Keysight E7515A UXM Firmware Update Tool

For the E7515A UXM Wireless Test Set

Installation & User Guide

KEYSIGHT TECHNOLOGIES

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Where to Find the Latest Information

Documentation is updated periodically. For the latest information about these products, including instrument software upgrades, application information, and product information, browse to one of the following URLs, according to the name of your product:

http://www.keysight.com/find/uxm

To receive the latest updates by email, subscribe to Keysight Email Updates at the following URL:

http://www.keysight.com/find/MyKeysight

Information on preventing instrument damage can be found at:

www.keysight.com/find/PreventingInstrumentRepair

Is your product software up-to-date?

Periodically, Keysight releases software updates to fix known defects and incorporate product enhancements. To search for software updates for your product, go to the Keysight Technical Support website at:

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Keysight Wireless Test Set
E7515 UXM Firmware Update Tool

Installation & User Guide

Firmware Update Tool

The E7515A UXM Firmware Update Tool is designed as a “one-click” application which allows you to easily update the firmware of E7515A UXM units. Just selecting a firmware version and clicking on a button, you can uninstall the current UXM firmware version and install the new one, including an update of the required software components.

This application must be installed and executed in the UXM embedded PC, running Microsoft Windows 7 Standard Embedded Edition.

The application can be executed only by local “Administrator” user, and no other users can be logged on the system. It also will work only on UXM units.

The following sections are included here:

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Installation

The E7515A UXM Firmware Update Tool is distributed as a Windows installer:
`UXM_FirmwareUpdateTool_Installer_x.y.w.z.exe`

To install the application just execute the installer and follow the guided installation dialogs.

Once installed, the application can be launched from Windows Start menu:
All Programs > Keysight E7515A UXM > Firmware Update Tool

Figure 1-1 Firmware Update Tool in the Windows Start Menu

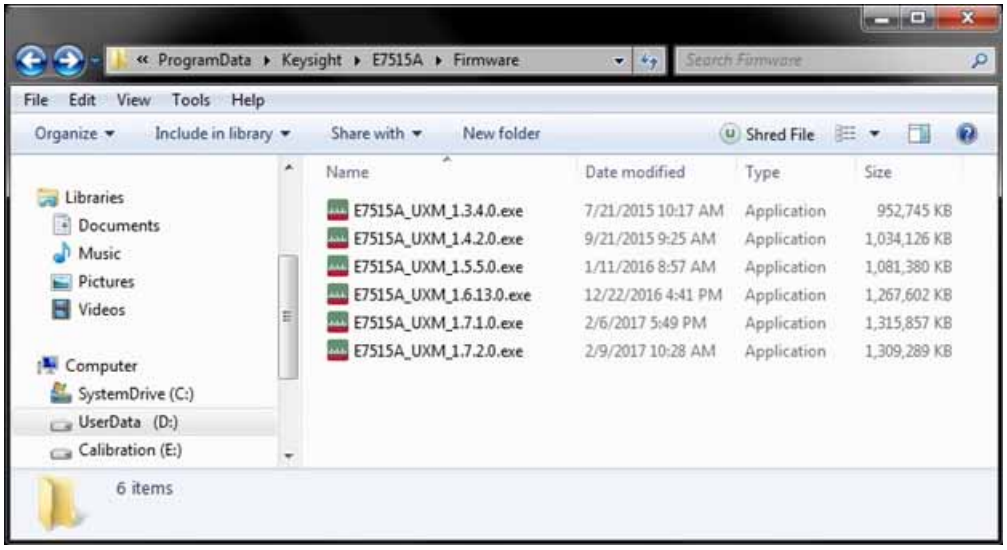
Repository

The UXM Firmware Update Tool repository is located at:
`D:\ProgramData\Keysight\E7515A\Firmware`

To be able to update the UXM firmware to a specific version, the installer associated with that version must be present in the repository folder.

UXM firmware installers file names must be in the form `E7515A_UXM_*.exe` to be recognized by the application.

