Smart-UPS Firmware Upgrade Wizard v4.2.0

APC™
by **Schneider** Electric

A Technical Guide

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Introduction

The Firmware Upgrade Wizard provides the following features:

- It supports upgrading the firmware on designated devices, see Supported Devices.
- It can upgrade your device using serial or USB, the exact method depending on the device itself.
- It supports automatic filtering of compatible firmware images from a directory of images.
- It bundles the latest compatible firmware files for supported devices with the tool.
- It includes bug fixes, and has added compatibility with more devices.

Note: For UPS devices with a SmartSlot, UPS firmware upgrades can also be carried out using a UPS Network Management Card. The detailed process is provided in the "Upgrading Firmware" section of the UPS Network Management Card 2 User Guide. The document is located in the **Documentation** tab here.

Note: The Firmware Upgrade Wizard is the most reliable and preferred method of upgrading. If you have a previous version of the Firmware Upgrade Wizard or Firmware Images, delete the old version and download the latest revision.

System Requirements

The system requirements are as follows:
- **Operating systems:** Microsoft® Windows® 7, Windows 2016, Windows 8.1, Windows 10, and Windows 2019.
- **Computer screen graphics:** Resolution of 800x600 with 16-bit colors (65536 colors) or higher.

Serial Connection
Use the serial cable provided along with the UPS to connect the computer to the device being updated, via a DE-9/DB-9 serial communications port.

USB Connection
Use the USB cable provided along with the UPS to connect the computer to the device being updated.

Note: You should not use serial to USB converters or other devices to connect your computer to the device being updated.

Supported Devices

All Smart-UPS devices with the SMT, SMX, SMC, SCL, and SRT prefixes are supported, except those listed in Unsupported Devices.

Unsupported Devices

UPS Family/Category	Unsupported SKUs/Models	Notes
Legacy Devices	Models with the SU, SUA, SUM, SURD, SURTD, SURTA, and SRC prefixes (e.g., SUA3000XL, SU22000NET, SURTD3000RMXLT)	
SMT	SMT1000US, SMT1500RMUS, SMT1500US, SMT2200RMUS, SMT1000US, SMT1500RMUS, SMT1500US, SMT2200RMUS, HTM1200RMJ1U, NMM1200RMJ1U	
SRT	SRT8KXLI, SRT8KXLT, SRT8KXLT-IEC, SRT8KRMXLI, SRT8KRMXLT, SRT8KRMXLT-IEC, SRT10KXLI, SRT10KXLT, SRT10KXLT-IEC, SRT10KRMXLI, SRT10KRMXLT, SRT10KRMXLT-IEC, DLRT8KRMXLI, DLRT8KRMXLT	
SMX	SMX2000LV, SMX2000LVNC, SMX2000LVNCQ, SMX2000LVQ, SMX2200HV, SMX2200HVQ, SMX3000HV, SMX3000HVNC, SMX3000HVNCQ, SMX3000HVQ, SMX3000HVT, SMX3000HVTQ, SMX3000LV, SMX3000LVNC, SMX3000LVNCQ, SMX3000LV	
	SMX750, SMX1000, SMX1500	**NOTE:** If any listed SKU is running UPS firmware 0.2x or lower, it is unsupported. These units are 120V devices manufactured prior to date code 1037. The date code is the first 4 numbers in your serial number, i.e. serial number AS1036123456 is not supported
	SMX2000RMLV2U, SMX2000RMLV2UNC, SMX2000RMLV2UNCQ, SMX2000RMLV2UQ, SMX2200RMHV2U, SMX2200RMHV2UQ, SMX2200RMLV2U, SMX2200RMLV2UQ, SMX3000RMHV2U, SMX3000RMHV2UNC, SMX3000RMHV2UNCQ, SMX3000RMHV2UQ, SMX3000RMLV2U, SMX3000RMLV2UNC, SMX3000RMLV2UNCQ, SMX3000RMLV2UQ, DLX3000R2LVJNC	**NOTE:** If any listed SKU is running a UPS firmware version between 5.0 and 7.0, it is supported by the Firmware Upgrade Wizard v4.2. For example: firmware version 6.2.
	FJX1500RMI2UNC, SMX1000, SMX1000I, SMX1000IQ, SMX1000Q, SMX1500RM2U, SMX1500RM2UNC, SMX1500RM2UNCQ, SMX1500RM2UQ, SMX1500RMI2U, SMX1500RMI2UNC, SMX1500RMI2UNCQ, SMX1500RMI2UQ, SMX750, SMX750I, SMX750IQ, SMX750-NMC, SMX750Q	**NOTE:** If any listed SKU is running UPS firmware version 7.0 and higher, it is supported by the Firmware Upgrade Wizard v4.2.

