Software Upgrade Procedure

Smartpack S Controller

Doc. No. 370058.063, Issue 2 Published 9-Oct-19

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1. Introduction

This document describes the tasks required to upgrade the software of the Smartpack S Control System in Eltek Power Systems. The procedures allow you to perform the upgrade on site or remotely.

The procedures describe the following upgrade methods:

- The free version of **Eltek Network Utility** (ENU), as a method to upgrade the Smartpack S Controller only, when upgrading remotely. The ENU allows you to upgrade Smartpack S controllers, one at a time.

  Note: The licensed version of the ENU allows the upgrade of multiple controllers simultaneously.

- **FTP**, using a third-party FTP client, to transfer files to the Controller, in order to update the Smartpack S. FTP is also used and to make update(s) to CAN nodes.

Overview

A Smartpack S may be the single controller in a system, or it may include additional nodes listed in Table 1. The table shows the list of files that will be needed for upgrading a Controller and CAN nodes.

> **Note:** The software update files can be downloaded from the **Controller** section of the documents at **eltek.sharefile.com**.

Table 1 – List of Controllers and CAN Nodes with Corresponding Software.

Controller- Node part number	Device name	SW part number	File name
242100.410 242100.415	Smartpack S Smartpack S panel mount	405021.009	405021.009_UPDATE_X.Y.Z_APP.s19* SPS.CRY* *If updating from v. 2.6.2 or earlier, use the s19 file. If a secure update is required, use the encrypted .CRY file (requires 2.7.x or later).
242100.603.VC	Fleximonitor	405028.009	FLEXIMON.S19
242100.300.VC (Hardware, v. 1 – 3)	Battery Monitor Type 1	402086.009	BATTMON.HEX
242100.300.VC (Hardware, v. 4+)	Battery Monitor Type 2	405033.009	BATTMON.S19
242100.304.VC	IO Monitor Type 1	402088.009	IO_UNIT.HEX
242100.502.VC	IO Monitor Type 2	402088.009	IO_UNIT.HEX

Controller- Node part number	Device name	SW part number	File name
242100.306.VC	IO Monitor Type 3	402088.009	IO_UNIT.HEX
242100.301.VC	Load Monitor	402087.009	LOADMON.HEX
242100.305.VC	Mains Monitor	402093.009	MAINSMON.HEX
242100.200.VC	Smart Node RS232_RS485	402077.009	SMARTNOD.MHX

For additional documentation about the controller, refer to the "Additional resources," listed on page 6. Reference is made to these other documents within this procedure. If you do not have a copy of these documents handy, download them from **https://eltek.sharefile.com**.

Please be aware of the following recommendations:

- Make allowance for the necessary time for the upgrade process to be completed. CAN nodes will take a longer time to upgrade. During this time, the message **SW UPGRADE.WAIT!** will appear on the display, followed by a pause while the controller reboots.
- Do not interrupt the upgrade process once it is initiated. Interrupting the process may cause adverse consequences to the system.
- Each controller or node is programmed individually.

Important Notes:

- ENU is a Windows-based utility. When using ENU for a remote update, download the current version from **https://eltek.sharefile.com**.
- The procedures in this document should not be used to downgrade the software in the controller. A software downgrade may cause incompatibility issues and or system damages; hence, Eltek does not recommend this practice, and shall not be held responsible for the loss of any data or system malfunction if the user chooses to do so.

Warnings

- The procedures described in this document are intended to upgrade an energized, live power system. Both AC and DC voltages as well as high currents are present.
- Eltek recommends upgrading the power system during programmed maintenance hours.

- Ensure that the power system is operating in normal conditions without active alarms.
- Observe all precautions and site rules to avoid contact with any voltage and current carrying conductor to prevent electrical shock.
- In the event unforeseen circumstances occur during the upgrade, Eltek is not responsible for the loss of any data.

Additional resources

In addition to this upgrade document, you may also consult the *Configuration Guide: Eltek Controllers* (Document number 370013.063). Be sure to obtain this document before beginning upgrade procedures. Copies of Eltek documents can be downloaded from https://eltek.sharefile.com.

2. Backing Up Your System Configuration

System configuration is preserved through the software update, and controllers do not need to be reconfigured unless otherwise noted. Nevertheless, should a controller fail, a backup can be used to restore the previous state of the controller.

For instructions about how to create a backup of your system configuration, follow the procedure given in the chapter on "Configuration Backup," in the *Configuration Guide: Eltek Controllers*, Doc. No. 370013.063.

IMPORTANT NOTE: The backup files are valid ONLY for the system and software version USED TO create THE BACKUP. Never use the backup on another system OR different software version.

3. Upgrade Procedure for Smartpack S Using Eltek Network Utility (ENU)

The Eltek Network Utility (ENU) program allows local and remote upgrade of the Smartpack S controller.

The free version of the ENU allows you to upgrade Smartpack S controllers one at a time. The licensed version of the ENU allows the upgrade of multiple controllers simultaneously.

Note: If you are unable to use ENU, refer to "Upgrade Procedure for Smartpack S Controller Using FTP," on page 12

This chapter explains how to upgrade the Smartpack S Controller ONLY, and requires the latest version of the ENU installed on your computer. The correct version of the upgrade software file, "**405021.009_UPDATE_X.Y.Z_APP.s19**", must be available on the local hard drive, or on other media accessible by the computer. For secure updates, use **SPS.CRY** (updating from rev. 2.7.x or later).

Note: These instructions assume that your controller is already on a network. If your controller is not on a network, you must connect your computer directly to the controller's Ethernet port.

Note: When using an s19 file for update, insecure updates must be enabled. To verify this setting, use the web browser interface; and go to **System Conf. › Device Settings › Network Settings › TCP/IP [Security]**. Confirm that **Allow insecure FW Update from ENU** is enabled (checked).

To upgrade a Smartpack S Controller:

1. Open **Eltek Network Utility (ENU)**.
2. Choose the magnifying glass icon on the upper left corner of the window. The program will query for any Eltek controllers that are connected to the Local Area Network (LAN). The main window of the ENU will populate and list any controllers connected to the same network.

