VT8000 Room Controllers

VT8000 Uploader Tool Installation Guide
Software Revision 3.3

26.09.2012 2:43 PM

Standby

Indoor °C

23.5°

24.0

Humidity | Outdoor
45 % | 18 °C

Room 1705

VICONICS
Beyond Comfort

Version 9

INTRODUCTION

The Uploader Tool allows a user to perform the following with a VT8000 Room Controller:

- Upgrade Room Controller firmware
- Upload custom standby image files for display when in standby mode
- Upload custom Lua script files to perform custom applications
- Upload VCM8000 firmware update (from firmware 2.0.0 and VCM 20 onward)
- Save and restore room controller settings (requires firmware 2.0.1 and onward)
- Configure Wi-Fi Module settings (requires firmware 2.5.1 and VCM8002 1.4 onward)

The Uploader Tool is compatible with computers running the following operating systems:

- Microsoft Windows 7, 32-bit (requires Service Pack 1 and .NET framework 4.5), and 64-bit
- Microsoft Windows 8, 32-bit and 64-bit
- Microsoft Windows 10, 32-bit and 64-bit

DOWNLOAD UPLOADER TOOL AND FIRMWARE

1. Go to https://www.viconics.com/categories-en/1-room-comfort-controllers.html and download the zip files containing:

- Uploader Tool (RoomControllerUploader-3.3.0-xxx.exe)
- Firmware - Room Controller (firm8000_x.x.x-xxx.fm8)

NOTE: By default the files are saved to the C: drive.

NOTICE

UNAUTHORIZED ACCESS

When commissioning is complete, it is recommended to minimize access points on the Room Controller:

- Disable USB access via the Configuration screen or Commissioning via USB on the Admin tab of the Configuration Web Page
- Enable main password to lock the setup screens
- Enable user password to lock the main screen adjustments (optional)
- Lock the display screen (optional)
- Use strong and unique Wi-Fi Module admin password

Failure to follow these instructions may lead to unauthorized users accessing the Wi-Fi Module or the Room Controller.

CONNECT TO ROOM CONTROLLER

1. Connect the computer to the Room Controller using the USB 'A' to Micro-USB 'B' cable (Figure 1).
2. Make sure that USB access is enabled via the configuration screen.

NOTE: USB access is enabled by default on new Room Controllers.

NOTE: To ensure proper connectivity, the correct USB cable must be used. Refer to Figure 2 for the required B connector dimensions, according to the "Universal Serial Bus, Micro-USB Cables and Connectors Specification", Revision 1.01.

CAUTION: Only connect one Room Controller at a time, otherwise you will have to select each one to configure individually.

INSTALL SERIAL PORT DRIVER

1. Right click the Uploader Tool exe file then select run as administrator.
2. On the User Account Control Window, click Yes.
3. On the Serial Port Driver Not Detected Window, click Yes to install it.
4. Follow the InstallShield Wizard instructions.
5. The Uploader Tool will open showing Ready status with the Com Port connected.

Figure 1. Connect Room Controller to system

Note: All dimensions are indicated in millimeters.
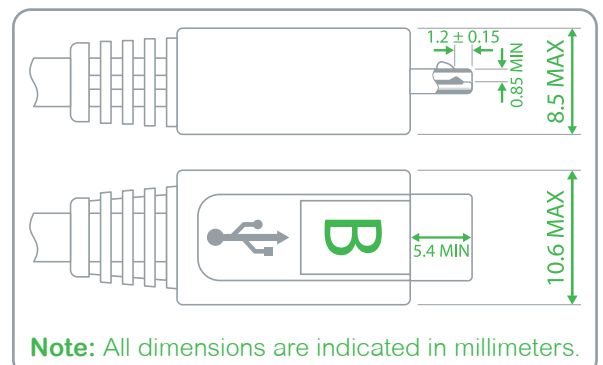
Figure 2. USB cable specification (B connector)

NOTICE

ADMINISTRATOR ACCESS ERROR MESSAGE

If the driver installation fails, try the following:

- For a company issued computer, ask your IT Administrator to install the driver for you.
- Antivirus software may have to be disabled during driver installation.
- Use a personal (non-company) computer. Make sure your Microsoft account has administrator access.

