# FIRMWARE DOCUMENTATION

# CyTime<sup>™</sup> Sequence of Events Recorder (SER) Multi-Device Firmware Update Tool

**APPLICABLE PRODUCTS** 

This document contains information regarding updating firmware to the latest released versions for the CyTime<sup>TM</sup> Sequence of Events Recorder, models SER-3200 and SER-2408. This firmware update tool is best utilized in applications where multiple SER devices in a system need to be updated at one time.

The information applies to the following catalog numbers:

- SER-3200-P2X2
- SER-3200-PTP
- SER-3200-32GB
- SER-2408-P2X2
- SER-2408-PTP
- SER-2408-32GB

# **Installing the SER Firmware Update Application**

- 1. Double click on the application file: CyTime\_SER\_Update\_v1.0.0.msi
- 2. Click "Next" on the Setup Wizard start screen



3. Once the Setup Wizard is complete, click the Finish button. You may check the Launch CyTime SER Update Utility box if you are ready to begin.



#### **Updating SER Firmware**

Download the Firmware update zip files from the Cyber Sciences web site.

- 1. Select the 3200 or 2408 model file, depending on the model type to update.
- 2. http://cyber-sciences.com/downloads.php

#### NOTE: Before updating firmware, please consider the following:

- All user setup is preserved:
   Updating the SER-3200/2408 firmware does not affect any user settings. However, as a precaution, it is recommended to make copies of the existing setup file or make a note of configuration settings.
- 2. Updates only:

**Warning:** SER-3200/2408 firmware is suitable for updates only. Do not attempt to "downgrade" firmware to a previous version; this can cause the unit to malfunction. [ <u>CyTime Update Instructions</u> ]

3. SER Updates from 1.xx to 2.xx

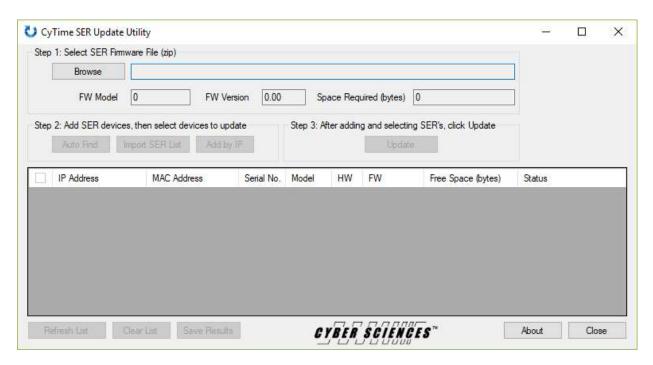
**Warning:** Updating the SER-3200 to v2.xx from version 1.xx (1.00-1.60) will clear the event log. To preserve events, ensure all desired event records are uploaded **BEFORE** initiating the update.

4. Release Notes

To decide if a firmware update is appropriate for your installation or to determine if a particular issue has been fixed in a subsequent release, please consult the published release notes. [ <u>CyTime</u> <u>Release Notes</u> ]

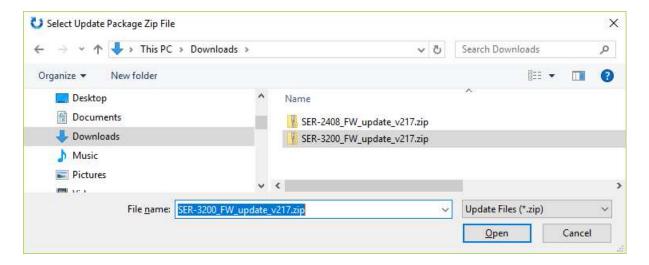
# **Step 1: Select SER Firmware File (zip)**

1. Click the "Select Browse" button to start the update process.

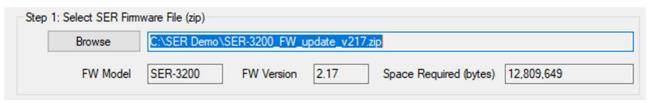


2. Go to the download folder where the firmware update zip file is stored. Select the Cyber Science firmware update zip file, then click "Open".

NOTE: Do not change the name of the firmware zip file or this information will not display correctly.