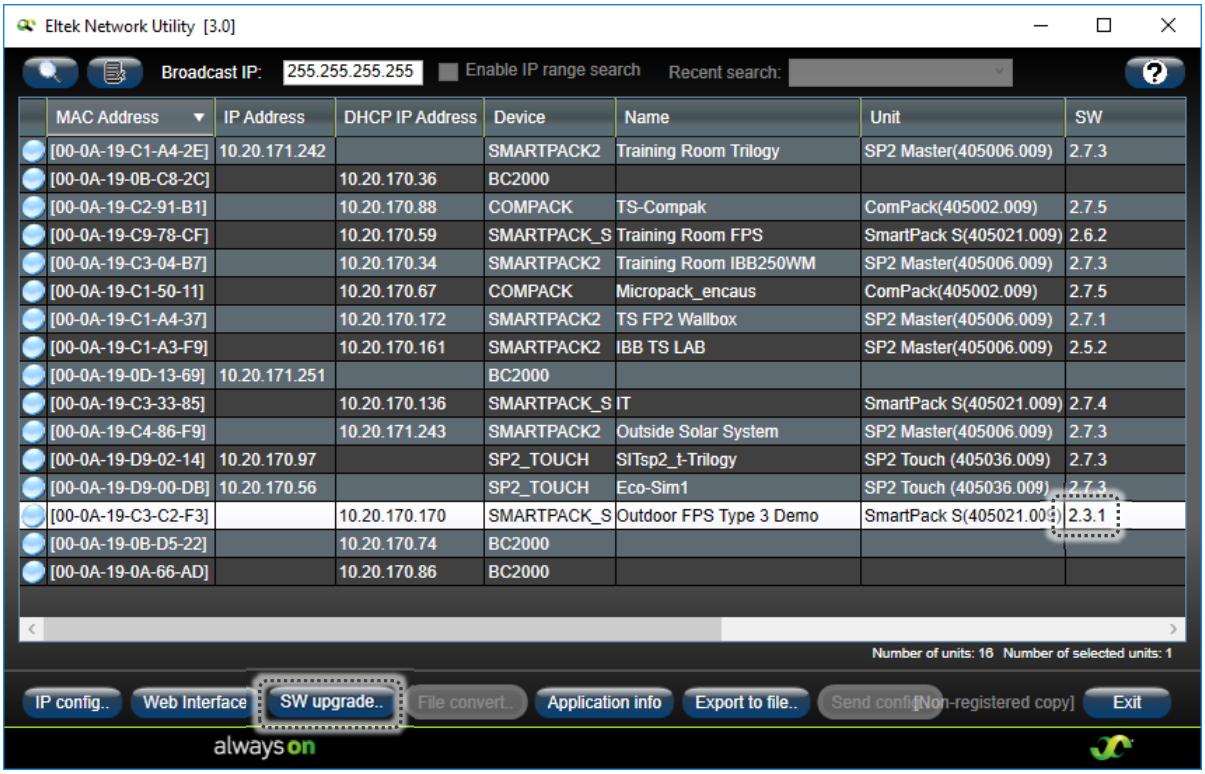

Figure 1 – ENU Main Window

3. From the list of controllers on the window, highlight the Smartpack S Controller to upgrade.

   Note: Verify the existing software version (**SW** column) installed on the controller. If you already have the latest version, a software upgrade is not necessary.

4. From the buttons along the bottom border, choose **SW upgrade**.

5. On the next window choose **Open file**. You will be prompted to locate the **.S19** upgrade file, or the **.CRY** file for encrypted upgrade (ver. 2.7.x or later).

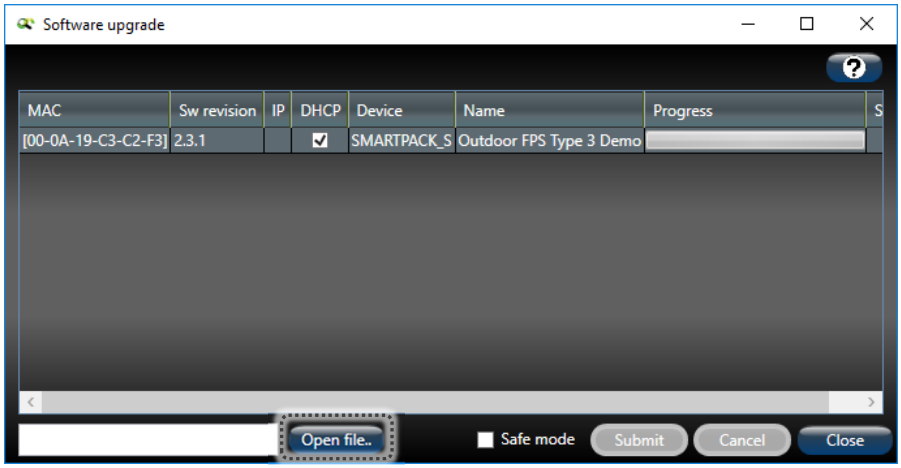

Figure 2 – ENU Open File

6. On the file browser window, highlight the correct file with the correct extension, for example **405021.009_UPDATE_X.Y.Z_APP.s19** and choose **Open**. The window will close.