Smart-UPS devices with no firmware image bundled with Firmware Upgrade Wizard

Note: For upgrading the below non-compatible SKUs, please refer to Knowledge Base article FA405392 on the APC website.

SRT Family: SRT1000UXI-LI, SRT1000UXI-NCLI, SRT1500UXI-LI, SRT1500UXI-NCLI, SRT2200UXI-LI, SRT2200UXI-NCLI, SRT3000UXI-LI, SRT3000UXI-NCLI, DLRT3000RMXLI, FJRT3000XLIX322, SRT2200RMXLI, SRT2200RMXLI-NC,SRT2200XLI, SRT3000RMXLI, SRT3000RMXLI-NC, SRT3000RMXLT, SRT3000RMXLT-NC, SRT3000RMXLW-IEC, SRT3000XLI, SRT3000XLT, SRT3000XLTW, SRT3000XLW-IEC, DLRT3000RMXLA, SRT2200RMXLA, SRT2200RMXLA-NC, SRT2200XLA, SRT3000RMXLA, SRT3000RMXLA-NC, SRT3000XLA, SRT3000XLA-TW, SRT2200RMXLAUS, SRT3000XLAUS
Smart-PMU: XP1K9NN42RCC

Usage

Upgrade Notes

- AC utility power should be supplied to the device and the internal battery should remain connected throughout the firmware upgrade.
- Do not remove the serial/USB cable from your device while the upgrade is in progress. If the upgrade is interrupted, the UPS may crash. In this case, contact APC Customer Support.
- It is recommended that the Wizard runs on a laptop or on a power-protected computer. If upgrading a UPS, do not have the UPS supply power to the computer.
- Ensure that the computer does not go to sleep, standby or hibernate due to user inactivity.
- While the Wizard allows a downgrade, this is neither recommended nor supported by Schneider Electric, unless directed by a representative of the company.
- Compatible firmware images for various devices are bundled with this software. Only use these compatible images or any approved firmware upgrade files that were supplied by Schneider Electric. Files received by other means may cause problems with the device, possibly resulting in permanent damage.
- Ensure that only one device is connected at a time to the computer for the firmware upgrade.

Notes for UPS Devices only

- SmartSlot cards should be removed from the UPS before a firmware upgrade of your UPS. It is also recommended that any equipment is disconnected from the UPS.
- The UPS should not be performing a runtime calibration during the upgrade.
- In the case of updating the firmware directly after plugging in a USB cable to a UPS, please ensure the USB driver installation is complete before proceeding with the upgrade.

Notes for SRT Devices only

- To upgrade SRT 5/6kVA devices with UPS firmware version 2.x, you must upgrade the firmware to version 2.9 first, and then it is recommended you upgrade to the latest version. This will require you to complete the firmware upgrade process twice. The first upgrade will bring you to version 2.9, and the second upgrade will bring you to the latest version.
- If you are upgrade an SRT device due to a "Needs Firmware Update" or "Battery Sys Error 0800" message, you **must** have your external battery packs connected when you perform the upgrade. If you connect more battery packs later and the issue continues, you will need to run the Firmware Upgrade Wizard again with all battery packs connected.
- Upgrading an SRT device may take up to 20 minutes to complete. **Do not reboot your computer or attempt to turn off the UPS during this time**. The more external battery packs connected, the longer the upgrade process will take.

Troubleshooting

- No software that is communicating with the device being upgraded should be running while using this Firmware Upgrade Wizard. Some software runs as a service on Windows and should be stopped (example: PowerChute Business Edition).
- To access Windows services, launch "Services" from the Windows Control Panel in Administrative Tools or type "Services.msc" in the command prompt.
- The PowerChute Business Edition service is called 'APC PBE Agent'. Stop this service before running the Wizard, and start it again afterward.
- If you have Bluetooth or virtual COM ports, and you want to do the upgrade using your serial port, you should manually select the COM port you want to perform the upgrade with. (This does not apply for a firmware upgrade using the USB port).
- The Firmware Upgrade Wizard will display an error message if the UPS is not capable of performing a firmware upgrade using the USB port. This will cause no harm to the device.
- The Firmware Upgrade Wizard uses its own 32-bit Java environment. Some operating systems might ask for confirmation to run this Java version.

