

USRobotics® Modemulator™ Expansion Card

USR3516-EMU



Installation Guide

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Introduction

This Installation Guide explains how to assemble a Modemulator Gateway by installing a USR3516-EMU Modemulator Expansion Card into a Cellular Gateway.



A complete USR3520/USR803520 Modemulator & 3G Cellular Gateway



A USR3516-EMU Modemulator Expansion Card



A USR3510/USR803510 3G Cellular Gateway



This Installation Guide can also be used to install the USR3516-EMU Modemulator Expansion Card into an Option CloudGate Gateway.

Related Documents

USRobotics Courier Modemulator & 3G Cellular Gateway – [Gateway User Guide](#)

USRobotics Courier Modemulator & 3G Cellular Gateway – [Modemulator User Guide](#)

Installation Guide

Upgrading a USR3510/USR803510 to a USR3520/USR803520 takes three simple steps:

- [Remove the Existing Serial Card](#)
- [Insert the Modemulator Card \(USR3516-EMU\)](#)
- [Update Gateway System Firmware and Load USR Modemulator Application Software](#)

Remove the Existing Serial Card



Note: The expansion card faceplate will deform if the card is pulled at the edge.

Do not attempt to remove the expansion card by pulling its edge!

1. Make sure the unit is powered off.
2. Remove the Torx screws that fasten the serial card to the base unit. Save these screws for later.
3. Plug a DB9M connector into the mating connector on the serial card and tighten the thumbscrews.
4. Remove the serial card by pulling the plug or cable that is inserted into the DB9 connector.

Insert the Modemulator Card (USR3516-EMU)

1. Make sure the unit is powered off.
2. With the expansion card in your hand, make sure the English labels are facing up. In this orientation, the card connector is also right facing.
3. Slide the card into the slot, using the side channels or grooves on the housing to guide the card into place. Make sure the screw holes line up.



4. Push gently until the card is flush with the housing.
5. Secure the card with the screws.

Update Gateway System Firmware and Load USR Modemulator Application Software

The Modemulator card requires the Gateway to run system firmware version 1.41.0 or later, and it will operate best with the latest version available. [Check the firmware version](#) currently loaded on the Gateway and update if necessary.

The Modemulator card also requires the Gateway to run Modemulator application software. The factory default application software running in the USR3510/USR803510 Gateway must be replaced by the Modemulator application software.

The Gateway upload process is used for uploading firmware or application software into the Gateway. The Gateway system firmware is provided as a **.bin** file, and the Modemulator application software is provided as a **.zip** file. As a file is being uploaded, the Gateway will automatically detect the file format and load the image correctly.

System Requirements

- A computer with:
 - An open Ethernet port
 - Web browser application
 - Internet connection
- An Ethernet cable

Recommended Web Browsers

- Internet Explorer 9
- Safari 5.1
- Firefox (Windows 21.0, Mac 12.0)
- Chrome (Windows 27.0.1453.110, Mac 26.0.1410.65)
- Opera (Windows 12.02, Mac 12.10)

Check Gateway System Firmware

1. Apply power to the Gateway

Connect the included PSU output jack to the Gateway power supply input, then plug the PSU into a mains power outlet.

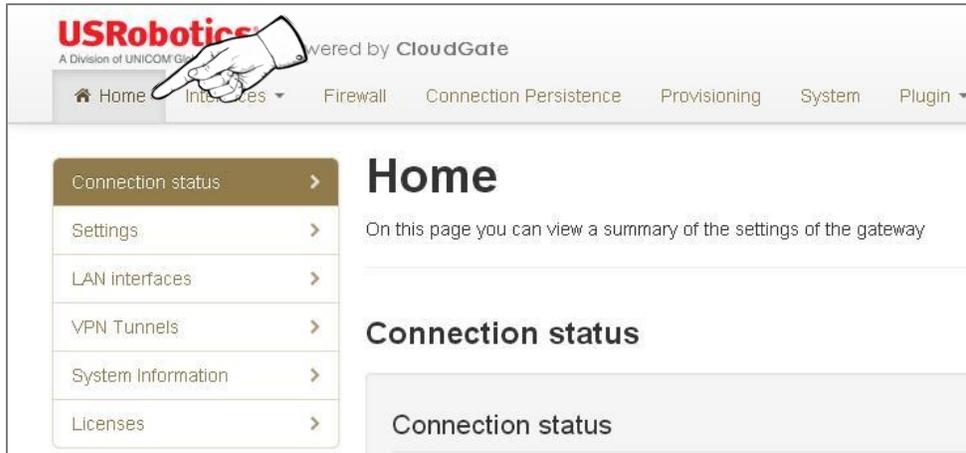


The Gateway will take about two minutes to become operational.