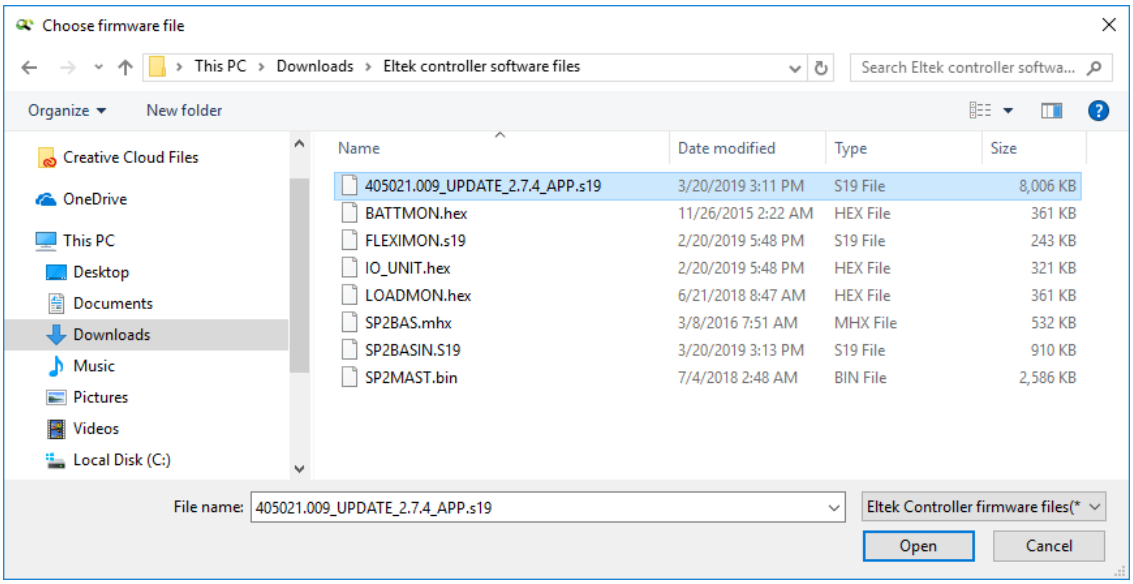

Figure 3 – Selecting the Update File

7. Returning to the **Software upgrade** window**,** click the **Submit** button.

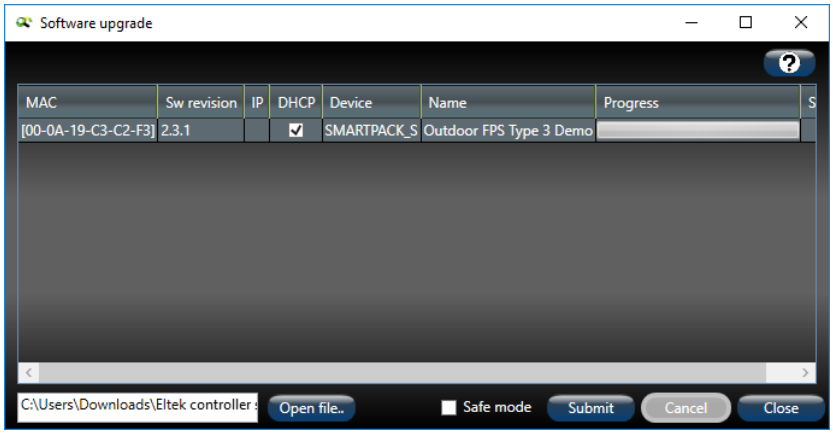

Figure 4 – ENU File Dialog Window

8. On the **Are you sure?** dialog box, click **Yes** to proceed with the upgrade. The software upload begins; you can see the status of the process on the **progress bar** that follows.

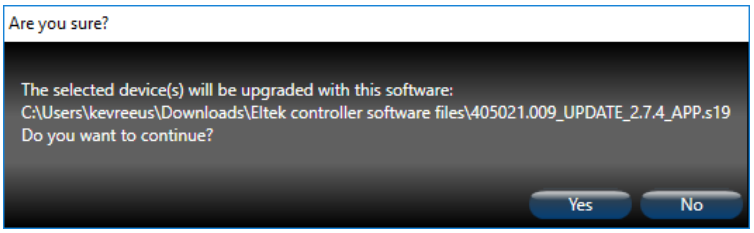

Figure 5 – ENU Confirmation Message

9. After the upload is complete, the controller performs an automatic reboot, and the message **Complete** will appear on the right end of the **progress bar**.

   Note: There is a lag time between the ENU progress bar on the computer screen and the operation within controller. During the upgrade, the message **SW UPGRADE.WAIT!** appears on the controller display, followed by a pause while the controller reboots. To verify that the upgrade is complete, log into the controller using the web browser interface; the software version is displayed on the home page.

10. **Close** the window. The upgrade of Smartpack S controller is complete.
11. Exit the **Eltek Network Utility** program.

This concludes the upgrade of the Smartpack S Controller through the ENU program.

If you are updating CAN nodes, follow the procedure given in the following chapter, “Upgrade Procedure for Additional Control Units Using FTP,” page 15.

4. Upgrade Procedure for Smartpack S Controller Using FTP

If you are unable to use ENU to update the Smartpack S controller, and you already have software version 2.7.x or later, you can use FTP as an alternate method of performing the update. (For the ENU update procedure, see Chapter 3, on page 8.)

Using FTP, the update procedure includes the following tasks:

- Verify Current Software Version(s) (next section, below)
- Transfer Files to Controller Using FTP (on page 16)

Note: When using FTP, verify whether FTPS is enabled or disabled. To verify FTP settings, use the web browser interface; and go to **System Conf. › Device Settings › Network Settings › TCP/IP [Security]**. If enabled, use port 990; if disabled, use port 21.

Note: If you are unfamiliar with the web browser interface, see the *Configuration Guide: Eltek Controllers*, Doc. No. 370013.063.

Verify Current Software Version

Before performing the software upgrade, verify the current software version of the controller, using the following steps.

1. Using the web browser interface, go to the home page, and verify the software version listed in the upper right corner of the browser window.

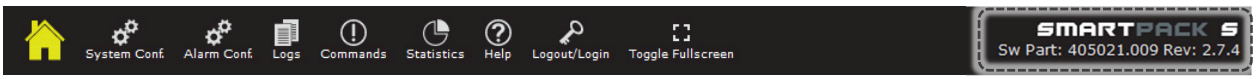

Figure 6 – Verifying Current Software Version

2. Compare the software version for your controller with the current version listed in the **README.txt** file included with the latest software update files.

   Note: The **README.txt** file, as well as software update files, can be downloaded from the **Controller** section of the documents at **eltek.sharefile.com**.

3. Copy the **SPS.CRY** file to your computer, so that you can transfer it remotely to the controller using FTP.

Transfer the File to Controller Using FTP

In order to upgrade using FTP, you must have an FTP client application installed on your computer. The following example uses **Filezilla**, but other applications can be used to transfer FTP files.

