

Firmware update procedure



About this document

This document contains all this information needed to update RTX handset, base station, and repeaters.

Please read this document thoroughly before starting, because wrong firmware upload can have a negative effect on the units.

This document describes firmware update from 3.06 to 420B01 if your firmware is older than 3.06 please contact RTX for support.

What products are covered in this document

Handsets:

- RTX8430
- RTX8630
- RTX8830

Base Stations:

- RTX9430
- RTX8660
- RTX8663

Repeater:

- RTX4024

Headset:

- RTX8930

Download the needed files

You can get the newest firmware files from your local reseller or download them from this link.

Xxxxxxxxxx

WARNING:

Do NOT use these files on products that are branded!! If the product is branded, please contact you dealer before updating, because using the wrong files and version can have negative effect on the products and system.

Branded products will always have the brand printed on the front.





What is needed to upgrade firmware

Firmware upload can be done in different ways. Here is a list of the tools needed.

TFTP, HTTP or HTTPS server

Firmware files

RTX Flashload tool (Optional)

Understanding RTX firmware versions

The firmware files have different names, versions, and branches.

Branch numbers are introduced to the file name from v0355 and newer.

V0324 and older

Base station files are called

RTX8660 - BeatusSw_4181_v0xxx (v0xxx= firmware version number)

RTX9430 – 9430_vxxx (v0xxx= firmware version number)

Handset files are called:

RTX8630 - Raffle_v0xxx (v0xxx= firmware version)

RTX8430 - 8430_v0xxx (v0xxx= firmware version)

RTX8830 - 8830_v0xxx (v0xxx= firmware version)

V0355 and newer

Base station files are called

RTX866x - 866x_v0xxx_b00xx (866x = Base station model, v0xxx=firmware version, b00xx=branch version)

RTX9430 – 9430_vxxx_b00xx (v0xxx=firmware version, b00xx=branch version)

Handset files are called:

RTX8630 - 8630_v0xxx_b00xx (v0xxx= firmware version, b00xx=branch version)

RTX8430 - 8430_v0xxx_b00xx (v0xxx= firmware version, b00xx=branch version)

RTX8830 - 8830_v0xxx_b00xx (v0xxx= firmware version, b00xx=branch version)

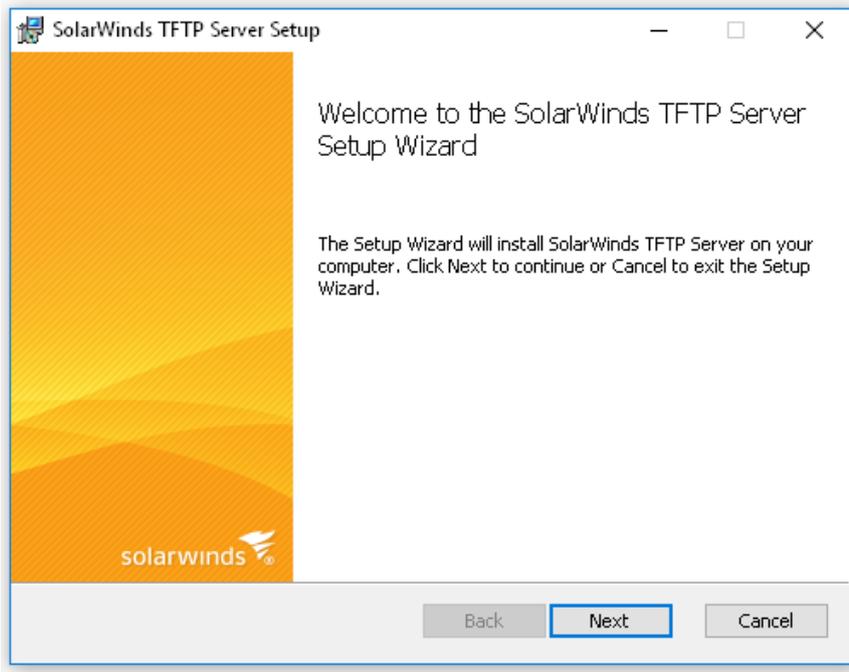
Using Solarwinds TFTP server

In this guide we use Solarwinds TFTP server, it can be downloaded for free.

