



Experion PKS

Release 130.2

## Firmware Manager User's Guide

EPDOC-X470-en-130.2A

*February 2021*

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## ABOUT THIS GUIDE

Firmware Manager is used to load firmware to a hardware node and access diagnostic information from the supported modules (e.g. EIM, UOC, CN100). This guide describes the prerequisites, installation, and usage of Firmware Manager.

### 1.1 Revision history

Version	Date	Description
A	February 2021	Initial release of the document

### 1.2 Terms and Definitions

The following are the terms and their definitions used throughout this guide.

Terms	Definitions
CPM	Control Processor Module
EIM	Ethernet Interface Module
ELCNBRIDGE	Enhanced Local Control Network Bridge
ELCNNODE	Enhanced Local Control Network Node
EPM	ControlEdge Expansion Process Module
PLC	Programmable Logic Controller
RFIM	Remote Fieldbus Interface Module
TCMI	Triconex Communication Module Interface
UEA	Universal Embedded Appliance
UIO	ControlEdge Universal Input Output
UOC	ControlEdge Unit Operations Controller
CN100	CN100 Controller
CC-PCNT02	C300 controller version
CC-PCNT05	Next generation C300 controller
CEE	Control Execution Environment
IOMs	Input/Output Modules

## ABOUT FIRMWARE MANAGER

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### 2.1 Introduction

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The Firmware Manager is used to load firmware and upload debug diagnostic information for the following:

- EIM - Ethernet Interface Module
- ControlEdge Unit Operations Control System
  - UOC- ControlEdge Unit Operations Controller
  - vUOC- ControlEdge Virtual Unit Operations Controller
  - EPM -ControlEdge Expansion Process Module
  - UIO-ControlEdge Universal Input Output

#### NOTE

vUOC only supports to capture the diagnostic information.

- UEA - Universal Embedded Appliance
  - TCMI- Triconics Communication Module Interface
  - ELCNNODE-Enhanced Local Control Network Node
  - ELCNBRIDGE-Enhanced Local Control Network Bridge
- RFIM - Remote Fieldbus Interface Module
- I/O Network and Control Module
  - CN100
  - Series C IOMs
  - CC-PCNT05 controller

#### NOTE

CN100 and CC-PCNT05 controllers support all Series C IOMs, except SPM and SVPM.

## 2.2 Changes in this release

Resolved two issues. Refer to the Resolved PARs section in this document for more details.

### 2.2.1 Resolved PARs

PAR	Function	Description
1-DJO1O3R	UEA	Firmware upgrade of TCMI using FM130.1 doesn't progress beyond 5% and fails.
1-DKGP057	UOC	PLC to UOC conversion is failing.

## 2.3 Known issues

PAR	Description
1-7072Q1X	<b>Description:</b> If the application image is not present, then flashing the recovery image will fail. This PAR is applicable to EIM, UOC, EPM, UIO, TCMI, ELCN Node, ELCN Bridge, RFIM i.e., all nodes. <b>Recovery :</b> NA <b>Workaround :</b> Refer to <a href="#">Load Recovery Image</a> .
1-6FJ2EB9	<b>Description:</b> On selecting EIP or 61850 personality, Firmware Manager is not flashing the recovery image by default. This PAR is applicable to EIM only. <b>Recovery:</b> NA. <b>Workaround:</b> Flash the recovery image, then flash the app image.
1-6XP5L2I	<b>Description:</b> After a fresh Experion installation, Firmware Manager requires ENAP service restart to detect EIMs. This PAR is applicable to EIM, UOC, EPM, UIO, TCMI, ELCN Node, ELCN Bridge, RFIM i.e., all nodes. <b>Recovery:</b> Click <b>Start &gt; Windows Administrative Tools &gt; Component Services</b> . Right click and restart Experion PKS eNAP Server. <b>Workaround:</b> NA.
1-860C8G1	<b>Description:</b> Status of the module displayed in Firmware manager on Experion flex or non-Experion node will be different when compared to Experion server and console nodes. This PAR is applicable to EIM, UOC, EPM, UIO, TCMI, ELCN Node, ELCN Bridge, RFIM i.e., all nodes. <b>Recovery:</b> None. <b>Workaround:</b> None.
1-86V6ZP6	<b>Description:</b> Firmware Manager shows EPM name as not configured even when it is configured and loaded in the Monitoring side. This PAR is applicable to EPM only. <b>Recovery:</b> None. <b>Workaround:</b> None.

PAR	Description
1-8EROU7A	<b>Description:</b> Firmware update fails when synchronized redundant pair is selected for flashing in one operation. This PAR is applicable to EIM, UOC, EPM, UIO, TCMI, ELCN Node, ELCN Bridge, RFIM i.e., all nodes. <b>Recovery:</b> None. <b>Workaround:</b> Update firmware on secondary module(s) first and then update firmware on primary module(s).
1-86V6ZP6	<b>Description:</b> Firmware Manager does not display the name of EPM and UIO configured in Control Builder. This PAR is applicable to EPM and UIO only. <b>Recovery:</b> None. <b>Workaround:</b> None.
1-8HEOG97	<b>Description:</b> Flashing firmware for multiple UIO modules fails. This PAR is applicable to UIO only. <b>Recovery:</b> None. <b>Workaround:</b> Flash one UIO module at a time.
1-83CWUHT	<b>Description:</b> When multiple nodes are selected for flashing the firmware, Firmware Manager does not update the Firmware version until flashing is completed for all the nodes. This PAR is applicable to EIM, UOC, EPM, UIO, TCMI, ELCN Node, ELCN Bridge, RFIM i.e., all nodes. <b>Recovery:</b> None. <b>Workaround:</b> Wait until all the selected nodes are flashed.
1-83CWUI2	<b>Description:</b> Firmware Manager is not flashing TCMI Firmware while performing Load Firmware option. This PAR is applicable to TCMI only. <b>Recovery:</b> None. <b>Workaround:</b> Flash the recovery image; then flash the app image.
1-8GECY02	<b>Description:</b> TCMI node status is inconsistent between Experion and Standalone nodes. This PAR is applicable to TCMI only. <b>Recovery:</b> None. <b>Workaround:</b> None.
1-8IA6KNV	<b>Description:</b> Firmware Manager displays incorrect state even though application has failed. This PAR is applicable to TCMI only. <b>Recovery:</b> None. <b>Workaround:</b> Check the actual status in the TCMI LCD Display.
1-8HEOWJ7	<b>Description:</b> Firmware Manager can't flash firmware in TCMI redundant nodes together. This PAR is applicable to EIM, UOC, EPM, UIO, TCMI, ELCN Node, ELCN Bridge, RFIM i.e., all nodes. <b>Recovery:</b> None. <b>Workaround:</b> Update firmware on secondary module(s) first; then update firmware on primary module(s).
1-7BCMUXC	<b>Description:</b> TCMI application version is not shown completely. This PAR is applicable to TCMI only. <b>Recovery:</b> None. <b>Workaround:</b> Tool tip on the version shows the complete version.

PAR	Description
1-8CXDO2J	<b>Description:</b> “Error adding nodes” message appears after adding TCMI node in Firmware Manager. This PAR is applicable to TCMI only. <b>Recovery:</b> None. <b>Workaround:</b> Close and relaunch Firmware Manager.

## PREREQUISITES

On a non-Experion node, install the following software before proceeding to install Firmware Manager.

- VC++ 10 runtime
- Microsoft .NET Framework 4.5
- VC++ 2015 runtime

**NOTE**

The Operating Systems supported for Firmware Manager on non-Experion nodes are Windows 7 (64-bit), Windows Server 2008 R2 (64-bit), Windows 10 (64-bit) and Windows Server 2016.

## INSTALLATION OF FIRMWARE MANAGER

Firmware Manager is by default installed on the following Experion nodes:

- Server (ESV)
- Server TPN Connected (ESVT)
- Console Station (ES-C)
- Console Station TPN Connected (ES-T)
- Flex Station (ES-F).

### NOTE

Not all features of Firmware Manager are available when installed on the Flex node.

On Experion nodes, you can download the latest version and upgrade, while on a non-Experion node, you can install the newer version.

To install Firmware Manager, perform the following steps:

1. Download the Firmware Manager installation software from the Honeywell Process Solutions website. To download FirmwareManager\_Setup.exe, click <http://honeywellprocess.blob.core.windows.net/public/Support/Customer/FirmwareManager-R130-1-Setup.zip>.

Use FirmwareManager\_Setup.exe to install Firmware Manager on Experion node running R500.1 and later, or any non-Experion node.

2. Double-click the **FirmwareManager\_Setup.exe** and follow on-screen instructions.

**NOTE** Log in using an account that is part of the **Administrators** group to perform the install or upgrade.

To launch Firmware Manager:

1. On non-Experion nodes, go to **Start>Honeywell Tools>Firmware Manager**.

### NOTE

For non-Experion nodes, after you navigate to **Honeywell Tools**, right-click and select **Run as Administrator**.

2. On Experion nodes, go to **Start> Honeywell Experion Tools > All Honeywell Tools > Firmware Manager**.

# FIRMWARE MANAGER USER INTERFACE OVERVIEW

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The graphical user interface of Firmware Manager is explained here.

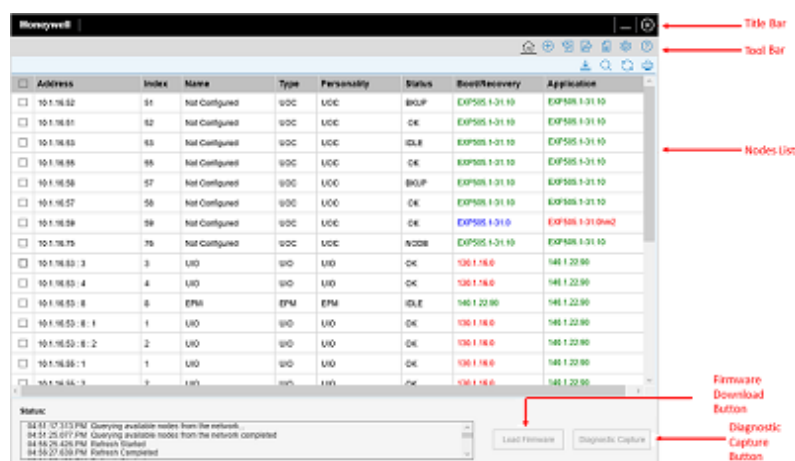


Figure 5.1 Firmware Manager Home Screen

The **Nodes list** contains the list of available nodes in the network. Information about the nodes such as IP address, Node identification index, Tag name, Type, Personality, Status, Boot/Recovery and Application are displayed. Experion nodes present in the network are auto-detected and the list is periodically updated. The status bar displays the status of the operations performed on the Home screen.

## NOTE

The Nodes List is pre-populated only on the Server (ESV), Server TPN Connected (ESVT), Console Station (ES-C), and Console Station TPN Connected (ES-T).

The **Load Firmware** button is used to flash the firmware to the selected nodes. The **Diagnostics Capture** button is used to capture maintenance information from a node.

Supported Modules	Supported Personalities
CN100	CN100 CN100RECOVERY
C300v5 (PCNT05)	C300V5
EIM	EIMRECOVERY EIMEIP EIM61850
UOC	UOC UOCRECOVERY
EPM	EPM EPMRECOVERY
UIO	UIO UIOBOOT
UEA	UEARECOVERY UEATCMI UEAELCN_BRG UEAELCN_NODE
RFIM	RFIM-APP RFIM-BOOT
Series C I/O	SERIES C-APP SERIES C-BOOT

- [Firmware Manager Workspace](#)
- [Firmware Manager Security](#)

## 5.1 Firmware Manager Workspace

This section explains the various controls available in Firmware Manager.

- [Tool bar Controls](#)
- [Node Details](#)
- [Color Legend](#)
- [Sorting](#)

## 5.1.1 Tool bar Controls



Figure 5.2 Tool bar Controls

### Add nodes


Nodes present in the network are auto-detected for the following Experion nodes:

- Server TPN Connected (ESVT)
- Console Station (ES-C)
- Console Station TPN Connected (ES-T)
- Server (ESV)

As on Experion Flex / Flex server and non-Experion nodes, Firmware Manager does not auto-detect the nodes present in the network, you must add the nodes manually to the list using the **Add Node** tool bar feature. However, you can use the Add Node feature even for Experion nodes if a node in the network is not auto-detected.

### Export node(s)

To export the nodes available in the Node list:

1. Click **Export** . The **Export Nodes** window appears.
2. Click **Browse** and select a location to save the configuration file.
3. Click **Export**. The selected files are exported and saved.

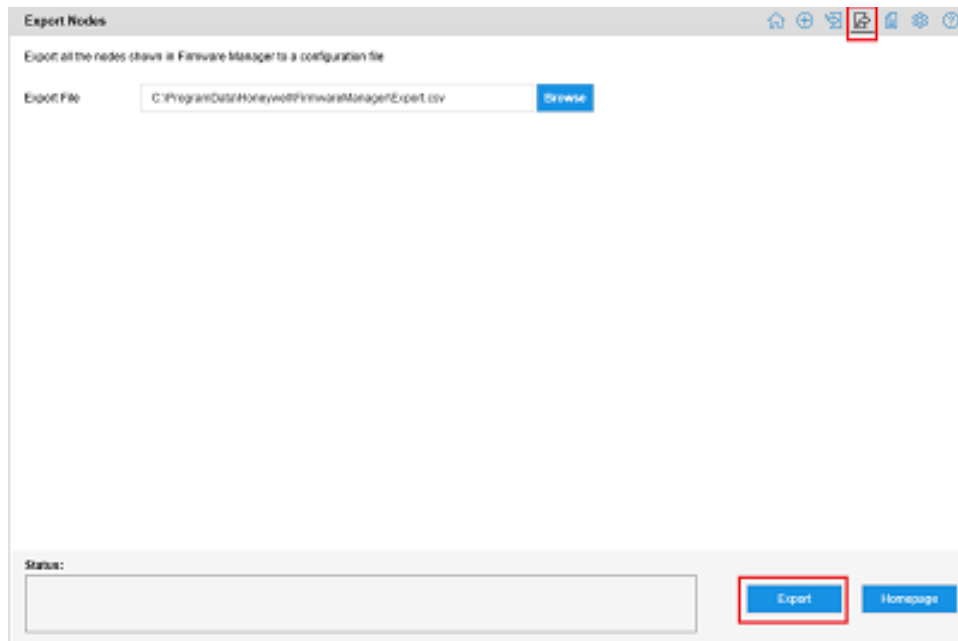



Figure 5.3 Export nodes

## Import node(s)

For platforms where nodes are not auto-detected, you can import existing nodes to the Nodes List using a configuration file from Home .For more information, refer to [Export node\(s\)](#).

To import nodes using a configuration file:

1. Click **Import** . The **Import Nodes** window appears.
2. Click **Browse** and select the configuration file.

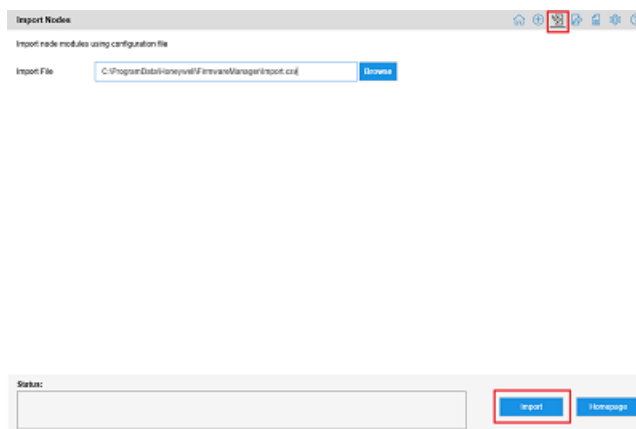



Figure 5.4 Import the node(s) using a Configuration file

3. Click **Import**. The selected nodes are imported.
4. Nodes present in the configuration are added and the results are displayed in Status bar on the Home screen.

## Search node

To search for a string available in the Nodes List:

1. Click **Search** . The **Find** dialog box appears.
2. Type your search string.
3. Click the **Find Next** button.
4. The nodes with information matching your search string are highlighted.

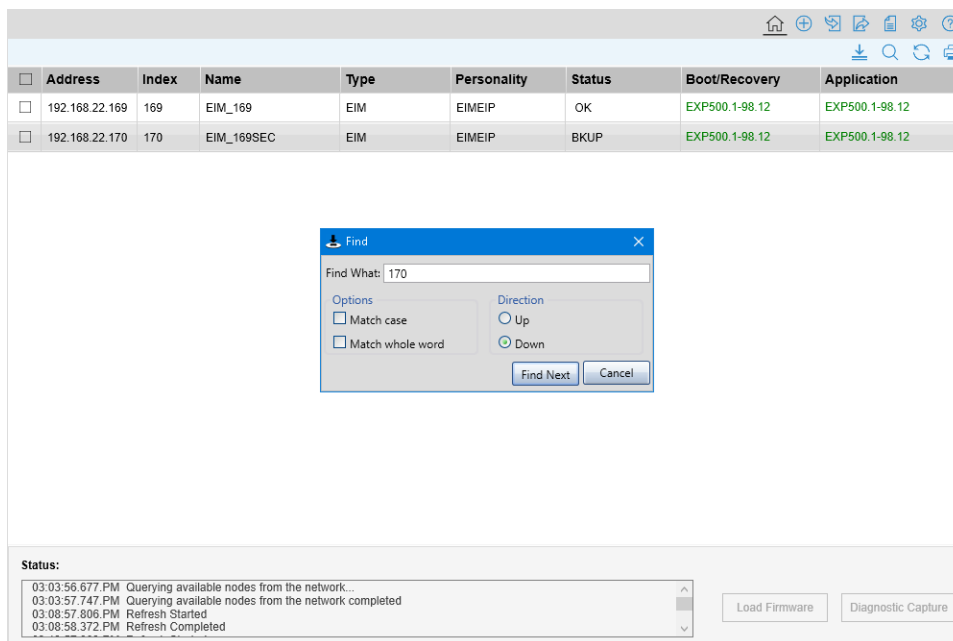


Figure 5.5 Search node

## Refresh

You can manually refresh the Nodes List using the **Refresh** option.

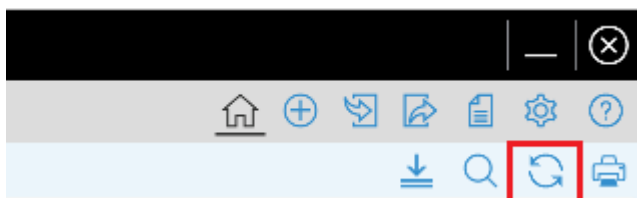


Figure 5.6 Refresh



Figure 5.7 Status bar during refresh

## View Log file

You can view the log file by clicking the **View Log file** button. This file is specific to Firmware Manager only and is used for debugging.

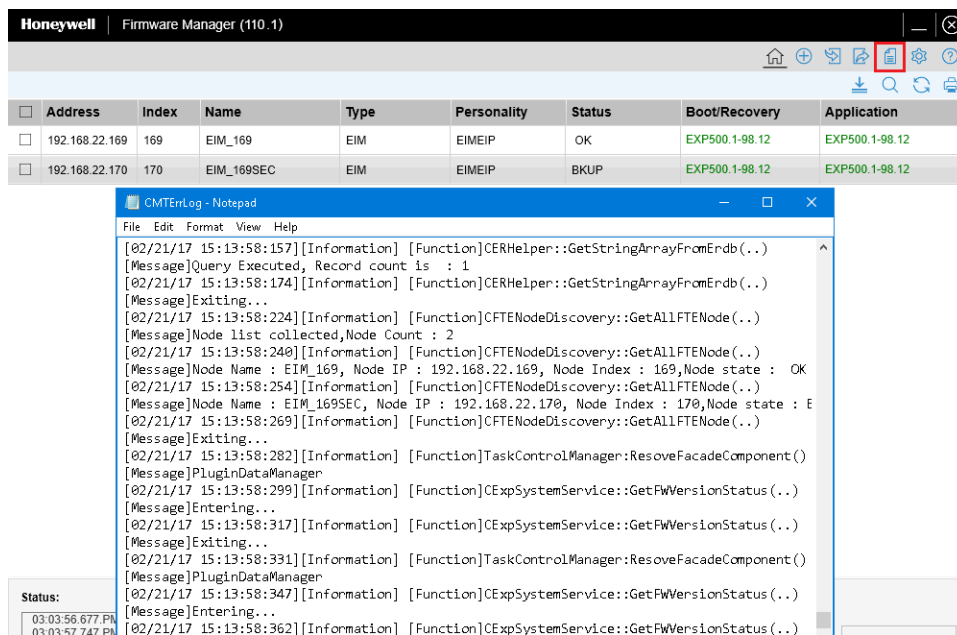


Figure 5.8 View Log file

## Settings

The Settings control is used to configure the log files storage, logging levels, and refresh rate.

1. The Base IP configured in Control Builder is fetched automatically and displayed in the **FTE Base IP** field. For a non-Experion node, this field is not applicable and is grayed out.
2. The **Default Log Path** displays the default log path.
3. Specify the **Logging Level**. The default level for the logger is **Error and Exception**.
4. Browse and specify the **Diagnostic Location** to save the diagnostic files.
5. Select the **Refresh Rate** from the drop-down list for automatic refresh.
6. Click **Save** to save the settings.

**Settings**

Configure Firmware Manager Settings

FTE Base IP: 192.168.22.0

Default Log Path: C:\ProgramData\Honeywell\FirmwareManager\Logs

Logging Level: Error + Exception(Default)

Diagnostic Location: C:\ProgramData\Honeywell\FirmwareManager\Logs\DiagnosticCapture\ [Browse](#)

Refresh Rate: 3 Minute

Status:

[Save](#) [Homepage](#)

Figure 5.9 Settings

## Help

Click **Help** to access the **Firmware Manager User's Guide**.

**About this guide**

This guide describes the prerequisites, usage, installation, and uninstallation steps of Firmware Manager. The Firmware Manager is used to load firmware to a hardware node and access diagnostic information from the supported modules (e.g. EIM, UOC).

**Revision history**

Version	Date	Description
A	February 2017	Initial release
B	July 2017	Includes resolved PARs for this release
C	September 2017	Supports UOC, EPM, UIO, UEA, TCMI, ELCN, ELCNBRIDGE and RFIM modules for this release

Figure 5.10 Help

## Print

Use the **Print** option to print the list of all the nodes and their details displayed on the Home screen.

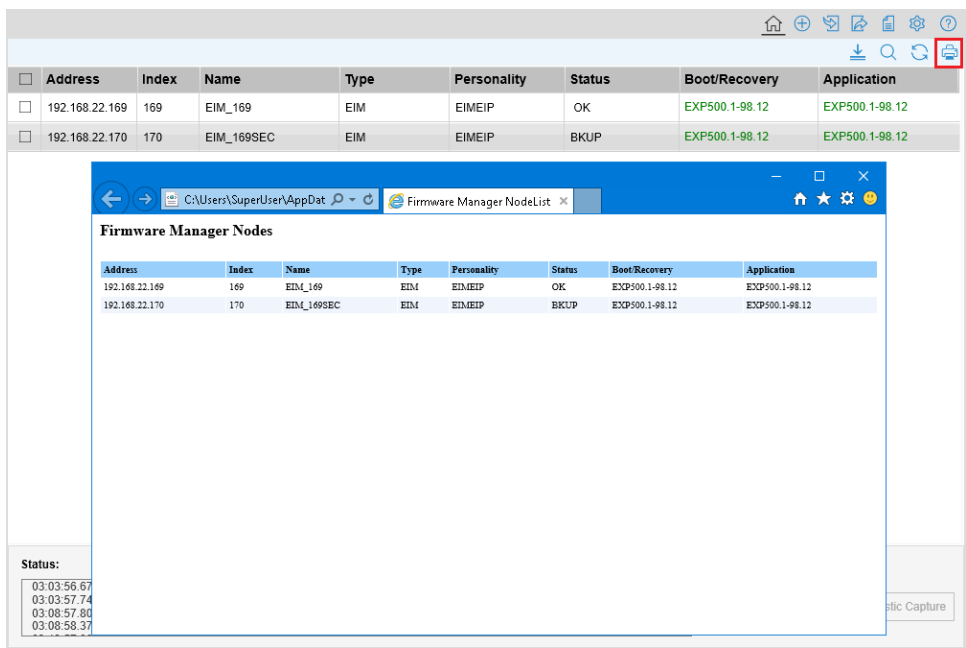


Figure 5.11 Print

5.1.2 Node Details

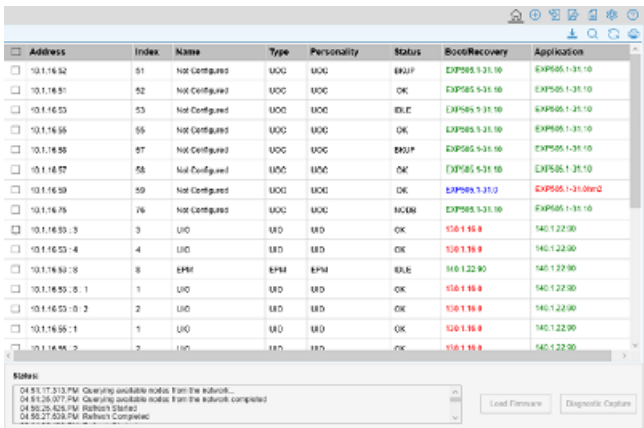


Figure 5.12 Node details

The Nodes List displays details of all nodes present in the network.




NOTE

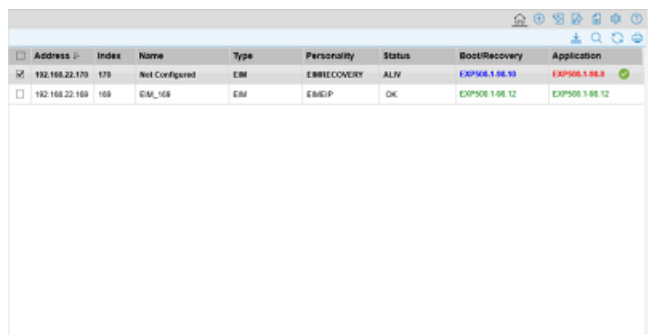
NA is displayed if a configuration detail is not applicable to that node type.

Column Name	Details
Address	Address of the node in the network. Example: 192.10.10.77.
Index	Physical index of the node. Example: the device with IP address 192.10.10.77 has a physical index 77.
Name	<p>The name you have configured for the node in the DCS system. Example: EIM_121.</p> <div> <p><b>NOTE</b> If a node is not configured in Control Builder, its status will be <b>Not configured</b>.</p> </div> <div> <p><b>NOTE</b> Firmware Manager displays the name as <b>Not configured</b> when installed on Experion Flex or non-Experion nodes.</p> </div>
Type	Type of node. Example: EIM.
Personality	<p>Personality of the node. Example: EIM nodes has three personality types:</p> <ul style="list-style-type: none"> <li>• EIM61850</li> <li>• EIMEIP</li> <li>• EIMRECOVERY</li> </ul>
Status	Current status of the node.
Boot/Recovery	Version of the boot firmware, where applicable. Example: EXP500.1-77.0.
Application Version	Version of the application firmware (Example: EXP500.1-77.0); else the field is blank.