To transfer the upgrade files using FTP:

1. Launch **Filezilla**, or other FTP application.
2. Locate the directory on your computer where the **SPS.CRY** upgrade file resides.

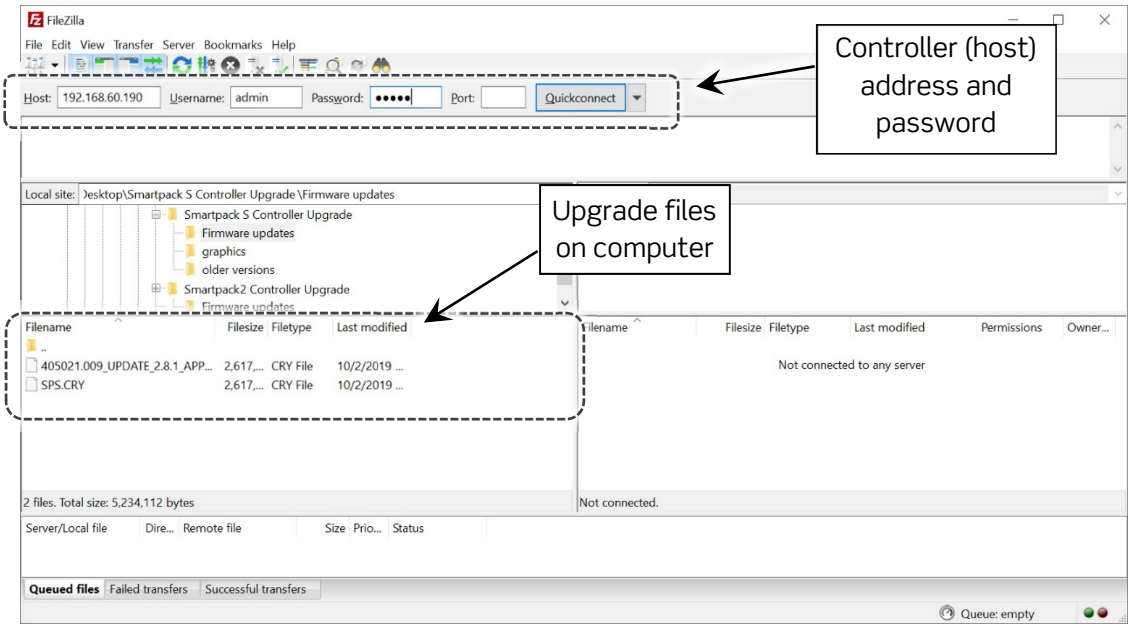

Figure 7 – Launching Filezilla

3. Enter the **Host** address, **Username**, and **Password** for the **Smartpack S Controller** (**Host**) for your system, and log in using FTP.

4. Choose the **SPS.CRY** file on your computer to be transferred to the controller, then drag and drop it (or right-click and choose **Upload**), to copy it to the controller (see Figure 13).

   Note: Copy the file to the root directory on the controller.

   After the file is copied, the screen on the controller displays the message **SW UPGRADE...WAIT!**, and then reboots, before returning to the home screen. The entire process takes several minutes.

   Also, once the file has been copied, the FTP client indicates that it has been disconnected.

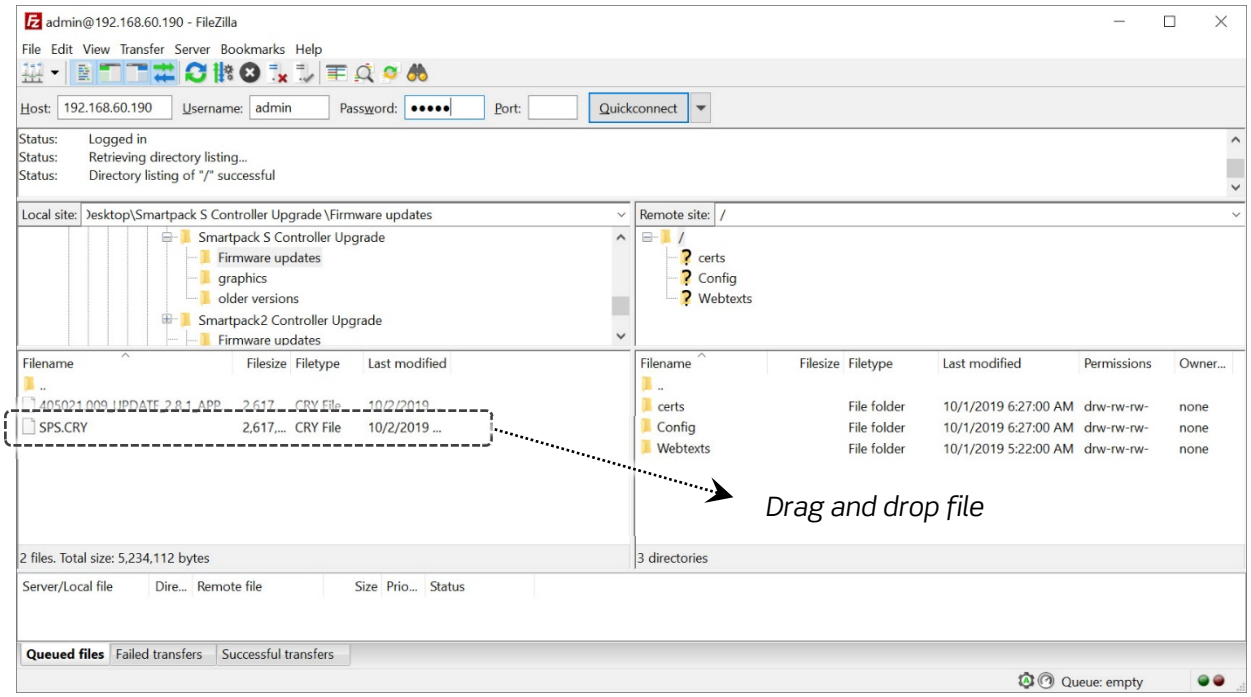

Figure 8 – Copying Upgrade File

5. Verify that update has been installed by returning to the web browser window and confirming that the new version is displayed in the upper right corner.

