

E2 License Key and Open Echelon Installation

Technical Bulletin

Overview

Some features in the E2 controller are available only by purchasing a special license from Emerson. This applies to certain third-party devices the E2 is capable of communicating with (such as the Lennox IMC rooftop controller), and also to additional quantities of E2's base applications that exceed the limits of the E2's model type.

In addition, Echelon® LONMARK® devices that communicate with E2 through its "Open Echelon" networking feature must have both a license key and a description file that must be loaded into the E2 to enable communication.

When licensed products are purchased from Emerson, the customer provides Emerson with (1) the types of features to be purchased, (2) the quantity of features to be purchased, and (3) the unique MAC address of each controller in which the features will be enabled. Emerson then returns the customer a report that contains a set of 16-character license keys and if necessary one or more description files that must be loaded into the E2 to allow the selected LONMARK® devices to communicate with the E2.

A license key unlocks a specific quantity of one type of feature for one E2 unit only.

Open Echelon Description File Installation

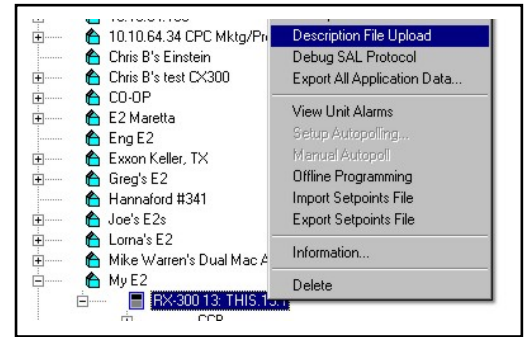
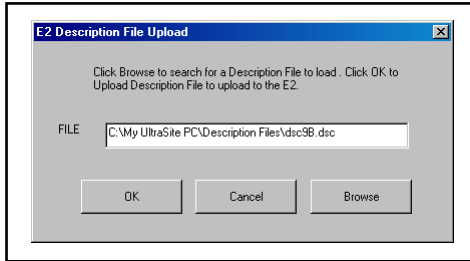
NOTE: If you are not enabling any Open Echelon devices, skip this section and proceed to "License Key Installation on page 3".

If you have purchased a license key that unlocks the ability to communicate with an Open Echelon device, Emerson will provide a file that must be loaded into the E2 called a description file (.dsc). This file enables communication to a specific type of LONMARK® device and must be loaded into each E2 that will be communicating with the device. Unlike license keys, description files are not unit-specific; in other words, the same description file may be loaded into multiple E2s.

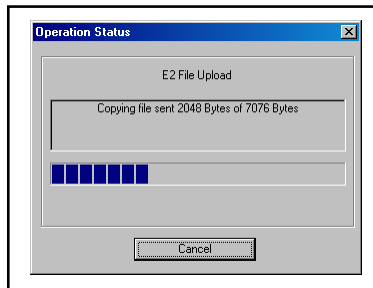
NOTE: Loading description files requires UltraSite32 version 4.35 or above. Contact Emerson for an upgrade if your version is older than 4.35.

1. Using UltraSite32, connect to the site that has the unit or units for which you want to enable Open Echelon. Uploading a file requires Level 4 (administrator) access to UltraSite32 and E2.
2. Right-click the unit you want to upload the description file to, and select **Description File Upload** from the menu.

- The E2 Description File Upload dialog box will prompt you for the location of the description file you wish to load. All description files have the file extension “.dsc”. Click **Browse...** and navigate to the location of the description file. If this file has been e-mailed to you, you will need to save a copy of the description file to your local hard drive before uploading.



- Click **OK** to begin upload. UltraSite32 will show an upload progress bar. When this bar reaches 100%, the file upload will be complete.



- Repeat *steps 1 through 4* for other Open Echelon description files.

Rebooting to Complete Description File Installation

When all description files have been loaded into the E2, reboot the E2 by pressing the **RESET** button on the E2 processor board. During reboot the E2 will locate and install the description files. When reboot is complete, you may enter license keys to unlock the Open Echelon devices (see “*License Key Installation on page 3*”).

License Key Installation

License keys must be entered from the front panel of the E2, or by using UltraSite32 or Site Manager in Terminal Mode.

1. Press **Log In/Out** and enter your username and password. You must be level 4 or above to enter a license key.
2. After logging in, press **Alt+T** and check that the **MAC Address** field on the TCP/IP screen (Figure 1) matches the MAC address in the report given to you from Emerson. The license key will not work unless the MAC address matches exactly. If the MAC address matches, go to step 3.
3. Press **Menu**, **7**, **9** to access the License Manager Screen (Figure 2).
4. Press **F1** to access the Activate Feature box.
5. Enter the 16-character license key in the blanks provided.
6. If entered correctly, the message at the bottom of the **Add Feature** box should read **Feature Activated**. Press **ESC** to exit and save.