<https://www.solarwinds.com/free-tools/free-tftp-server>

Install the Solarwinds TFTP server

After you have downloaded the installation file follow the install wizard

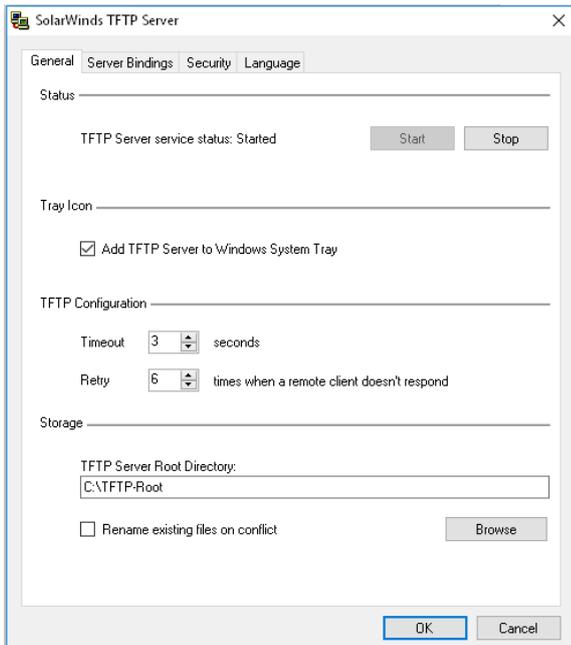


After the Solarwinds TFTP server have been installed go to Start/Programs/Solar..... start application.

NB: If you are running Win10 you need to enable TFTP client.
How-To enable the TFTP client on Win10 can be found her:
www.thewindowsclub.com/enable-tftp-windows-10

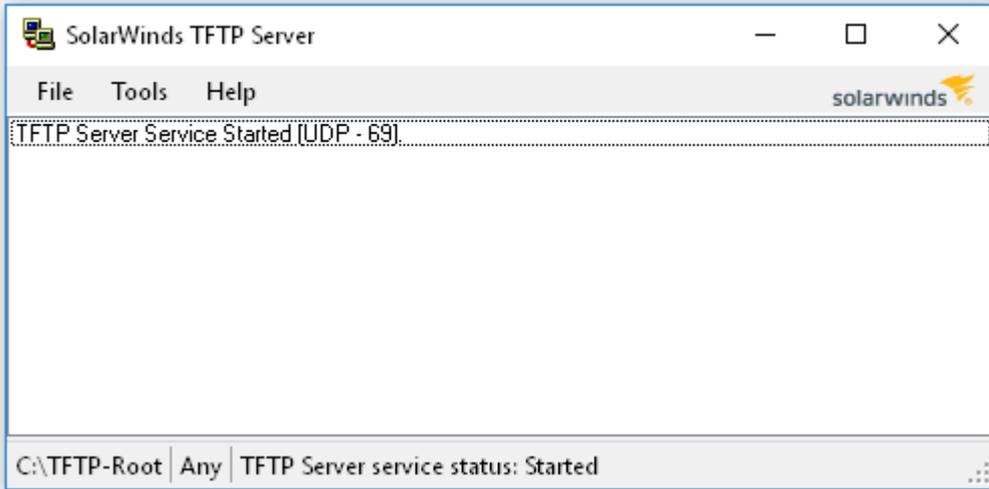
Create a directory at PC to be the TFTP server root, this example named "TFTP-Root" at c:\