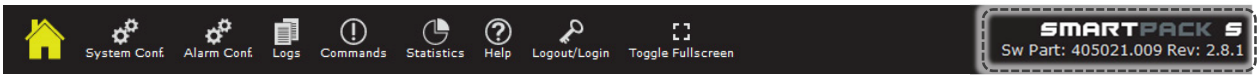

Figure 9 – Verifying Software Revision

5. Upgrade Procedure for Additional Control Units Using FTP

The instructions in this chapter provide a method for updating additional CAN nodes only.

The update procedure includes the following tasks:

- Verify Current Software Version(s) (next section, below)
- Transfer Files to Controller Using FTP (on page 16)
- Run Software Update (on page 19)

Note: When using FTP, verify whether FTPS is enabled or disabled. To verify FTP settings, use the web browser interface; and go to **System Conf. › Device Settings › Network Settings › TCP/IP [Security]**. If enabled, use port 990; if disabled, use port 21.

If you are unfamiliar with the web browser interface, see the *Configuration Guide: Eltek Controllers*, Doc. No. 370013.063.

Verify Current Software Version(s)

Before performing any software upgrades, verify the current software version installed on each controller element in your system.

To verify existing controller software version(s), complete the following steps.

1. Using the web browser interface, go to **Commands › Software Upgrade**.
2. On the **Software Upgrade** page, refer to the **SW Ver #** column.

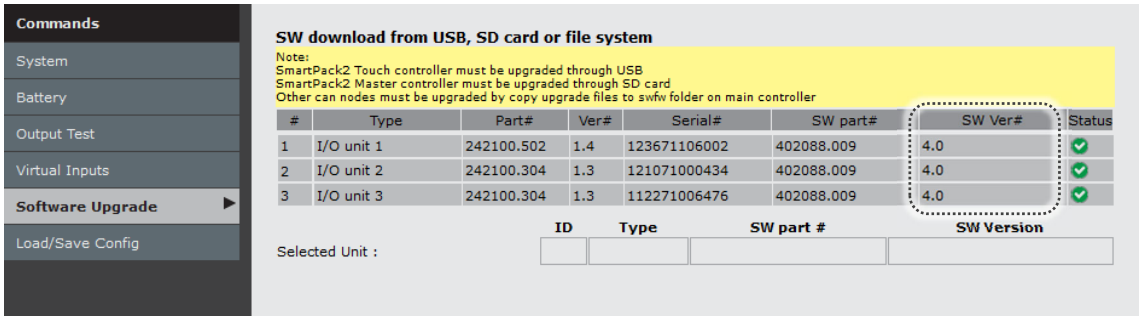

Figure 10 – Verifying Current Software Versions

Note: The Smartpack S Controller does not appear on this page; only CAN nodes are listed, if any are installed. If there are no CAN nodes, the table will appear empty (see Figure 11, below). The highlighted notes in the field above the table contain further information regarding upgrades for other master controllers; but the Smartpack S Controller must be upgraded using either the Eltek Network Utility, as described in the chapter, "Upgrade Procedure for Smartpack S Using Eltek Network Utility (ENU)," page 8; or via FTP, as described in the preceding chapter, "Upgrade Procedure for Smartpack S Controller Using FTP," page 12.

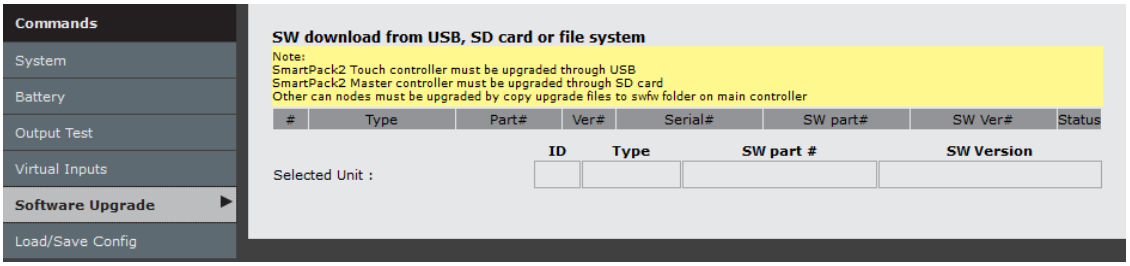

Figure 11 – SW Download Page with No Additional Controllers

3. Compare the software versions for your controllers (Figure 10) with the current versions listed in the **README.txt** file included with the latest software update files.

   Note: The **README.txt** file, as well as the software update files, can be downloaded from the Controller section of the documents at **eltek.sharefile.com**.

4. Copy any necessary software update files to your computer, so that you can transfer them remotely to the controller using FTP. For the correlation between the various controllers and the filenames of the updates, see Table 1 on page 4.

Transfer Files to Controller Using FTP

In order to upgrade using FTP, you must have an FTP client application installed on your computer. The following example uses **Filezilla**, but other applications can be used to transfer FTP files.

To transfer the upgrade files using FTP:

1. Launch **Filezilla**, or other FTP application.
2. Locate the directory on your computer where the upgrade files reside. (These are the files that you identified in the previous task (Step 4, above).