# Firmware Upgrade Process: Step-by-Step Walkthrough

Step One

Download the Firmware Upgrade Wizard from the Software / Firmware page on the APC website (select "Software Upgrades – Wizards and Configurators" from the drop-down list) or Knowledge Base article FA164737. Double-click the downloaded file, and launch the application.
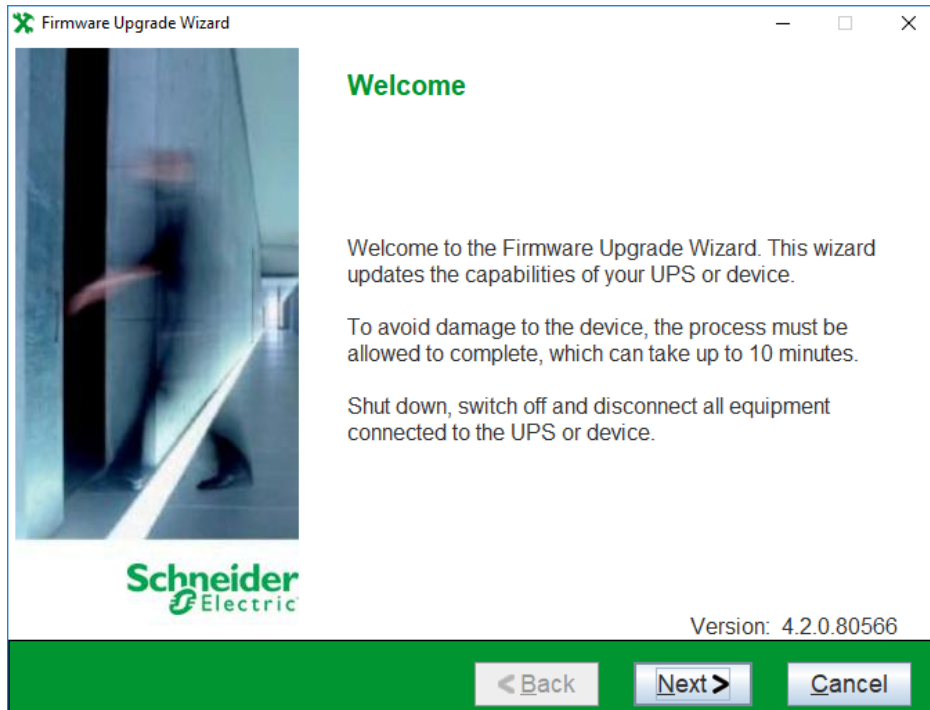
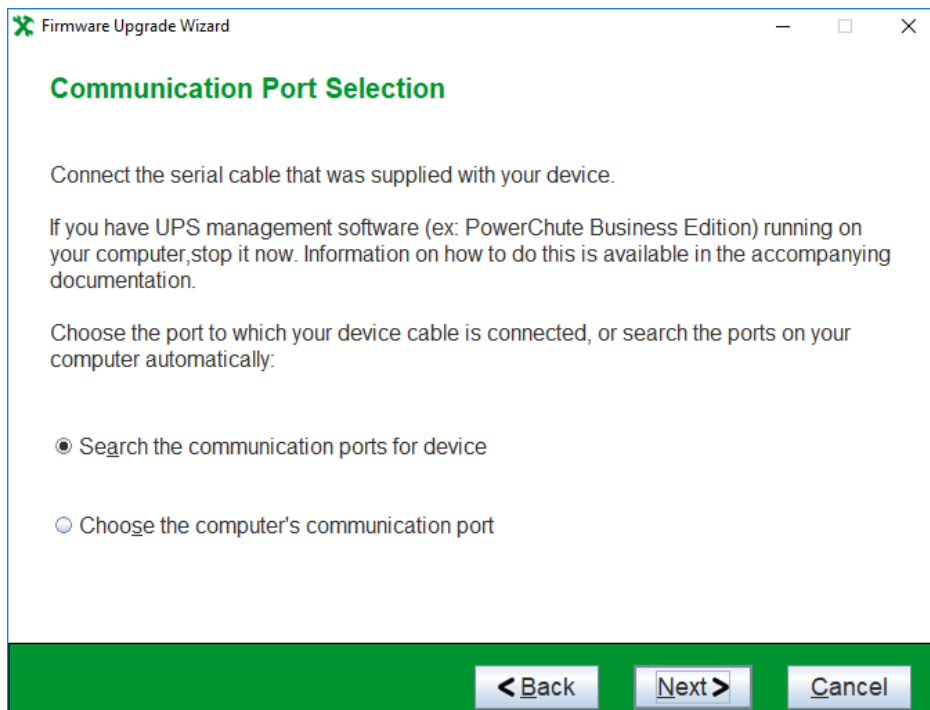Click "Next" to begin.