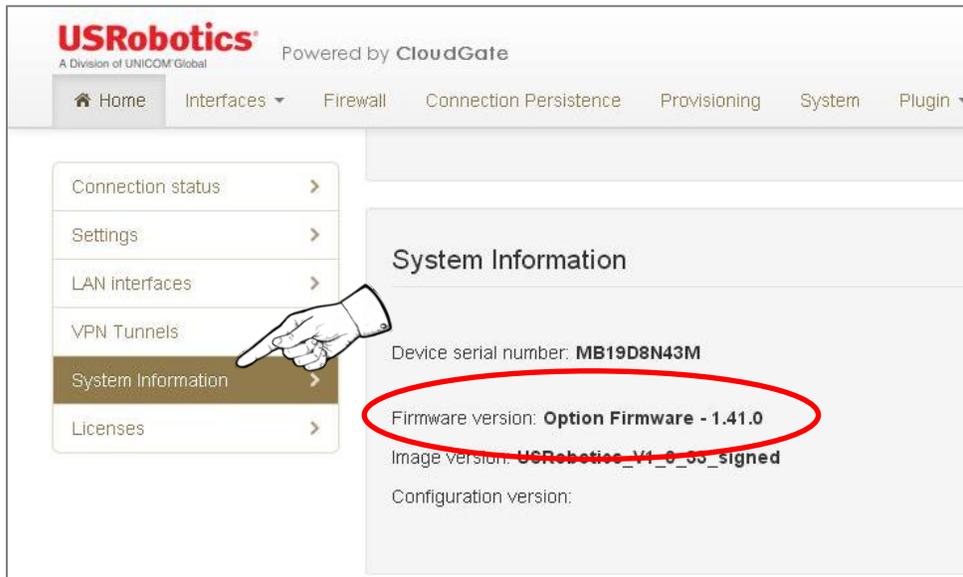
2. Connect the Gateway Ethernet port to a computer Ethernet port with a standard Ethernet cable
3. Open a web browser application on the computer.
4. Open the Gateway's embedded Graphical User Interface (GUI)
 - a. In a web browser, go the URL: **192.168.1.1**
 - b. In the login screen, enter the default username **admin** and password **admin**

5. Check system firmware version

- a. Choose the **Home** tab (default upon login)



- b. Select **System Information**



- c. Note the Firmware version number shown in System Information

6. Check latest available firmware version

- a. Navigate the web browser to the product support page on the USR website:

<http://support.usr.com/support/3520>

- b. Compare the version number of the latest system firmware on the USR support page to the firmware running in the Gateway from step 5c.

If the latest version of system firmware on the USR support page is newer than the currently loaded firmware version, continue with [Update Gateway System Firmware](#) to load the new

firmware into the Gateway. Otherwise proceed directly to [Replace USRobotics Embedded Application Software](#).