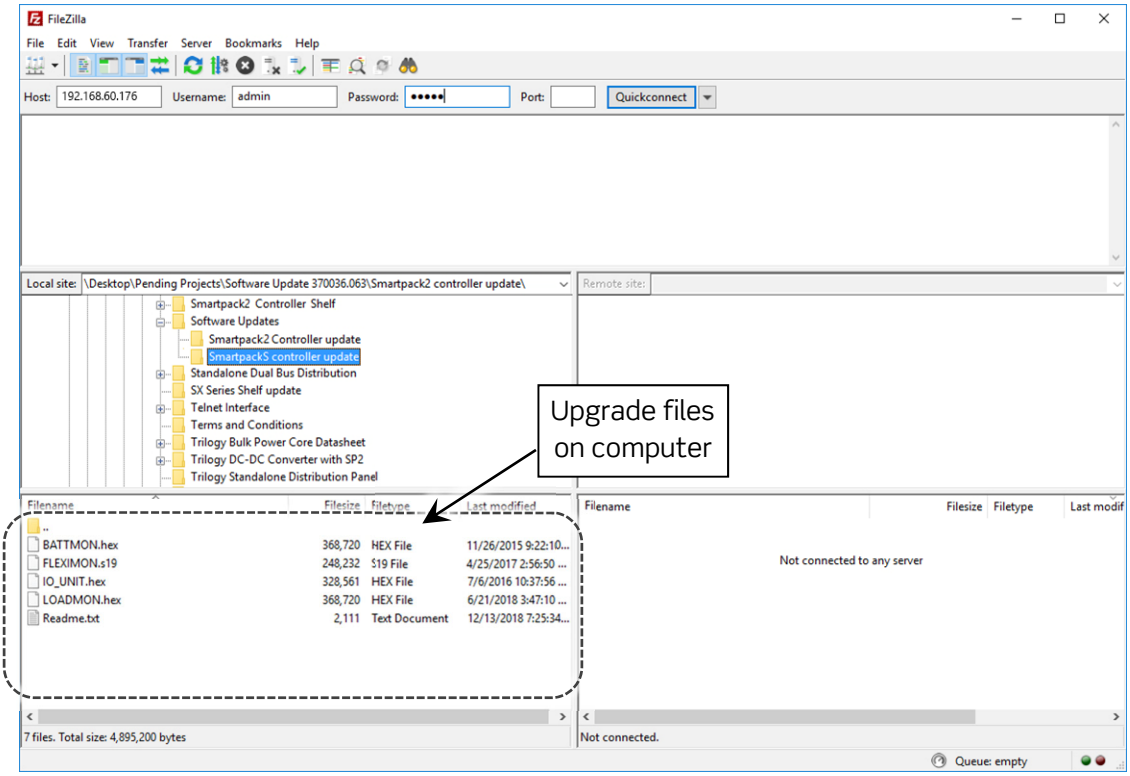

Figure 12 – Launching Filezilla

3. Enter the **Host** address, **Username**, and **Password** for the **Smartpack S Controller** (**Host**) for your system, and log in using FTP.

4. Choose the file(s) on your computer to be transferred to the controller, then drag and drop them (or right-click and choose **Upload**), to copy them to the controller (see Figure 13).

   Note: Copy the files to the root directory on the controller.