### 5.1.3 Color Legend

The **Color Legend** for each node.

-  (Green): The node is running the latest supported firmware.
-  (Blue): The node is running a supported but not the latest firmware version.
-  (Red): The node is running an older firmware version that is not supported.

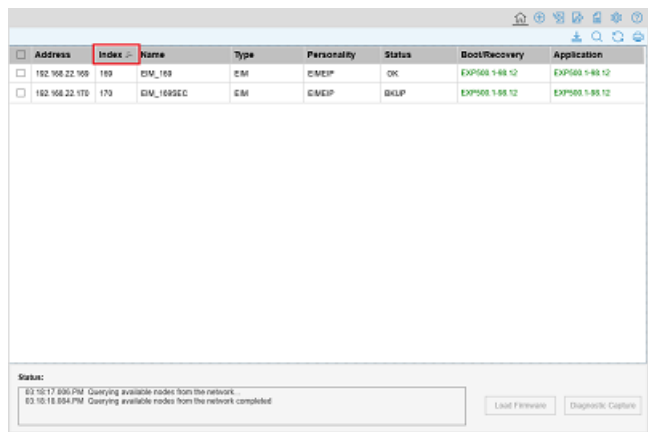


<input type="checkbox"/>	Address	Index	Name	Type	Personality	Status	Boot/Recovery	Application
<input checked="" type="checkbox"/>	192.168.22.170	170	Not Configured	EM	EMRECOVERY	ALN	EXP568.1.68.12	EXP568.1.68.12
<input type="checkbox"/>	192.168.22.169	169	EM_169	EM	EMREP	OK	EXP568.1.68.12	EXP568.1.68.12

Figure 5.13 Color Legend

5.1.4      **Sorting**

Click the column header of any column to sort that column alphanumerically (in ascending or descending order).



<input type="checkbox"/>	Address	Index	Name	Type	Personality	Status	Boot/Recovery	Application
<input type="checkbox"/>	192.168.22.169	169	EM_169	EM	EMREP	OK	EXP568.1.68.12	EXP568.1.68.12
<input type="checkbox"/>	192.168.22.170	170	EM_169SEC	EM	EMREP	OK	EXP568.1.68.12	EXP568.1.68.12

Status:

03/10/17 09:01 PM Querying available nodes from the network...

03/10/18 09:04 PM Querying available nodes from the network completed

Load FirmwareDiagnostic Capture

Figure 5.14 Sorting based on Index column in an ascending order

5.2      **Firmware Manager Security**

To launch Firmware Manager on an Experion system, you must have one of these privileges:

- Local Engineers
- Product Administrators

For non-Experion systems, you must have the following privilege to launch Firmware Manager.

- Administrators

**NOTE**

Install Firmware Manager only on computers whose usage can be physically secured and are used by trusted personnel.

For more information on security, see the *Network and Security Planning Guide*.

**NOTE**

For module specific security guidelines, see the respective Experion User's Guide.

## GETTING STARTED WITH FIRMWARE MANAGER FOR ETHERNET INTERFACE MODULE

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### 6.1 Add nodes for EIM

Nodes present in the network are auto-detected when Firmware Manager is installed on any of the following Experion nodes:

- Server TPN Connected (ESVT)
- Console Station (ES-C)
- Console Station TPN Connected (ES-T)
- Server (ESV)

On an Experion Flex and on non-Experion nodes, you must add nodes manually to the list using the **Add Node** tool bar feature. This feature is mainly applicable to platforms where nodes are not auto-detected.

To add nodes manually:

1. Click **Add Node (+)**. The **Add Nodes** window appears.
2. On the left pane: Select the **Type** as EIM Select **Parent** as NA (not applicable) Enter the IP address in the **Address** field Enter the last octet of the IP address in the **Index** field
3. Click **Validate**. The validated results are displayed on the right pane.

Add Nodes

Add one or more nodes to the Firmware Manager by providing following details  
This feature helps if a node cannot be detected automatically by the Firmware Manager tool

Type\*

Parent\*

Address\*

Index\*

EM

NA

192.168.22.169

169

Validate

Validation Results

Valid Node (PAddress):  
192.168.22.169

By clicking on "Add" will add only Valid Nodes.

Status:


Add

Homepage

NOTE

The Validate button verifies the details of the node you have entered and provides the validation results in the right pane. Details about valid nodes, duplicate nodes, or invalid nodes are provided. Only valid nodes can be added to the Nodes List.

4. Click **Add** to add the node.

5. Click  and follow steps 2 through 4 to add more nodes.

6. Click the **Homepage** icon. You can see the new nodes you added in the Nodes List.

<input type="checkbox"/>	Address	Index	Name	Type	Personality	Status	Boot/Recovery	Application
<input type="checkbox"/>	192.168.22.169	169	EM_169	EM	EMBP	OK	EXP508.1-98.12	EXP500.1-98.12
<input type="checkbox"/>	192.168.22.170	170	EM_169SEC	EM	EMBP	GROUP	EXP508.1-98.12	EXP500.1-98.12

Status:

03:03:58.877 PM Querying available nodes from the network...

03:03:57.747 PM Querying available nodes from the network completed

Load Firmware

Diagnostic Capture

NOTE

The status bar on the Home screen displays appropriate messages if there are issues in adding a node.





6.2 Load Firmware


You can select either a single node or multiple nodes of the same type provided they are in an applicable state to load firmware. You cannot flash a EIM if its Status is OK. The status must be NOBDB state.

To load firmware:

Honeywell

- 28 -

1. Select one or multiple nodes to load firmware by selecting the appropriate check box(es) . The selected node(s) are highlighted. You can select multiple nodes of the same product type (for example EIM) running with different personalities, and click **Load Firmware**. In this case, the nodes will be flashed with the latest version of their respective personalities.
2. Click **Load Firmware**. The load operation begins and its progress is displayed on the progress bar.  
A load symbol  appears beside the **Application** version column for the node on which firmware is being loaded.
3. After the firmware is loaded, the load symbol changes to a green colored tick mark . If the firmware load operation fails, a Failed symbol  appears. The reason for failure is shown in the status bar below the progress bar or in the FM log file.

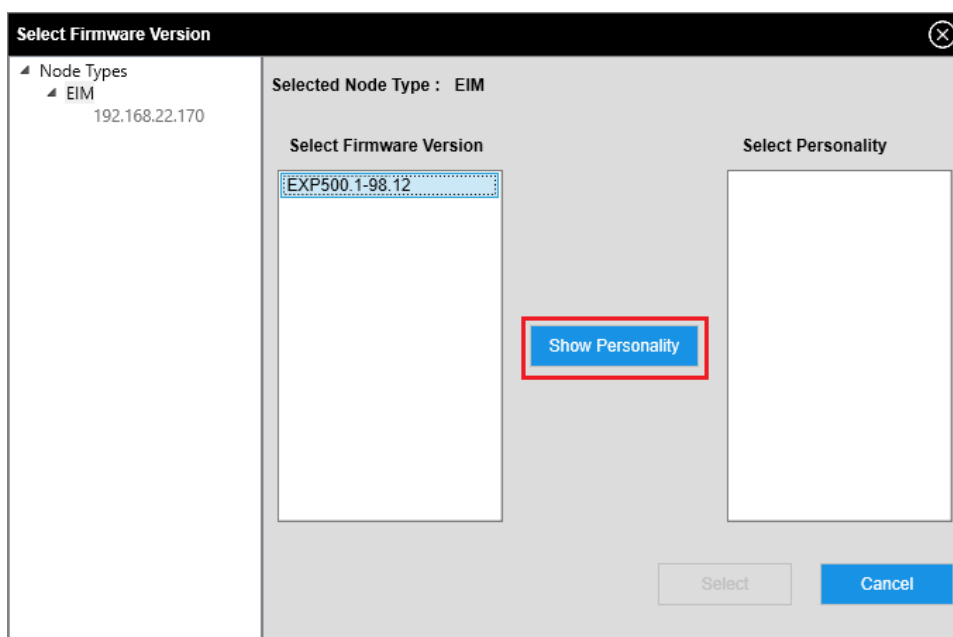
**NOTE** In case you have selected multiple nodes to load firmware, the load operation is performed in a sequential manner. The grey colored load icon  is displayed for the nodes on which the load operation has not yet started.

## 6.2.1 Load Firmware for a single node through node selection

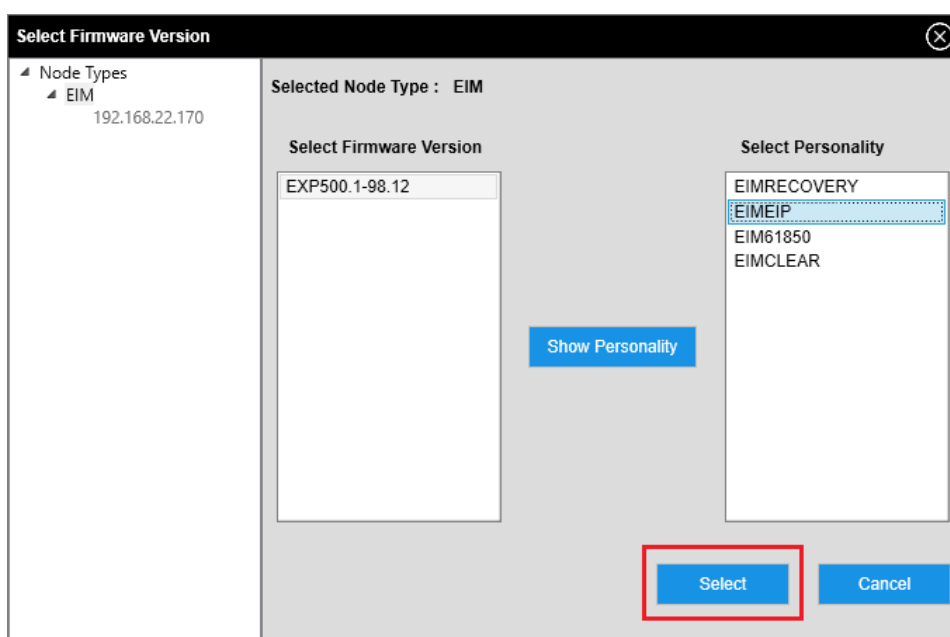
To load firmware on a single node:

**Note:** You must perform the following steps for both EIM recovery and the EIMEIP personalities. EIM recovery personality must be flashed first.

1. Select the check box corresponding to the **node** you want to load the firmware. The row is highlighted.
2. Right-click on the selected row and click **Firmware Version**.  
The **Select Firmware Version** window appears.
3. Select a firmware version and click **Show Personality**.



4. Select a personality under **Personality** and click **Select**.



5. On the Home screen, click **Load Firmware**. The selected node is added to the Nodes List.

**NOTE** The pointer near the download status symbol shows the Firmware version and Personality of the selected node. The same information is displayed in the Status bar.

## 6.2.2 Progress bar for single node selection

When a single node is selected for loading firmware, the progress is shown indicating the percentage of the task completed. Events such as flashing or rebooting that occur are also listed.

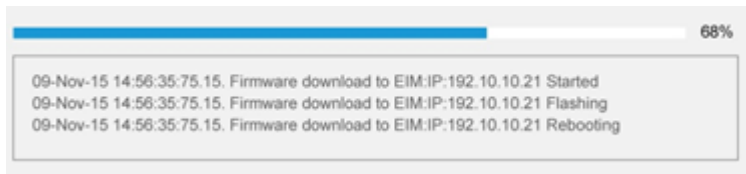


Figure 6.1 Progress bar for single node selection

## 6.2.3 Progress bar for multiple node selection

If you select multiple nodes, the firmware is loaded in a sequential manner (one node after the other) and the progress bar and text box show the progress and the status for the node that is currently being loaded.


**ATTENTION:** The latest version of the firmware is displayed after all the nodes are updated.

## 6.2.4 Cancel Load firmware operation

Click **Cancel** to cancel a Load Firmware operation that is in progress.

### NOTE

- In case of a single node, you cannot cancel the load operation as it is already in progress.
- In case you have selected multiple nodes to load firmware and click **Cancel**, the load operation is canceled only after the load operation is completed on the current node. Note that the load operation for the remaining nodes is canceled and a load canceled

symbol  appears next to Application column for those nodes.

## 6.3 Load Recovery Image

The recovery image that comes with the Experion release may not match the image which is loaded from the factory. In this case, the latest recovery image is required to be updated.

To update the Recovery Image in EIM:

1. Right-click the module in Firmware Manager, select the intended application image (either EIMEIP or EIM61850) and flash the module with an application image. In this stage, the EIM module is running with an application image.
2. Right-click the module in Firmware Manager, select the new **Recovery Image** and flash the module. EIM Module is running with the new **Recovery Image**. Now select the application image and flash the module.
3. Reboot the module. After rebooting, the module will transition to NO\_DB state.

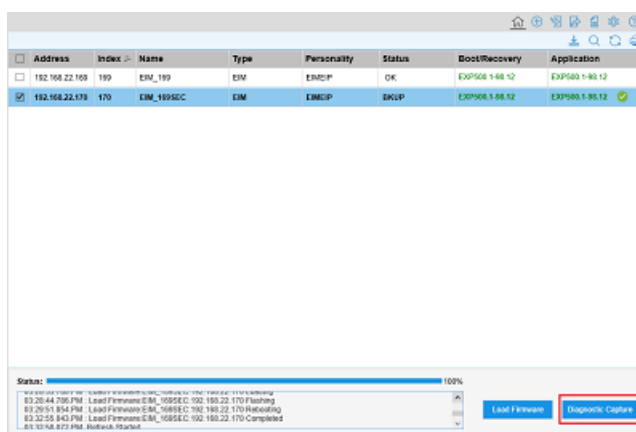
**ATTENTION:** After flashing the recovery image, you must flash the personalities.


## 6.4 Diagnostic Capture

Use the Diagnostic Capture feature to upload diagnostic information files such as **log files** from a node.


To capture the diagnostic data:

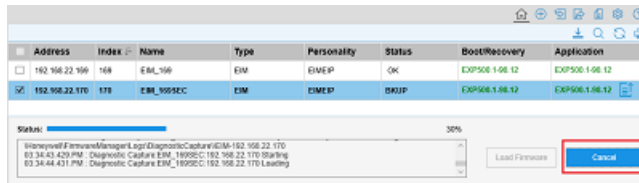
1. Select one or multiple nodes from the Nodes List to capture diagnostic data.
2. Click **Diagnostics Capture**. The caption of the button changes to **Cancel**.




3. The upload symbol  appears beside the Application version column for the node(s) whose diagnostic data is being uploaded. The data is saved to the location defined earlier in the **Settings** page.


**NOTE** The Progress bar displays the progress and the text box displays the events during the Diagnostic capture.


4. After the data is uploaded successfully,  is displayed.
5. To cancel the operation, click the **Cancel** button.



6. In case of a single node, you cannot cancel the operation as it is already in progress. In case you have selected multiple nodes to capture diagnostic information and click **Cancel**, the operation is canceled only after the operation is completed on the current node. The diagnostic capture

operation for the remaining nodes is canceled and a Canceled symbol  appears next to

Application column for those nodes. If diagnostic capture fails, the Failed symbol  is displayed.

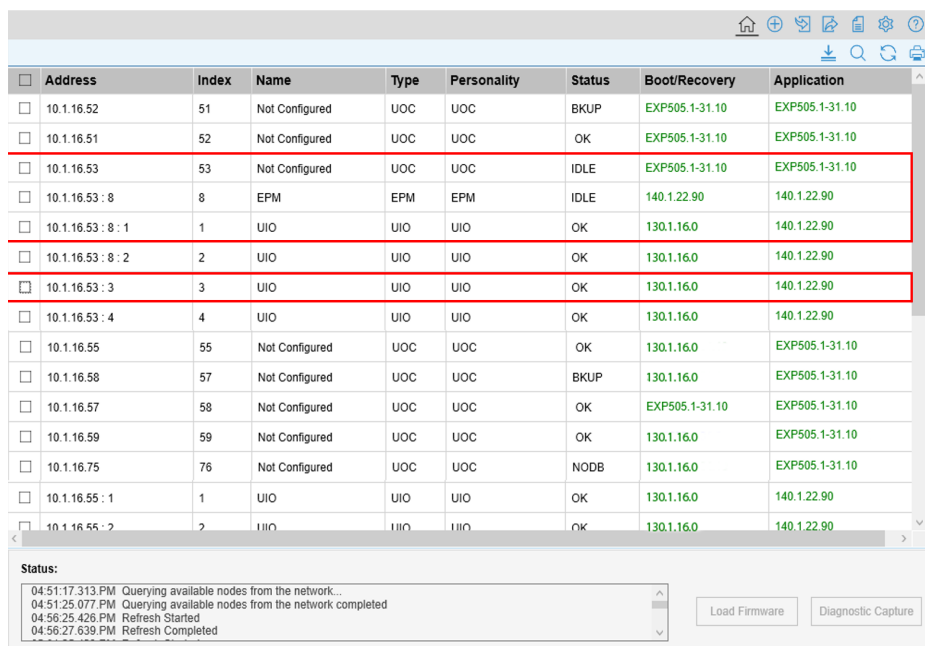
The diagnostics capture operation is sequential.  is displayed for the nodes on which the operation has not yet started.

## GETTING STARTED WITH FIRMWARE MANAGER FOR CONTROL EDGE UNIT OPERATIONS CONTROLLER

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The graphical user interface of Firmware Manager represented for a UOC Control System is explained here.



<input type="checkbox"/>	Address	Index	Name	Type	Personality	Status	Boot/Recovery	Application
<input type="checkbox"/>	10.1.16.52	51	Not Configured	UOC	UOC	BKUP	EXP505.1-31.10	EXP505.1-31.10
<input type="checkbox"/>	10.1.16.51	52	Not Configured	UOC	UOC	OK	EXP505.1-31.10	EXP505.1-31.10
<input type="checkbox"/>	10.1.16.53	53	Not Configured	UOC	UOC	IDLE	EXP505.1-31.10	EXP505.1-31.10
<input type="checkbox"/>	10.1.16.53 : 8	8	EPM	EPM	EPM	IDLE	140.1.22.90	140.1.22.90
<input type="checkbox"/>	10.1.16.53 : 8 : 1	1	UIO	UIO	UIO	OK	130.1.16.0	140.1.22.90
<input type="checkbox"/>	10.1.16.53 : 8 : 2	2	UIO	UIO	UIO	OK	130.1.16.0	140.1.22.90
<input type="checkbox"/>	10.1.16.53 : 3	3	UIO	UIO	UIO	OK	130.1.16.0	140.1.22.90
<input type="checkbox"/>	10.1.16.53 : 4	4	UIO	UIO	UIO	OK	130.1.16.0	140.1.22.90
<input type="checkbox"/>	10.1.16.55	55	Not Configured	UOC	UOC	OK	130.1.16.0	EXP505.1-31.10
<input type="checkbox"/>	10.1.16.58	57	Not Configured	UOC	UOC	BKUP	130.1.16.0	EXP505.1-31.10
<input type="checkbox"/>	10.1.16.57	58	Not Configured	UOC	UOC	OK	EXP505.1-31.10	EXP505.1-31.10
<input type="checkbox"/>	10.1.16.59	59	Not Configured	UOC	UOC	OK	130.1.16.0	EXP505.1-31.10
<input type="checkbox"/>	10.1.16.75	76	Not Configured	UOC	UOC	NODB	130.1.16.0	EXP505.1-31.10
<input type="checkbox"/>	10.1.16.55 : 1	1	UIO	UIO	UIO	OK	130.1.16.0	140.1.22.90
<input type="checkbox"/>	10.1.16.55 : 2	2	UIO	UIO	UIO	OK	130.1.16.0	140.1.22.90

**Status:**  
04:51:17.313.PM Querying available nodes from the network...  
04:51:25.077.PM Querying available nodes from the network completed  
04:56:25.426.PM Refresh Started  
04:56:27.639.PM Refresh Completed

Load Firmware
Diagnostic Capture

Figure 7.1 Firmware Manager for UOC

In the above example, the node with 10.1.16.53 as its IP is a UOC

An EPM with rack ID 8 is represented as 10.1.16.53:8

A UIO with slot ID 1 that is configured under EPM rack ID 8, is represented as 10.1.16.53:8:1

A UIO with slot ID 3 configured under UOC address 10.1.16.53, is represented as 10.1.16.53:3

- [Add Nodes for UOC](#)
- [Load Firmware to UOC](#)
- [Add Nodes for EPM and UIO](#)
- [Load Firmware to EPM](#)
- [Load Firmware to Single EPM Module](#)
- [Load Firmware to UIO](#)
- [Load Firmware for Single Node for UIO](#)
- [Diagnostic Capture for ControlEdge Unit Operations Controller](#)
- [ControlEdge PLC to ControlEdge UOC Conversion](#)

## 7.1 Add Nodes for UOC


Nodes present in the network are auto-detected when Firmware Manager is installed on any of the following Experion nodes:

- Server TPN Connected (ESVT)
- Console Station (ES-C)
- Console Station TPN Connected (ES-T)
- Server (ESV)

On an Experion Flex and on non-Experion nodes you must add nodes manually to the list using the **Add Node** toolbar feature. This feature is mainly applicable to platforms where nodes are not auto-detected such as a bench system to be used for converting a PLC CPM into a UOC CPM.

To add nodes manually perform the following steps:

1. Click **Add Node (+)**.  
The **Add Nodes** window appears.
2. On the left pane, select the **Type** as UOC, **Parent** is not applicable, enter the IP address in the **Address** field, and type the last octet of the IP address in the **Index** field.
3. Click **Validate**; the validated results are displayed on the right pane.

4. Click **Add** to add the nodes.
5. Click  to add more nodes.
6. Click **Homepage** to go to Home page.

New nodes are now added to the Nodes list.

	Address	Index	Name	Type	Personality	Status	Boot/Recovery	Application
<input type="checkbox"/>	10.1.18.57	1	Not Configured	UOC	UOCPROCESS	Run	EXP505 1-31.10	EXP505 1-31.10

#### NOTE

If there is an issue in adding a node, it will be displayed in the status bar on the Home page.

## 7.2 Load Firmware to UOC



You can select either a single node or multiple nodes in an applicable state to load firmware.

**NOTE** You cannot flash a UOC if its Status is OK. Change the CEE state to IDLE in Control Builder to flash the UOC.


To load firmware:

1. Select one or multiple nodes to load firmware by selecting the appropriate check box(es) . The selected node(s) are highlighted. You can select multiple nodes of the same product type (for example UOC) running with different personalities, and click Load Firmware. In this case, the nodes will be flashed with the latest version of their respective personalities.
2. Click Load Firmware. The load operation begins and its progress is displayed on the progress bar.

A load symbol appears beside the Application version column for the node on which firmware is being loaded.

3. After the firmware is loaded, the load symbol changes to a green colored tick mark . If the firmware load operation fails, a Failed symbol  appears. The reason for failure is shown in the status bar below the progress bar or in the FM log file.

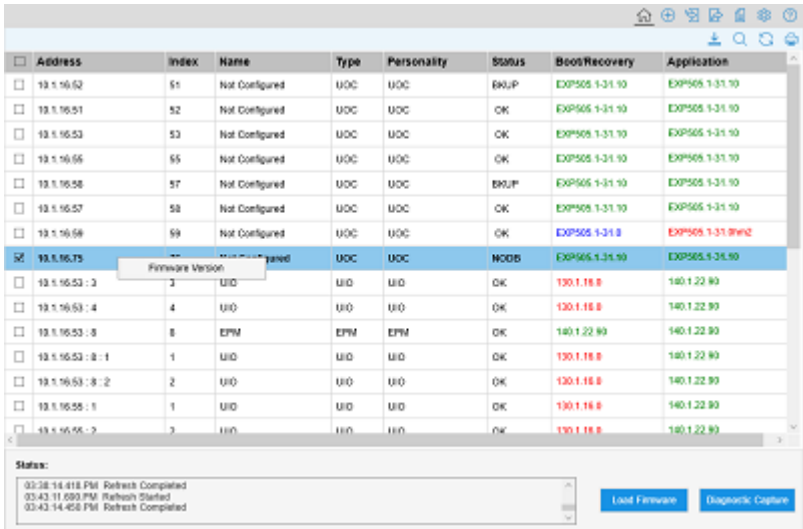
**ATTENTION:** After flashing the module with the recovery image, flash the UOC with the application image.

**NOTE:** In case you have selected multiple nodes to load firmware, the load operation is performed in a sequential manner. The grey colored load icon  is displayed for the nodes on which the load operation has not yet started.

## 7.2.1 Load Firmware for Single Node through Node Selection for UOC

To load firmware to a single node:

1. Select a **node** by selecting the appropriate check box.
2. Right-click on the selected row and click **Firmware Version**.