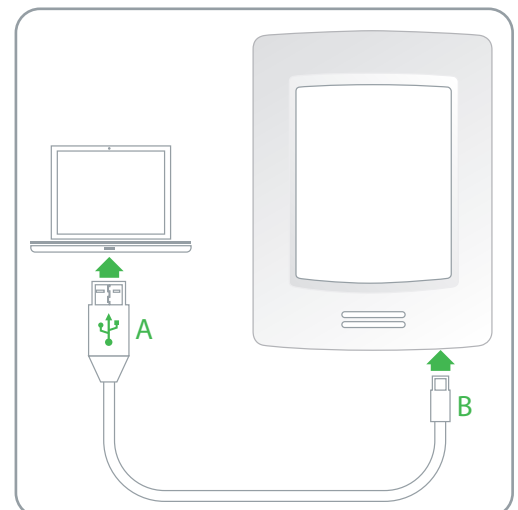**Administrator access is required to run the driver-installer.**

OPERATION

The Uploader Tool displays the following information about the Room Controller to which it is connected:

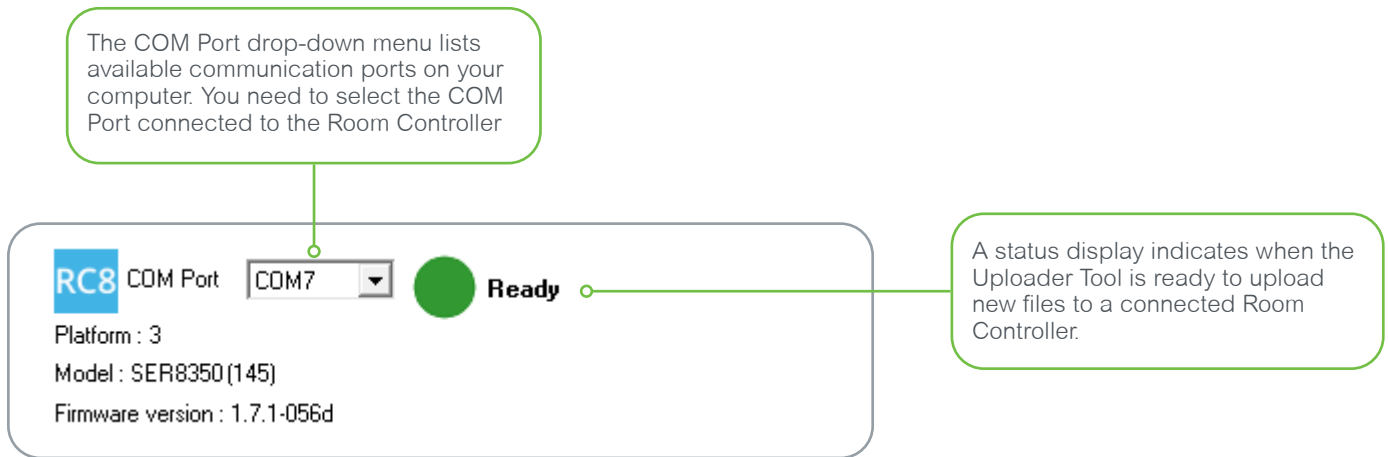> The COM Port drop-down menu lists available communication ports on your computer. You need to select the COM Port connected to the Room Controller

> A status display indicates when the Uploader Tool is ready to upload new files to a connected Room Controller.

RC8 COM Port [COM7 ▾]   ● **Ready**

Platform : 3

Model : SER8350 (145)

Firmware version : 1.7.1-056d

Figure 3. Uploader Tool system information

● If a Room Controller is not detected, the status display shows a red dot and the message 'Not connected'.

● If a Room Controller is detected, the status display shows a yellow dot and the message 'Incompatible' when:
  • The Room Controller hardware is not supported by the Uploader Tool
  • The firmware fm8 file is not compatible with the Room Controller.

● If a Room Controller is detected and USB access is disabled, the status display shows a yellow dot and the message 'USB disabled'. Enable USB access via the Room Controller configuration screen.

● If a Room Controller is detected with hardware supported by the Uploader Tool, compatible firmware and USB access enabled, the status display shows a green dot and the message 'Ready'.

NOTE: To refresh the Uploader Tool status display, disconnect then reconnect the USB cable.