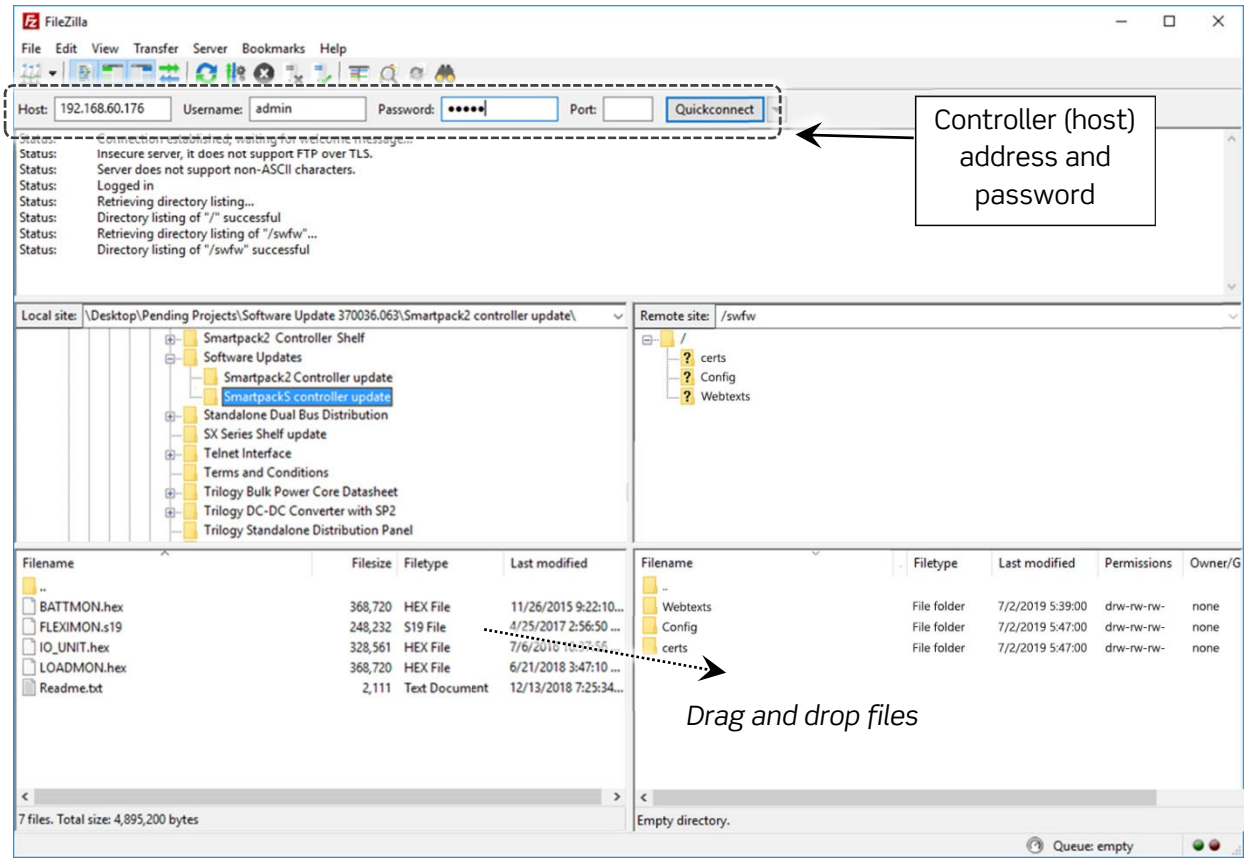

Figure 13 – Copying Upgrade Files

5. Verify that all necessary files have been copied successfully, before moving to the next task.

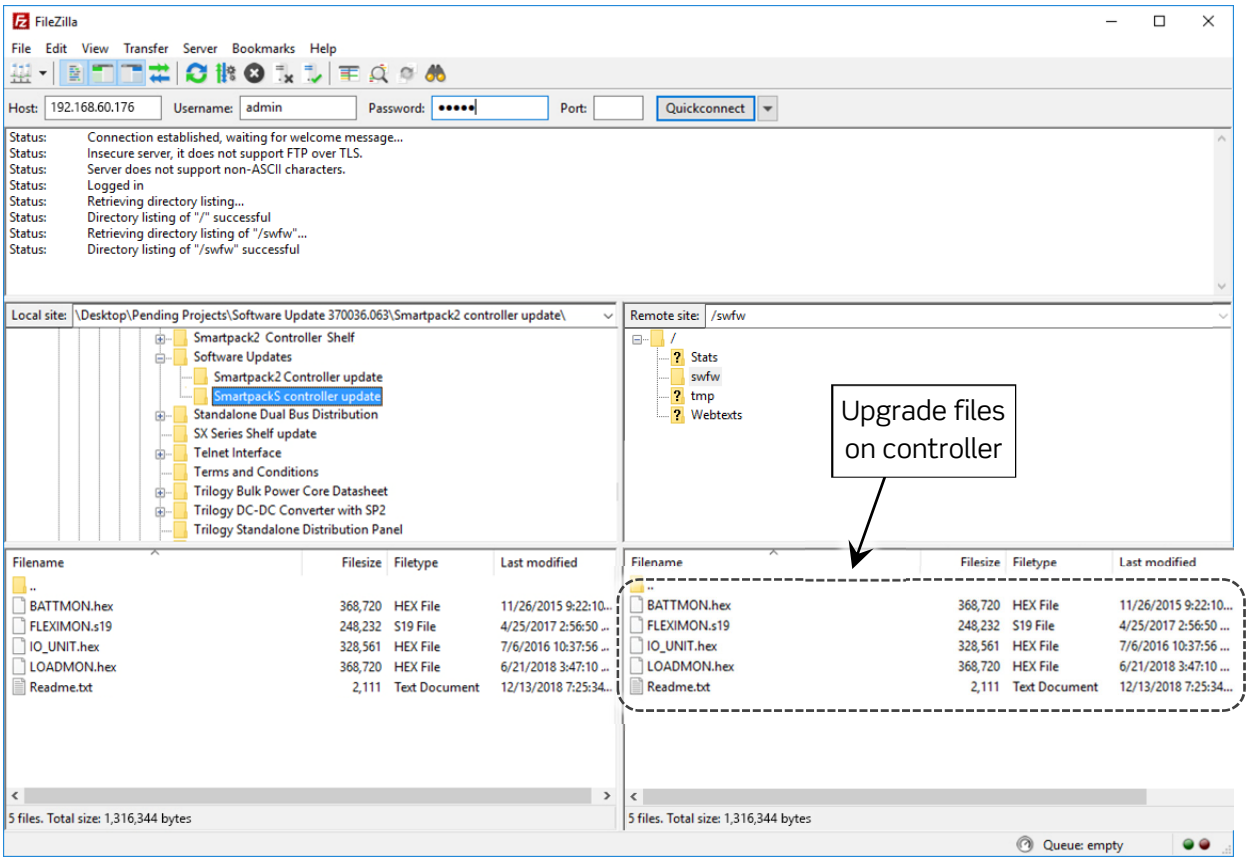

Figure 14 – Transfer Complete

Run Software Update

After all software files have been transferred via FTP to the controller, as described in the previous section, return to the web browser interface, in order to run software updates.

To run software updates:

1. Using the web browser interface, go to **Commands › Software Upgrade**.
2. On the **Software Upgrade** page, click the controller you want to upgrade. This selection will reveal additional details about the unit.

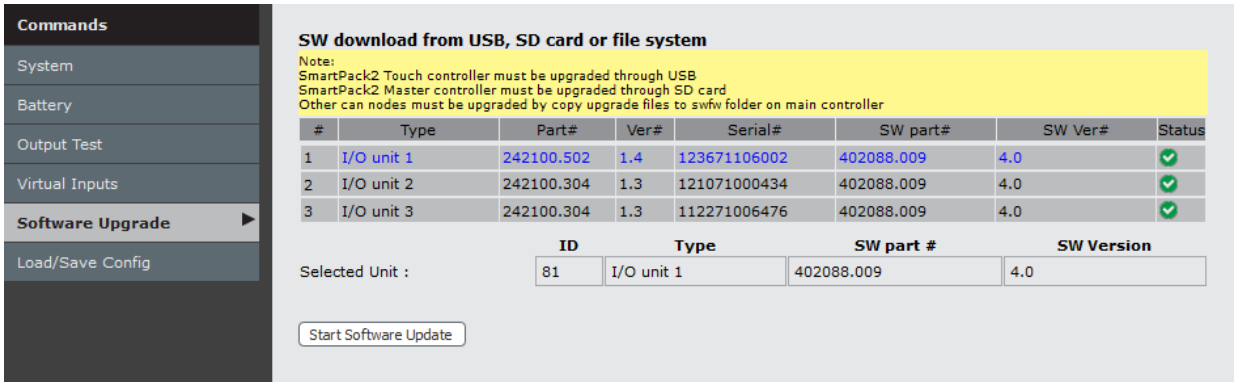

Figure 15 – Software Update Selection

3. Click the **Start Software Update** button, to begin the upgrade of that CAN node. You will see an alert saying: **The selected unit will be programmed!**
4. On the **Message!** alert, click **OK** to continue the update.

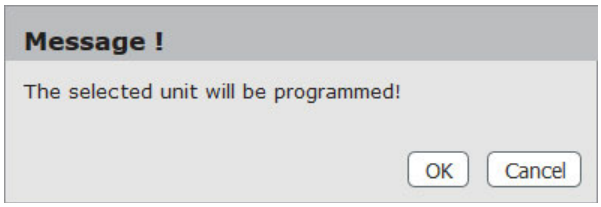

Figure 16 – Software Update Message

A progress bar appears, allowing you to monitor the progress of the update; it will be followed by an alert, notifying you when the upgrade for the controller is complete.