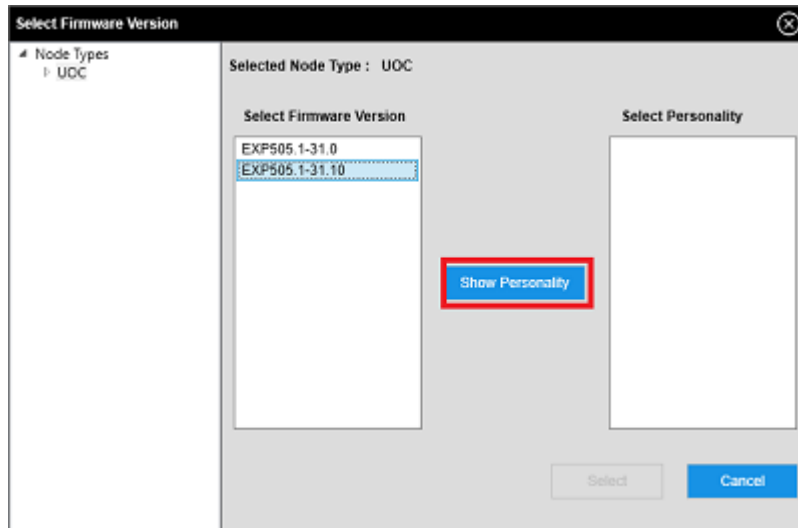
Address	Index	Name	Type	Personality	Status	Boot/Recovery	Application
<input type="checkbox"/> 19.1.16.52	51	Not Configured	UOC	UOC	Backup	EXP565-1-31-10	EXP565-1-31-10
<input type="checkbox"/> 19.1.16.51	52	Not Configured	UOC	UOC	OK	EXP565-1-31-10	EXP565-1-31-10
<input type="checkbox"/> 19.1.16.53	53	Not Configured	UOC	UOC	OK	EXP565-1-31-10	EXP565-1-31-10
<input type="checkbox"/> 19.1.16.55	55	Not Configured	UOC	UOC	OK	EXP565-1-31-10	EXP565-1-31-10
<input type="checkbox"/> 19.1.16.58	57	Not Configured	UOC	UOC	Backup	EXP565-1-31-10	EXP565-1-31-10
<input type="checkbox"/> 19.1.16.57	58	Not Configured	UOC	UOC	OK	EXP565-1-31-10	EXP565-1-31-10
<input type="checkbox"/> 19.1.16.59	59	Not Configured	UOC	UOC	OK	EXP565-1-31-10	EXP565-1-31-8Rev2
<input checked="" type="checkbox"/> 19.1.16.75	75	Not Configured	UOC	UOC	NOOB	EXP565-1-31-10	EXP565-1-31-10
<input type="checkbox"/> 19.1.16.53 : 3	3	UIC	UIC	UIC	OK	130.1.18.9	140.1.22.90
<input type="checkbox"/> 19.1.16.53 : 4	4	UIC	UIC	UIC	OK	130.1.18.9	140.1.22.90
<input type="checkbox"/> 19.1.16.53 : 8	8	EPN	EPN	EPN	OK	140.1.22.90	140.1.22.90
<input type="checkbox"/> 19.1.16.53 : 8 : 1	1	UIC	UIC	UIC	OK	130.1.18.9	140.1.22.90
<input type="checkbox"/> 19.1.16.53 : 8 : 2	2	UIC	UIC	UIC	OK	130.1.18.9	140.1.22.90
<input type="checkbox"/> 19.1.16.55 : 1	1	UIC	UIC	UIC	OK	130.1.18.9	140.1.22.90
<input type="checkbox"/> 19.1.16.55 : 3	3	UIC	UIC	UIC	OK	130.1.18.9	140.1.22.90

**Status:**  
 03:38:14.418 PM Refresh Completed  
 03:43:11.693 PM Refresh Started  
 03:43:14.455 PM Refresh Completed

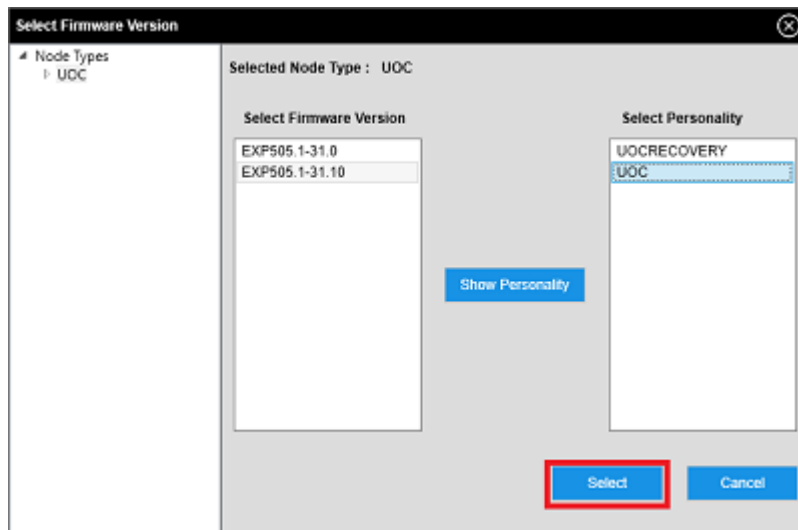
Buttons: Load Firmware, Diagnostic Capture

The **Select Firmware Version** window of the selected node appears.

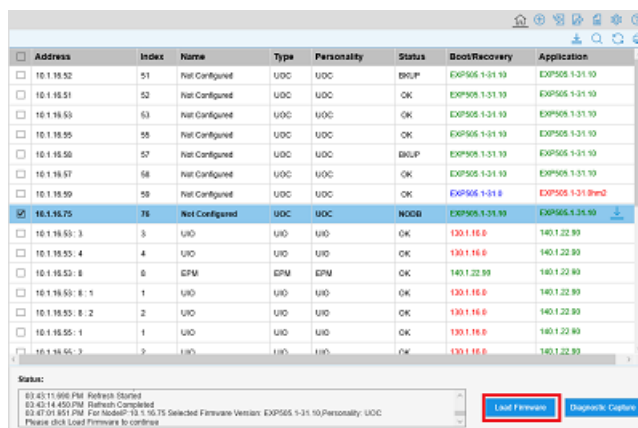
3. Select a firmware version and click **Show Personality**.



4. Select a personality under **Select Personality** and click **Select**.



5. Click **Load Firmware** on the Home screen.  
The selected node is displayed in the list.



**NOTE**

The pointer near the download status symbol shows the Firmware version and Personality of the selected node. The same information is displayed in the Status bar.

## 7.2.2 Progress Bar for Single Node Selection for UOC

When a single node is selected for loading firmware, the progress is shown with the percentage of the task completed. Events such as flashing or rebooting that occur are also listed.



Figure 7.2 Progress bar for single node selection

## 7.2.3 Progress Bar for Multiple Node Selection for UOC

If you select multiple nodes of the same type, the firmware is loaded in a sequential manner (one node after the other) and the progress bar and text box show the progress and the status for the node that is currently being loaded.

**ATTENTION:** The latest version of the Firmware is displayed after all the nodes are updated.

## 7.2.4 Cancel Load Firmware Operation for UOC

Click **Cancel** to cancel a Load Firmware operation that is in progress.

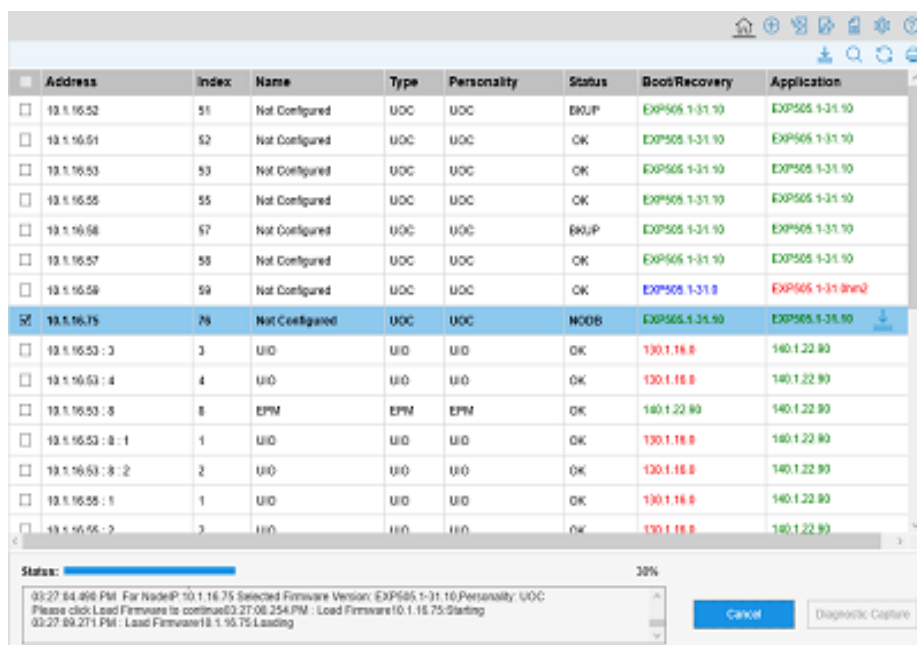
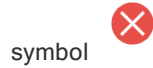


Figure 7.3 Cancel Load Firmware

**NOTE**

- In case of a single node, you cannot cancel the load operation as it is already in progress.
- In case you have selected multiple nodes to load firmware and click **Cancel**, the load operation is canceled only after the load operation is completed on the current node. Note that the load operation for the remaining nodes is canceled and a load canceled



symbol appears next to Application column for those nodes.

Address	Index	Name	Type	Personality	Status	Boot/Recovery	Application
10.1.18.52	51	Not Configured	UOC	UOC	BRUP	EXP505-1-31.19	EXP505-1-31.19
10.1.18.51	52	Not Configured	UOC	UOC	OK	EXP505-1-31.19	EXP505-1-31.19
10.1.18.53	63	Not Configured	UOC	UOC	OK	EXP505-1-31.19	EXP505-1-31.19
10.1.18.55	55	Not Configured	UOC	UOC	OK	EXP505-1-31.19	EXP505-1-31.19
10.1.18.56	57	Not Configured	UOC	UOC	BRUP	EXP505-1-31.19	EXP505-1-31.19
10.1.18.57	58	Not Configured	UOC	UOC	OK	EXP505-1-31.19	EXP505-1-31.19
10.1.18.59	59	Not Configured	UOC	UOC	OK	EXP505-1-31.19	EXP505-1-31.19
10.1.18.75	76	Not Configured	UOC	UOC	NOOB	EXP505-1-31.19	EXP505-1-31.19
10.1.18.53-3	3	UO	UO	UO	OK	130.1.18.0	140.1.22.99
10.1.18.53-4	4	UO	UO	UO	OK	130.1.18.0	140.1.22.99
10.1.18.53-8	8	EPM	EPM	EPM	OK	140.1.22.99	140.1.22.99
10.1.18.53-8-1	1	UO	UO	UO	OK	130.1.18.0	140.1.22.99
10.1.18.53-8-2	2	UO	UO	UO	OK	130.1.18.0	140.1.22.99
10.1.18.55-1	1	UO	UO	UO	OK	130.1.18.0	140.1.22.99
10.1.18.55-3	3	UO	UO	UO	OK	130.1.18.0	140.1.22.99

Status:  
 8/3/2018 4:57 PM Load Firmware 10.1.18.75: Send Command Failed: Error Response = (314) Signature verification failed  
 8/3/2018 5:12 PM Refresh Started  
 8/3/2018 5:12 PM Refresh Completed

Load Firmware Diagnostic Capture

Figure 7.4 Canceled Load Firmware

## 7.3 Add Nodes for EPM and UIO

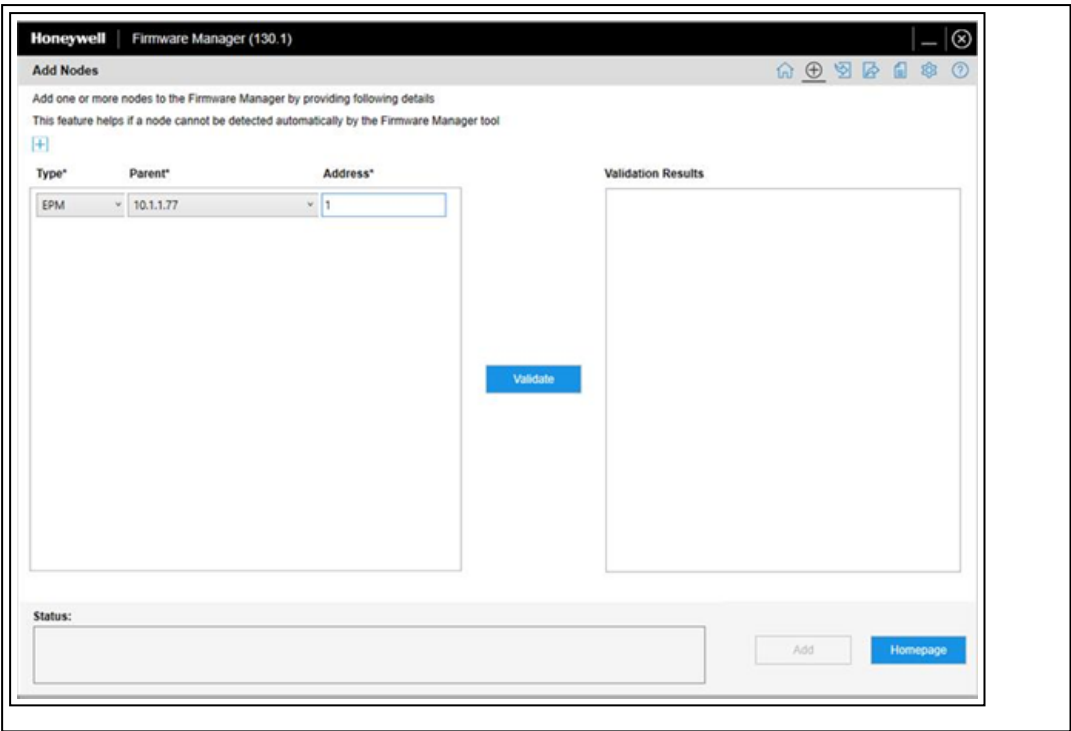
### To add nodes for EPM and UIO modules

1. Click **Add Node (+)**.  
The **Add Nodes** window appears.
2. On the left pane, select the **Type** as EPM or UIO, select the **Parent** from the drop-down list, enter the **Address** and the **Index**.

#### Parent selection

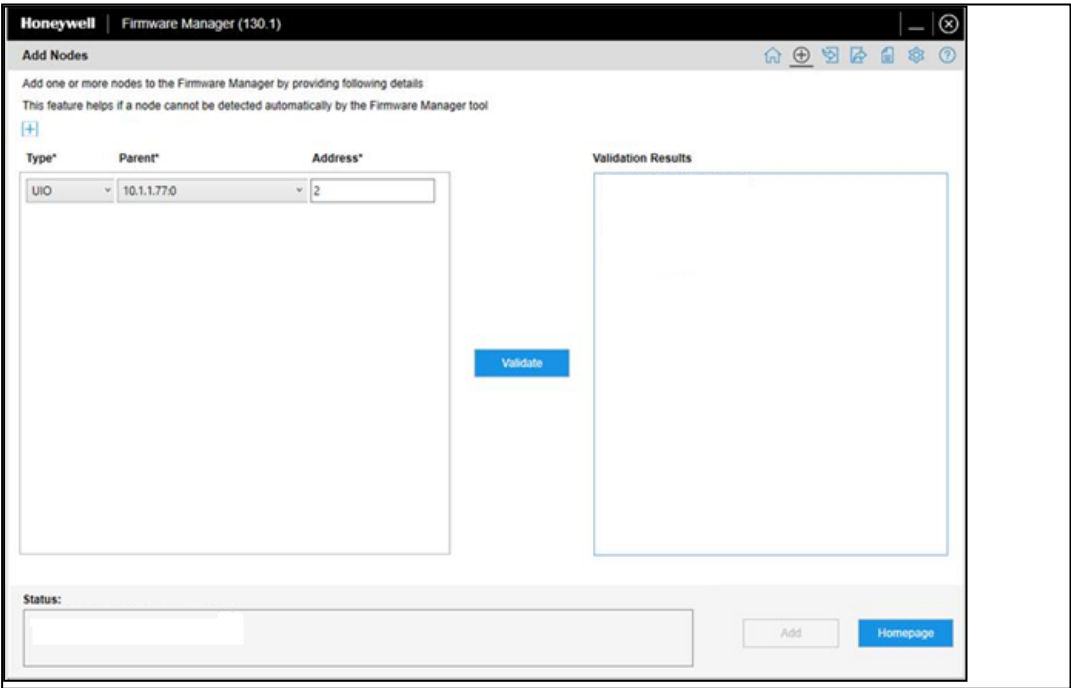
##### EPM:

For EPM, the UOC's address will be listed for selection.



UIO:

For UIO, the UOC's and EPM's address will be listed for selection.



For a local UIO, select the UOC address but for a remote UIO, select the EPM address.

Address and Index

EPM- Enter the rack ID.

UIO- Enter the slot ID.

**NOTE**



Enter the same rack ID/slot ID in the Address and Index fields, respectively.

For more information on Tool bars in Firmware Manager, refer to [Tool Bar Controls](#).

## 7.4 Load Firmware to EPM

You can select either a single node or multiple nodes to load firmware provided the modules are in an applicable state.

To load firmware:

1. Select the node(s) to load firmware by selecting the appropriate check box(es). The selected node(s) are highlighted. You can select multiple nodes of the same product type (for example EPM), running with different personalities and click **Load Firmware**. In this case, the nodes will be flashed with the latest version of their respective personalities.
2. Click **Load Firmware**. The progress is displayed on the progress bar.
3. A load symbol appears beside the Application Version column based on the firmware being downloaded.
4. After the firmware is loaded, the load symbol changes to a green colored tick mark . If the firmware load operation fails, a Failed symbol  appears. The reason for failure is shown in the status bar below the progress bar or in the FM log file.

## 7.5 Load Firmware to Single EPM Module

You can select a single node to load firmware.

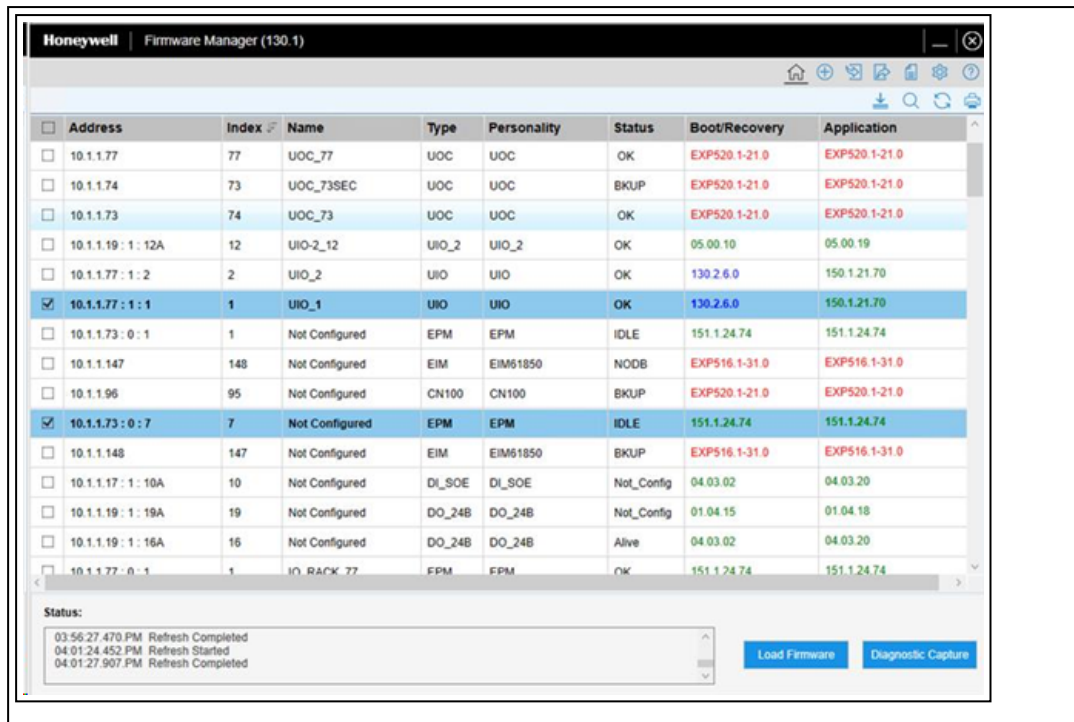
**NOTE**

Flashing an EPM is restricted if its Status is **OK**.

To change the state in Control Builder, inactivate all the UIOs present under the EPM.

To load firmware to a single node:

1. Select a **node** by clicking the appropriate check box.
2. Right-click on the selected row and click **Firmware Version**.



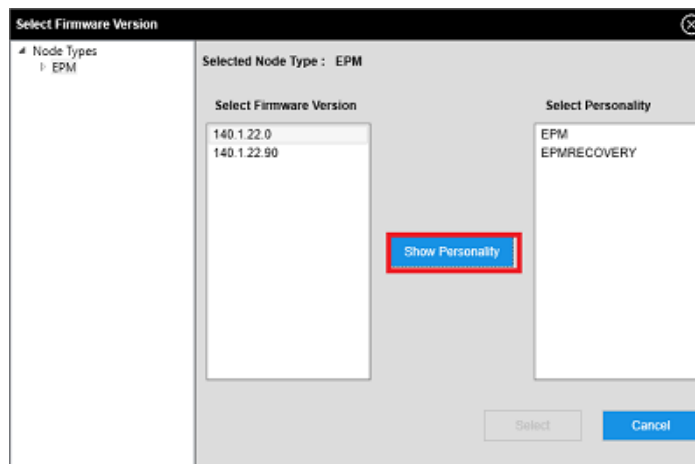
<input type="checkbox"/>	Address	Index	Name	Type	Personality	Status	Boot/Recovery	Application
<input type="checkbox"/>	10.1.1.77	77	UOC_77	UOC	UOC	OK	EXP520.1-21.0	EXP520.1-21.0
<input type="checkbox"/>	10.1.1.74	73	UOC_73SEC	UOC	UOC	BKUP	EXP520.1-21.0	EXP520.1-21.0
<input type="checkbox"/>	10.1.1.73	74	UOC_73	UOC	UOC	OK	EXP520.1-21.0	EXP520.1-21.0
<input type="checkbox"/>	10.1.1.19 : 1 : 12A	12	UIO_2_12	UIO_2	UIO_2	OK	05.00.10	05.00.19
<input type="checkbox"/>	10.1.1.77 : 1 : 2	2	UIO_2	UIO	UIO	OK	130.2.6.0	150.1.21.70
<input checked="" type="checkbox"/>	10.1.1.77 : 1 : 1	1	UIO_1	UIO	UIO	OK	130.2.6.0	150.1.21.70
<input type="checkbox"/>	10.1.1.73 : 0 : 1	1	Not Configured	EPM	EPM	IDLE	151.1.24.74	151.1.24.74
<input type="checkbox"/>	10.1.1.147	148	Not Configured	EIM	EIM61850	NODB	EXP516.1-31.0	EXP516.1-31.0
<input type="checkbox"/>	10.1.1.96	95	Not Configured	CN100	CN100	BKUP	EXP520.1-21.0	EXP520.1-21.0
<input checked="" type="checkbox"/>	10.1.1.73 : 0 : 7	7	Not Configured	EPM	EPM	IDLE	151.1.24.74	151.1.24.74
<input type="checkbox"/>	10.1.1.148	147	Not Configured	EIM	EIM61850	BKUP	EXP516.1-31.0	EXP516.1-31.0
<input type="checkbox"/>	10.1.1.17 : 1 : 10A	10	Not Configured	DI_SOE	DI_SOE	Not_Config	04.03.02	04.03.20
<input type="checkbox"/>	10.1.1.19 : 1 : 19A	19	Not Configured	DO_24B	DO_24B	Not_Config	01.04.15	01.04.18
<input type="checkbox"/>	10.1.1.19 : 1 : 16A	16	Not Configured	DO_24B	DO_24B	Alive	04.03.02	04.03.20
<input type="checkbox"/>	10.1.1.77 : 0 : 1	1	IO_RACK_77	EPM	EPM	OK	151.1.24.74	151.1.24.74

Status:

03:56:27.470 PM Refresh Completed  
 04:01:24.452 PM Refresh Started  
 04:01:27.907 PM Refresh Completed

Load Firmware Diagnostic Capture

- The **Select Firmware Version** window of the selected node appears.  
Select a firmware version and click **Show Personality**.



**Select Firmware Version**

Node Types  
☒ EPM

Selected Node Type : EPM

Select Firmware Version

140.1.22.0  
 140.1.22.90

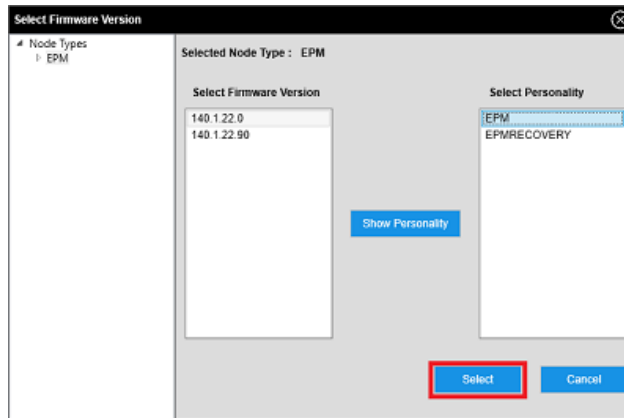
Select Personality

EPM  
 EPMRECOVERY

Show Personality

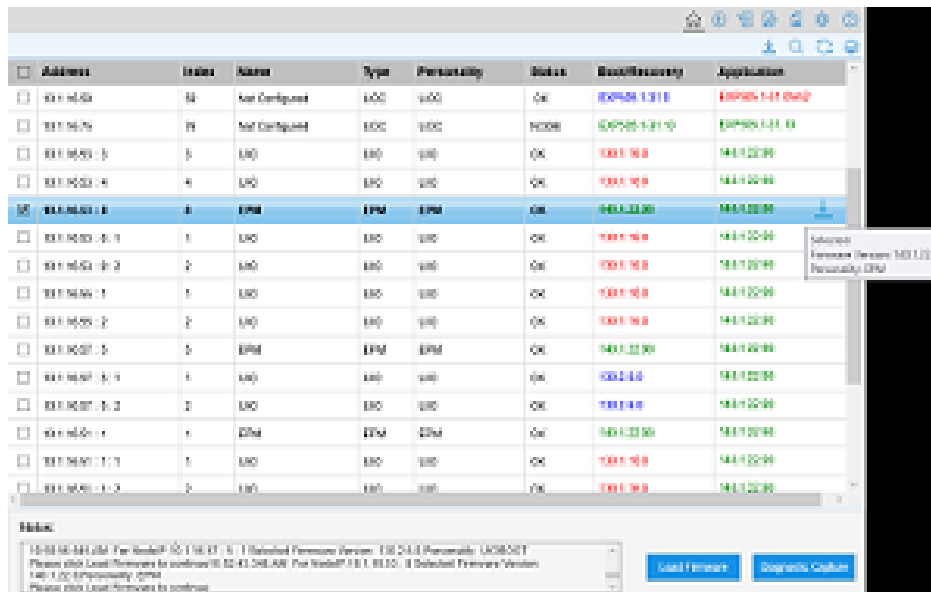
Select Cancel

- Select a personality under **Select Personality** and click **Select**.



Click **Load Firmware** on the Home screen.

The selected node is added to the Nodes List.



5.

#### NOTE

The pointer near the download status symbol shows the Firmware version and Personality of the selected node. The same information is displayed in the Status bar.

## 7.6 Load Firmware to UIO



You can select either a single node or multiple nodes to load firmware provided the modules are in an applicable state.

#### NOTE

Flashing UIO is restricted if the UIO Status is **OK**.

To change its state in Control Builder, inactivate the UIO.

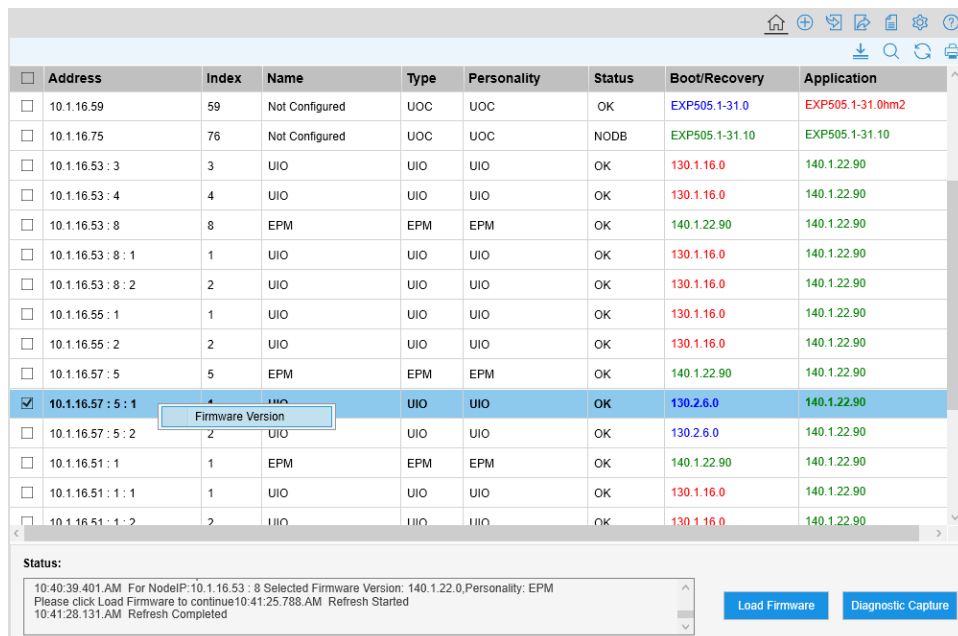
To load firmware:

1. Select the node(s) to load firmware by selecting the appropriate check box(es). The selected node(s) are highlighted. You can select multiple nodes of the same product type (for example UIO), running with different personalities and click **Load Firmware**. In this case, the nodes will be flashed with the latest version of their respective personalities.
2. Click **Load Firmware**. The progress is displayed on the progress bar.
3. A load symbol appears beside the Application Version column based on the firmware being downloaded.
4. After the firmware is loaded, the load symbol changes to a green colored tick mark . If the firmware load operation fails, a Failed symbol  appears. The reason for failure is shown in the status bar below the progress bar or in the FM log file.