Figure 1-2 Repository for the Firmware Update Tool



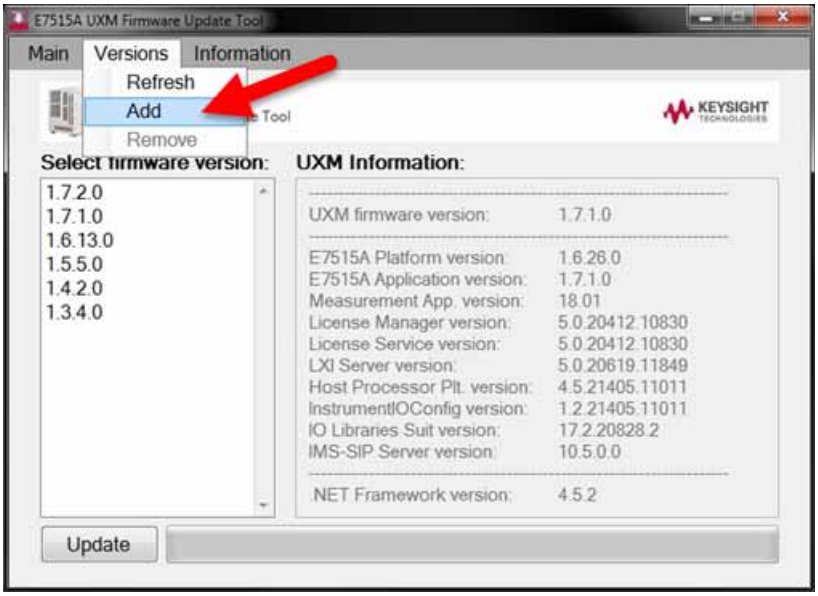
Operation

Add Versions

There are three different options for adding UXM versions to the application repository.

The first method is to select **Add** from the **Versions** menu:

Figure 1-3 Adding a version (using Versions menu)



The second method is to select **Add** from the menu invoked by right-clicking on the list of firmware versions:

Figure 1-4 Adding a version (using right-click menu)

The third method is to use Windows Explorer to copy an installer file into the repository folder. In that case, the list box has to be refreshed from within the application, using any of these methods:

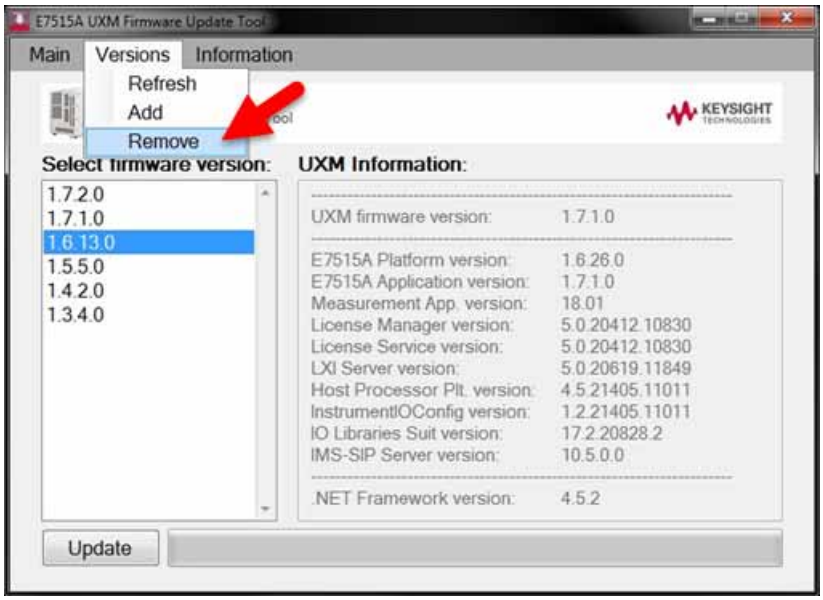
- Selecting **Refresh** on the **Versions** menu.
- Selecting **Refresh** on the menu which is invoked by right-clicking on the list of firmware versions.
- Pressing the **F5** key.

Remove Versions

There are three different options for removing UXM versions from the application repository.