NOTE: The Uploader Tool is compatible with all VT8000 Series Room Controller models shipped with firmware version 1.0.7 and newer, except for VTR8300 Series models sold before May 2015. However, Room Controllers with firmware version 1.6 and older are not compatible with Uploader Tool revision 3.x. Use Uploader Tool revision 1.x or 2.x and upgrade to firmware version 1.7, then continue the upgrade with Uploader Tool 3.x.

UPGRADE

1. On the Uploader Tool select the com port from the Com Port drop-down list and wait for the indicator to show 'Ready'.
2. In the Upgrade section of the Uploader Tool, click FM8 Path and browse to select the .FM8 file you downloaded in section DOWNLOAD UPLOADER TOOL AND FIRMWARE of this document.
3. From the Updates drop-down list select a firmware package to install on the Room Controller.

NOTE: The available upgrades are dependent on the model of the Room Controller connected.

NOTE: By default Bootloader, Firmware, Fonts, and VCM (if present) options are toggled.

NOTE: It is recommended to keep these default settings to ensure the latest packages are uploaded to the Room Controller.

┌─ Upgrade ──┐
│   │
│ [FM8 Path...]   C:\Users\sesa123456\Downloads\firm8000_2.5.1-0-02f76ce3e.fm8   │
│   │
│   Updates   [SER 8350 2.5.1-0-02f76ce3e (Platform 20, model 155)   ▾]   │
│   │
│ ☑ Firmware   Gamma_VTR_SER_83_2.5.1-0-02f76ce3e.bin   │
│ ☑ Fonts   Graphics_v4.1.0-9f8ffd46_WithoutCustomImg.bin   │
│ ☑ Bootloader   GammaAutoBootLoader_2.2.0-106-c2f2ebc2.bin   │
│ ☐ Lua   │
│ ☑ VCM   GammaOtaForBootloader-Release_31.0.0-9-0c8db0b.bin   │
│   │
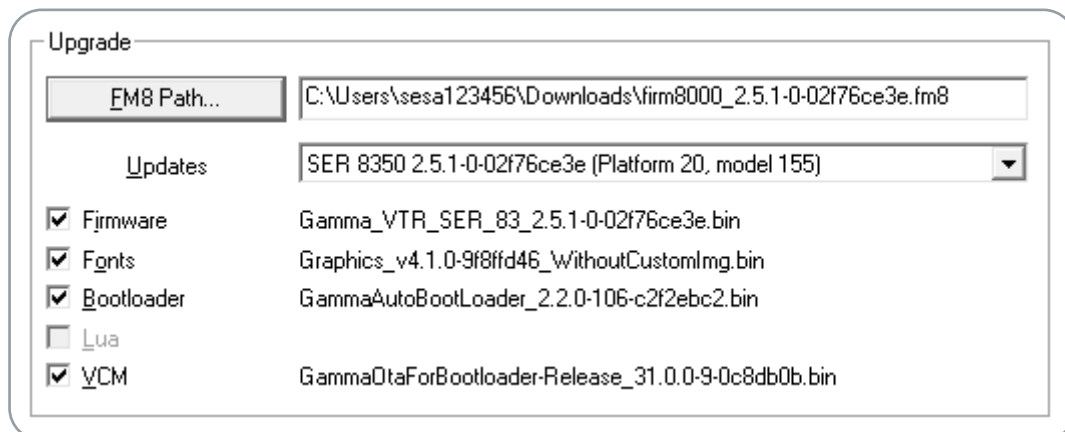└──┘

Figure 4. Upgrade section

PREPARE CUSTOM STANDBY IMAGE FOR UPLOAD

It is possible to upload a custom standby image to display on the Room Controller.

The image file must meet the following criteria:

- Image size: 240 horizontal x 320 vertical
- File format: 24-bit bitmap (.bmp)

Selecting an image file larger or smaller than 240 x 320 or with a colour depth less than 24 bits shows the following error message:

- Wrong file size message: "Error: Image Size is not 240 x 320 pixels."
- Wrong colour depth message: "Error: Color Depth is not 24-bit."