Step Two

Select the "I agree to terms in the License Agreement" checkbox, and click "Next".
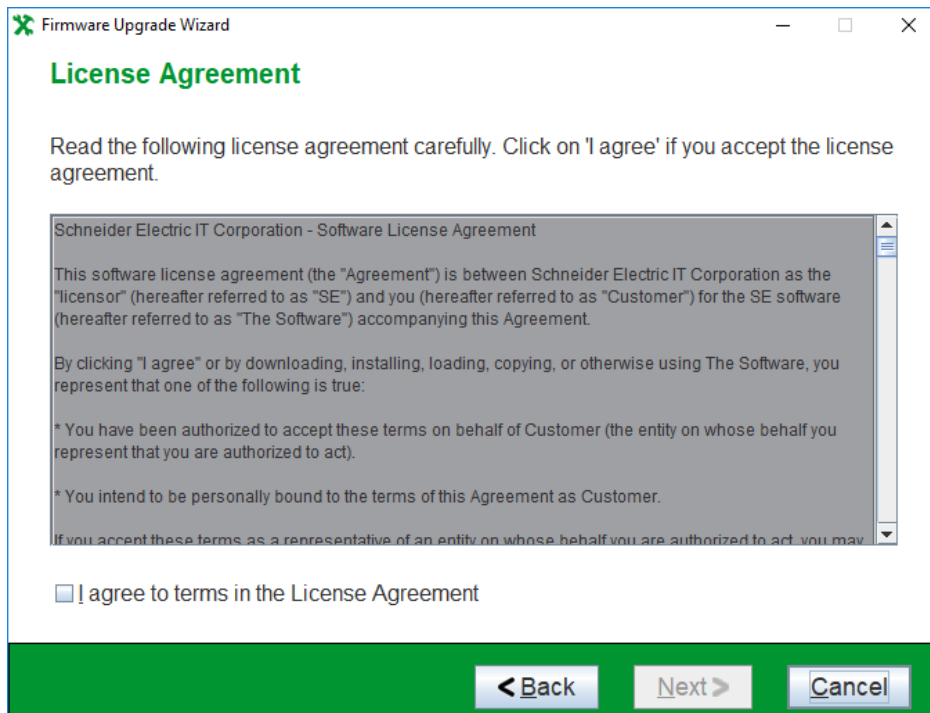
Step Three

The Firmware Upgrade Wizard will now search the communication ports for the UPS. The UPS is referred to on-screen as the "device". If you have set up virtual ports, it is important to manually select the correct port, the UPS is connected to, here.