Update Gateway System Firmware

1. Download the latest Gateway firmware from the product support page on the USR website:

<http://support.usr.com/support/3520>

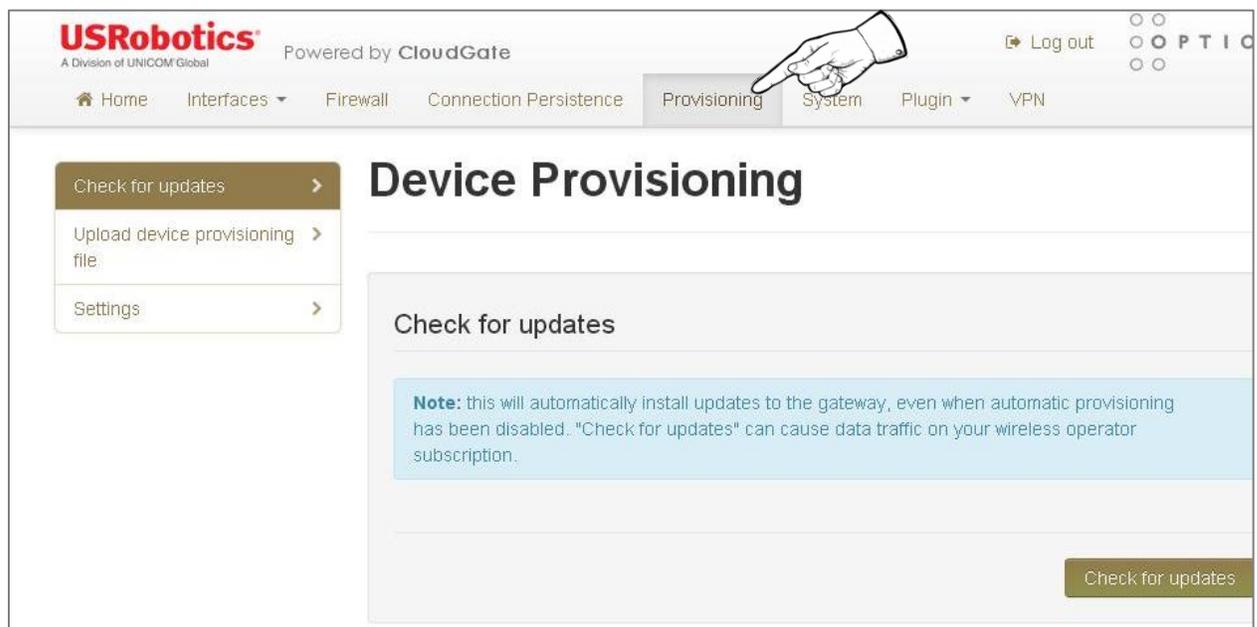
Save the **.bin** file to a convenient place on the computer

2. Open the Gateway's embedded Graphical User Interface (GUI)
 - a. In a web browser, go the URL: **192.168.1.1**
 - b. In the login screen, enter the default username **admin** and password **admin**

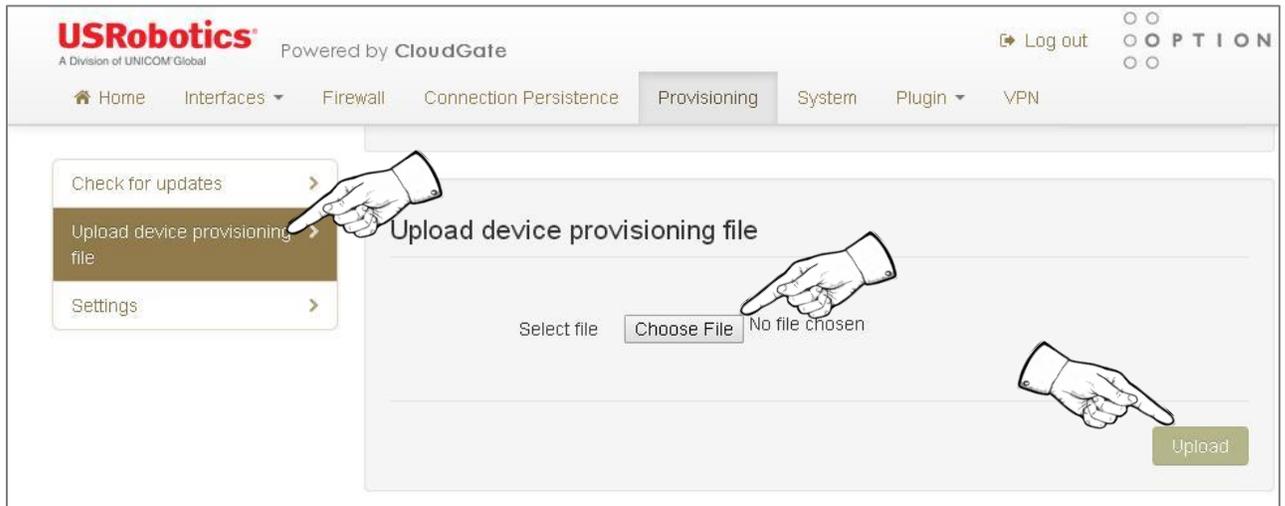


Be sure to disable the Automatic Provisioning feature of the gateway to prevent the gateway from automatically reverting to the firmware on the Cloud Provisioning Server. See Appendix B of the [Modemulator User Guide](#) for details.