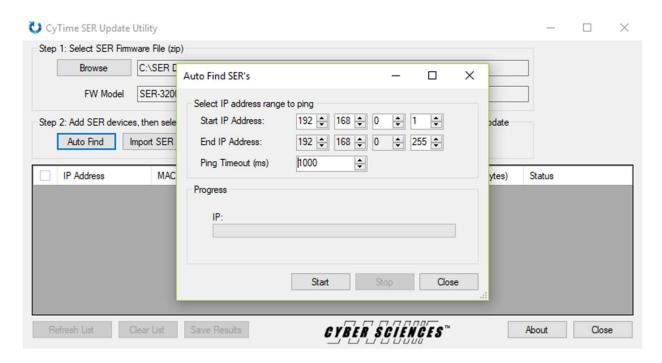


- 3. Once you select the firmware zip file, the FW Model, FW Version and Space Required for the file will appear in the application.
  - CyTime SER Update Utility

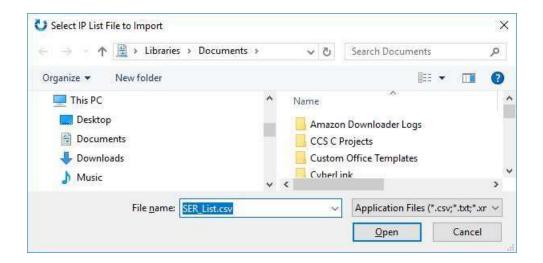


# Step 2: Add SER devices, then select devices to update

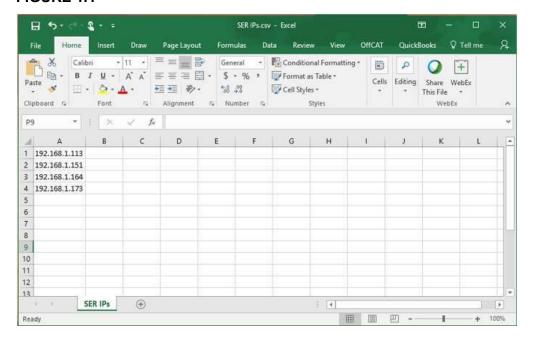
1. Click "Auto Find" to automatically find and add SER devices to the main window.



 Optionally, click "Import SER List" to import SER devices for updating. Select the IP list file to import into update application. This will be a simple text, XML, or CSV file created from Excel or by hand. See Figure 1.1 on the next page



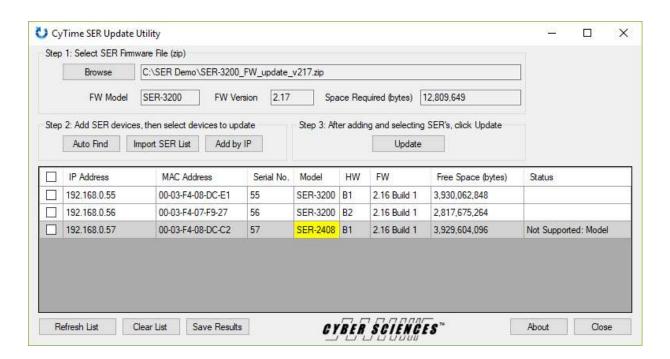
# FIGURE 1.1



Optionally, click the "Add by IP" button to add individual SER's.

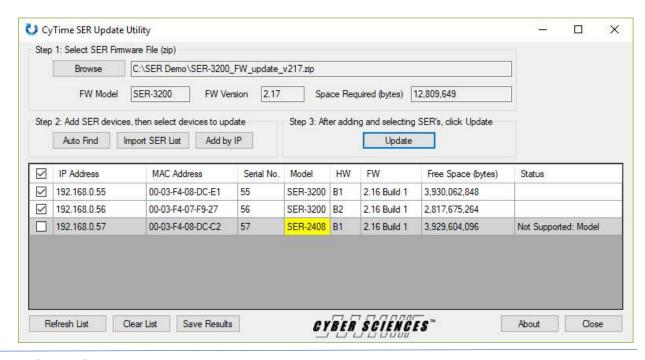


3. The display will only allow upgrades according to the correct Model, Firmware Version, and Space Available boxes from step 1. If there are issues found, the line will be grayed, the checkbox disabled, and the specific issue will be highlighted in yellow.