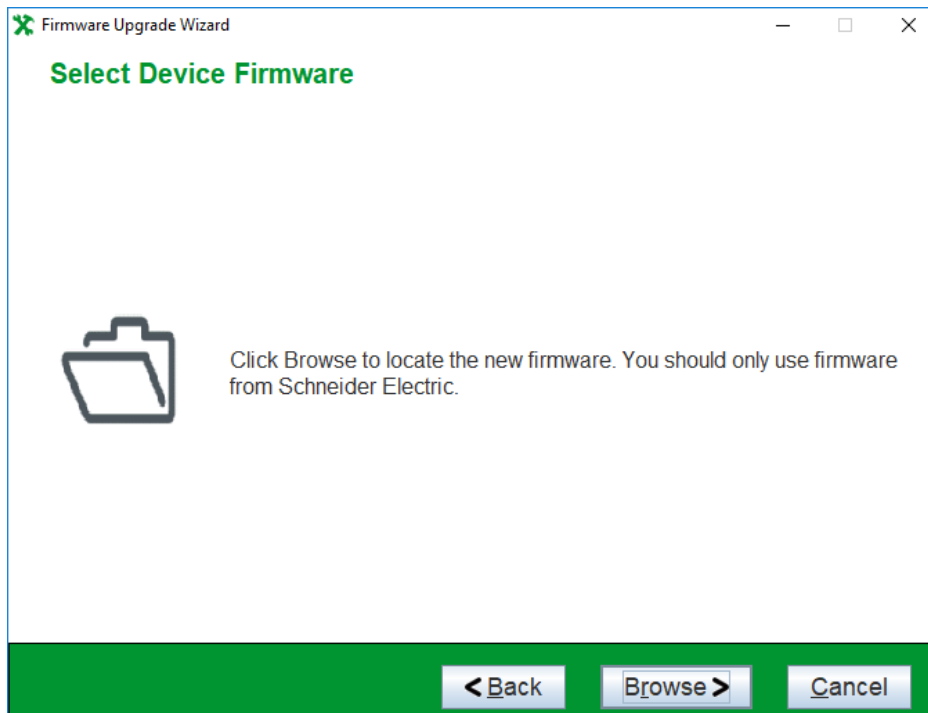If the device is connected via USB, the wizard will detect the device.
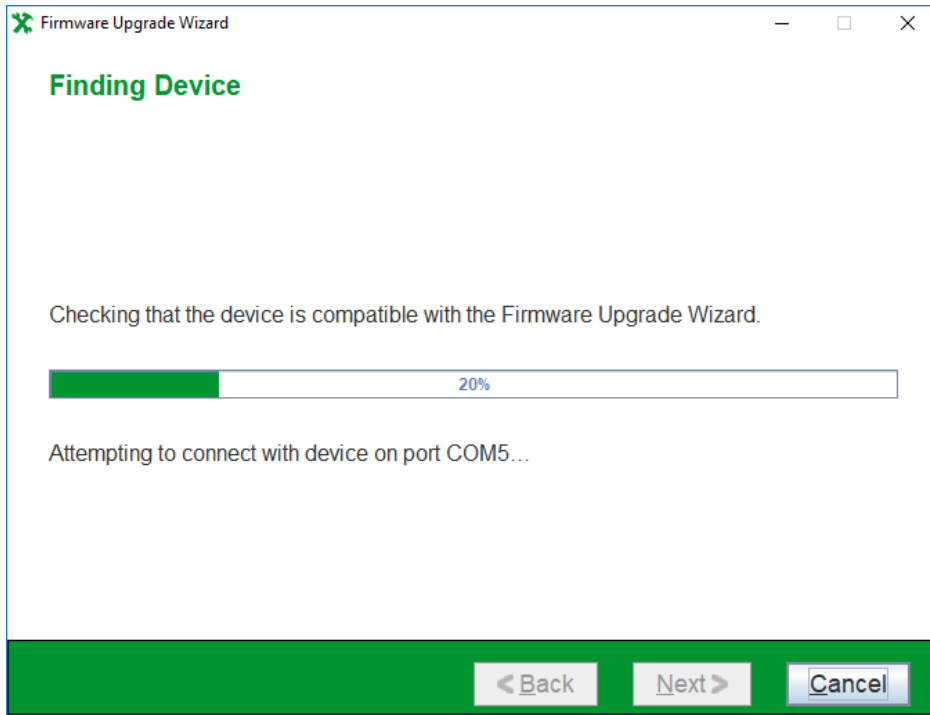
Click "Next" and the Firmware Upgrade Wizard will display the current firmware version installed on the device.
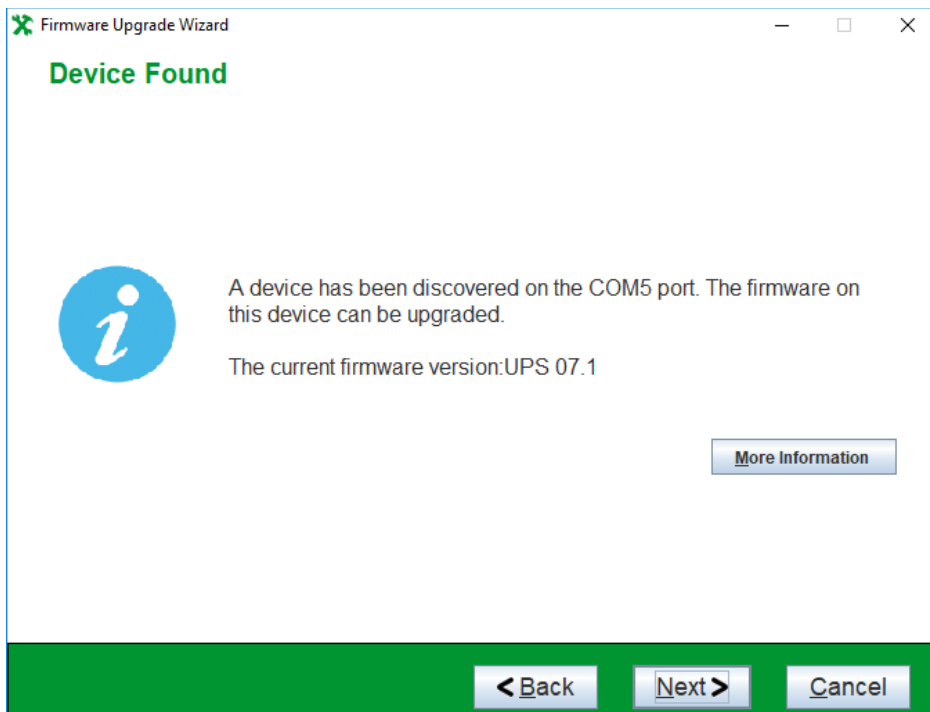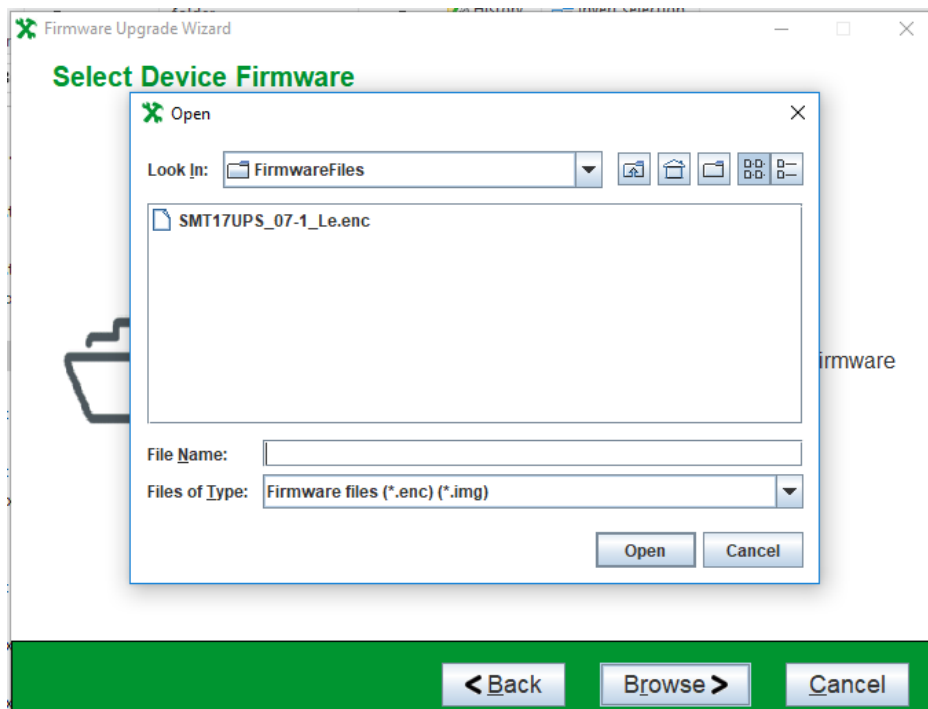
Step Four