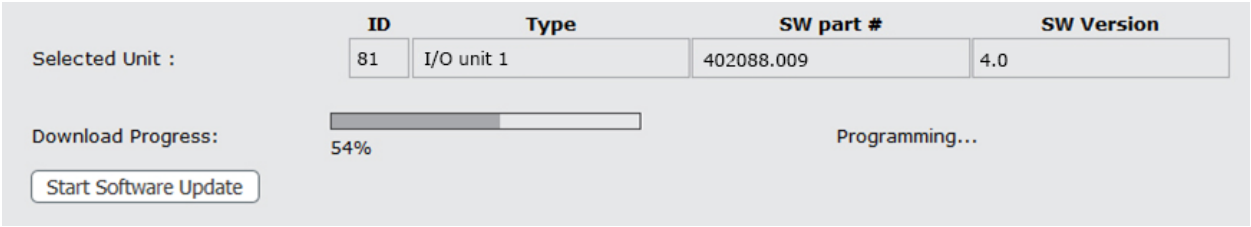

Figure 17 – Upgrade Progress Bar

5. After the upgrade is complete, click **OK** to return to the software download page.
6. If you are upgrading additional units, choose the next controller, and repeat steps 3 – 5.

Appendix: Restoring a Configuration File

If a controller or CAN node fails during an upgrade, you can import to a replacement controller, the configuration file that you created in “Backing Up Your System Configuration,” on page 7.

IMPORTANT NOTE: The backup files are valid ONLY for the system and software version USED TO create THE BACKUP. If the replacement controller is a different version from the failed controller, contact Technical Support for assistance, before proceeding with the restoration procedure.

To import the configuration file using the web interface:

1. Launch **your** browser, and **Login** to the web interface.
2. From the home page, choose **Commands › Load/Save Config**.

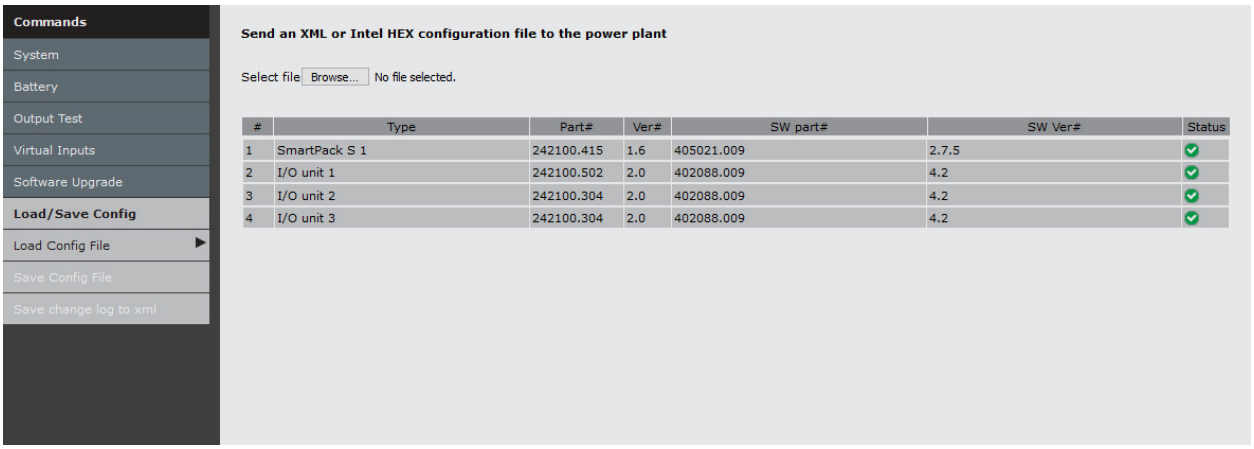

Figure 18 – Load Config Page

3. Choose **Browse**, and follow the prompts to select your configuration file.

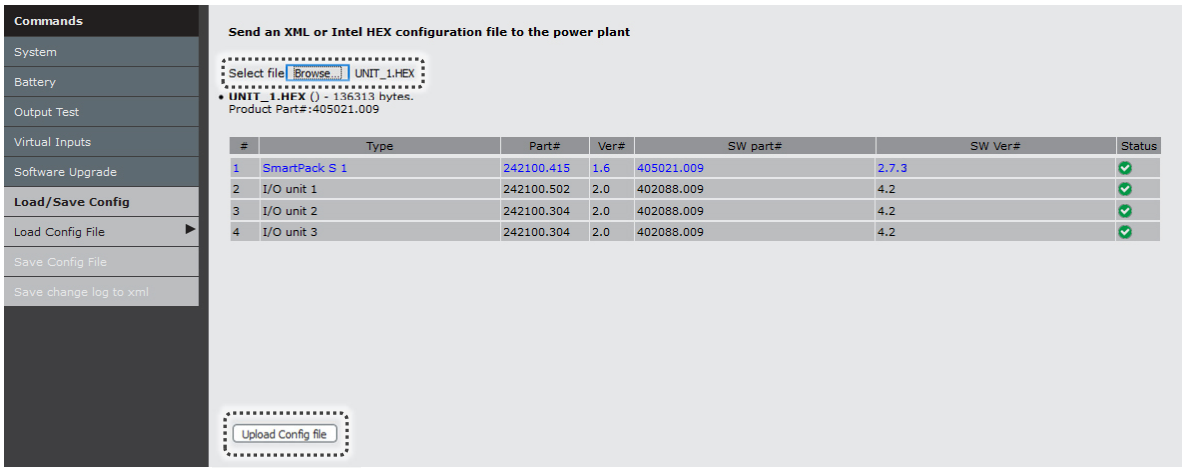

Figure 19 – Browse for Config File

4. In the web browser interface, choose **Upload Config file** to begin uploading the configuration. A progress bar indicates the status of the process.
5. Return to applicable upgrade procedure.

This concludes the procedure to import a configuration file.

For assistance with technical questions and solutions, please contact Technical Support by email at techsupport.us@deltaww.com or by phone at 1-800-435-4872.

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