## 7.7 Load Firmware for Single Node for UIO

To load firmware to a single node:

1. Select a **node**.
2. Right-click on the selected row and click **Firmware Version**. The **Select Firmware Version** window of the selected node appears.



The screenshot displays the Firmware Manager interface. At the top, there is a toolbar with icons for home, add, delete, refresh, search, and help. Below the toolbar is a table with the following columns: Address, Index, Name, Type, Personality, Status, Boot/Recovery, and Application. The table contains several rows of nodes. One row, with Address 10.1.16.57:5:1, is selected and highlighted in blue. A context menu is open over this row, showing the option 'Firmware Version'. At the bottom of the interface, there is a status bar with a text area showing logs and two buttons: 'Load Firmware' and 'Diagnostic Capture'.

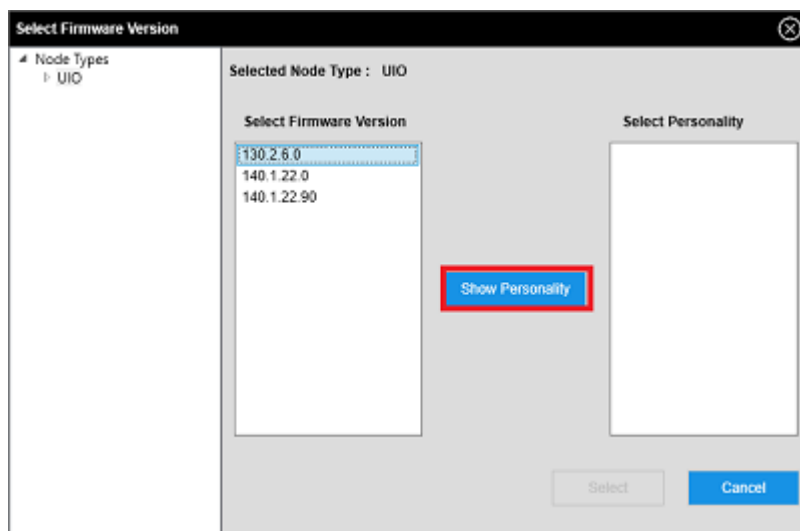
Address	Index	Name	Type	Personality	Status	Boot/Recovery	Application
10.1.16.59	59	Not Configured	UOC	UOC	OK	EXP505.1-31.0	EXP505.1-31.0hm2
10.1.16.75	76	Not Configured	UOC	UOC	NODB	EXP505.1-31.10	EXP505.1-31.10
10.1.16.53:3	3	UIO	UIO	UIO	OK	130.1.16.0	140.1.22.90
10.1.16.53:4	4	UIO	UIO	UIO	OK	130.1.16.0	140.1.22.90
10.1.16.53:8	8	EPM	EPM	EPM	OK	140.1.22.90	140.1.22.90
10.1.16.53:8:1	1	UIO	UIO	UIO	OK	130.1.16.0	140.1.22.90
10.1.16.53:8:2	2	UIO	UIO	UIO	OK	130.1.16.0	140.1.22.90
10.1.16.55:1	1	UIO	UIO	UIO	OK	130.1.16.0	140.1.22.90
10.1.16.55:2	2	UIO	UIO	UIO	OK	130.1.16.0	140.1.22.90
10.1.16.57:5	5	EPM	EPM	EPM	OK	140.1.22.90	140.1.22.90
10.1.16.57:5:1	1	UIO	UIO	UIO	OK	130.2.6.0	140.1.22.90
10.1.16.57:5:2	2	UIO	UIO	UIO	OK	130.2.6.0	140.1.22.90
10.1.16.51:1	1	EPM	EPM	EPM	OK	140.1.22.90	140.1.22.90
10.1.16.51:1:1	1	UIO	UIO	UIO	OK	130.1.16.0	140.1.22.90
10.1.16.51:1:2	2	UIO	UIO	UIO	OK	130.1.16.0	140.1.22.90

Status:

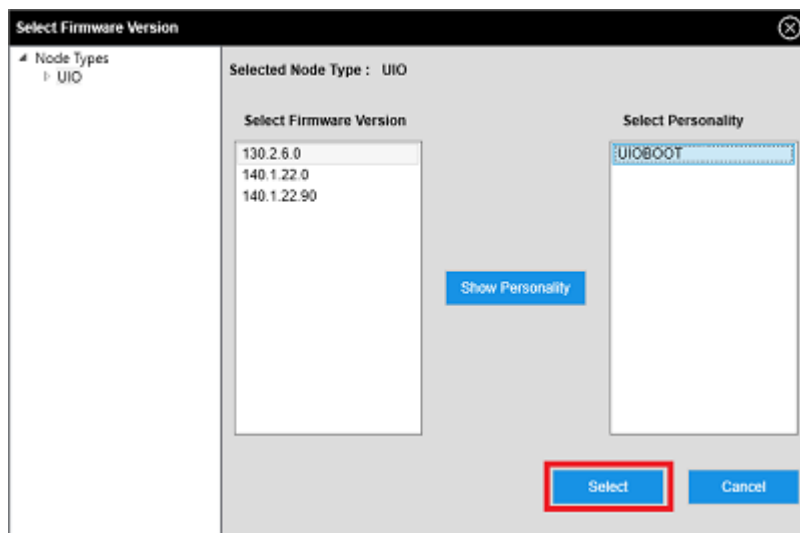
10:40:39.401 AM For NodeIP:10.1.16.53:8 Selected Firmware Version: 140.1.22.0,Personality: EPM  
Please click Load Firmware to continue10:41:25.788 AM Refresh Started  
10:41:28.131 AM Refresh Completed

Load Firmware Diagnostic Capture

3. Select an appropriate firmware version and click **Show Personality**.



4. Select a personality under **Select Personality** and click **Select**.



5. Click **Load Firmware**.

The selected node is added to the Nodes List.

<div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> </div>								
ACROSS	Index	Name	Type	Personality	Status	Bcc/Recovery	Application	
<input type="checkbox"/>	18.1.15.59	59	Not Configured	UOC	UOC	OK	CDPS95.5-31.1.9	CDPS95.5-31.1.9#2
<input type="checkbox"/>	18.1.16.76	76	Not Configured	UOC	UOC	NOERR	CDPS95.5-31.1.6	CDPS95.5-31.1.70
<input type="checkbox"/>	18.1.15.53_3	3	UOC	UOC	UOC	OK	130.1.16.9	140.1.22.80
<input type="checkbox"/>	18.1.15.53_4	4	UOC	UOC	UOC	OK	130.1.16.9	140.1.22.80
<input type="checkbox"/>	18.1.16.3_8	8	EFM	EFM	EFM	OK	140.1.22.80	140.1.22.80
<input type="checkbox"/>	18.1.15.53_8_1	1	UOC	UOC	UOC	OK	130.1.16.9	140.1.22.80
<input type="checkbox"/>	18.1.15.53_8_2	2	UOC	UOC	UOC	OK	130.1.16.9	140.1.22.80
<input type="checkbox"/>	18.1.16.68_1	1	UOC	UOC	UOC	OK	130.1.16.9	140.1.22.80
<input type="checkbox"/>	18.1.16.68_2	2	UOC	UOC	UOC	OK	130.1.16.9	140.1.22.80
<input type="checkbox"/>	18.1.15.57_5	5	EFM	EFM	EFM	OK	140.1.22.80	140.1.22.80
<input checked="" type="checkbox"/>	18.1.15.57_5_1	1	UOC	UOC	UOC	OK	130.2.6.0	140.1.22.80
<input type="checkbox"/>	18.1.15.57_5_2	2	UOC	UOC	UOC	OK	130.2.6.0	140.1.22.80
<input type="checkbox"/>	18.1.15.51_1	1	EFM	EFM	EFM	OK	140.1.22.80	140.1.22.80
<input type="checkbox"/>	18.1.15.51_1_1	1	UOC	UOC	UOC	OK	130.1.16.9	140.1.22.80
<input type="checkbox"/>	18.1.15.51_1_2	2	UOC	UOC	UOC	OK	130.1.16.9	140.1.22.80

**NOTE**

The pointer near the download status symbol shows the Firmware version and Personality of the selected node. The same information is displayed in the Status bar.

## 7.8 Diagnostic Capture for ControlEdge Unit Operations Controller

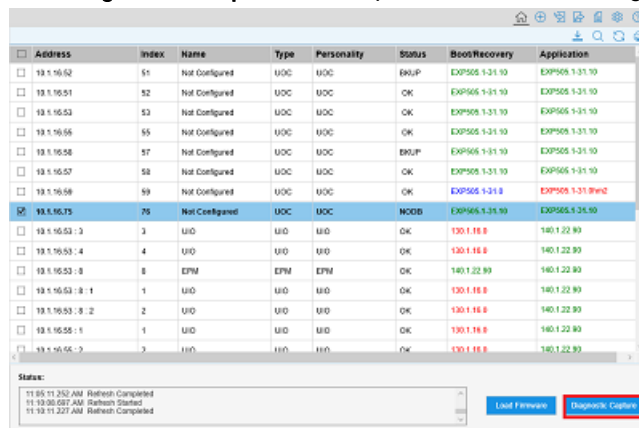
Use the Diagnostic Capture feature to upload diagnostic information files such as **log files** from a node.

**NOTE**

The **Diagnostic Capture** feature does not support EPM and UIO modules.

To capture the diagnostic data:

1. Select one or multiple nodes from the Nodes List to capture diagnostic data.
2. Click **Diagnostics Capture**. The caption of the button changes to **Cancel**.




Address	Index	Name	Type	Personality	Status	Boot/Recovery	Application
<input type="checkbox"/> 19.1.16.52	51	Not Configured	UOC	UOC	OKUP	EXP505 1-31.10	EXP505 1-31.10
<input type="checkbox"/> 19.1.16.51	52	Not Configured	UOC	UOC	OK	EXP505 1-31.10	EXP505 1-31.10
<input type="checkbox"/> 19.1.16.53	53	Not Configured	UOC	UOC	OK	EXP505 1-31.10	EXP505 1-31.10
<input type="checkbox"/> 19.1.16.56	55	Not Configured	UOC	UOC	OK	EXP505 1-31.10	EXP505 1-31.10
<input type="checkbox"/> 19.1.16.58	57	Not Configured	UOC	UOC	OKUP	EXP505 1-31.10	EXP505 1-31.10
<input type="checkbox"/> 19.1.16.57	58	Not Configured	UOC	UOC	OK	EXP505 1-31.10	EXP505 1-31.10
<input type="checkbox"/> 19.1.16.59	59	Not Configured	UOC	UOC	OK	EXP505 1-31.10	EXP505 1-31.10
<input checked="" type="checkbox"/> 19.1.16.75	76	Not Configured	UOC	UOC	NOOB	EXP505 1-31.10	EXP505 1-31.10
<input type="checkbox"/> 19.1.16.53 : 3	3	UIO	UIO	UIO	OK	130.1.16.8	140.1.22.80
<input type="checkbox"/> 19.1.16.53 : 4	4	UIO	UIO	UIO	OK	130.1.16.8	140.1.22.80
<input type="checkbox"/> 19.1.16.53 : 8	8	EPM	EPM	EPM	OK	140.1.22.80	140.1.22.80
<input type="checkbox"/> 19.1.16.53 : 8 : 1	1	UIO	UIO	UIO	OK	130.1.16.8	140.1.22.80
<input type="checkbox"/> 19.1.16.53 : 8 : 2	2	UIO	UIO	UIO	OK	130.1.16.8	140.1.22.80
<input type="checkbox"/> 19.1.16.55 : 1	1	UIO	UIO	UIO	OK	130.1.16.8	140.1.22.80
<input type="checkbox"/> 19.1.16.55 : 2	2	UIO	UIO	UIO	OK	130.1.16.8	140.1.22.80

Status:


11:05:11.252 AM Refresh Completed  
 11:10:00.087 AM Refresh Started  
 11:10:11.227 AM Refresh Completed

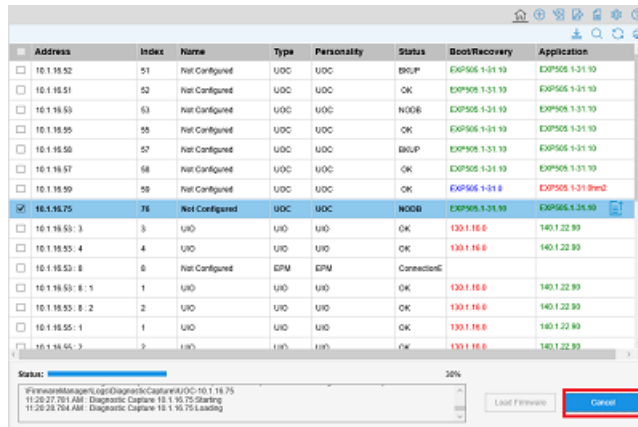
Load Firmware **Diagnostics Capture**

3. The upload symbol  appears beside the Application version column for the node(s) for which the diagnostic data is being uploaded. The data gets saved to the location defined earlier on the **Settings** page.

**NOTE**

The progress bar displays the progress and the text box displays the events during the Diagnostic capture.

4. After the data is uploaded successfully,  is displayed.
5. To cancel the operation, click the **Cancel** button.



#	Address	Index	Name	Type	Personality	Status	Boot/Recovery	Application
<input type="checkbox"/>	10.1.18.52	51	Not Configured	UOC	UOC	ERROR	EXP505-1-31-10	EXP505-1-31-10
<input type="checkbox"/>	10.1.18.51	52	Not Configured	UOC	UOC	OK	EXP505-1-31-10	EXP505-1-31-10
<input type="checkbox"/>	10.1.18.53	53	Not Configured	UOC	UOC	NOERR	EXP505-1-31-10	EXP505-1-31-10
<input type="checkbox"/>	10.1.18.55	55	Not Configured	UOC	UOC	OK	EXP505-1-31-10	EXP505-1-31-10
<input type="checkbox"/>	10.1.18.56	57	Not Configured	UOC	UOC	ERROR	EXP505-1-31-10	EXP505-1-31-10
<input type="checkbox"/>	10.1.18.57	58	Not Configured	UOC	UOC	OK	EXP505-1-31-10	EXP505-1-31-10
<input type="checkbox"/>	10.1.18.59	59	Not Configured	UOC	UOC	OK	EXP505-1-31-10	EXP505-1-31-10
<input checked="" type="checkbox"/>	10.1.18.75	75	Not Configured	UOC	UOC	NOERR	EXP505-1-31-10	EXP505-1-31-10
<input type="checkbox"/>	10.1.18.53:3	3	UOC	UOC	UOC	OK	130.1.18.0	140.1.22.90
<input type="checkbox"/>	10.1.18.53:4	4	UOC	UOC	UOC	OK	130.1.18.0	140.1.22.90
<input type="checkbox"/>	10.1.18.53:8	8	Not Configured	CPM	CPM	Connected		
<input type="checkbox"/>	10.1.18.53:8:1	1	UOC	UOC	UOC	OK	130.1.18.0	140.1.22.90
<input type="checkbox"/>	10.1.18.53:8:2	2	UOC	UOC	UOC	OK	130.1.18.0	140.1.22.90
<input type="checkbox"/>	10.1.18.55:1	1	UOC	UOC	UOC	OK	130.1.18.0	140.1.22.90
<input type="checkbox"/>	10.1.18.55:3	3	UOC	UOC	UOC	OK	130.1.18.0	140.1.22.90


Status: 30%


FirmwareManagerLog/Diagnostic/Capture/10.1.18.75  
 11:20:27.701 AM: Diagnostic Capture 10.1.18.75 Starting  
 11:20:28.704 AM: Diagnostic Capture 10.1.18.75 Loading


Load Firmware Cancel

6. In case of a single node, you cannot cancel the operation as it is already in progress.

In case you have selected multiple nodes to capture diagnostic information and click Cancel, the operation is canceled only after the operation is completed on the current node. The diagnostic

capture operation for the remaining nodes is canceled and a canceled symbol  appears

next to Application column for those nodes. If diagnostic capture fails, Failed symbol  is

displayed. The diagnostics capture operation is sequential.  is displayed for the nodes on which the operation has not yet started.

## 7.9 ControlEdge PLC to ControlEdge UOC Conversion

ControlEdge UOC and PLC are distinct controllers that can be deployed using a common family of HW. For information on ControlEdge HW components see *ControlEdge 900 Platform Hardware Planning and Installation Guide\_HWDOC-X430.pdf*.

The ControlEdge Control Processor Module (CPM) is the central component which communicates on its uplink ports with the Experion PKS system and on its downlink ports with I/O and devices. The UOC's hardware and model number are identical to that of the ControlEdge PLC but its firmware is different. The CPM is always shipped from the factory preloaded with PLC firmware. To use a CPM in an Experion PKS system, it must first be converted into a UOC CPM by loading firmware over a network connection.

Network connectivity is established by using an Ethernet port and IP address that conform to the PLC's communication methodology. The handling of Ethernet ports and IP addresses in a ControlEdge PLC is different from that of Experion. As a result, the PLC to be converted must be placed in a system where it can communicate without needing to be a member of an FTE community.

There are two possible ways of doing this,

- Use a Bench system with a ControlEdge power supply and rack that can host a CPM.
- Use an Experion PKS system with a ControlEdge power supply and rack or rack slot that can host a CPM and is not being used for on-process control.

**ATTENTION:**

- Once the PLC is converted into a UOC, it should not be reconnected to a PLC system as it requires Experion PKS infrastructure to operate.
- The PLC's ControlEdge Builder is not used to perform PLC-to-UOC conversion. Manually attempting to load UOC firmware to a PLC-CPM with the PLC's Control Edge Builder may result in controller firmware corruption.
- UOC-to-PLC conversion is currently not supported. Manually attempting to load PLC firmware to a UOC-CPM may result in controller firmware corruption.
- Do not install the PLC's ControlEdge Builder software on either an Experion node type or a Bench laptop or PC that has Firmware Manager installed. These applications have similar controller communication infrastructure that are not designed to co-exist resulting in Firmware Manager to module communication breakage.

At a high level, follow these steps to complete the conversion using either a Bench System or an Experion PKS System.

1. [Bench System Only] When not using an Experion PKS system, Install the Bench System software for UOC conversion using the Experion PKS Installation media.
  2. [Common] Setup the Conversion System laptop/PC and the PLC-CPM.
  3. [Common] Perform PLC to UOC conversion.
- [Bench System Software Installation](#)
  - [Setup Conversion System PC and PLC-CPM](#)
  - [Perform PLC to UOC Conversion](#)
  - [PLC to UOC Conversion Troubleshooting](#)

## 7.9.1 Bench System Software Installation

**ATTENTION:**

- This section only applies to laptops/PCs that are not an Experion PKS node type.
- The first Firmware Manager installation on the Bench System laptop/PC must be done using an Experion PKS media set as described in this section to also install the UOC firmware files on the PC. Subsequent Firmware Manager updates may be done using an installation downloaded from the HPS website. Recommended to check for the latest Firmware Manager software from the [honeywellprocess.com](http://honeywellprocess.com) website and install if applicable
- A Bench System may have target UOC-CPM firmware that is older than currently used in an Experion PKS system that has been updated since it was installed from the Experion PKS Installation media. As a consequence, UOC-CPM firmware update may be required following conversion using a Bench System.
- The minimum Firmware Manager version that supports PLC-to-UOC conversion is R110.4

To install Firmware Manager software on a Bench System laptop/PC:

1. Insert the installation DVD 1 and launch **setup.exe** to launch the installation wizard.
2. Right-click on setup.exe and select **Run as administrator**.
3. Select **Product Install Only** and click **Next**.  
The **Honeywell Experion PKS Dialog Manager** window appears.
4. Click **Next**.
5. Select **Install Clean** and click **Next**.
6. If pop-up appears saying Migration not selected, then click **Yes**.  
The **License and agreement** window appears.
7. Select **Accept the License...** and click **Next**.
8. Select the **Optional Features** and click **Next**.
9. Type the company name and click **Next**.
10. In the Features and Options window, select **UOC Bench systems** and click **Next**.
11. Type the default security password for the install users and click **Next**.  
The Summary page appears.
12. Verify the information provided and click **Install**.
13. Reboot the machine after the installation is completed.  
Go to [honeywellprocess.com](http://honeywellprocess.com) website and check for the latest Firmware Manager software and install if applicable. It is recommended to install the latest version.

## 7.9.2 Setup Conversion System PC and PLC-CPM

### NOTE

Both a Bench System Laptop/PC and an Experion PKS node can be employed in a Conversion System to convert PLCs to CPMs. This common section refers to both as the Conversion PC and when necessary makes specific references to either Bench System laptop/PC or Experion PKS System PC.

Procure a ControlEdge controller rack with power supply. Either a redundant or non-redundant rack may be used. For information on ControlEdge power supplies or rack types, see *ControlEdge 900 Platform Hardware Planning and Installation Guide\_HWDOC-X430.pdf*.

The PLC-CPM must have factory default settings. Refer to *ControlEdge PLC Interface Reference EPDOC-X467-ento* to set PLC-CPM factory default settings. If the CPM has not been received directly from the factory and has previously been used as a PLC-CPM, the Firmware Manager will not be able to connect. In that case, ControlEdge (PLC) Builder must first be used to reset to factory defaults.

Repeat the following steps for each PLC-CPM to be converted.

1. Set the CPM Mode switch to Stop to ensure that the PLC will accept firmware load.
2. Before inserting the CPM into the rack, set the desired FTE device index at its rotary switches. Until a PLC-CPM is converted into a UOC-CPM, the device index is not used. Once the conversion is complete, the UOC-CPM acquires a new IP address from the network's BOOTP server based on its device index.

### NOTE

This is applicable only for Experion, not the bench system.

3. Ensure that the CPM is properly aligned with the slot guides, insert the new CPM in the rack, and secure it in place with the captive screws at top and bottom of the module. Failure to adequately secure the CPM may result in the inability to communicate with the CPM.

When the PLC-CPM is reset to factory defaults, as delivered when shipped from the factory, its ETH2 interface has a fixed 255.255.255.0 subnet mask and an IP Address of either 192.168.1.50 for a primary or non-redundant PLC or 192.168.1.51 for a secondary PLC.

To prevent an addressing conflict, only one primary/non-redundant PLC-CPM and/or only one secondary PLC-CPM may be connected at a time since the ETH2 port of each PLC-CPM communicates through the same IP address.

### NOTE

When you are going for Experion system, ensure that the above IP addresses are not used (not occupied). The communication connection between the PLC and the Conversion PC cannot be established if any of the IP addresses are occupied.

For the Bench System PC:

- Configure the Ethernet adaptor (used to communicate with the PLC-CPM) to have an IP Address of 192.168.1.XX and subnet mask 255.255.255.0. The IP address must not be one of the PLC factory reset addresses, 192.168.1.50 or 192.168.1.51.
- Connect the Ethernet adaptor (used to communicate with the PLC-CPM) to the ETH2 adaptor socket of the CPM. It may be connected directly or through a switch.

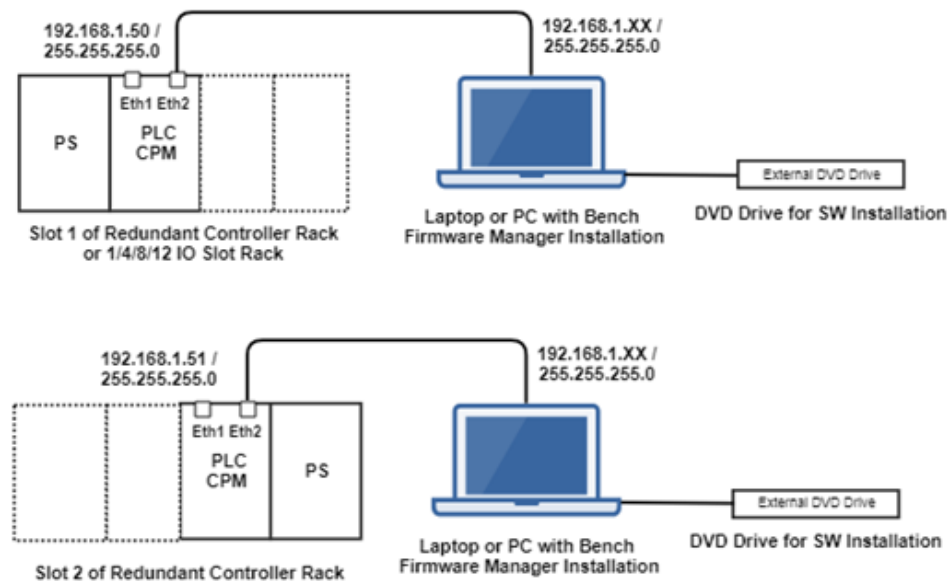


Figure 7.5 PLC-to-UOC conversion Bench System

For the Experion PKS System PC:

- Connect the PLC-CPM's ETH2 adaptor socket to the Yellow FTE cable. The PLC-CPM's ETH1 adaptor must not be connected to the FTE network until the CPM has been converted as its properties will be incompatible with the FTE network and could cause disruption of communications.