Click "Browse" to select your firmware file.

The Wizard will display the Firmware File appropriate for your device. If you want to manually select a different file, you can browse to the appropriate location. Select it, and click "Open".
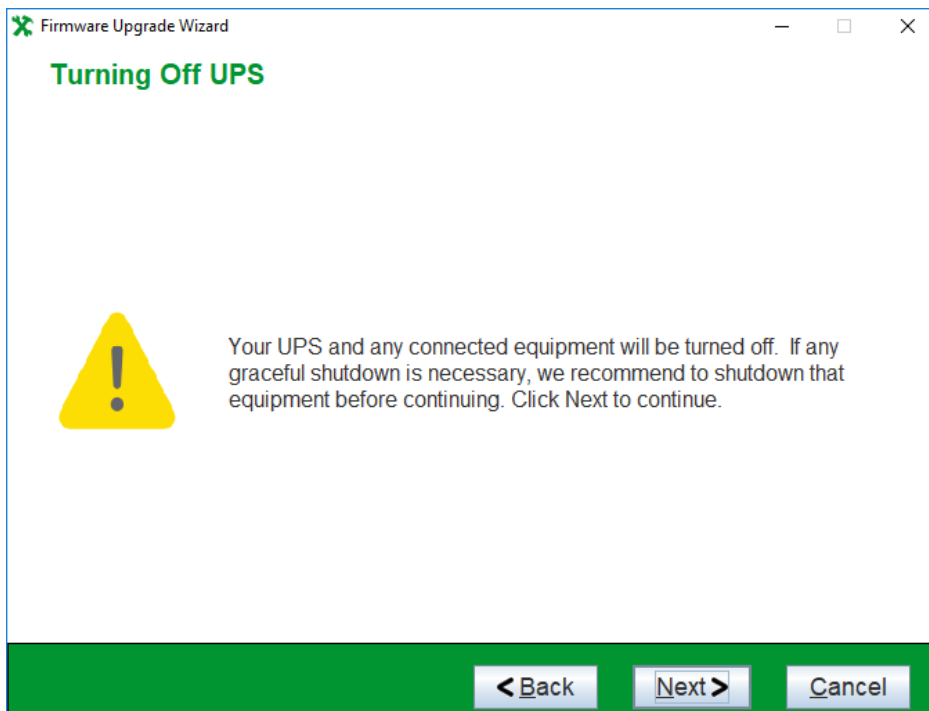