3. Upload the latest version firmware to the Gateway
 - a. Choose the **Provisioning** tab



b. Select **Upload device provisioning file**



- c. Click the **Choose File** button
- d. Navigate to the folder where the firmware that was downloaded in step 1 is stored, and choose the file with the **.bin** suffix
- e. Click the **Upload** button

The Gateway will then load the new firmware and ask permission to restart.

Replace USRobotics Embedded Application Software

1. Download the latest USRobotics Application Software from the product support page on the USR website:

<http://support.usr.com/support/3520>

Save the **.zip** file to a convenient place on the computer



Do not unzip this **.zip** file

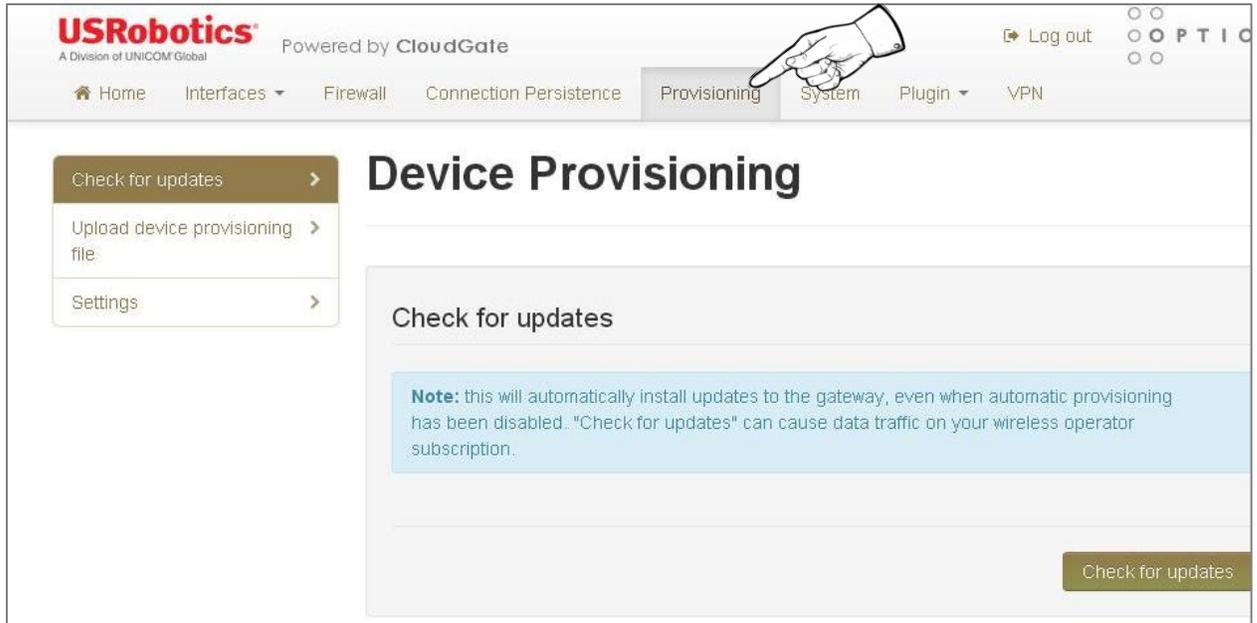
2. Open the Gateway's embedded Graphical User Interface (GUI)
 - a. In a web browser, go the URL: **192.168.1.1**
 - b. In the login screen, enter the default username **admin** and password **admin**