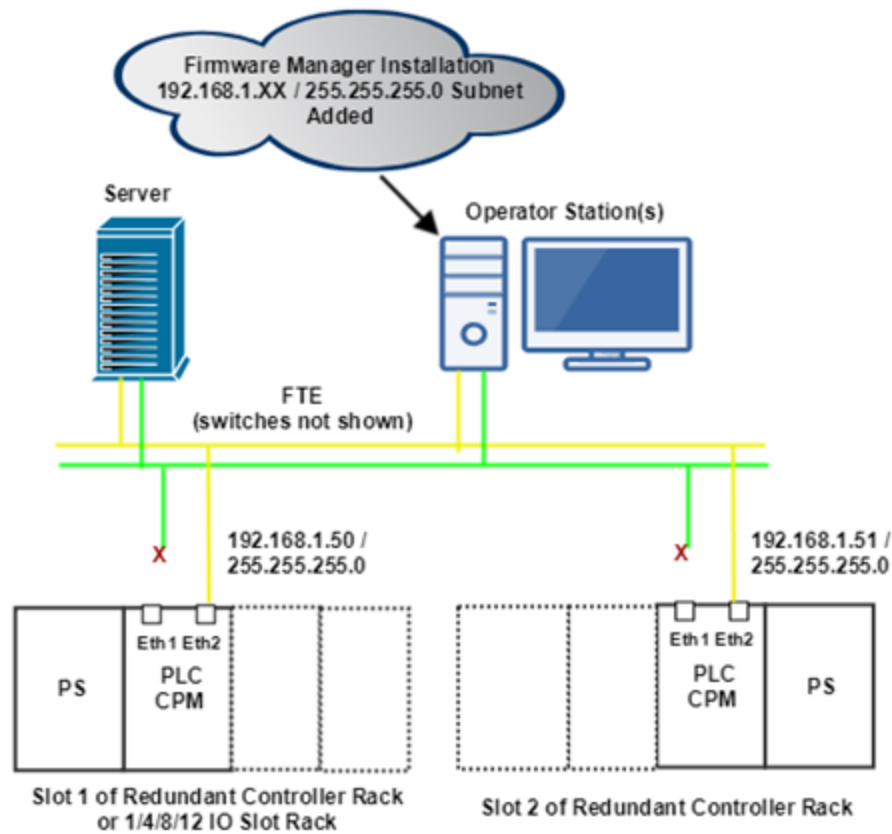


Figure 7.6 PLC-to-UOC conversion Experion PKS System

- If the FTE Mux Adapter does not already allow communication to and from the PLC's factory reset IP address and subnet mask, add a 192.168.1.XX IP Address and 255.255.255.0 subnet mask to the FTE Mux Adapter. The IP address must not be one of the PLC factory reset addresses, 192.168.1.50 or 192.168.1.51.

### 7.9.3 Perform PLC to UOC Conversion

#### NOTE

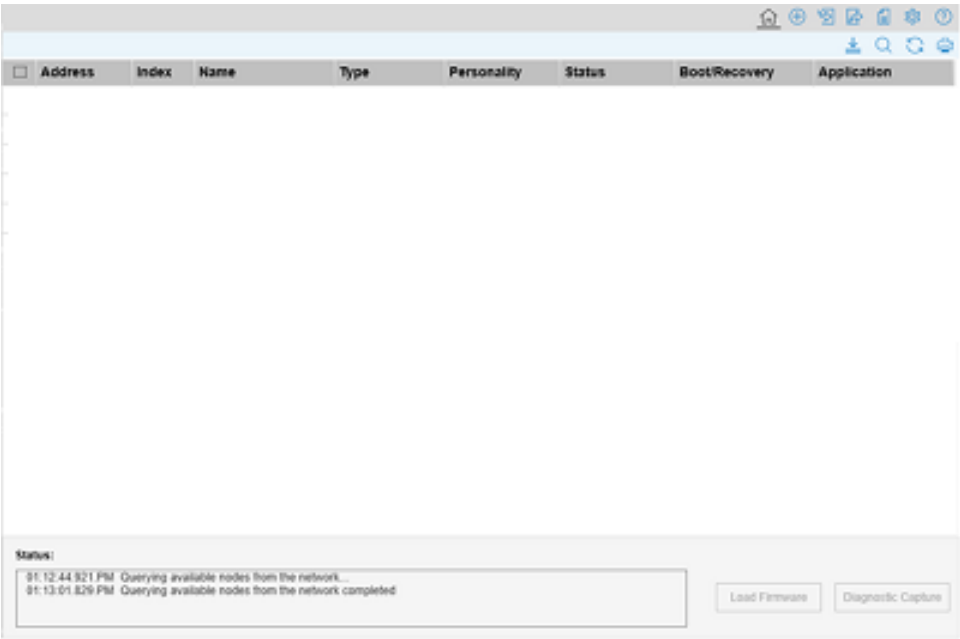
Both a Bench System Laptop/PC and an Experion PKS node can be employed in a Conversion System to convert PLCs to CPMs. This common section refers to both as the Conversion PC and when necessary makes specific references to either Bench System laptop/PC or Experion PKS System PC.

To convert a PLC to a UOC .

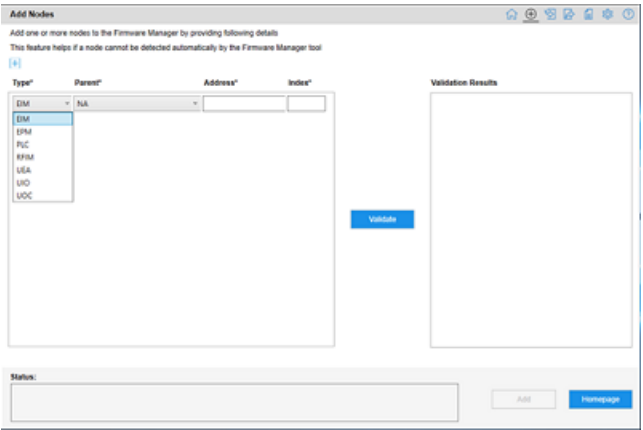
1. Launch Firmware Manager. Browse to "C:\Program Files (x86)\Honeywell\FirmwareManager\Honeywell.CMT.CommonMaintenanceTool.exe" Or Click Start > Honeywell Tools > Firmware Manager.

**NOTE**

Firmware Manager can only be started under Administrative privileges.



2. Click Add Node (+).  
The Add Nodes window appears.



3. On the left pane, select the Type as PLC, (Parent is not applicable). Enter the address 192.168.1.50 (or 192.168.1.51 when in Slot 2 of redundant controller rack) in the Address field. Enter the 4th octet of the IP Address in the Index field.
4. Click Validate. The validated results are displayed on the right pane. Refer to the PLC-to-UOC Conversion Troubleshooting section if validation fails.

### Add Nodes

Add one or more nodes to the Firmware Manager by providing following details  
This feature helps if a node cannot be detected automatically by the Firmware Manager tool

[\[+\]](#)

Type*	Parent*	Address*	Index*
PLC	-	NA	-
		192.168.1.50	50

[Validate](#)

#### Validation Results

Valid Node IPAddresses:  
192.168.1.50

By clicking on "Add" will add only Valid Nodes.

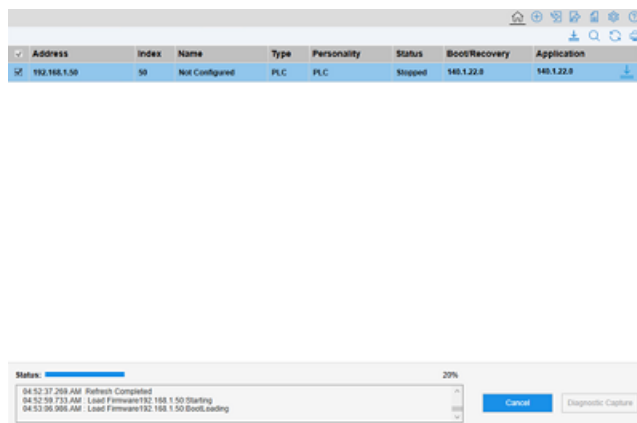
**Status:**  
04:48:10 853 AM Validation completed.

[Add](#) [Homepage](#)

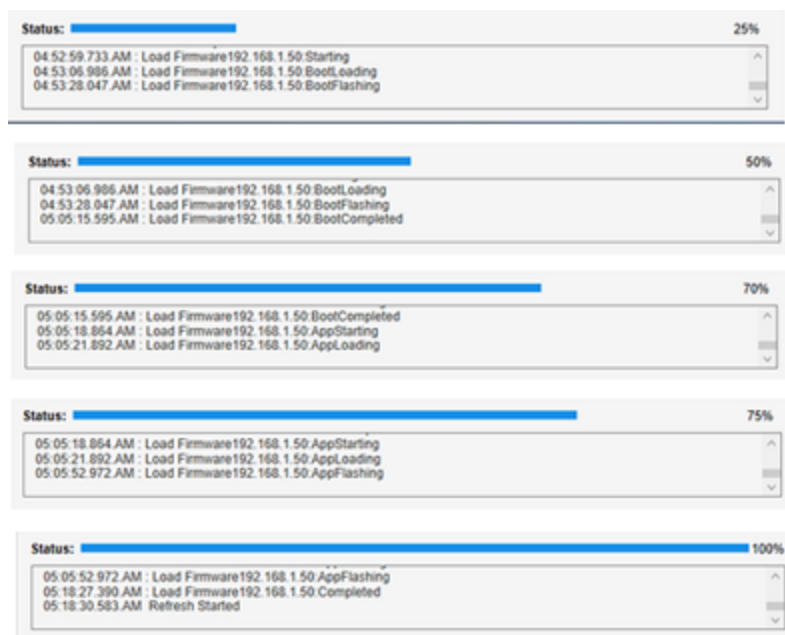
5. Click Add to add the node. The PLC you added appears in the Nodes List on the Home screen.

<div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> </div>								
<input type="checkbox"/>	Address	Index	Name	Type	Personality	Status	Boot/Recovery	Application
<input type="checkbox"/>	192.168.1.50	50	Not Configured	PLC	PLC	Stopped	140.1.22.0	140.1.22.0

6. Click Load Firmware on the Home screen to start the conversion process.

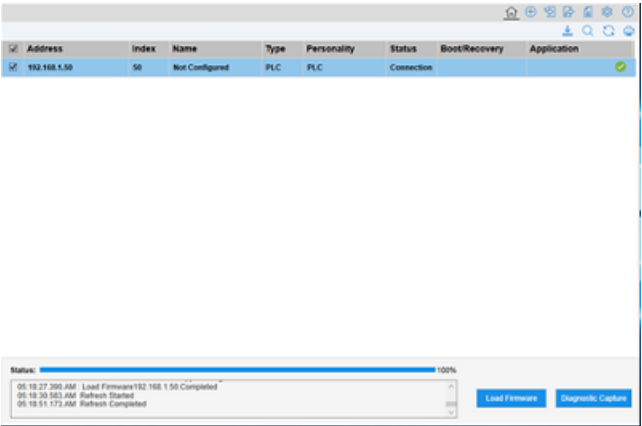


7. The progress is displayed in the Progress bar. The conversion process requires loading both the UOC Recovery and UOC Application mages, with a reboot of the module after each load is complete. The complete process takes about 30 minutes. Refer to the PLC-to-UOC Conversion Troubleshooting section if there is an error loading firmware.



8. After the firmware is flashed, the Nodes List on the Home screen is updated to display the Status as Connection Error for the PLC module because the UOC-CPM is no longer communicating at the PLC-CPM's factory reset IP Address. The UOC-CPM starts up running its UOC Application image and it reaches a point in startup processing where it waits for IP address assignment from an Experion PKS BOOTP server.

- a. When using a Bench System for conversion, no BOOTP server is present. The UOC-CPM acquires no IP address and is unable to communicate. Its status LED blinks red once per second. After the firmware is flashed, the Nodes List on the Home screen is updated to display the Status as Connection Error for the PLC module.
- b. When using an Experion PKS System for conversion, a UOC at the configured FTE IP address shows up within the Firmware Manager's node list. When viewing the module itself, note that after the UOC has completed its boot up process its status LED transitions to the green blinking (if primary) or orange blinking (if secondary) state.

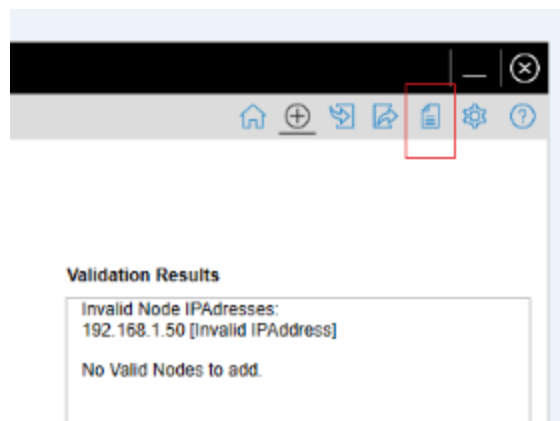


9. To properly connect the UOC-CPM to FTE following conversion from PLC-CPM:
- Remove the Yellow FTE or Bench System cable from ETH2.
  - Connect the Yellow FTE cable to ETH1.
  - Connect the Green FTE cable to ETH2.

## 7.9.4 PLC to UOC Conversion Troubleshooting

### Unable to Validate PLC-CPM (when Adding to Firmware Manager)

1. Firmware Manager on the Conversion System PC cannot communicate to PLC-CPM at 192.168.1.50 / 255.255.255.0.
  - a. Confirm that the Conversion PC is properly configured to communicate with the PLC. The built-in firewall of the PLC prevents it from responding to ping. Power off the rack with the PLC-CPM to be converted. Configure a test PC or laptop with static IP Address 192.168.1.50 and subnet mask 255.255.255.0 to match the PLC-CPM. Disconnect the Ethernet cable from the PLC-CPM ETH2 and connect to the test PC. From the Conversion PC, open a command prompt and ping 192.168.1.50 (i.e. the test PC configured the same as the PLC). If successful, the Conversion PC is properly configured to communicate with the PLC. Otherwise, refer to **Setup Conversion System PC and PLC-CPM** section to review how to configure the Conversion PC.
  - b. Ensure that the PLC's ControlEdge Builder software is not installed on the Conversion PC as this is not designed to coexist with the Firmware Manager software.
2. A PLC in slot 2 of a redundant controller rack takes the secondary redundancy role (when the PLC is in factory reset). When adding the PLC to the Firmware Manager, use the default ETH2 secondary IP address of 192.168.1.51 (instead of the default ETH2 non-redundant/primary IP address, 192.168.1.50).
3. The Conversion PC must be connected to the PLC's ETH2 port which has a static IP address. Do not connect with the PLC's ETH1 port as this port expects dynamic IP address assignment.
4. The PLC was configured with a non-default password. The PLC must be in factory reset for the Firmware Manager to use the default password to connect with the PLC. To confirm the password was changed, open the logfile (see below) and search for "**Open Session Failed Exception: R101Driver\_Connect\_Password\_incorrect**". The ControlEdge (PLC) Builder must first be used to reset the PLC back to factory defaults before attempting PLC-to-UOC conversion.



5. Failure to adequately secure the CPM in the rack may result in the inability to communicate with the CPM because the CPM hardware may falsely detect removal under power and not complete system startup following the last restart. Secure the PLC in place with the captive screws at top and bottom of the module.
6. Uninstall the PLC's ControlEdge Builder software when installed on the same Conversion PC that has Firmware Manager installed. These applications have similar controller communication infrastructure that are not designed to co-exist resulting in Firmware Manager to module communication breakage.

### Firmware Manager Fails to Load Firmware to the PLC

1. The Conversion PC does not have the UOC firmware installed for Firmware Manager to load to the PLC as part of the conversion process.
  - a. If the Conversion PC is an Experion PKS System PC, it must be installed with Experion PKS R505.1 or later.
  - b. If the Conversion PC is a Bench System laptop PC, the Firmware Manager must first be installed from an Experion PKS Installation media set to install the UOC firmware files on the PC.
2. The Firmware Manager only supports PLC-to-UOC conversion starting with R140.1 or later PLC firmware as the firmware loading protocol differs with earlier PLC firmware. If the PLC has R120.1 or earlier firmware, the ControlEdge (PLC) Builder must first be used to update the PLC to R140.1 or later firmware before attempting the conversion. Note that PLCs shipped from the factory have R140.1 or later firmware at the time R505.1 was released (i.e. the inaugural release of the UOC).
3. The PLC-CPM rejects firmware update when the Mode switch is in the Run position. Change the PLC's Mode switch to Stop and retry the conversion.

### Manual Firmware Update

In the event the UOC application firmware is manually loaded to the PLC (e.g. from the PLC ControlEdge Builder or from Firmware Manager but not following the PLC-to-UOC conversion procedure), the PLC reboots and no longer communicates at the previous PLC IP Addresses. Instead the CPM acts like a UOC-CPM and you need to configure a device index, connect to an Experion system, and use the Firmware Manager to manually load the UOC recovery firmware to complete the conversion.

## GETTING STARTED WITH FIRMWARE MANGER FOR CN100

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### 8.1 Load Firmware to CN100

You can select either a single node or multiple nodes in an applicable state to load firmware.

#### NOTE

CEE must be IDLE and all IOMs must be inactive to perform firmware upgrade, otherwise a firmware upgrade could cause a loss of control.

To load firmware:

1. Select one or multiple nodes to load firmware by selecting the appropriate check box(es) ☒ .  
The selected node(s) are highlighted.

You can select multiple nodes of the same product type running with different personalities, and click **Load Firmware**. In this case, the nodes will be flashed with the latest version of their respective personalities.

Address	Index	Name	Type	Personality	Status	Boot/Recovery	Application
<input type="checkbox"/> 192.168.41.125	125	Not Configured	EM	EMEP*	NOOB	EXP516-1-37-193	EXP516-1-37-12
<input type="checkbox"/> 192.168.41.126	126	Not Configured	EM	EMEP*	GROUP	EXP516-1-37-193	EXP516-1-37-12
<input type="checkbox"/> 192.168.41.127	128	UOC-127	UOC	UOC	IDLE	EXP515-1-25-8	EXP515-1-25-8
<input type="checkbox"/> 192.168.41.128	127	UOC-127SEC	UOC	UOC	GROUP*	EXP515-1-25-8	EXP515-1-25-8
<input checked="" type="checkbox"/> 192.168.41.151	151	CN100_151	CN100	CN100	OK	EXP515-1-26-8	EXP515-1-26-8
<input type="checkbox"/> 192.168.41.151-1-1A	1A	CN151_UU031	UU0_2	UU0_2	OK	05.00.19	05.00.19
<input type="checkbox"/> 192.168.41.151-1-28A	28A	Not Configured	DO_248	DO_248	Connected		
<input type="checkbox"/> 192.168.41.151-1-29A	29A	CN151_AH09	AL_HART	AL_HART	OK	05.00.01	05.00.08
<input type="checkbox"/> 192.168.41.151-1-29B	29B	CN151_AH09	AL_HART	AL_HART	Not_Config	05.00.01	05.00.08
<input type="checkbox"/> 192.168.41.151-1-30A	30A	CN151_AH030	AO_HART	AO_HART	OK	05.00.01	05.00.08
<input type="checkbox"/> 192.168.41.151-1-30B	30B	CN151_AH030	AO_HART	AO_HART	Not_Config	05.00.01	05.00.08
<input type="checkbox"/> 192.168.41.151-1-31A	31A	CN151_UU031	UU0_2	UU0_2	OK	05.00.19	05.00.19
<input type="checkbox"/> 192.168.41.151-1-32A	32A	CN151_UU032	UU0_2	UU0_2	OK	05.00.19	05.00.19
<input type="checkbox"/> 192.168.41.151-1-32B	32B	CN151_UU032	UU0_2	UU0_2	Not_Config	05.00.19	05.00.19
<input type="checkbox"/> 192.168.41.151-1-31A	31A	CN151_FV13	FV_3A	FV_3A	OK	05.00.01	05.00.01



Status:


13:25:08.733 AM Refresh Completed  
 13:27:51.982 AM Refresh Started  
 13:28:05.144 AM Refresh Completed  
 13:30:51.953 AM Refresh Started

Load Firmware Diagnostic Capture

- Click **Load Firmware**. The load operation begins and its progress is displayed on the progress bar.

A load symbol  appears beside the **Application** version column for the node on which firmware is being loaded.

- After the firmware is loaded, the load symbol changes to a green colored tick mark . If the firmware load operation fails, a Failed symbol  appears. The reason for failure is shown in the status bar below the progress bar or in the FM log file.

Address	Index	Name	Type	Personality	Status	Boot/Recovery	Application
<input type="checkbox"/> 192.168.41.125	125	Not Configured	EM	EMEP*	NOOB	EXP516-1-37-193	EXP516-1-37-12
<input type="checkbox"/> 192.168.41.126	126	Not Configured	EM	EMEP*	GROUP	EXP516-1-37-193	EXP516-1-37-12
<input type="checkbox"/> 192.168.41.127	128	UOC-127	UOC	UOC	IDLE	EXP515-1-25-8	EXP515-1-25-8
<input type="checkbox"/> 192.168.41.128	127	UOC-127SEC	UOC	UOC	GROUP*	EXP515-1-25-8	EXP515-1-25-8
<input checked="" type="checkbox"/> 192.168.41.151	151	CN100_151	CN100	CN100	OK	EXP515-1-26-8	EXP515-1-26-8 
<input type="checkbox"/> 192.168.41.151-1-1A	1A	CN151_UU031	UU0_2	UU0_2	OK	05.00.19	05.00.19
<input type="checkbox"/> 192.168.41.151-1-28A	28A	Not Configured	DO_248	DO_248	Connected		
<input type="checkbox"/> 192.168.41.151-1-29A	29A	CN151_AH09	AL_HART	AL_HART	OK	05.00.01	05.00.08
<input type="checkbox"/> 192.168.41.151-1-29B	29B	CN151_AH09	AL_HART	AL_HART	Not_Config	05.00.01	05.00.08
<input type="checkbox"/> 192.168.41.151-1-30A	30A	CN151_AH030	AO_HART	AO_HART	OK	05.00.01	05.00.08
<input type="checkbox"/> 192.168.41.151-1-30B	30B	CN151_AH030	AO_HART	AO_HART	Not_Config	05.00.01	05.00.08
<input type="checkbox"/> 192.168.41.151-1-31A	31A	CN151_UU031	UU0_2	UU0_2	OK	05.00.19	05.00.19
<input type="checkbox"/> 192.168.41.151-1-32A	32A	CN151_UU032	UU0_2	UU0_2	OK	05.00.19	05.00.19
<input type="checkbox"/> 192.168.41.151-1-32B	32B	CN151_UU032	UU0_2	UU0_2	Not_Config	05.00.19	05.00.19
<input type="checkbox"/> 192.168.41.151-1-31A	31A	CN151_FV13	FV_3A	FV_3A	OK	05.00.01	05.00.01


Status:

13:25:08.733 AM Refresh Completed  
 13:27:51.982 AM Refresh Started  
 13:28:05.144 AM Refresh Completed  
 13:30:51.953 AM Refresh Started

Load Firmware Diagnostic Capture

**ATTENTION:** After flashing the module with the recovery image, flash the CN100 with the application image.

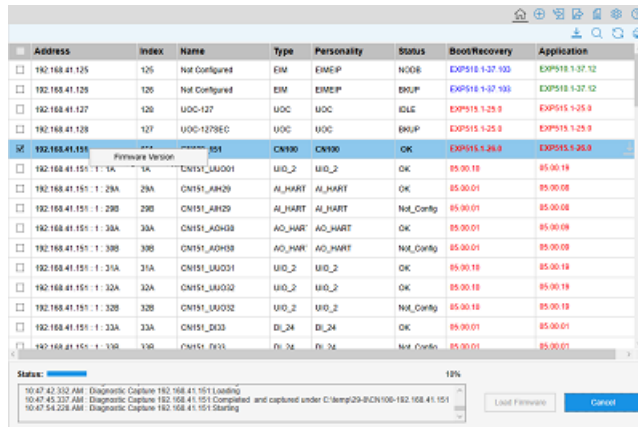
#### NOTE

**NOTE:** In case you have selected multiple nodes to load firmware, the load operation is performed in a sequential manner. The grey colored load icon  is displayed for the nodes on which the load operation has not yet started.

## 8.1.1 Load Firmware for Single Node through Node Selection for CN100

To load firmware to a single node:

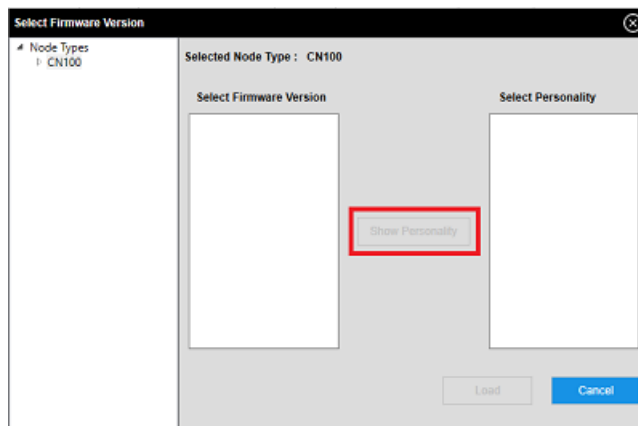
1. Select a **node** by selecting the appropriate check box.
2. Right-click on the selected row and click **Firmware Version**.



Address	Index	Name	Type	Personality	Status	Boot/Recovery	Application
192.168.41.125	125	Not Configured	EM	EMEP	NODE	EXP518-1-27-103	EXP518-1-27-12
192.168.41.126	126	Not Configured	EM	EMEP	EXPUP	EXP518-1-27-103	EXP518-1-27-12
192.168.41.127	127	UOC-127	UOC	UOC	IDLE	EXP518-1-25-9	EXP518-1-25-9
192.168.41.128	127	UOC-127SEC	UOC	UOC	EXPUP	EXP518-1-25-9	EXP518-1-25-9
192.168.41.151	151	151	CN100	CN100	OK	EXP518-1-26-9	EXP518-1-26-9
192.168.41.151:1:1A	1A	CN151_AU001	UO_2	UO_2	OK	85.00.18	85.00.18
192.168.41.151:1:28A	28A	CN151_AH09	AL_HART	AL_HART	OK	85.00.01	85.00.08
192.168.41.151:1:29D	29D	CN151_AH29	AL_HART	AL_HART	Not Config	85.00.01	85.00.08
192.168.41.151:1:33A	33A	CN151_AO03	AO_HART	AO_HART	OK	85.00.01	85.00.09
192.168.41.151:1:38B	38B	CN151_AO03B	AO_HART	AO_HART	Not Config	85.00.01	85.00.09
192.168.41.151:1:31A	31A	CN151_AU001	UO_2	UO_2	OK	85.00.18	85.00.18
192.168.41.151:1:32A	32A	CN151_AU002	UO_2	UO_2	OK	85.00.18	85.00.18
192.168.41.151:1:32B	32B	CN151_AU002	UO_2	UO_2	Not Config	85.00.18	85.00.18
192.168.41.151:1:33A	33A	CN151_DI03	DI_24	DI_24	OK	85.00.01	85.00.01
192.168.41.151:1:33D	33D	CN151_DI03	DI_24	DI_24	Not Config	85.00.01	85.00.01

The **Select Firmware Version** window of the selected node appears.

3. Select a firmware version and click **Show Personality**.



**Select Firmware Version**

Node Types: CN100

Selected Node Type: CN100

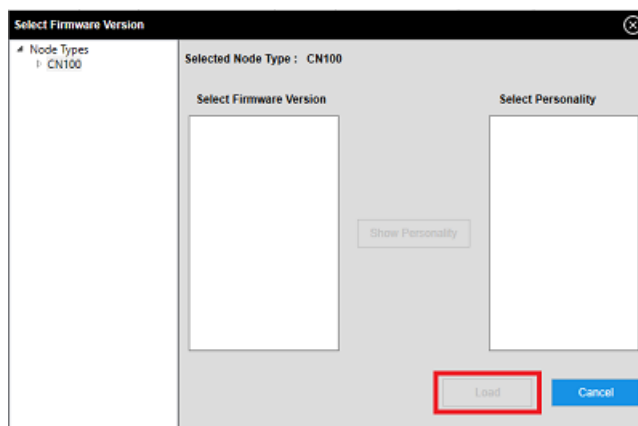
Select Firmware Version

Select Personality

Show Personality

Load Cancel

4. Select a personality under **Select Personality** and click **Select**.



**Select Firmware Version**

Node Types: CN100

Selected Node Type: CN100

Select Firmware Version

Select Personality

Show Personality

Load Cancel

5. Click **Load Firmware** on the Home screen.

The selected node is displayed in the list.