If the key is incorrect, the message will read "Feature Unknown or Invalid Key" — double-check that the key was entered correctly and the MAC address matches the one specified in the report.

Repeat steps 1 through 6 for each license key to be entered for this E2.

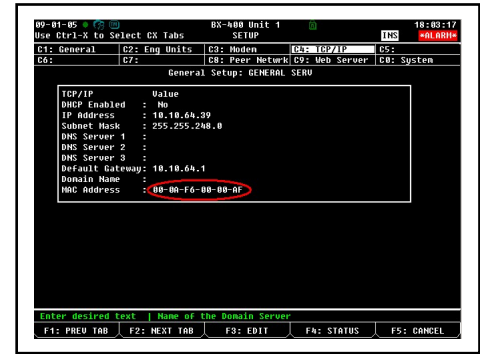


Figure 1 - MAC Address Screen

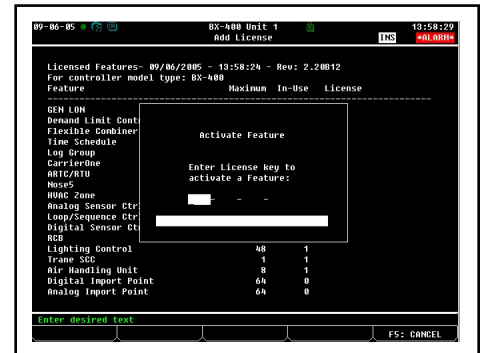


Figure 2 - Add License Screen

Rebooting to Complete License Key Activation

When all license keys have been entered for the E2, you must reboot the E2 unit to complete the license key activation process. Press the **RESET** button on the E2 processor board. When the E2 is finished rebooting, login again and press **Menu**, **7**, **9**, and verify the features are listed as enabled. They will be shown in this screen along with the license key(s) you entered to enable them (Figure 3).

Adding Open Echelon Devices

Once the description file for a device type is loaded, assuming you have already entered the license key that enables a certain quantity of the device, you must add the devices in the E2 Connected I/O screen.

1. Log on to the E2 with level 4 access.
2. Press **Menu**, **7**, **7**, **2** - **Connected I/O Boards and Controllers**.

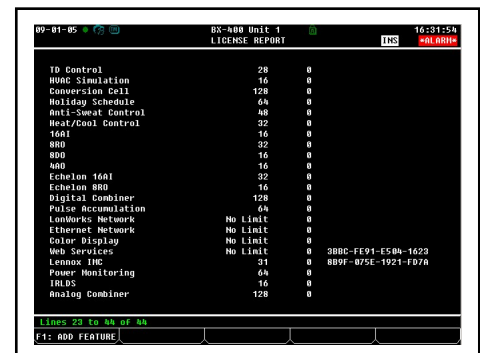
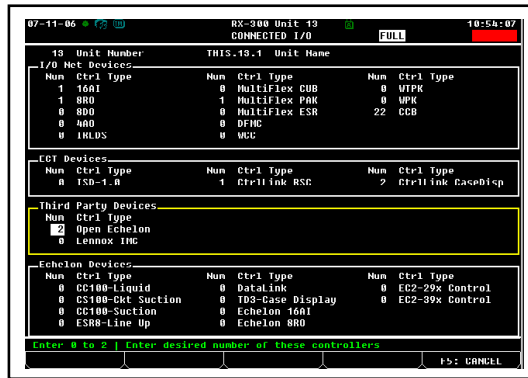
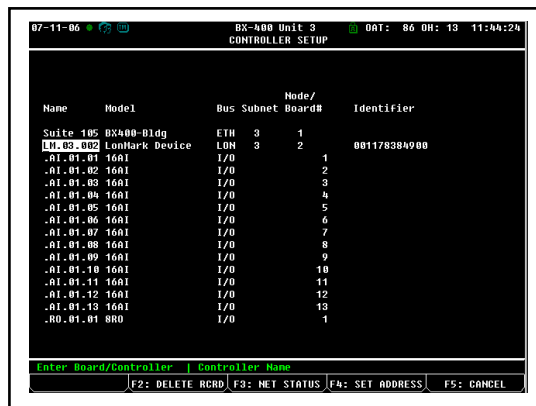