In the Custom Standby Image section select From File or From List:

- If you selected From File, click Browse to select a file for upload.
- If you selected From List select a file from the list shown on the left pane.
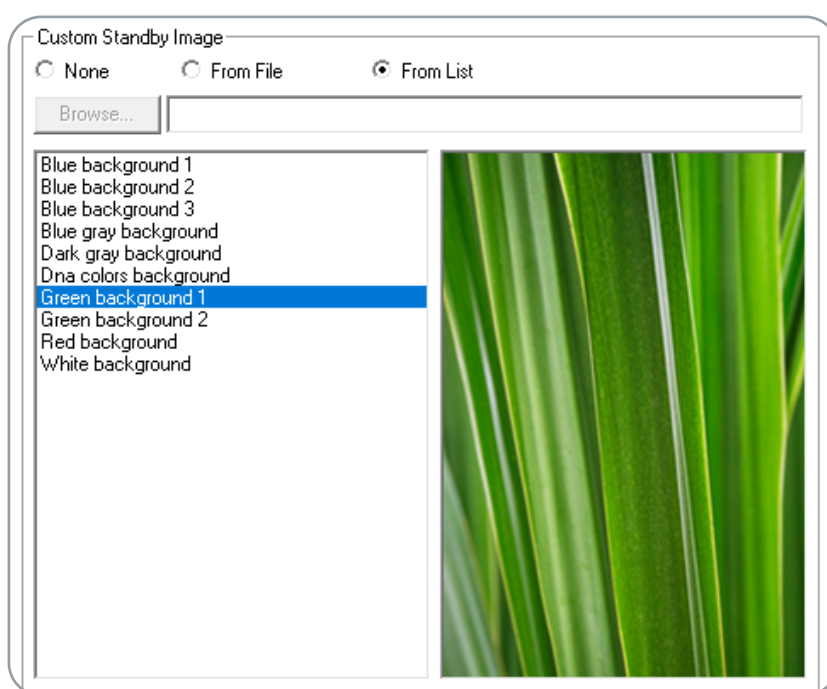
Figure 5. Custom standby image

PREPARE CUSTOM LUA SCRIPT FOR UPLOAD

You can upload a custom Lua. All Lua script files must end with .lua to upload successfully.

NOTE: The Uploader Tool cannot determine if a Lua script ends with a .lua extension.

In the Custom Lua File section select From File then click Browse to select a file for upload.
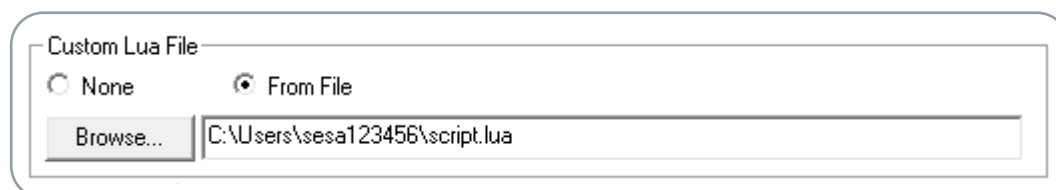
Figure 6. Custom Lua File

START UPLOAD

Ensure the connecting cable is firmly inserted in both the Room Controller and the Device running the Uploader Tool. If the Device becomes unplugged during Upload process, the Room Controller files can become corrupt and damage your device. In this condition, it may be necessary to contact Support for assistance to restore the function of the Room Controller.

1. Click Upload to upload all files to the Room Controller.

NOTE: The Room Controller will reboot when the upgrade is complete.