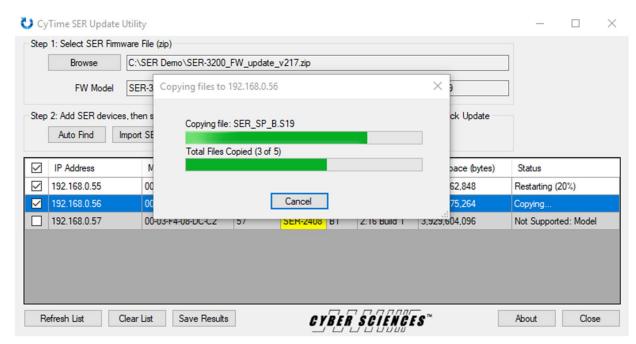


#### Step 3: After adding and selecting SER's, click Update

1. Select the SER's in the grid view, then click the "Update" button to start the update.

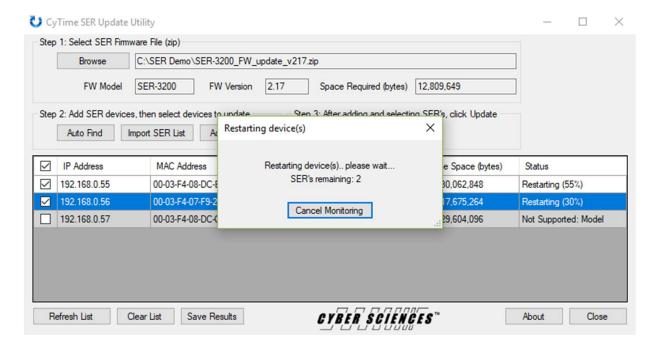


2. The update progress will be displayed in the copy dialog, and the main window's "Status" column. Any errors will be reported in the "Status" column at the end of copying, for each SER.

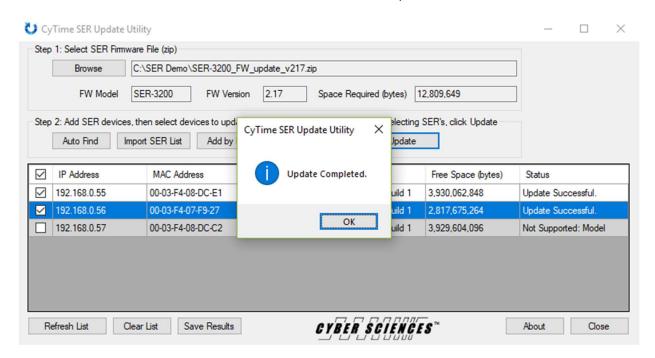


NOTE: THE USER ID AND PASSWORD WILL BE REQUIRED FOR EACH DEVICE IF CHANGED FROM FACTORY DEFAULT ID AND PASSWORD (ADMIN/ADMIN).

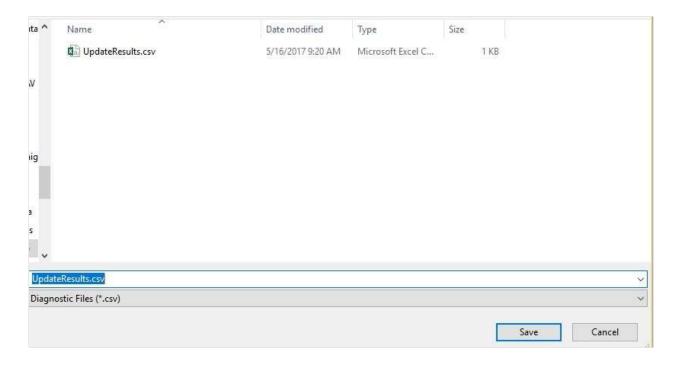
3. This shows the "Restart Monitoring Progress" form, only shown after all FTP operations complete, and there are SER devices restarting.



4. After all SER's have been updated, the completion message is shown. Click OK to close this window. Click the main window's "Save Results" button to save update status data to csv file.



5. Click the Save Results button and save the csv file.



#### Requirements

The CyTime SER Update Utility is a Windows .NET based application, built using Visual Studio 2017.

#### 1. Operating System and Frameworks

- Windows 7 SP1 or greater (i.e. 7, 8, 8.x, 10)
  - o 32 or 64 bit
- .NET Framework 4.5.2 or greater
  - o 4.5 requires Windows Vista SP2 or higher
  - o 4.5 is an in-place replacement of 4.0
  - o The 4.6.2 is an in-place update to the Microsoft .NET Framework

4/4.5/4.5.1/4.5.2/4.6/4.6.1. So it is safe to say that the latest 4.6.2 will also work fine https://msdn.microsoft.com/en-us/library/5a4x27ek.aspx

# 2. TCP/IP Ports and Applications (IPv4 only)

- FTP (21)
  - o Used to transfer firmware data to the SER FTP server
  - o Also used to get a directory listing from the SER FTP server, after files have been copied, to confirm file sizes are correct (files copied correctly)
  - o A timeout of 10 seconds, as well as "Keepalive=true", are used internally to reduce chances of connection interruption
- Modbus (502)
  - o Used by the utility in the "Auto Find" to find SER devices
    - A default timeout of 1 second, which is configurable from 100ms to 60 seconds
  - Used to get MAC, model, firmware version, and space available from the SER Modbus server
  - o Also used to send a reset (reboot command) to the SER Modbus server, which initiates the update upon rebooting of the SER
  - o A timeout of 5 seconds is used to reduce chances of connection interruption



www.cyber-sciences.com