Address	Index	Name	Type	Personality	Status	Boot/Recovery	Application
192.168.41.125	125	Not Configured	DM	EMEP*	NOOB	EXP518-1-37-193	EXP518-1-37-12
192.168.41.126	126	Not Configured	DM	EMEP*	NOOB	EXP518-1-37-193	EXP518-1-37-12
192.168.41.127	128	UOC-127	UOC	UOC	IDLE	EXP515-1-25-8	EXP515-1-25-8
192.168.41.128	127	UOC-127SEC	UOC	UOC	BRUP*	EXP515-1-25-8	EXP515-1-25-8
192.168.41.151	151	CN100_151	CN100	CN100	OK	EXP515-1-25-8	EXP515-1-25-8
192.168.41.151 : 1-1A	1A	CN151_UU091	UUC_2	UUC_2	OK	05.00.19	05.00.19
192.168.41.151 : 1-28A	28A	Not Configured	DO_248	DO_248	ConnectionE		
192.168.41.151 : 1-28A	28A	CN151_AH09	AL_HART	AL_HART	OK	05.00.01	05.00.08
192.168.41.151 : 1-28B	28B	CN151_AH09	AL_HART	AL_HART	Not Config	05.00.01	05.00.08
192.168.41.151 : 1-36A	36A	CN151_AH08	AO_HART	AO_HART	OK	05.00.01	05.00.08
192.168.41.151 : 1-36B	36B	CN151_AH08	AO_HART	AO_HART	Not Config	05.00.01	05.00.08
192.168.41.151 : 1-31A	31A	CN151_UU031	UUC_2	UUC_2	OK	05.00.19	05.00.19
192.168.41.151 : 1-32A	32A	CN151_UU032	UUC_2	UUC_2	OK	05.00.19	05.00.19
192.168.41.151 : 1-32B	32B	CN151_UU032	UUC_2	UUC_2	Not Config	05.00.19	05.00.19
192.168.41.151 : 1-31A	31A	CN151_UU031	UUC_2	UUC_2	OK	05.00.01	05.00.01

Status:

- 19:25:08.733 AM Refresh Completed
- 19:27:51.862 AM Refresh Started
- 19:28:05.184 AM Refresh Completed
- 19:30:51.863 AM Refresh Started

Load Firmware Diagnostic Capture

#### NOTE

The pointer near the download status symbol shows the Firmware version and Personality of the selected node. The same information is displayed in the Status bar.

## 8.1.2 Progress Bar for Single Node Selection for CN100

When a single node is selected for loading firmware, the progress is shown with the percentage of the task completed. Events such as flashing or rebooting that occur are also listed.



Figure 8.1 Progress bar for single node selection

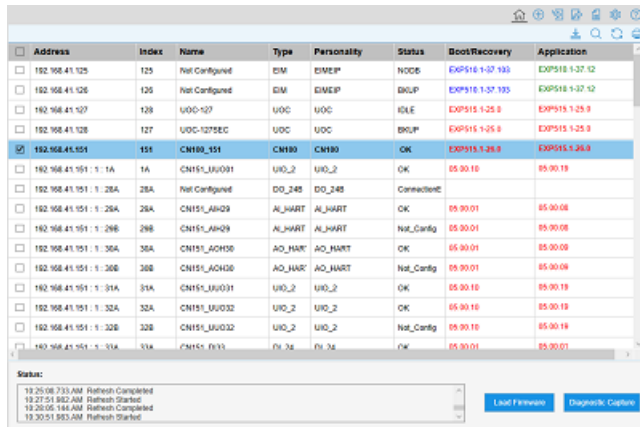
## 8.1.3 Progress Bar for Multiple Node Selection for CN100

If you select multiple nodes of the same type, the firmware is loaded in a sequential manner (one node after the other) and the progress bar and text box show the progress and the status for the node that is currently being loaded.

**ATTENTION:** The latest version of the Firmware is displayed after all the nodes are updated.

## 8.1.4 Cancel Load Firmware Operation for CN100

Click **Cancel** to cancel a Load Firmware operation that is in progress.



Address	Index	Name	Type	Personality	Status	Boot/Recovery	Application
192.168.41.125	125	Not Configured	BM	BMER*	NOCB	EXP515 1.27.12	EXP515 1.27.12
192.168.41.126	126	Not Configured	BM	BMER*	BRUP	EXP515 1.27.12	EXP515 1.27.12
192.168.41.127	127	UOC-127	UOC	UOC	IDLE	EXP515 1.25.9	EXP515 1.25.9
192.168.41.128	128	UOC-127SEC	UOC	UOC	BRUP	EXP515 1.25.9	EXP515 1.25.9
192.168.41.151	151	CN100_151	CN100	CN100	OK	EXP515 1.25.9	EXP515 1.25.9
192.168.41.151 : 1.1A	1A	CN151_UU031	UU0_2	UU0_2	OK	05.00.10	05.00.10
192.168.41.151 : 1.2BA	2BA	Not Configured	DO_24B	DO_24B	Connected		
192.168.41.151 : 1.2BA	2BA	CN151_AH29	AL_HART	AL_HART	OK	05.00.01	05.00.08
192.168.41.151 : 1.2B8	2B8	CN151_AH29	AL_HART	AL_HART	Not Config	05.00.01	05.00.08
192.168.41.151 : 1.3BA	3BA	CN151_AH3B	AO_HART	AO_HART	OK	05.00.01	05.00.08
192.168.41.151 : 1.3B8	3B8	CN151_AH3B	AO_HART	AO_HART	Not Config	05.00.01	05.00.08
192.168.41.151 : 1.31A	31A	CN151_UU031	UU0_2	UU0_2	OK	05.00.10	05.00.10
192.168.41.151 : 1.32A	32A	CN151_UU032	UU0_2	UU0_2	OK	05.00.10	05.00.10
192.168.41.151 : 1.32B	32B	CN151_UU032	UU0_2	UU0_2	Not Config	05.00.10	05.00.10
192.168.41.151 : 1.31A	31A	CN151_PN31	PN_3A	PN_3A	OK	05.00.01	05.00.01

Status:


19.25.08.733 AM Refresh Completed  
 19.27.51.882 AM Refresh Started  
 19.28.05.144 AM Refresh Completed  
 19.30.51.953 AM Refresh Started

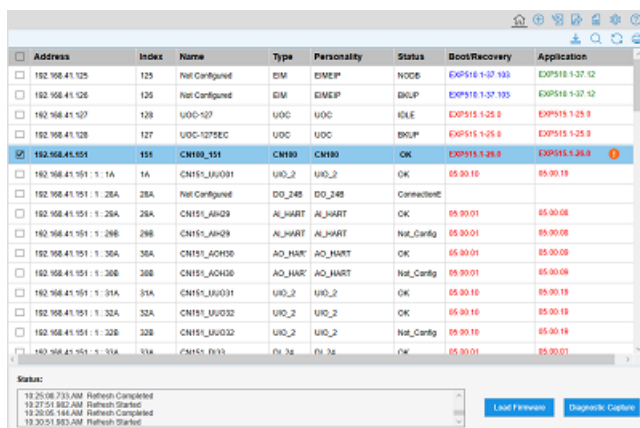
Load Firmware Diagnostic Capture

Figure 8.2 Cancel Load Firmware

**NOTE**

- In case of a single node, you cannot cancel the load operation as it is already in progress.
- In case you have selected multiple nodes to load firmware and click **Cancel**, the load operation is canceled only after the load operation is completed on the current node. Note that the load operation for the remaining nodes is canceled and a load canceled

symbol  appears next to Application column for those nodes.



Address	Index	Name	Type	Personality	Status	Boot/Recovery	Application
192.168.41.125	125	Not Configured	BM	BMER*	NOCB	EXP515 1.27.12	EXP515 1.27.12
192.168.41.126	126	Not Configured	BM	BMER*	BRUP	EXP515 1.27.12	EXP515 1.27.12
192.168.41.127	127	UOC-127	UOC	UOC	IDLE	EXP515 1.25.9	EXP515 1.25.9
192.168.41.128	128	UOC-127SEC	UOC	UOC	BRUP	EXP515 1.25.9	EXP515 1.25.9
192.168.41.151	151	CN100_151	CN100	CN100	OK	EXP515 1.25.9	EXP515 1.25.9
192.168.41.151 : 1.1A	1A	CN151_UU031	UU0_2	UU0_2	OK	05.00.10	05.00.10
192.168.41.151 : 1.2BA	2BA	Not Configured	DO_24B	DO_24B	Connected		
192.168.41.151 : 1.2BA	2BA	CN151_AH29	AL_HART	AL_HART	OK	05.00.01	05.00.08
192.168.41.151 : 1.2B8	2B8	CN151_AH29	AL_HART	AL_HART	Not Config	05.00.01	05.00.08
192.168.41.151 : 1.3BA	3BA	CN151_AH3B	AO_HART	AO_HART	OK	05.00.01	05.00.08
192.168.41.151 : 1.3B8	3B8	CN151_AH3B	AO_HART	AO_HART	Not Config	05.00.01	05.00.08
192.168.41.151 : 1.31A	31A	CN151_UU031	UU0_2	UU0_2	OK	05.00.10	05.00.10
192.168.41.151 : 1.32A	32A	CN151_UU032	UU0_2	UU0_2	OK	05.00.10	05.00.10
192.168.41.151 : 1.32B	32B	CN151_UU032	UU0_2	UU0_2	Not Config	05.00.10	05.00.10
192.168.41.151 : 1.31A	31A	CN151_PN31	PN_3A	PN_3A	OK	05.00.01	05.00.01

Status:

19.25.08.733 AM Refresh Completed  
 19.27.51.882 AM Refresh Started  
 19.28.05.144 AM Refresh Completed  
 19.30.51.953 AM Refresh Started

Load Firmware Diagnostic Capture

Figure 8.3 Canceled Load Firmware

## 8.2 Load firmware for Series C IOMs connected to CN100

Series C IO present in the network are auto-detected when Firmware Manager is installed on any of the Experion nodes.

## 8.3 Load Firmware to Series C IOM



You can select either a single node or multiple nodes to load firmware provided the modules are in an applicable state.

### NOTE

Flashing of an IO module is restricted if the IOM Status is **OK**.

To change its state in Control Builder, inactivate the IOM.

To load firmware:

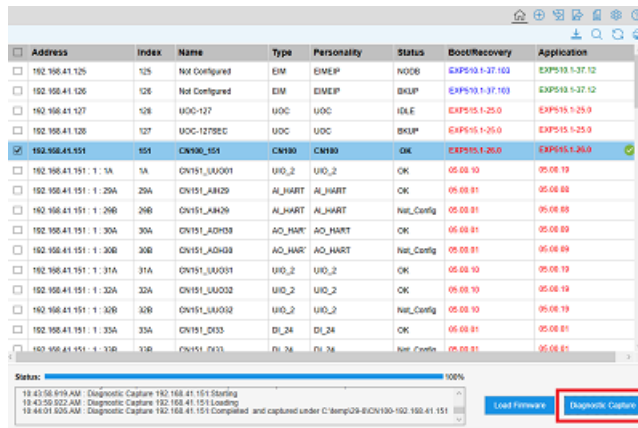
1. Select the node(s) to load firmware by selecting the appropriate check box(es). The selected node (s) are highlighted. You can select multiple nodes of the same product type (for example IOM), running with different personalities and click **Load Firmware**. In this case, the nodes will be flashed with the latest version of their respective personalities.
2. Click **Load Firmware**. The progress is displayed on the progress bar.
3. A load symbol appears beside the Application Version column based on the firmware being downloaded.
4. After the firmware is loaded, the load symbol changes to a green colored tick mark . If the firmware load operation fails, a Failed symbol  appears. The reason for failure is shown in the status bar below the progress bar or in the FM log file.


## 8.4 Diagnostic Capture from CN100 and series C IOMs

Use the Diagnostic Capture feature to upload diagnostic information files such as **log files** from a node.



To capture the diagnostic data:

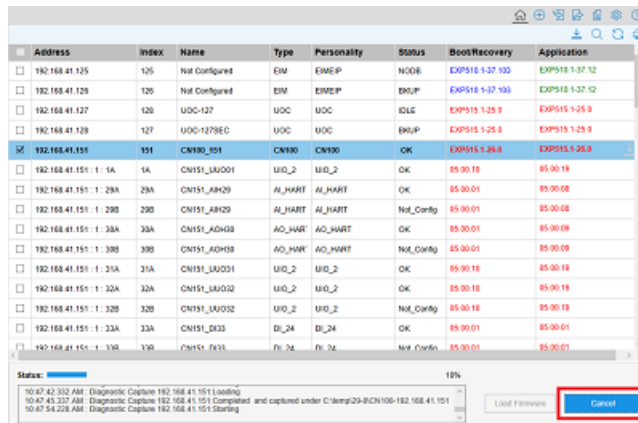
1. Select one or multiple nodes from the Nodes List to capture diagnostic data.
2. Click **Diagnostics Capture**. The caption of the button changes to **Cancel**.



3. The upload symbol  appears beside the Application version column for the node(s) for which the diagnostic data is being uploaded. The data gets saved to the location defined earlier on the **Settings** page.


**NOTE** The progress bar displays the progress and the text box displays the events during the Diagnostic capture.


4. After the data is uploaded  successfully,  is displayed.
5. To cancel the operation, click the **Cancel** button.



6. In case of a single node, you cannot cancel the operation as it is already in progress.

In case you have selected multiple nodes to capture diagnostic information and click Cancel, the operation is canceled only after the operation is completed on the current node. The diagnostic capture operation for the remaining nodes is canceled and a canceled symbol next to

Application column for those nodes. If diagnostic capture fails, Failed symbol  is displayed.

The diagnostics capture operation is sequential.  is displayed for the nodes on which the operation has not yet started.

## GETTING STARTED WITH FIRMWARE MANAGER FOR PCNT05

PCNT05 is the next generation C300 controller. It is based on a new hardware design and uses the Firmware Manager for firmware maintenance and related activities, rather than "CTOOLS" which is used by previous versions of the C300.

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### 9.1 Load Firmware to PCNT05



You can select either a single node or multiple nodes in an applicable state to load firmware.

#### NOTE

CEE must be IDLE and all IOMs must be inactive to perform firmware upgrade, otherwise a firmware upgrade could cause a loss of control.

To load firmware:


1. Select one or multiple nodes to load firmware by selecting the appropriate check box(es) ☒ .  
The selected node(s) are highlighted.
2. You can select multiple nodes of the same product type running with different personalities, and click **Load Firmware**. In this case, the nodes will be flashed with the latest version of their respective personalities.
3. Click **Load Firmware**. The load operation begins and its progress is displayed on the progress bar. A load symbol  appears beside the **Application** version column for the node on which firmware is being loaded.

4. After the firmware is loaded, the load symbol changes to a green colored tick mark . If the firmware load operation fails, a Failed symbol  appears. The reason for failure is shown in the status bar below the progress bar or in the FM log file.

**ATTENTION:** After flashing the module with the recovery image, flash the C300 with the application image.

#### NOTE

In case you have selected multiple nodes to load firmware, the load operation is

performed in a sequential manner. The grey colored load icon  is displayed for the nodes on which the load operation has not yet started.

### 9.1.1 Load Firmware for Single Node through Node Selection for PCNT05

To load firmware to a single node:

1. Select a **node** by selecting the appropriate check box.
2. Right-click on the selected row and click **Firmware Version**. The **Select Firmware Version** window of the selected node appears.
3. Select a firmware version and click **Show Personality**.
4. Select a personality under **Select Personality** and click **Select**.
5. Click **Load Firmware** on the Home screen

The selected node is displayed in the list.

The pointer near the download status symbol shows the Firmware version and Personality of the selected node. The same information is displayed in the Status bar.

### 9.1.2 Progress Bar for Single Node Selection for PCNT05

When a single node is selected for loading firmware, the progress is shown with the percentage of the task completed. Events such as flashing or rebooting that occur are also listed.



Figure 9.1 Progress bar for single node selection

### 9.1.3 Progress Bar for Multiple Node Selection for PCNT05

If you select multiple nodes of the same type, the firmware is loaded in a sequential manner (one node after the other) and the progress bar and text box show the progress and the status for the node that is currently being loaded.


**ATTENTION:** The latest version of the Firmware is displayed after all the nodes are updated.

### 9.1.4 Cancel Load Firmware Operation for PCNT05

Click **Cancel** to cancel a Load Firmware operation that is in progress.

#### NOTE

- In case of a single node, you cannot cancel the load operation as it is already in progress.
- In case you have selected multiple nodes to load firmware and click **Cancel**, the load operation is canceled only after the load operation is completed on the current node. Note that the load operation for the remaining nodes is canceled and a load canceled

symbol  appears next to Application column for those nodes.

## 9.2 Load firmware for Series C IOMs connected to PCNT05

Series C IO present in the network are auto-detected when Firmware Manager is installed on any of the Experion nodes.

## 9.3 Load Firmware to Series C IOM

You can select either a single node or multiple nodes to load firmware provided the modules are in an applicable state.

#### NOTE



Flashing of an IO module is restricted if the IOM Status is **OK**.

To change its state in Control Builder, inactivate the IOM.

To load firmware:

1. Select the node(s) to load firmware by selecting the appropriate check box(es). The selected node(s) are highlighted. You can select multiple nodes of the same product type (for example IOM), running with different personalities and click **Load Firmware**. In this case, the nodes will be flashed with the latest version of their respective personalities.
2. Click **Load Firmware**. The progress is displayed on the progress bar.
3. A load symbol appears beside the Application Version column based on the firmware being


downloaded.

4. After the firmware is loaded, the load symbol changes to a green colored tick mark . If the firmware load operation fails, a Failed symbol  appears. The reason for failure is shown in the status bar below the progress bar or in the FM log file.





## 9.4 Diagnostic Capture from PCNT05 and series C IOMs

Use the Diagnostic Capture feature to upload diagnostic information files such as **log files** from a node.

To capture the diagnostic data:

1. Select one or multiple nodes from the Nodes List to capture diagnostic data.
2. Click **Diagnostics Capture**. The caption of the button changes to **Cancel**.
3. The upload symbol  appears beside the Application version column for the node(s) for which the diagnostic data is being uploaded. The data gets saved to the location defined earlier on the **Settings** page.

**NOTE** The progress bar displays the progress and the text box displays the events during the Diagnostic capture.

4. After the data is uploaded  successfully,  is displayed.
  5. To cancel the operation, click the **Cancel** button.
  6. In case of a single node, you cannot cancel the operation as it is already in progress.
  7. In case you have selected multiple nodes to capture diagnostic information and click Cancel, the operation is canceled only after the operation is completed on the current node. The diagnostic capture operation for the remaining nodes is canceled and a canceled symbol appears next to Application column for those nodes. If diagnostic capture fails, Failed symbol  is displayed.
- The diagnostics capture operation is sequential.  is displayed for the nodes on which the operation has not yet started.

## GETTING STARTED WITH FIRMWARE MANAGER FOR UNIVERSAL EMBEDDED APPLIANCE

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This chapter explains how to get started with Firmware Manager for TCMI and ELCN modules.

- [Getting Started with Firmware Manager for Triconics Communication Module Interface](#)
- [Getting Started with Firmware Manager for ELCN](#)

### 10.1 Getting Started with Firmware Manager for Triconics Communication Module Interface


- [Load Firmware for TCMI](#)
- [Load Recovery Image for TCMI](#)
- [Diagnostic Capture for TCMI](#)

#### 10.1.1 Adding Nodes for TCMI

The nodes present in the network are auto-detected and the list of nodes in the Home screen is updated periodically. However, on non-Experion nodes, you must add the nodes manually to the list using the **Add Node** tool bar feature. This feature is mainly applicable on platforms where nodes are not auto-detected.

To add nodes manually:

1. Click **Add Node (+)**.  
The **Add Nodes** window appears.
2. On the left pane,  
Select **Type** as UEA,  
Select **Parent** as NA (not applicable)  
Enter the IP address in the **Address** field  
Enter last octet of the IP address in the **Index** field
3. Click **Validate**. The validated results are displayed on the right pane.

4. Click **Add** to add the nodes.
5. Click  and repeat steps 2 through 4 to add more nodes.
6. Click the **Homepage** icon. You can see the new nodes you added in the Nodes List.

Address	Index	Name	Type	Personality	Status	Boot Recovery	Application
10.1.4.177	177	Not Configured	UEA	UEAFCM	OK	UEA_100 5-11.0	TCM_100 5-31.0
10.1.4.178	178	Not Configured	UEA	UEAFCM	ERRP	UEA_100 5-11.0	TCM_100 5-31.0
10.1.4.100	179	Not Configured	UEA	UEAFCM	ERRP	UEA_100 5-11.0	TCM_100 5-31.0
10.1.4.176	180	Not Configured	UEA	UEAFCM	OK	UEA_100 5-11.0	TCM_100 5-31.0

#### NOTE

The Status bar on the Home screen displays appropriate messages if there are issues in adding a node.

For more information on Tool bars in Firmware Manager, refer to [Tool Bar Controls](#).

## 10.1.2 Load Firmware for TCM

You can select a single node or multiple nodes to load a firmware. The module should be in applicable state to load a firmware.

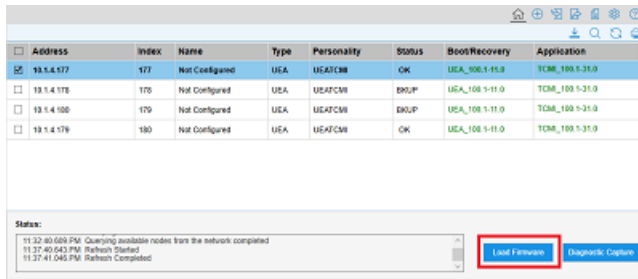


Figure 10.1 Load Firmware

To load firmware perform the following steps:

1. Select a single node or multiple nodes to load firmware by selecting check box ☒. The selected nodes are highlighted.



The user can select multiple nodes of the same product type (for example UEA), running with different personalities and click **Load Firmware**. In this case, the nodes will be flashed with the latest version of its respective personality.

**ATTENTION:** When the UEA board is received from the factory it has only the recovery image (UEARECOVERY) present in it. You must flash the TCMI application image (UEATCMI) next. If the Firmware Manager is executing on an Experion node, use the **Browse** option to find the firmware.

**ATTENTION:** Firmware will be flashed based on the personality which is already running (UEARECOVERY or UEATCMI) in the UEA. For instance, if a recovery image is flashed by the Firmware Manager (UEARECOVERY), the firmware flashing of TCMI nodes fail since the firmware is already flashed for UEARECOVERY. To further flash the TCMI nodes, you must reboot the module and select the relevant personality.

2. Click **Load Firmware**. The progress is displayed on the progress bar and text on the **Load Firmware** button changes to **Cancel**.

A load symbol  is displayed besides the **Application** version column based on the firmware being downloaded.

3. Once the firmware is loaded, the load symbol changes to a green colored tick mark . If the firmware load fails, a Failed symbol  is displayed. The reason for failure can be known from the status bar below the progress bar or FMlog file.

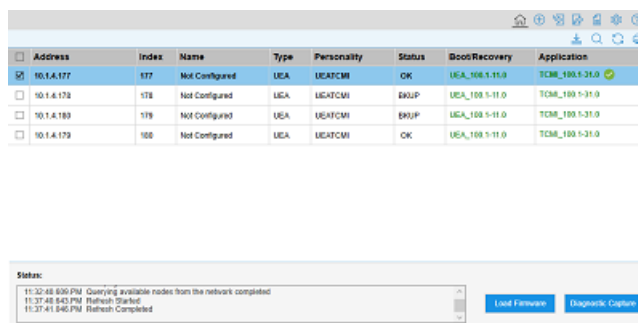



Figure 10.2 Load Firmware Status

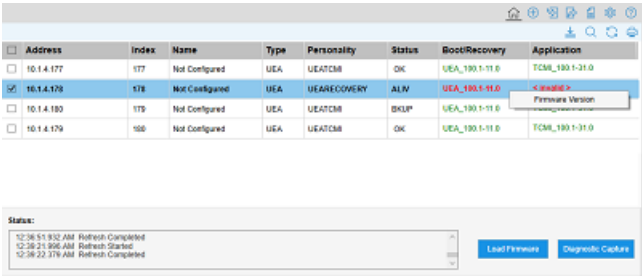
NOTE

In case you have selected multiple nodes to load firmware the load operation happens in a sequential manner. The load icon (grey color)  is displayed for the nodes if the load process has not started.

Load Firmware for a Node using Browse Option for TCM1

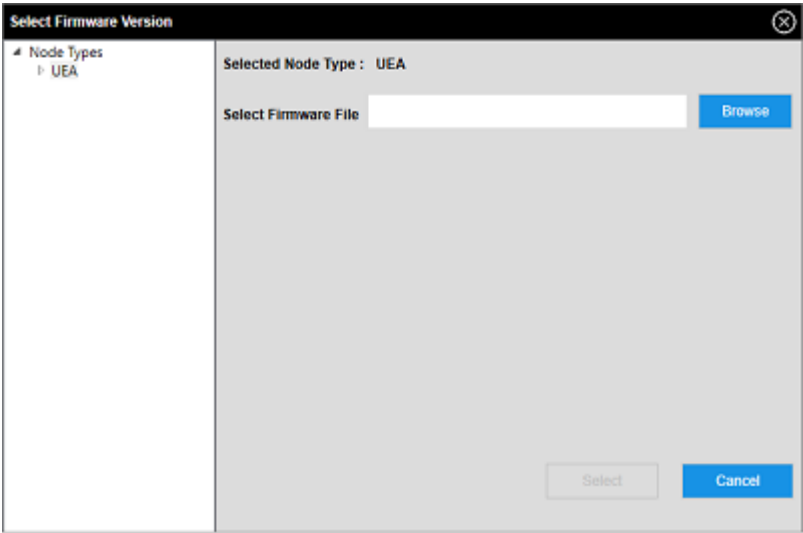
To load firmware to a node using browse option, perform the following steps:

- 1. Select a **node**.
- 2. Right-click on the selected row and click **Firmware Version**.

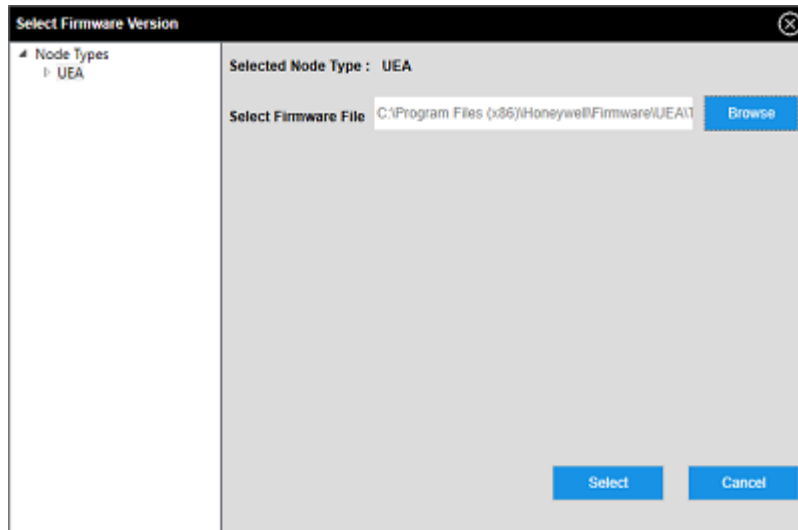


The **Select Firmware Version** window of the selected node appears.