2. Disconnect the cable from the Room Controller and the Device when upload completes.
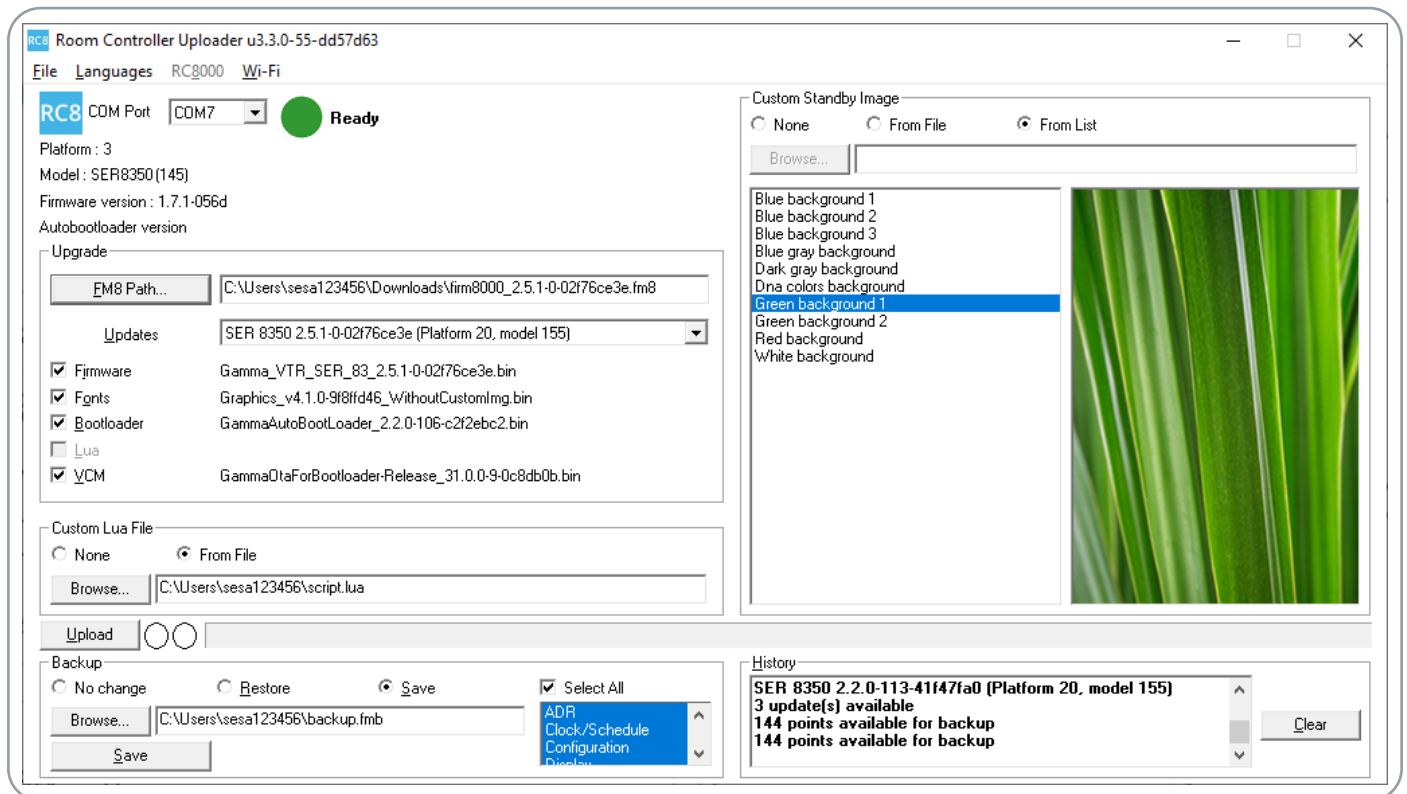
Figure 7. Upload files to the Room Controller

BACKUP

The Uploader allows users to back up and restore data between room controllers. This feature helps reduce commissioning time in large scale installations by allowing the configuration of one room controller to be saved to a file and then restored to other room controllers.

You can save and restore the following categories of settings:

- ADR
- Clock/Schedule
- Configuration
- Display
- Language
- Network
- Setpoints
- Wireless Alarms Configuration

NOTE: A configuration file may only be restored to a room controller of the same model and the same or newer firmware.

NOTE: The Save and Restore features require FM8 2.0.1 or newer and firmware version 1.7 or newer.

NOTE: Configuration values specific to the installation of an individual device, such as temperature calibration and wireless networking settings, are not included in the back file.
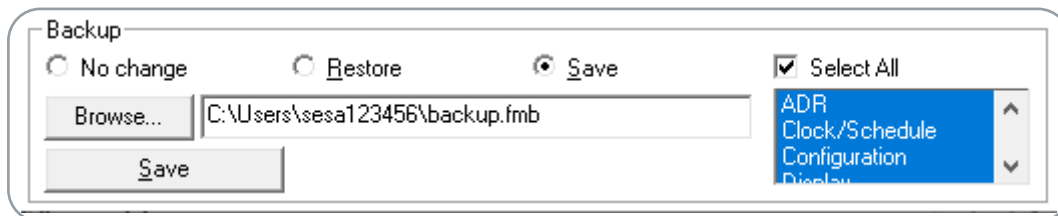
Figure 8. Backup

To save Room Controller settings to a backup file:

1. Navigate to Backup and click the Save radio button.
2. You have the option to Select All categories or manually pick the ones you wish to save.
3. Click the Browse button then select the desired directory.
4. Create a new .fmb file (in the File name box, type the file name such as backup.fmb, then click Open).
5. Click the Save button.