Figure 3 - Viewing Licenses




- Open Echelon devices must be added by entering the number of devices in the **Open Echelon** field in the box titled **Third Party Devices**. This screen does not show the specific name of the Open Echelon device(s) enabled by license key. If you need to add multiple Open Echelon device types, enter the total number of all Open Echelon devices in this field.
- Press to save changes and return to the Network Setup menu.
- From the Network Setup menu, press **#3** - **Controller Setup**. The Open Echelon devices you added will be in the controller list, with a model type “LonMark® Device” and a default name beginning with **LM**. These records are not yet associated with a particular device; they are simply placeholders. Therefore, you do not need to worry about the order in which you commission Open Echelon devices, and you do not have to assign a specific device to a specific node.
- Using the arrow keys, highlight the name of the Open Echelon device you wish to set up. If you wish, you may rename this device by entering the name in this field.
- Commission the device by highlighting the name and pressing **F4** - **Set Address**. You may either commission by pressing the service pin or button on the device, or you may manually enter the LonMark® ID number. Consult the manufacturer’s documentation for the LonMark®-enabled device for information about the ID number and the location of the service pin or button.
- After successfully commissioning the device, the LonMark® ID number will be displayed in the far right column. Repeat steps 6-7 for the remaining devices.

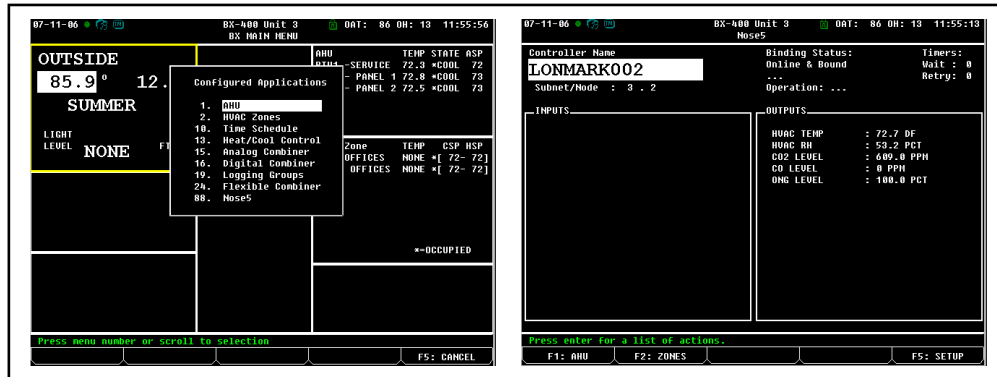


- When all devices are commissioned, press to return to the Network Setup menu, and press **1** to access the Online Status screen. Verify that all LonMark® devices are Online. If one or more devices have **Unknown** in their status column, there may be a problem with wiring or commissioning.

Viewing and Working With Open Echelon® Devices

Though there are many different kinds of Open Echelon devices the E2 may communicate with, when viewing the Network Status, all Open Echelon devices will be listed only as “LONMARK® Device.” However, the E2 does recognize the model type of each device, and it is clearly marked in the Configured Applications menu and its status and summary screens.

Press  **5** - **Configured Applications**. In the list of application types, the type(s) of LonMark® devices you added will be listed. Select the device type you wish to view or work with from this menu to view the status and/or summary screens for this device.



Status screens for LonMark® devices typically list network status and binding information in the top right corner of the screen, with device input and output values in the bottom left side and bottom right side boxes. Pressing **F5** - **SETUP** allows access to the applications’ setup screens; however, depending on the device type, you may or may not be allowed to change any of the device’s parameters. If it is possible to change device setpoints through the E2 setup screens, the setpoints will be listed in the setup screen tab **C2: Setpoints**. Otherwise, all Open Echelon application setup screens allow renaming of the application and access to input and output definitions for extended I/O purposes, logging, and alarming.

Keeping and Reissuing License Keys and Description Files

License keys and Open Echelon description files will remain in an E2’s memory even after a cleanout. It is therefore unlikely you will need to re-enter a license key or re-upload a description file. However, Emerson recommends you keep a copy of the license keys and description file with the E2 so they may be found easily if you need to re-enter them.

Because license keys are issued for specific MAC addresses, and MAC addresses are hard-coded in the E2 hardware, if you replace the processor board on an E2 unit, you will need a new license key because the MAC address will be different. Contact Emerson and inform them of the new MAC address, and they will provide a replacement key.

Open Echelon description files are not for specific MAC addresses, so if you replace a processor board on an E2 unit, you may upload the same description file used by the old E2.