- 3. Click **Browse** button to locate the TCM1 node that you wish to load firmware.

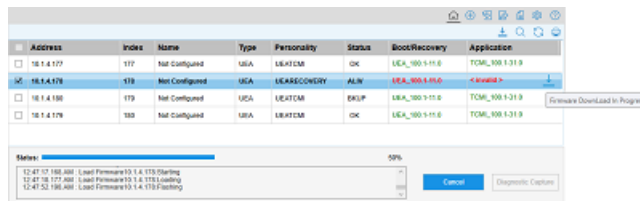


- 4. Once the firmware file is located, click **Select**.

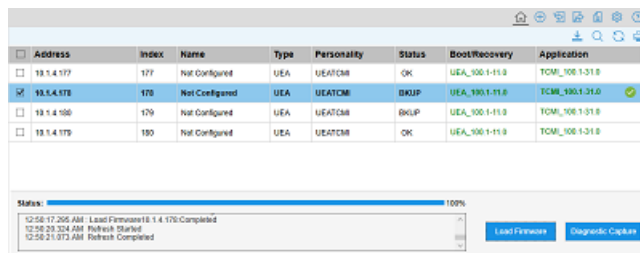


- Click **Load Firmware**.

Selected node is loaded into the list.



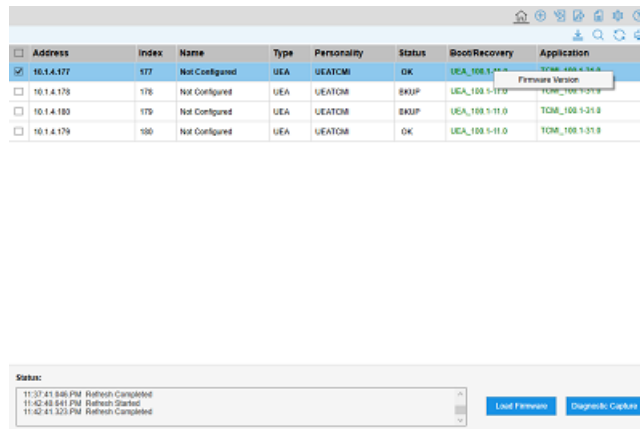
Once the firmware is loaded, the following screen appears.



## Load Firmware for Single Node through Node Selection for TCM

To load firmware to a single node, perform the following steps:

1. Select a **node** by clicking the appropriate check box.
2. Right-click on the selected row and click **Firmware Version**.



Address	Index	Name	Type	Personality	Status	Boot/Recovery	Application
<input checked="" type="checkbox"/> 10.14.177	177	Not Configured	UEA	UEATCMI	OK	UEA_100.1-11.0	TCMI_100.1-31.0
<input type="checkbox"/> 10.14.178	178	Not Configured	UEA	UEATCMI	BRUP	UEA_100.1-11.0	TCMI_100.1-31.0
<input type="checkbox"/> 10.14.180	179	Not Configured	UEA	UEATCMI	BRUP	UEA_100.1-11.0	TCMI_100.1-31.0
<input type="checkbox"/> 10.14.179	180	Not Configured	UEA	UEATCMI	OK	UEA_100.1-11.0	TCMI_100.1-31.0

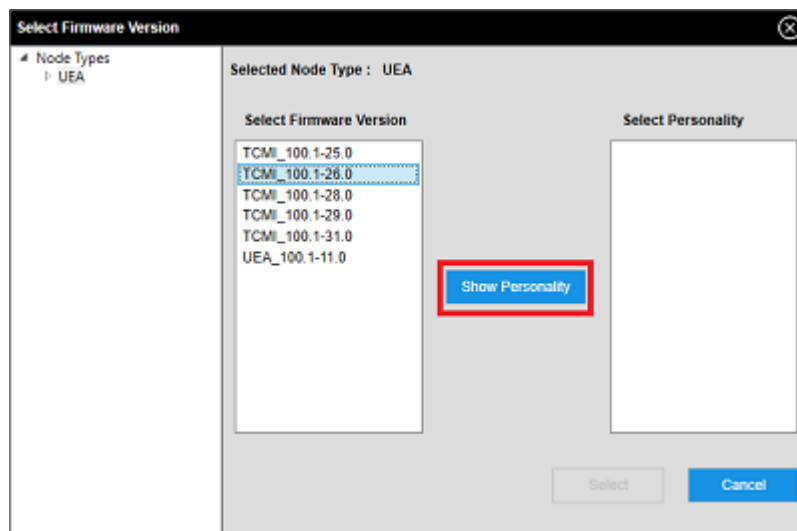
Status:

11:37:41.846 PM Refresh Completed  
 11:40:48.641 PM Refresh Started  
 11:42:41.323 PM Refresh Completed

Load Firmware    Diagnostic Capture

The **Select Firmware Version** window of the selected node appears.

3. Select a firmware version and click **Show Personality**.



**Select Firmware Version**

Node Types  
 UEA

Selected Node Type : UEA

Select Firmware Version

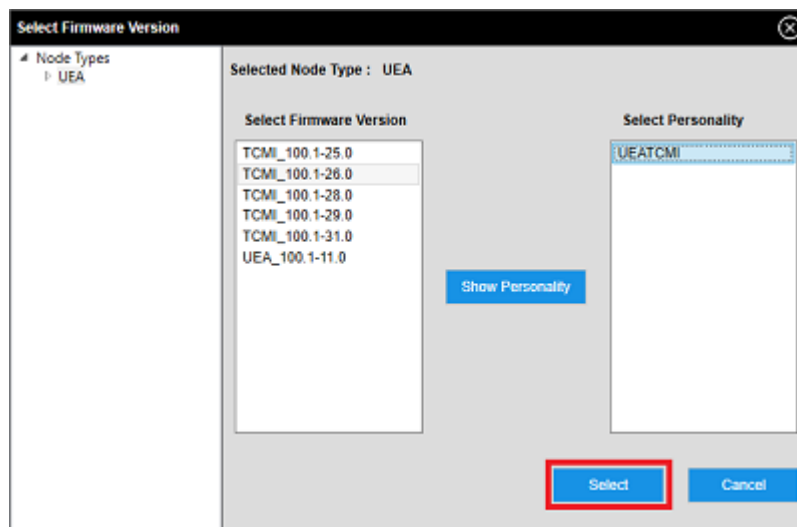
- TCMI\_100.1-25.0
- TCMI\_100.1-26.0**
- TCMI\_100.1-28.0
- TCMI\_100.1-29.0
- TCMI\_100.1-31.0
- UEA\_100.1-11.0

Select Personality

Show Personality

Select    Cancel

4. Select a personality under **Select Personality** and click **Select**.



**Select Firmware Version**

Node Types  
 UEA

Selected Node Type : UEA

Select Firmware Version

- TCMI\_100.1-25.0
- TCMI\_100.1-26.0
- TCMI\_100.1-28.0
- TCMI\_100.1-29.0
- TCMI\_100.1-31.0
- UEA\_100.1-11.0

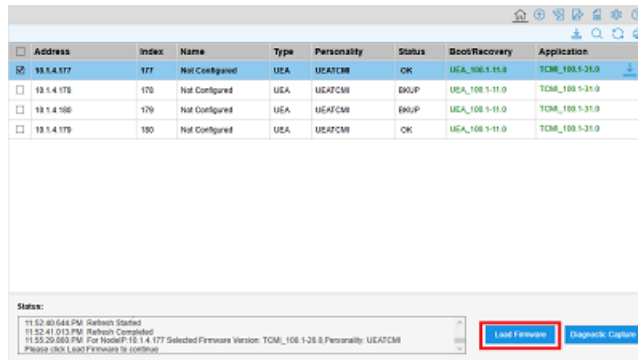
Select Personality

- UEATCMI**

Show Personality

Select    Cancel

5. On the Home screen, click **Load Firmware**. The selected node is added to the Nodes List.



<input type="checkbox"/>	Address	Index	Name	Type	Personality	Status	Boot/Recovery	Application
<input checked="" type="checkbox"/>	19.1.4.177	177	Not Configured	UEA	UEATCMB	OK	UEA_108.1-11.0	TCMB_108.1-21.0
<input type="checkbox"/>	19.1.4.178	178	Not Configured	UEA	UEATCMB	EXUP	UEA_108.1-11.0	TCMB_108.1-21.0
<input type="checkbox"/>	19.1.4.180	179	Not Configured	UEA	UEATCMB	EXUP	UEA_108.1-11.0	TCMB_108.1-21.0
<input type="checkbox"/>	19.1.4.179	180	Not Configured	UEA	UEATCMB	OK	UEA_108.1-11.0	TCMB_108.1-21.0

Status: 11:52:40.644 PM Refresh Started  
11:52:41.012 PM Refresh Completed  
11:53:29.863 PM For NodeIP:19.1.4.177 Selected Firmware Version: TCMB\_108.1-21.0, Personality: UEATCMB  
Please click Load Firmware to continue.

[Load Firmware](#) [Diagnostic Capture](#)

**NOTE**

The pointer near the download status symbol shows the Firmware version and Personality of the selected node. The same information is displayed in the Status bar.

**Progress Bar for Single Node Selection for TCMI**

When a single node is selected for loading firmware, the progress is shown with the percentage of the task completed. Events such as flashing or rebooting that occur are also listed.



Status:	30%
04:38:28.300 AM For NodeIP:19.1.4.177 Selected Firmware Version: TCMB_108.1-21.0, Personality: UEATCMB Please click Load Firmware to continue04:40:10.816 AM : Load Firmware19.1.4.177 Starting 04:40:11.826 AM : Load Firmware19.1.4.177 Loading	

Figure 10.3 Progress bar for single node selection

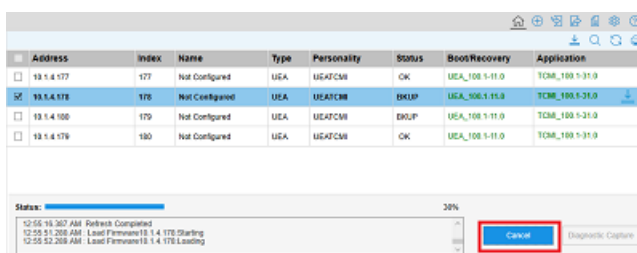
**Progress Bar for Multiple Node Selection for TCMI**

If you select multiple nodes, the firmware is loaded in a sequential manner (one node after the other) and the progress bar and text box show the progress and the status for the node that is currently being loaded.

**ATTENTION:** The latest version of the Firmware is displayed after all the nodes are updated.

**Cancel Load Firmware Operation for TCMI**

To cancel the Load Firmware operation click **Cancel**.



<input type="checkbox"/>	Address	Index	Name	Type	Personality	Status	Boot/Recovery	Application
<input type="checkbox"/>	19.1.4.177	177	Not Configured	UEA	UEATCMB	OK	UEA_108.1-11.0	TCMB_108.1-21.0
<input checked="" type="checkbox"/>	19.1.4.178	178	Not Configured	UEA	UEATCMB	EXUP	UEA_108.1-11.0	TCMB_108.1-21.0
<input type="checkbox"/>	19.1.4.180	179	Not Configured	UEA	UEATCMB	EXUP	UEA_108.1-11.0	TCMB_108.1-21.0
<input type="checkbox"/>	19.1.4.179	180	Not Configured	UEA	UEATCMB	OK	UEA_108.1-11.0	TCMB_108.1-21.0

Status: 12:55:16.367 AM Refresh Completed  
12:55:51.208 AM Load Firmware19.1.4.178 Starting  
12:55:52.208 AM Load Firmware19.1.4.178 Loading

[Cancel](#) [Diagnostic Capture](#)

Figure 10.4 Cancel Load Firmware

**NOTE**

- If you select a single node and choose to abort the load operation, the load operation is not cancelled since it is already in progress.
- If multiple nodes are selected and the load operation is cancelled, then the node for which loading is in progress gets completed and loading for rest of the nodes is

cancelled. A load cancelled symbol



is displayed near the application column for such nodes.

Address	Index	Name	Type	Personality	Status	Boot/Recovery	Application
19.1.4.177	177	Not Configured	UEA	UEATCMI	OK	UEA_100.5-11.0	TCMI_100.5-31.0
19.1.4.178	178	Not Configured	UEA	UEATCMI	OK	UEA_100.5-11.0	TCMI_100.5-31.0
19.1.4.179	179	Not Configured	UEA	UEATCMI	OK	UEA_100.5-11.0	TCMI_100.5-31.0
19.1.4.179	180	Not Configured	UEA	UEATCMI	OK	UEA_100.5-11.0	TCMI_100.5-31.0

Status:

12:25:15.961 AM Load Firmware 19.1.4.177 Module is On-Control  
 12:25:15.965 AM Refresh Started  
 12:25:19.357 AM Refresh Completed

Load Firmware Diagnostic Capture

Figure 10.5 Load Firmware failed

### 10.1.3 Load Recovery Image for TCMI

This section explains about the steps to update load recovery image for UEA.

To update the Recovery Image in UEA TCMI:

1. Right-click the module in Firmware Manager, select the new **Recovery Image** and flash the module.

After the recovery image is updated the UEA node will automatically reboot and enter ALIVE state, indicating successful start of the recovery image.

**NOTE**

To update an application image in UEA TCMI:

Right-click the module in Firmware Manager, select an intended application image (UEATCMI) and flash the module with an application image.

In this stage the UEA module is running with an application image.

2. Reboot the module.

UEA Module is running with the TCMI Image.

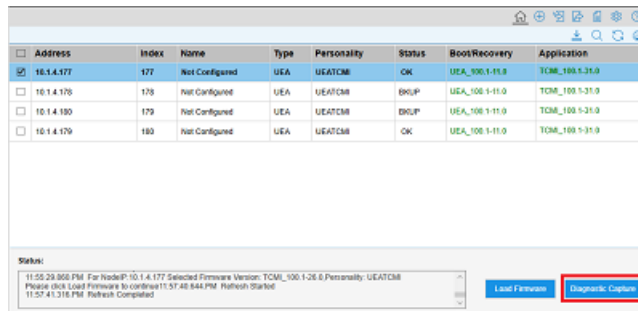
**ATTENTION:** When the UEA box has only the UEA recovery image, the UEA box needs to be flashed with the required Application image (UEATCMI) before upgrading the UEA recovery image. On a UEA box that runs only the UEA recovery image, trying to update the UEA recovery image to the later version will result in a failure.


### 10.1.4 Diagnostic Capture for TCMI

Diagnostic Capture feature is used to upload diagnostic information files like **log files** from a node. To capture the diagnostic data, perform the following steps:

1. Select a node or multiple nodes from the list to capture the diagnostic data.
2. Click **Diagnostics Capture**.


The caption of the button changes to **Cancel**.

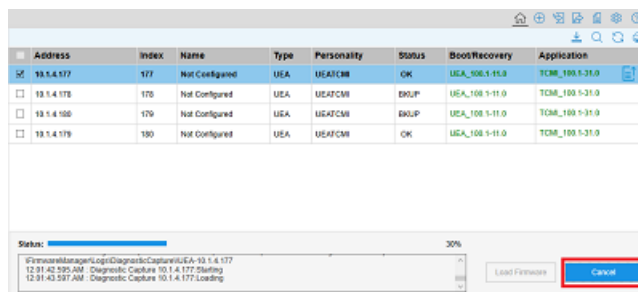


3. The upload symbol  is displayed beside the Application version column for the node for which the diagnostic data is being uploaded. The data gets saved to the location defined earlier on the **Settings** page.


#### NOTE

The progress bar displays the progress and the text box displays the events of Diagnostic capture.


4. On successful upload of data,  is displayed.
5. The diagnostic capture operation can be cancelled by clicking the **Cancel** button.



6. If you select a single node and choose to abort the operation, the diagnostics capture will not be cancelled since it is already in progress.  
If you select multiple nodes and choose to abort the operation, the node for which diagnostic capture is in progress gets completed and the diagnostic capture operation for rest of the nodes is cancelled.

A Cancel symbol  is displayed for such nodes.

If diagnostic capture fails, Failed symbol  is displayed.

The diagnostics capture operation is sequential. The upload symbol (grey color)  is displayed for the nodes if the operation has not started.

## 10.2 Getting Started with Firmware Manager for Enhanced Local Control Network

- [Load Firmware for ELCN](#)
- [Load Recovery Image for ELCN](#)
- [Diagnostic Capture for ELCN](#)

### 10.2.1 Adding Nodes for ELCN

The nodes present in the network are auto detected and the list of nodes in the home screen is updated periodically. However, on non-Experion nodes, you must add the nodes manually to the list using the **Add Node** tool bar feature. This feature is mainly applicable on platforms where nodes are not auto-detected.

To add nodes manually:

1. Click **Add Node (+)**.  
The **Add Nodes** window appears.
2. On the left pane  
Select **Type** as UEA  
Select **Parent** as NA (not applicable)  
Enter the IP address in the **Address** field  
Enter the last octet of the IP address in the **Index** field.
3. Click **Validate**. The validated results are displayed on the right pane.

**Add Nodes**

Add one or more nodes to the Firmware Manager by providing following details.  
This feature helps if a node cannot be detected automatically by the Firmware Manager tool.

Type*	Parent*	Address*	Index*
UEA	NA	10.1.1.100	100

**Validate**

**Validation Results**


Valid Node IPAddresses:  
10.1.1.100

By clicking on 'Add' will add only Valid Nodes

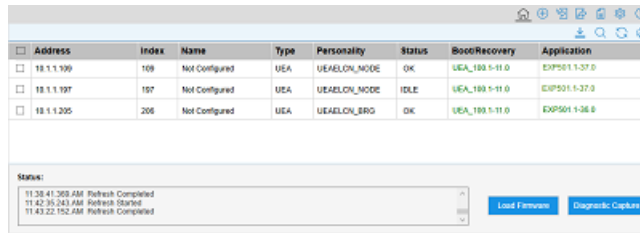
**Status:**  
12:35:36 03/03/2016 Validation completed

**Add** **Homepage**

4. Click **Add** to add the nodes.

5. Click  to add more nodes.

6. Click **Homepage** to go to Home page. The new nodes you added appear in the Nodes List.



<input type="checkbox"/>	Address	Index	Name	Type	Personality	Status	Boot/Recovery	Application
<input type="checkbox"/>	19.1.1.199	199	Not Configured	UEA	UEAELCN_NODE	OK	UEA_100.5-11.0	EXP501.1-37.0
<input type="checkbox"/>	19.1.1.197	197	Not Configured	UEA	UEAELCN_NODE	IDLE	UEA_100.5-11.0	EXP501.1-37.0
<input type="checkbox"/>	19.1.1.205	205	Not Configured	UEA	UEAELCN_BRG	OK	UEA_100.5-11.0	EXP501.1-36.0

Status:

11:38:41:369 AM Refresh Completed  
 11:42:35:243 AM Refresh Started  
 11:43:22:152 AM Refresh Completed

[Load Firmware](#) [Diagnostic Capture](#)

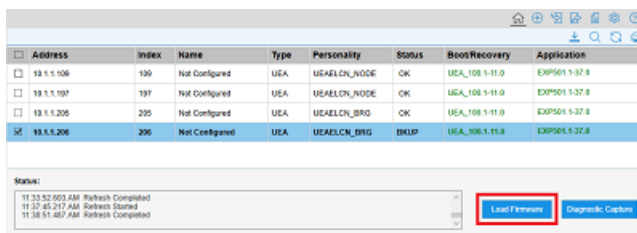
#### NOTE

If there is any issue in adding a node, it will be displayed in the Status bar on the Home screen.

For more information on Tool bars in Firmware Manager, refer to [Tool Bar Controls](#).

## 10.2.2 Load Firmware for ELCN

You can select a single node or multiple nodes to load a firmware. The module should be in applicable state to load a firmware.



<input type="checkbox"/>	Address	Index	Name	Type	Personality	Status	Boot/Recovery	Application
<input type="checkbox"/>	19.1.1.106	106	Not Configured	UEA	UEAELCN_NODE	OK	UEA_100.5-11.0	EXP501.1-37.0
<input type="checkbox"/>	19.1.1.197	197	Not Configured	UEA	UEAELCN_NODE	OK	UEA_100.5-11.0	EXP501.1-37.0
<input type="checkbox"/>	19.1.1.205	205	Not Configured	UEA	UEAELCN_BRG	OK	UEA_100.5-11.0	EXP501.1-37.0
<input checked="" type="checkbox"/>	19.1.1.206	206	Not Configured	UEA	UEAELCN_BRG	BRUP	UEA_100.5-11.0	EXP501.1-37.0


Status:

11:33:52:003 AM Refresh Completed  
 11:37:45:217 AM Refresh Started  
 11:38:51:487 AM Refresh Completed

[Load Firmware](#) [Diagnostic Capture](#)

Figure 10.6 Load Firmware

To load firmware perform the following steps:

1. Select a single node or multiple nodes to load firmware by selecting check box . The selected nodes are highlighted.



The user can select multiple nodes of the same product type (for example UEA), running with different personalities and click **Load Firmware**. In this case, the nodes will be flashed with the latest version of its respective personality.

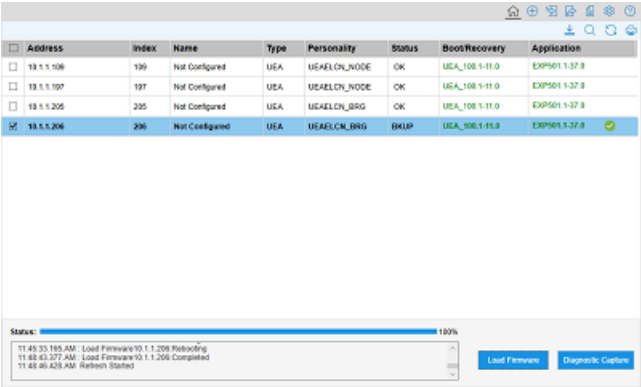
**ATTENTION:** When the UEA board is received from the factory it has only the recovery image (UEARECOVERY) present in it. You must flash the ELCN application image (UEAELCN\_BRG or UEAELCN\_NODE) next.

**ATTENTION:** Firmware will be flashed based on the personality which is already running (UEARECOVERY or UEAELCN\_BRG OR UEAELCN\_NODE) in the UEA box. For instance, if an ELCN Node firmware is flashed in the UEA box (UEARECOVERY) , the firmware flashes the latest ELCN Node firmware to the UEA box.

2. Click **Load Firmware**. The progress is displayed on the progress bar and text on the **Load Firmware** button changes to **Cancel**.

A load symbol  is displayed besides the **Application** version column based on the firmware being downloaded.

3. Once the firmware is loaded, the load symbol changes to a green colored tick mark . If the firmware load fails, a Failed symbol  is displayed. The reason for failure can be known from the status bar below the progress bar or FM log file.




Address	Index	Name	Type	Personality	Status	Boot/Recovery	Application
19.1.1.108	199	Not Configured	UEA	UEAELCN_NODE	OK	UEA_108.1-11.0	EXP501.1-37.9
19.1.1.107	197	Not Configured	UEA	UEAELCN_NODE	OK	UEA_108.1-11.0	EXP501.1-37.9
19.1.1.205	205	Not Configured	UEA	UEAELCN_BRG	OK	UEA_108.1-11.0	EXP501.1-37.9
19.1.1.206	206	Not Configured	UEA	UEAELCN_BRG	OK	UEA_108.1-11.0	EXP501.1-37.9

Status: 100%  
11:45:35:185 AM : Load Firmware/10.1.1.206 Reloading  
11:48:43:377 AM : Load Firmware/10.1.1.206 Completed  
11:48:40:429 AM : Reboot Started

Load Firmware Diagnostic Capture

Figure 10.7 Load Firmware Status

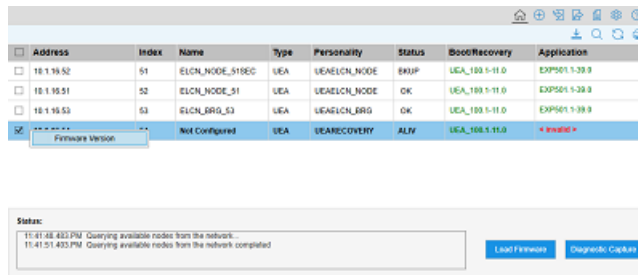
**NOTE**

In case you have selected multiple nodes to load firmware the load operation happens in a sequential manner. The load icon (grey color)  is displayed for the nodes if the load process has not started.

**Load Firmware for a Node using Browse Option for ELCN**

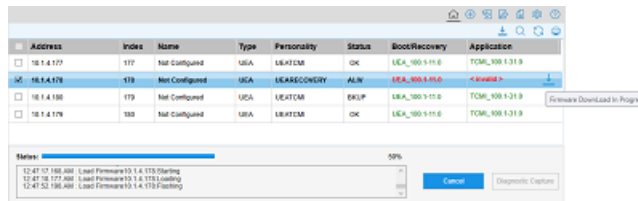
To load firmware to a node using browse option, perform the following steps:

1. Select a **node**.
2. Right-click on the selected row and click **Firmware Version**.

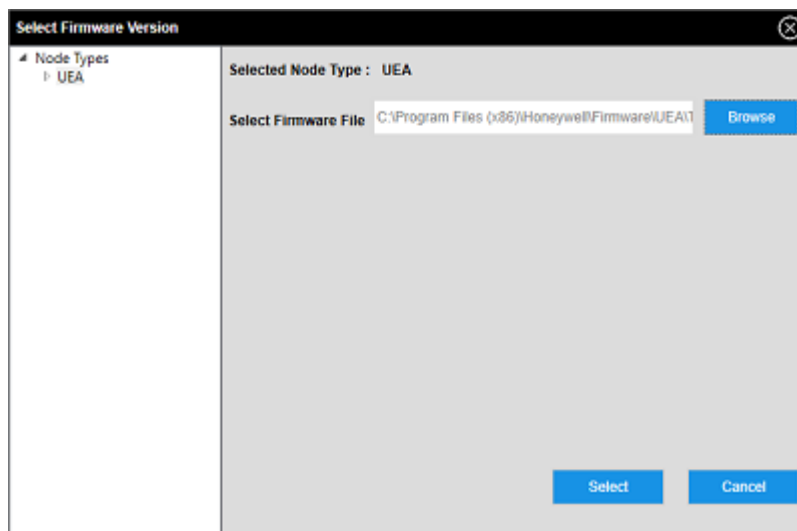


The **Select Firmware Version** window of the selected node appears.