To restore Room Controller settings from a backup file:

1. Navigate to Backup and click the Restore radio button.
2. Click the Browse button, select the .fmb file, then click Open.
3. You have the option to Select All categories or manually pick the ones you wish to restore.
4. Click the Restore button.

WI-FI MODULE CONFIGURATION

For sites where multiple RCs need to be commissioned, a sub-set of commissioning is supported from the VT8000 Uploader Tool via the USB port on the Room Controller. This provides a simple, fast, repeatable method to connect the Wi-Fi Module (VCM8002) to the building's Wi-Fi network and enable the most common features. Advanced features can then be commissioned via the Configuration Web Pages across the building Wi-Fi network, saving commissioning time as it is not necessary to connect to the Access Point of each Wi-Fi Module.

In most cases, the only settings that require incremental changes are the IP Address and the BACnet/IP Instance Number. Click the +1 buttons to automatically increment these settings. The Wi-Fi Module configuration can be saved to a backup file and then restored to other room controllers. Multiple configurations can be saved if there are large changes to the default settings.

NOTE: The Wi-Fi Module backup file can be restored to any of the four Room Controller model types.

For more information on the Wi-Fi Module, refer to:

- Wi-Fi Card - Installation and Quickstart Guide
- WiFi Card Module - FAQ

NOTE: If you intend to connect the module to a hidden Wi-Fi Network (SSID Broadcast is disabled), it must be done before making the connection. Once the module is connected, the network configuration must not be changed, or the module may lose connection or fail to reconnect after power is cycled to the device or router. If you do change the network configuration, the module should be disconnected from the network and reconnected again.

The Wi-Fi Module settings that can be configured by the Uploader Tool are as follows:

- User Authentication and first admin password change
- Wi-Fi Network connection (SSID)
- IP Configuration (DHCP or Static)
- Enable and configure BACnet/IP
- Enable NTP time source

NOTE: The Wi-Fi Module configuration requires Room Controller firmware version 2.5.1 or newer, VCM8002 Wi-Fi Module firmware version 1.4 or newer, and Uploader Tool software revision 3.3 or newer.

Figure 9. Wi-Fi Module Configuration

Typical Procedure:

1. Enter the Wi-Fi Module settings into the text boxes as required, or load the settings from a .fmb file.
2. Enter the admin user and Wi-Fi Network SSID passwords.
3. Increment the settings as required then click the Save Configuration button to upload the settings to the Room Controller.
4. Click Refresh to see the Wi-Fi Module status, it should be connected to your Wi-Fi network with a ready network status.
5. You can now access the Configuration Web Page to complete the Wi-Fi Module configuration, or you can do it later if required. Enter the Network IP address into the web browser's address bar and use the admin user and password entered in step 2 to log in to the Web Page.
6. When configuration is done, disable USB access via the Configuration screen or Commissioning via USB on the Admin tab of the Configuration Web Page.
7. Disconnect the Room Controller and connect the next Room Controller.
8. Repeat steps 3 to 7 until all Room Controllers are configured.

NOTE: If the Refresh button is not enabled, make sure a correct admin user password is entered into the Password text box.

To Save Wi-Fi Module settings to a backup file:

1. Enter the Wi-Fi Module settings into the text boxes as required.
2. Navigate to Save/Restore From File and click the Browse button.
3. Select the desired directory then create a new .fmb file (in the File name box, type the file name such as wifibackup.fmb, then click Open).
4. Click the Save to file button.

NOTE: If the Save to file button is not enabled, make sure that you enter the correct settings into the highlighted text boxes.

NOTE: The User and Wi-Fi Network passwords are not saved in the fmb file.

To Restore Wi-Fi Module settings from a backup file:

1. Navigate to Save/Restore From File and click the Browse button.
2. Select the .fmb file, then click Open.
3. Click the Load from file button.
4. Continue with step 2 in the Typical Procedure above.