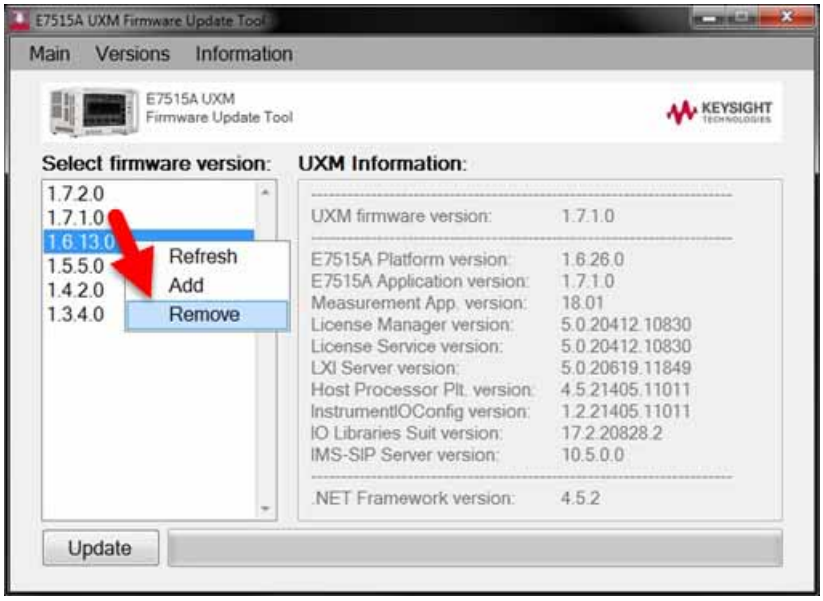
The first method is to select **Remove** from the **Versions** menu:

Figure 1-5 Removing a version (using Versions menu)



The second method is to select **Remove** from the menu invoked by right-clicking on the list of firmware versions:

Figure 1-6 Removing a version (using right-click menu)



The third method is to use Windows Explorer to delete an installer file from the repository folder. In that case, the list box has to be refreshed from within the application, using any of these methods:

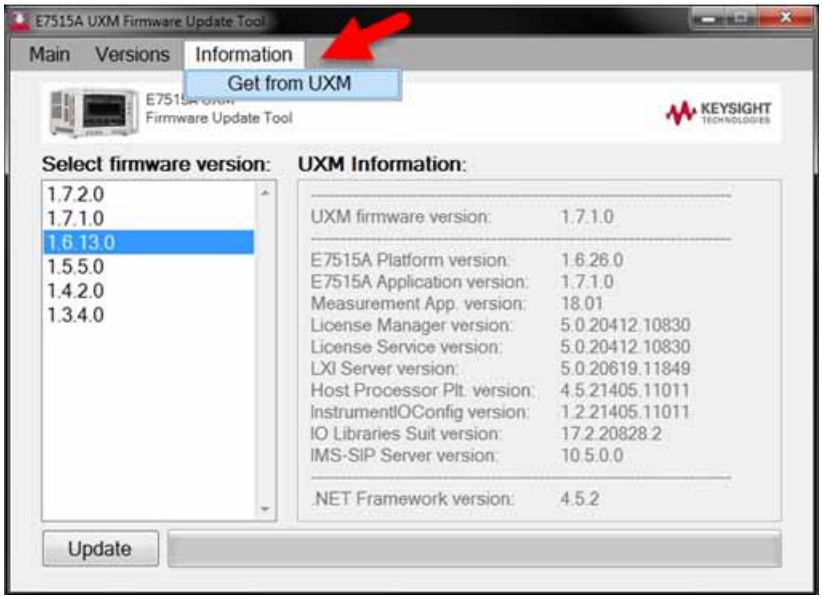
- Selecting **Refresh** on the **Versions** menu.
- Selecting **Refresh** on the menu which is invoked by right-clicking on the list of firmware versions.
- Pressing the **F5** key.

Get UXM Information

The application can display information about the version of the UXM firmware currently installed in the unit, as well as for all the installed software components that are part of this firmware.

This information can be displayed in a text box by pressing the F6 key, or by selecting Get from the Information menu:

Figure 1-7 Getting information from the UXM

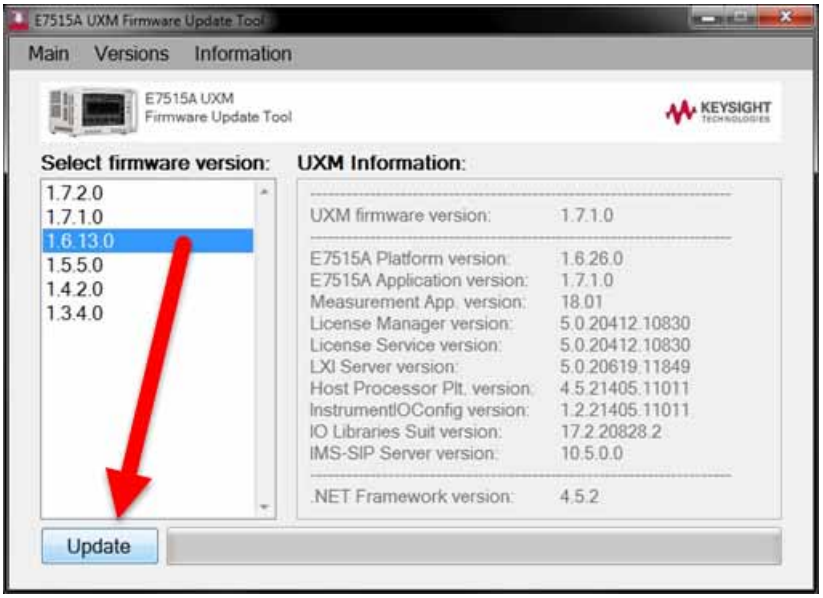


Firmware Update

NOTE Before starting a firmware update it is highly recommended to close any running application that interacts with the UXM, and disconnect the LAN.

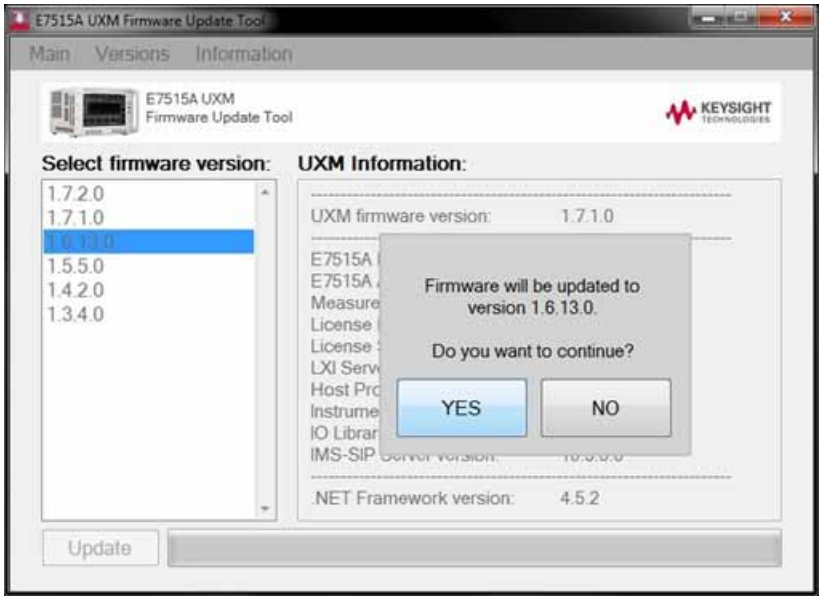
The UXM firmware update process can be launched by double-clicking on a firmware version element in the list box of available versions, or by selecting a firmware version from the list and clicking the **Update** button.

Figure 1-8 Launching a firmware update



Before the update process begins, a confirmation dialog appears, showing the firmware version number the UXM unit will be updated to:

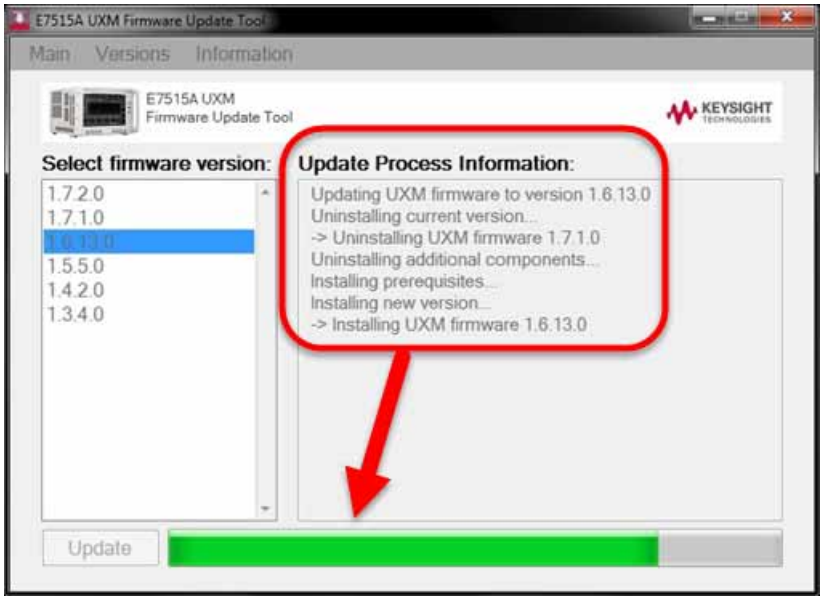
Figure 1-9 Confirming the firmware update