The Firmware Upgrade Wizard is now ready to begin the upgrade process. The Revision Note will give detailed information on the version of the firmware.
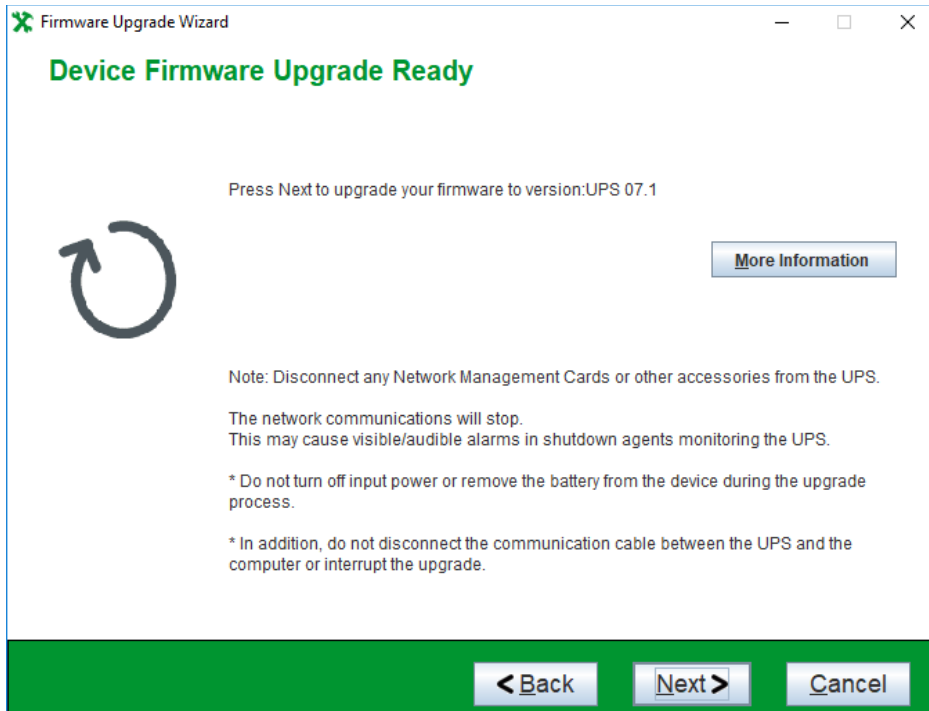
Click "Next".

Step Five

The first step in sending the upgrade file is turning off the UPS. Ensure your attached load is correctly shut down, then click "Next".

The Firmware Upgrade Wizard will now begin transferring the file to the device. This process will take approximately 5 minutes. Do not turn off power or remove the battery during this process.