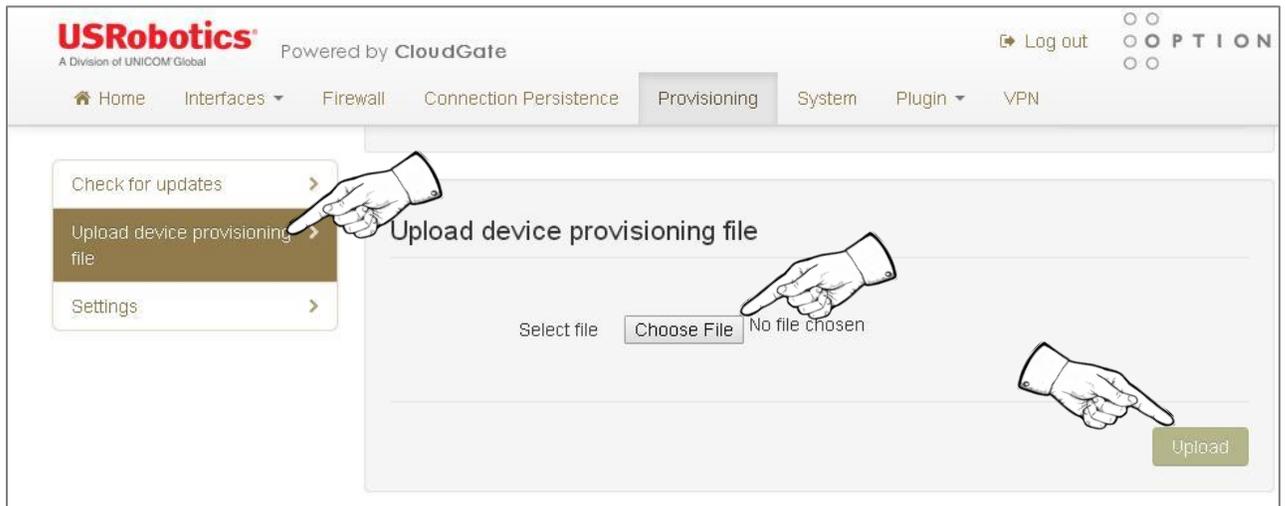
Be sure to disable the **Automatic Provisioning** feature of the gateway to prevent the gateway from automatically reverting to the default application on the Cloud Provisioning Server. See Appendix B of the [Modemulator User Guide](#) for details.

3. Load the latest version application software

a. Choose the **Provisioning** tab



b. Select **Upload device provisioning file**



c. Click the **Choose File** button

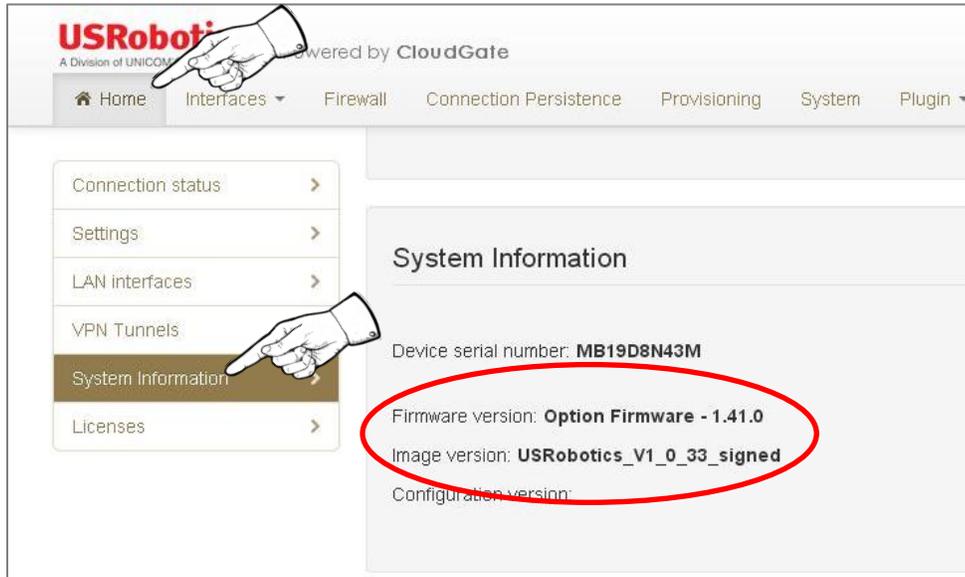
d. Navigate to the folder where the application software that was downloaded in step 1 is stored, and choose the file with the **.zip** suffix

e. Click the **Upload** button

The Gateway will then load the new software and ask permission to restart.

Verify Software and Firmware Versions

Once the Gateway has restarted, login and navigate to **System Information** in the **Home** tab to verify the version of the new software and firmware images.



Congratulations!

The Cellular Gateway is now a Modemulator Gateway!!



The USR3516-EMU Modemulator expansion card also contains an embedded firmware image.

USRobotics may release new Modemulator firmware to add or enhance features, or to fix any bugs.

For the procedure to update the USR3516-EMU firmware, please see the [USR3520/USR803520](#)

[Modemulator User Guide](#).

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The safety precautions listed in this user guide must be observed at all times. Failure to comply with these precautions may result in injury and property damage. **U.S. Robotics assumes no liability for the customer's failure to comply with these requirements.**



WARNING!

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For questions regarding your product or declaration, contact:

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To identify this product we refer to the Part, Series, or Model number found on the product.