Clicking **YES** causes the update operation to start. Information about the process is displayed in the **Update Process Information** text box. A green progress bar is also displayed.

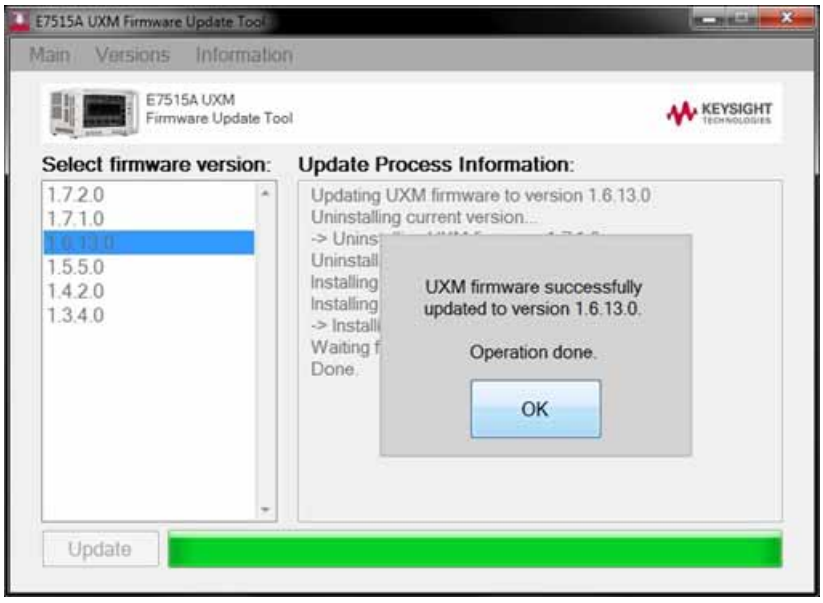
NOTE The update process can take 30 minutes or more.

Figure 1-10 Update Process Information



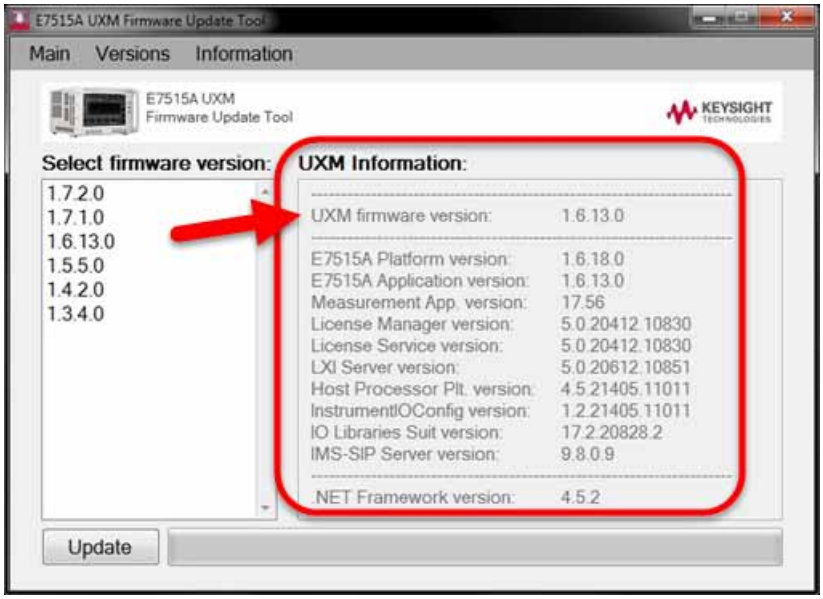
When the update operation is finished, a new dialog is displayed, indicating that the update is completed.

