronized with a host PC to share files and data. Sometimes contains an infrared device to beam information to another unit.
Portable Data Terminal (PDT)	An industrial strength handheld computer with a keypad, navigation keys, and a bar code scanner used in inventory, retail, and warehouse activities to collect data and upload it to a host PC.
PRG	*Product Reference Guide.* It is included on the Product CD that accompanies each Datalogic unit.
QRG	*Quick Reference Guide.* A printed copy is included in the box with each unit.
RF card	A small card-shaped device installed in a terminal that allows wireless connection and communication with a network.
Server Error Log	Server Activity Log. This log displays server actions and errors.
Shortcut menu	A menu that is displayed for a selected object; usually accessed by right-clicking the mouse over the selected object. The menu contains commands that are contextually relevant to the selection in the Tree View.
SNMP (Simple Network Management Protocol)	SNMP is the standard protocol for managing devices on a network. Simple Network Management Protocol (SNMP) is a standardized protocol for network management services using a client/server model. The network management program (client) issues queries and commands to the remote device

SSID	Secure Set Identifier (32-character unique Identifier) — a sequence of characters that uniquely names a wireless local area network (WLAN). This name allows workstations to connect to the desired network when multiple independent networks operate in the same physical area.
Start	**Start (![icon])** opens the Start menu. The Start menu contains a list of the available applications, applets, and utilities on the device.
Subnet Mask	Number used to identify a subnetwork so that an IP address can be shared on a Local Area Network (LAN).
Symbology	A symbology is a protocol for arranging the bars and spaces that make up a particular kind of bar code. A bar code is made up of numbers, letters, and computer-recognized characters that can be represented in a combination of bars and spaces. There are currently over 400 bar code symbologies that serve different uses, industries, or geographic needs.
Terminal	An individual unit attached to an FMU network.
Tracert	Trace Route. A utility/command to determine TCP/IP packet routing.
Tree View	The list of items that appear in the left pane of the FMU Console.
UI	User Interface.
Uniform Resource Locator (URL)	The address of a resource on the Internet. URL syntax is in the form *protocol://host/localinfo*, where *protocol* specifies the means of returning the object, such as HTTP or FTP. *Host* specifies the remote location where the object resides and *localinfo* is a string, often a file name, passed to the protocol handler at the remote location. *Also called* a Uniform Resource Identifier.
USB	Universal Serial Bus is a hardware standard for connecting PCs with peripheral devices, including PDTs, PDAs, mobile computers, cameras, printers, mice, scanners, etc.
Web Server	The web server can perform several different actions, including generating a web page containing statistics relating to performance of the mobile computer and creating an interface for interaction with the terminal to configure system behavior.

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ASCII Character Set

The table on this page shows a set of ASCII characters and their corresponding Hex Values. The Hex Values in this table are needed for setting symbology specific label identifiers, as well as enabling custom prefix and suffix characters.

ASCII Char.	Hex Value	ASCII Char.	Hex Value	ASCII Char.	Hex Value	ASCII Char.	Hex Value
nul	00	sp	20	@	40	`	60
soh	01	!	21	A	41	a	61
stx	02	"	22	B	42	b	62
etx	03	#	23	C	43	c	63
eot	04	$	24	D	44	d	64
enq	05	%	25	E	45	e	65
ack	06	&	26	F	46	f	66
bel	07	'	27	G	47	g	67
bs	08	(	28	H	48	h	68
ht	09	)	29	I	49	i	69
lf	0A	*	2A	J	4A	j	6A
vt	0B	+	2B	K	4B	k	6B
ff	0C	'	2C	L	4C	l	6C
cr	0D	-	2D	M	4D	m	6D
so	0E	.	2E	N	4E	n	6E
si	0F	/	2F	O	4F	o	6F
dle	10	0	30	P	50	p	70
dc1	11	1	31	Q	51	q	71
dc2	12	2	32	R	52	r	72
dc3	13	3	33	S	53	s	73
dc4	14	4	34	T	54	t	74
nak	15	5	35	U	55	u	75
syn	16	6	36	V	56	v	76
etb	17	7	37	W	57	w	77
can	18	8	38	X	58	x	78
em	19	9	39	Y	59	y	79
sub	1A	:	3A	Z	5A	z	7A
esc	1B	;	3B	[	5B	{	7B
fs	1C	,	3C	<	5C			7C
gs	1D	=	3D	]	5D	}	7D
rs	1E	>	3E	^	5E	~	7E
us	1F	?	3F	_	5F	del	7F

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