Some devices may require longer time to complete the firmware upgrade. If a delay occurs, you will see an option to close the wizard, while the device firmware completes in the background.
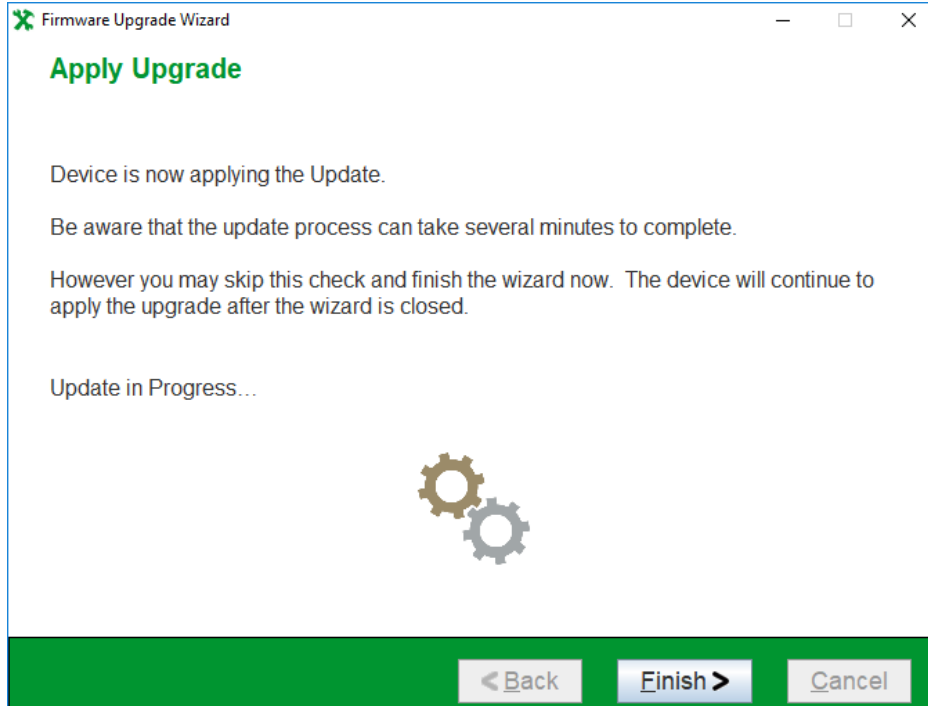
Click "Finish" to exit the upgrade wizard before completion, or wait for the confirmation screen.

Step Six

The firmware upgrade is now complete. You can verify the new updated revision of your device firmware. Click "Finish" and you can put your UPS and attached load back into production.
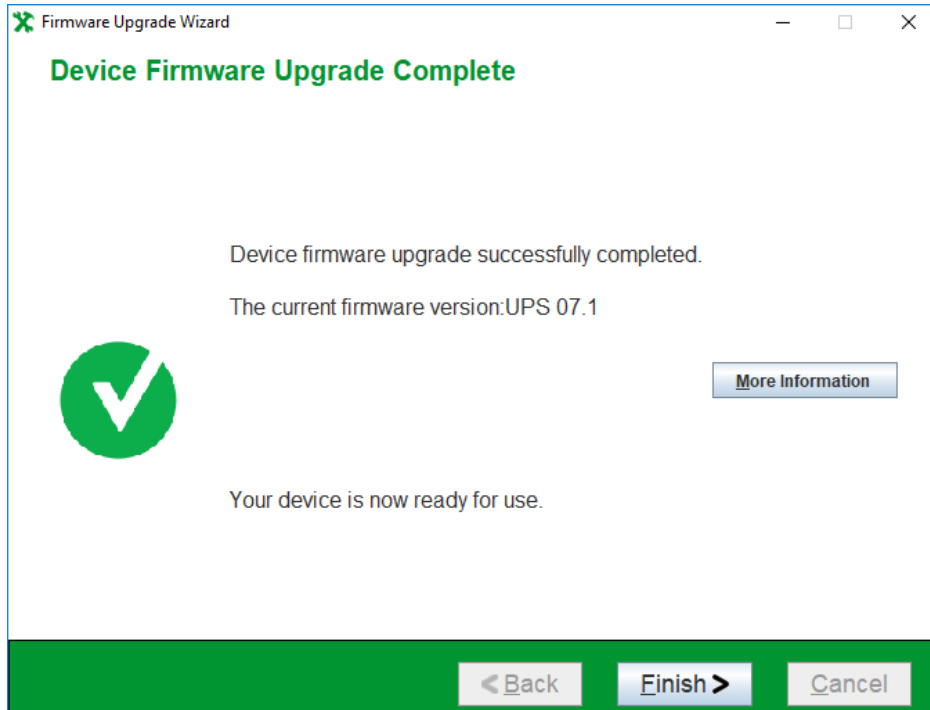
If the upgrade was unsuccessful

The Firmware Upgrade Wizard is a self-extracting executable file that gets uncompressed to your chosen folder; the default folder is the Documents directory, e.g. `C:\User\Documents\FirmwareUpgradeWizard_v4.2.0`. A log file called FUW.log gets created when the tool is run in the FirmwareUpgradeWizard_v4.2.0 folder. If you have problems with running the wizard, go to the FirmwareUpgradeWizard_v4.2.0 folder to access the log file, which gives information on what occurred when the Wizard executed. For security reasons, this log file is encrypted. If problems occurred while running the Firmware Upgrade Wizard, please contact Customer Support and provide this encrypted log file to them for processing.