3. Click the **Browse** button to locate the ELCN node that you wish to load firmware.

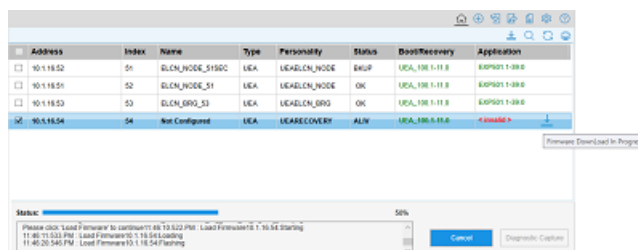


4. Once the firmware file is located, click **Select**.

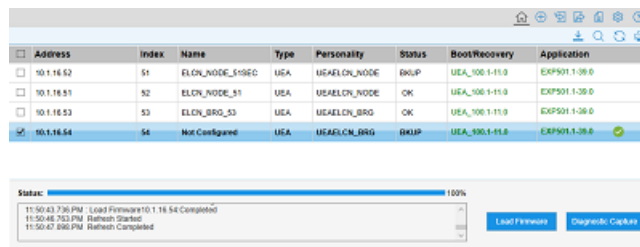


5. Click **Load Firmware**.

Selected node is loaded into the list.



Once the firmware is loaded, the following screen appears.



Address	Index	Name	Type	Personality	Status	Boot/Recovery	Application
10.1.16.52	51	ELCN_NODE_S196C	UEA	UEAELCN_NODE	OKUP	UEA_100.1-11.0	EXP501.1-36.0
10.1.16.51	52	ELCN_NODE_S1	UEA	UEAELCN_NODE	OK	UEA_100.1-11.0	EXP501.1-36.0
10.1.16.53	53	ELCN_BRG_S3	UEA	UEAELCN_BRG	OK	UEA_100.1-11.0	EXP501.1-36.0
10.1.16.54	54	Not Configured	UEA	UEAELCN_BRG	OKUP	UEA_100.1-11.0	EXP501.1-36.0

Status: 100%

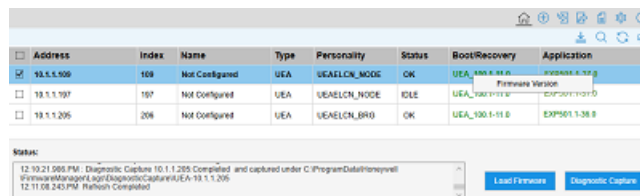
11:50:43.736 PM - Load Firmware 10.1.16.54 Completed  
 11:50:48.763 PM - Refresh Started  
 11:50:47.866 PM - Refresh Completed

Load Firmware Diagnostic Capture

## Load Firmware for Single Node Through Node Selection for ELCN (UEAELCN\_NODE or UEAELCN\_BRG)

To load firmware to a single node, perform the following steps:

1. Select a **node**.
2. Right-click on the selected row and click **Firmware Version**.



Address	Index	Name	Type	Personality	Status	Boot/Recovery	Application
10.1.1.106	106	Not Configured	UEA	UEAELCN_NODE	OK	UEA_100.1-11.0	EXP501.1-36.0
10.1.1.197	197	Not Configured	UEA	UEAELCN_NODE	IDLE	UEA_100.1-11.0	EXP501.1-36.0
10.1.1.206	206	Not Configured	UEA	UEAELCN_BRG	OK	UEA_100.1-11.0	EXP501.1-36.0

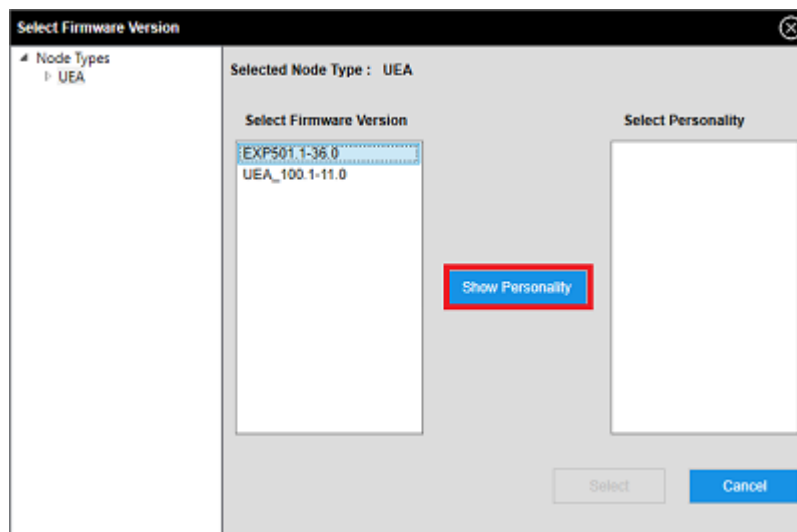
Status:

12:10:21.985 PM - Diagnostic Capture 10.1.1.206 Completed and captured under C:\ProgramData\Honeywell\FirmwareManager\log\DiagnosticCapture\UEA-10.1.1.206  
 12:11:08.243 PM - Refresh Completed

Load Firmware Diagnostic Capture

The **Select Firmware Version** window of the selected node appears.

3. Select a firmware version and click **Show Personality**.



**Select Firmware Version**

Node Types: UEA

Selected Node Type: UEA

Select Firmware Version:

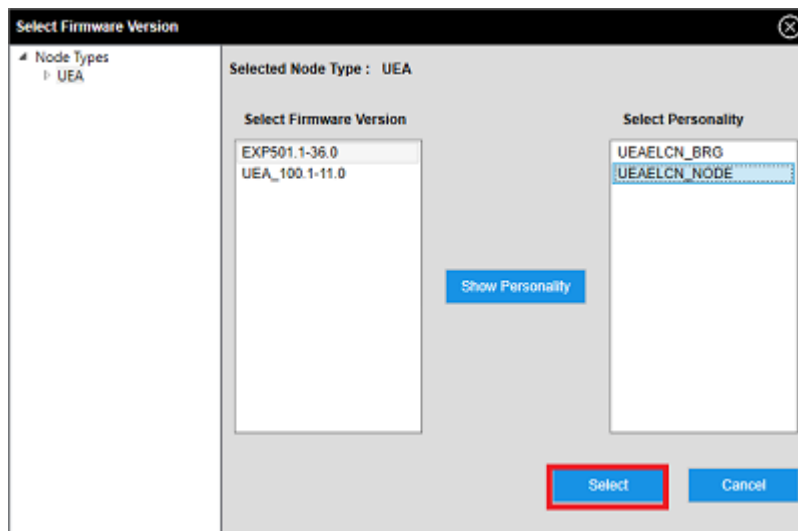
- EXP501.1-36.0
- UEA\_100.1-11.0

Select Personality:

Show Personality

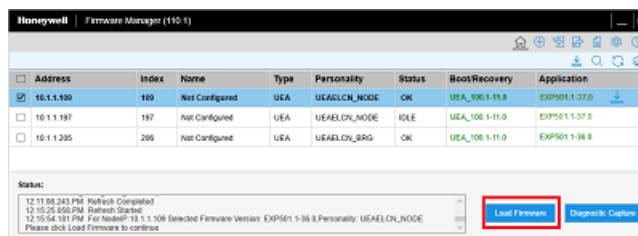
Select Cancel

4. Select a personality under **Personality** and click **Select**.



- Click **Load Firmware**.

Selected node is loaded into the list.



#### NOTE

The pointer near the download status symbol shows the Firmware version and Personality of the selected node. Same information is displayed in the status bar.

### Progress bar for Single Node Selection for ELCN

When a single node is selected for load firmware, the progress is shown on the progress bar with the completed load percentage. Events such as flashing or rebooting that occur during the load appear as and when the events occur.

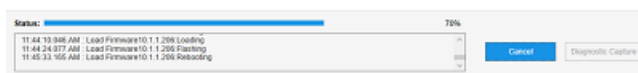


Figure 10.8 Progress bar for single node selection

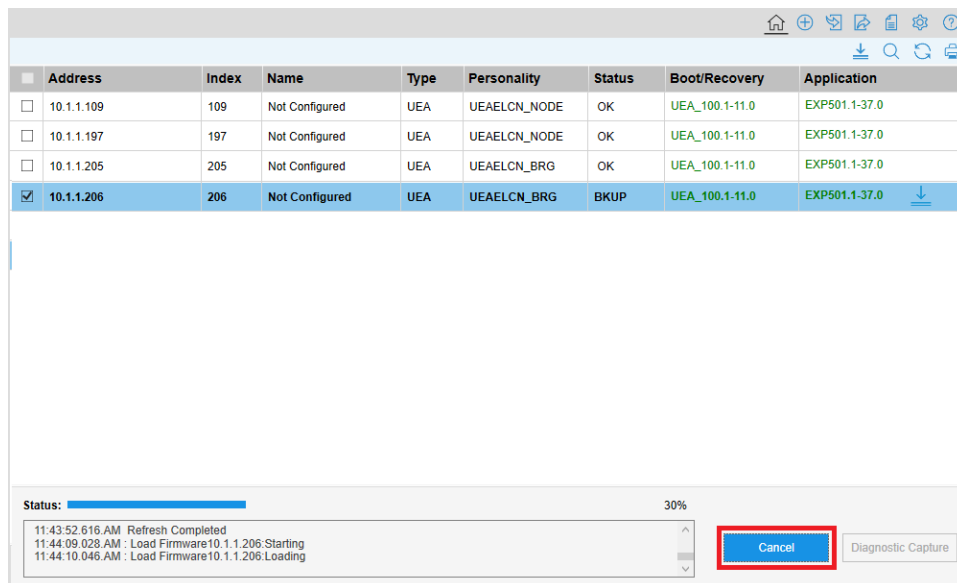
### Progress Bar for Multiple Node Selection for ELCN

When multiple nodes are selected for loading firmware, loading occurs in a sequential manner (one node after the other) and the progress bar and text box show the progress and the status for the current node that is being loaded.

**ATTENTION:** The latest version of the Firmware is displayed if all the nodes are updated.

## Cancel Load Firmware Operation for ELCN

Click **Cancel** to cancel a Load Firmware operation that is in progress.



	Address	Index	Name	Type	Personality	Status	Boot/Recovery	Application
<input type="checkbox"/>	10.1.1.109	109	Not Configured	UEA	UEAELCN_NODE	OK	UEA_100.1-11.0	EXP501.1-37.0
<input type="checkbox"/>	10.1.1.197	197	Not Configured	UEA	UEAELCN_NODE	OK	UEA_100.1-11.0	EXP501.1-37.0
<input type="checkbox"/>	10.1.1.205	205	Not Configured	UEA	UEAELCN_BRG	OK	UEA_100.1-11.0	EXP501.1-37.0
<input checked="" type="checkbox"/>	10.1.1.206	206	Not Configured	UEA	UEAELCN_BRG	BKUP	UEA_100.1-11.0	EXP501.1-37.0


Status: 30%

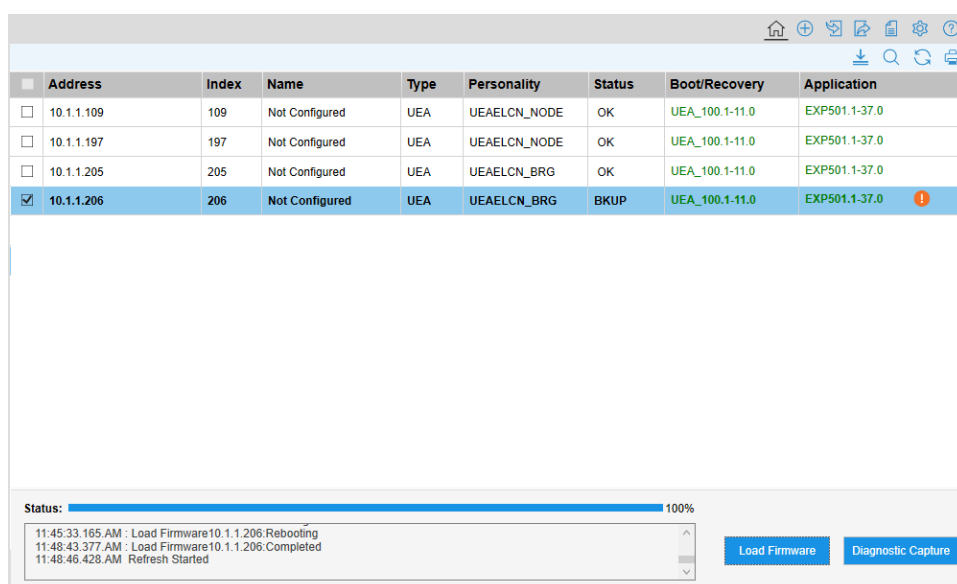
11:43:52.616 AM : Refresh Completed  
 11:44:09.028 AM : Load Firmware10.1.1.206:Starting  
 11:44:10.046 AM : Load Firmware10.1.1.206:Loading

**Cancel** Diagnostic Capture

Figure 10.9 Cancel Load Firmware

### NOTE

- In case of a single node, you cannot cancel the load operation as it is already in progress.
- In case you have selected multiple nodes to load firmware and click **Cancel**, the load operation is canceled only after the load operation is completed on the current node. Note that the load operation for the remaining nodes is canceled and a load canceled symbol  appears next to Application column for those nodes.



	Address	Index	Name	Type	Personality	Status	Boot/Recovery	Application
<input type="checkbox"/>	10.1.1.109	109	Not Configured	UEA	UEAELCN_NODE	OK	UEA_100.1-11.0	EXP501.1-37.0
<input type="checkbox"/>	10.1.1.197	197	Not Configured	UEA	UEAELCN_NODE	OK	UEA_100.1-11.0	EXP501.1-37.0
<input type="checkbox"/>	10.1.1.205	205	Not Configured	UEA	UEAELCN_BRG	OK	UEA_100.1-11.0	EXP501.1-37.0
<input checked="" type="checkbox"/>	10.1.1.206	206	Not Configured	UEA	UEAELCN_BRG	BKUP	UEA_100.1-11.0	EXP501.1-37.0

Status: 100%

11:45:33.165 AM : Load Firmware10.1.1.206:Rebooting  
 11:48:43.377 AM : Load Firmware10.1.1.206:Completed  
 11:48:46.428 AM : Refresh Started

Load Firmware Diagnostic Capture

Figure 10.10 Load Firmware failed

### 10.2.3 Load Recovery for ELCN

To update the Load Recovery Image in UEA ELCN:

1. Right-click the module in Firmware Manager, select the new **Recovery Image**, and flash the module.

After the recovery image is updated, the UEA node will automatically reboot and enter the ALIVE state indicating a successful start of the recovery image.

#### NOTE

To update an application image in UEA ELCN:

Right-click the module in Firmware Manager, select an intended application image (either UEAELCN\_BRG or UEAELCN\_NODE), and flash the module with an application image.

In this stage, the ELCN module is running with an application image.

2. Reboot the module.

The ELCN Module is running with the ELCN application image (UEAELCN\_BRG or UEAELCN\_NODE) image.

**ATTENTION:** When the UEA box has the UEA recovery image only, the UEA box must be flashed with the required Application image (UEA\_ELCN\_BRG or UEA\_ELCN\_NODE) before upgrading the UEA recovery image. On a UEA box that runs only the UEA recovery image, trying to update the UEA recovery image to a later version will result in a failure.

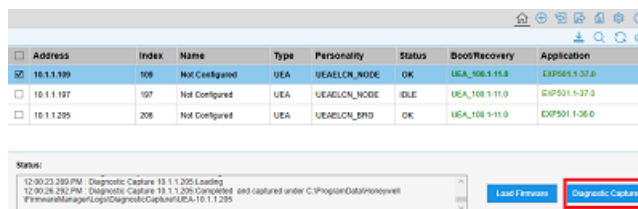
### 10.2.4 Diagnostic Capture for ELCN


Use the Diagnostic Capture feature to upload diagnostic information files such as **log files** from a node.

To capture the diagnostic data:

1. Select one or multiple nodes from the Nodes List to capture the diagnostic data.
2. Click **Diagnostics Capture**.


The caption of the button changes to **Cancel**.

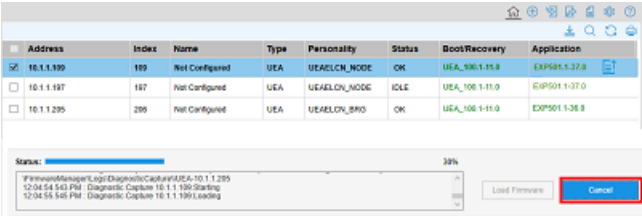


3. The upload symbol  is displayed beside the Application version column for the node for which the diagnostic data is being uploaded. The data is saved to the location defined earlier in the **Settings** page.


**NOTE**

The progress bar displays the progress and the text box displays the events during the Diagnostic capture.


4. After the data is uploaded successfully,  is displayed.
5. To cancel the operation, click the **Cancel** button.



6. In case of a single node, you cannot cancel the operation as it is already in progress.
- In case you have selected multiple nodes to capture diagnostic information and click **Cancel**, the operation is canceled only after the operation is completed on the current node. The diagnostic

capture operation for the remaining nodes is canceled and a canceled symbol  appears next to Application column for those nodes.

If diagnostic capture fails, the Failed symbol  is displayed.

The diagnostics capture operation is sequential.  is displayed for the nodes on which the operation has not yet started.

## GETTING STARTED WITH FIRMWARE MANAGER FOR REMOTE FIELDBUS INTERFACE MODULE

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### 11.1 Adding Nodes for RFIM

As the RFIM nodes are not auto-detected, you must add the nodes manually to the list using the **Add Node** tool bar feature.

To add the RFIM nodes manually:

1. Click **Add Node (+)**. The **Add Nodes** window appears.
2. On the left pane
  - Select **Type** as UEA
  - Select **Parent** as NA (not applicable)
  - Enter the IP address in the **Address** field
  - Enter the last octet of the IP address in the **Index** field.
3. Click **Validate**. The validated results are displayed on the right pane.

**Add Nodes**

Add one or more nodes to the Firmware Manager by providing following details.  
This feature helps if a node cannot be detected automatically by the Firmware Manager tool.

Type	Parent	Address	Index
RFIM	NA	10.76.80.89	89

**Validation Results**

Valid Node IP/Address:  
10.76.80.89  
By clicking on 'Add' will add only Valid Nodes.

**Validate**

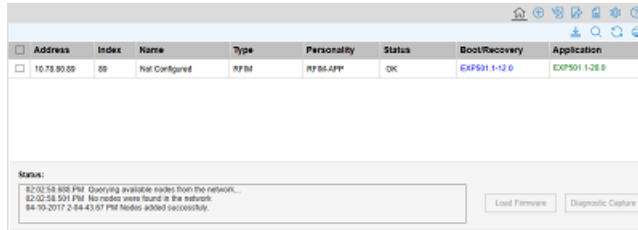
**Status:**  
10/20/2015 10:53 PM Validation completed

**Add** **Homepage**

4. Click **Add** to add the nodes.

5. Click  and repeat steps 2 through 4 to add more nodes.

6. Click the **Homepage** icon to go to Home page. The new nodes you added appear in the Nodes List.



#### NOTE

If there is any issue in adding a node, it will be displayed in the Status bar on the Home screen.

#### NOTE

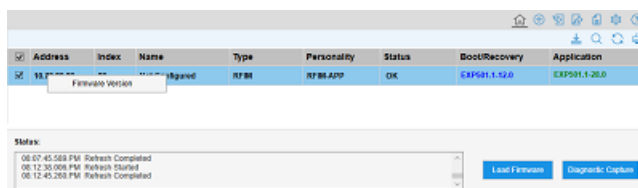
After the firmware is upgraded to RFIM, you cannot revert the module to FIM.

For more information on Tool bars in Firmware Manager, refer to [Tool Bar Controls](#).

## 11.2 Load Firmware for Single Node through Node Selection for RFIM

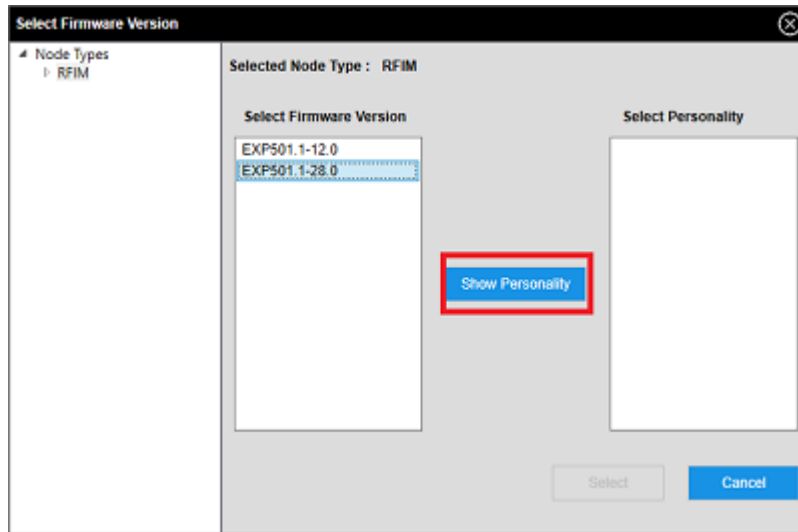
To load firmware to a single node:

1. Select a **node** by clicking the appropriate check box.
2. Right-click on the selected row and click **Firmware Version**.



The **Select Firmware Version** window of the selected node appears.

3. Select a firmware version and click **Show Personality**.

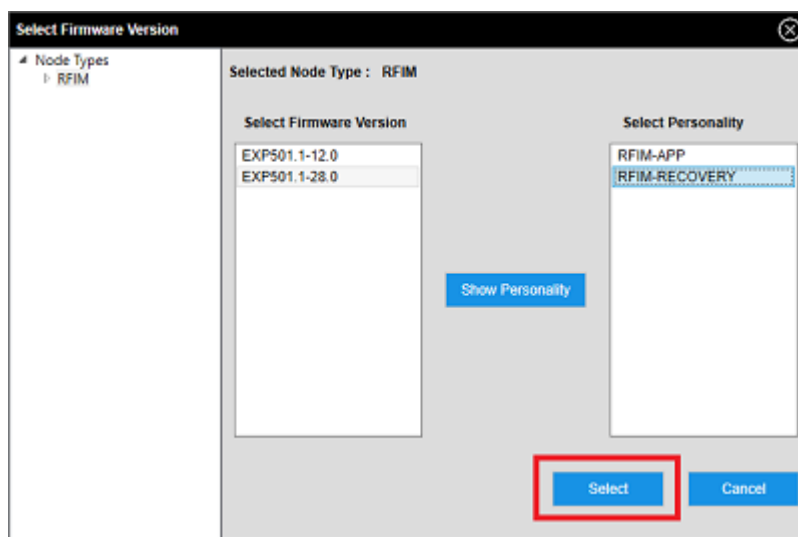


4. Select a personality under **Select Personality** and click **Select**.

#### NOTE

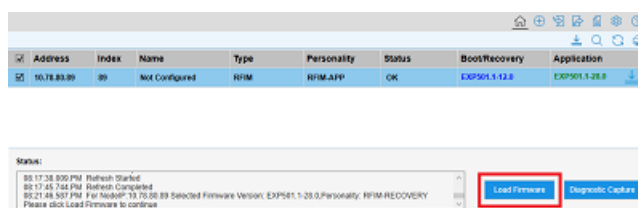
Multiple firmware can be loaded into RFIM. The sequence is as follows:

1. Select the **RFIM-RECOVERY** personality and click the **Load Firmware** button.
2. Then select the **RFIM-APP** personality and click the **Load Firmware** button.



5. Click **Load Firmware**.

The selected node is added to the Nodes List on the Home screen.



**NOTE**  
The pointer near the download status symbol shows the Firmware version and the same information is displayed in the Status bar.

### 11.2.1 Progress Bar for Single Node Selection for RFIM

When a single node is selected for loading firmware, the progress is shown indicating the percentage of the task completed. Events such as flashing or rebooting that occur are also listed.

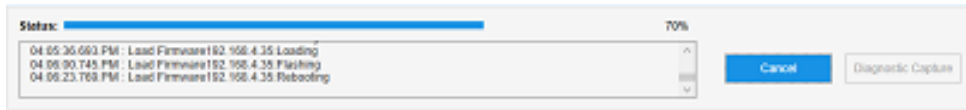


Figure 11.1 Progress bar for single node selection

### 11.2.2 Cancel Load Firmware Operation for RFIM

Click **Cancel** to cancel a Load Firmware operation that is in progress.

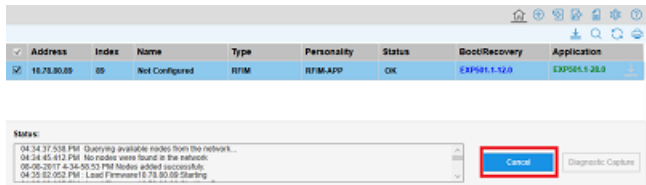


Figure 11.2 Cancel Load Firmware

**NOTE**

- In case of a single node, you cannot cancel the load operation as it is already in progress.

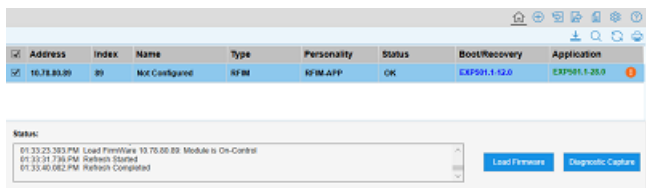


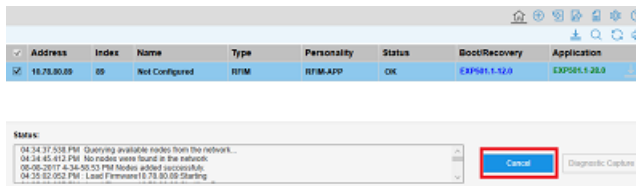
Figure 11.3 Load Firmware Failed


## 11.3 Diagnostic Capture for RFIM

Use the Diagnostic Capture feature to upload diagnostic information files such as **log files** from a node. To capture the diagnostic data:

1. Select one or multiple nodes from the Nodes List to capture diagnostic data.
2. Click **Diagnostics Capture**.


The caption of the button changes to **Cancel**.

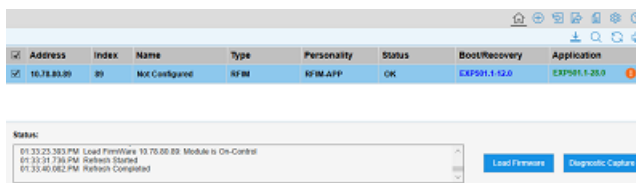


3. The upload symbol  is displayed beside the Application version column for the node for which the diagnostic data is being uploaded. The data is saved to the location defined earlier on the **Settings** page.


#### NOTE

The Progress bar displays the progress and the text box displays the events during the Diagnostic capture.


4. After the data is uploaded successfully,  is displayed.
5. To cancel the operation, click the **Cancel** button.



6. In case of a single node, you cannot cancel the operation as it is already in progress.  
In case you have selected multiple nodes to capture diagnostic information and click **Cancel**, the operation is canceled only after the operation is completed on the current node. The diagnostic

capture operation for the remaining nodes is canceled and a Canceled symbol  appears next to Application column for those nodes.

If diagnostic capture fails, the Failed symbol  is displayed.

The diagnostics capture operation is sequential.  is displayed for the nodes on which the operation has not yet started.

# Notices

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