Figure 1-11 Completion dialog



After you dismiss the dialog (by clicking **OK**), you can check the installed firmware version by requesting the UXM information (click on **Information** › **Get from UXM**, or press the **F6** key).

Figure 1-12 Checking the installed firmware version



Special Considerations

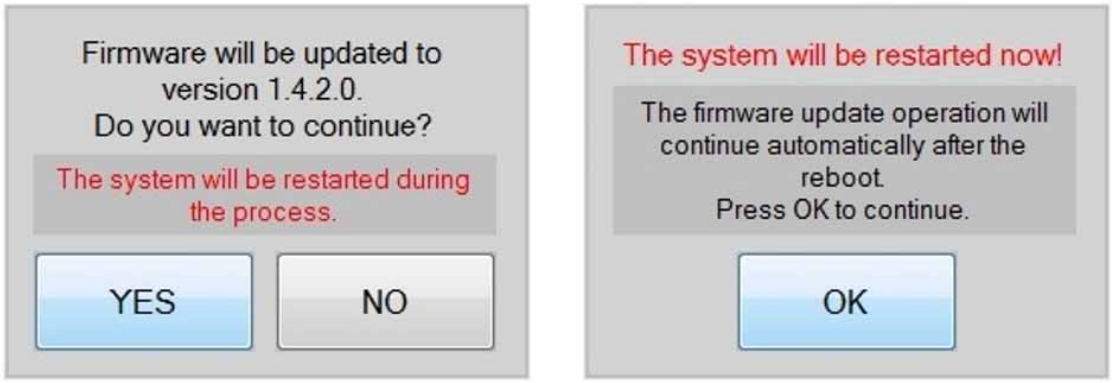
Arrays

If the UXM unit is part of an array (“Main” or “Auxiliary” role), starting the update process causes the UXM to exit automatically from the array, and operate as a “StandAlone” unit.

Reboot

The UXM firmware update operation may require the unit to be rebooted during the process. If that happens, you will be informed in the update confirmation dialog, and also before the unit is rebooted. After the reboot, the process will continue automatically, with no user interaction required.

Figure 1-13 Reboot warnings



Operational State

The firmware update process concludes when the unit reaches the “Operational” state; if a SPC or XPC board is present, the process also waits until the board is in “Operational” state. If this state is not reached, an error message is displayed in the conclusion dialog.

If the unit does not become operational, the following error is shown:

Figure 1-14 Error message if UXM is not operational

If the SPC/XPC board is present but doesn’t become operational, the following errors are shown:

Figure 1-15 Error message if SPC/XPC board is not operational

Restrictions

The following version restrictions apply to the Firmware Update Tool.

Versions Too Low or Too High

UXM firmware versions lower than 1.4.0.0, and versions equal or greater than 1.10.0.0, are not supported. The following dialogs will be displayed:

Figure 1-16 Error messages if the version is too low or high

Versions Not Compatible with SPC or XPC

If neither an SPC board nor an XPC board is installed, any version of the firmware which isn't too high or low (see above) can be installed.

However, the SPC and XPC boards have compatibility requirements for specific versions of firmware:

- If the SPC board is installed in the unit, then UXM firmware versions 1.7.2.x, 1.8.2.x, and 1.9.2.x **cannot** be used to update the system.
- If the XPC board is installed in the unit, then **only** UXM firmware versions 1.7.2.x, 1.8.2.x, and 1.9.2.x can be used to update the system.

The following dialogs will be displayed if you try to update to a firmware version not compatible with the installed hardware:

Figure 1-17 Errors shown if the version selected isn't compatible with installed hardware

If you install an SPC/XPC board, and the currently installed firmware is not compatible with the new hardware, you will be blocked from running the firmware update to correct the problem (see the error messages illustrated below). Therefore, it is necessary to run the firmware update **before** installing the SPC/XPC board.

If you have installed the board already, your two options are:

– Unplug the SPC/XPC board, update the firmware to a version compatible with it, and then plug it in again.

– Uninstall the UXM firmware manually from Windows Control Panel (under **Control Panel > Programs > Programs and Features**, select **"Keysight E7515A UXM"** and right-click **Uninstall**). Then install a version compatible with the new board.

Figure 1-18 Errors shown if added hardware isn't compatible with installed version

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