Screen shot



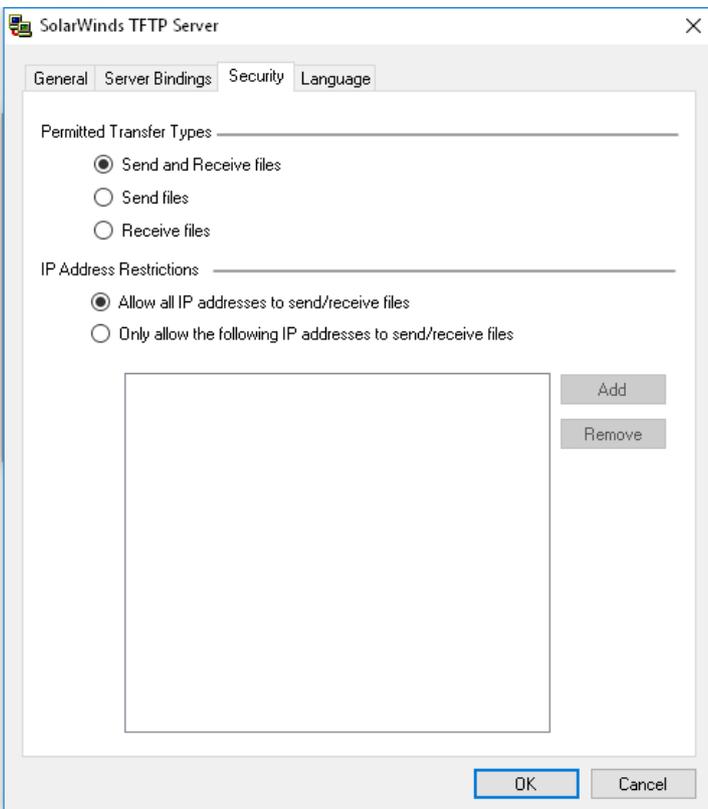
Press “Start” and “OK” – TFTP server now started.

Screen shot



Default Security allows Send/Receive files.
Some network configuration needs IP address specified to allow send/receive.

Screen shot



From Solarwinds manual:

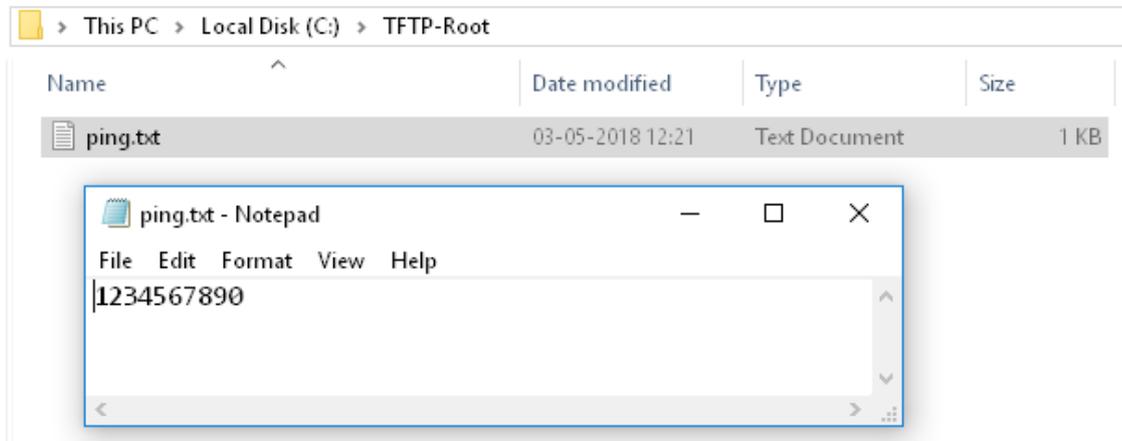
If you want to restrict TFTP server functions to a specific IP address range, click *Add* and then specify the beginning and ending IP addresses of the range. Then, click *OK*.

Note: TFTP protocol has no innate security. There are no passwords or authentication. SolarWinds TFTP Server adds security by allowing you to limit the server's functionality and specify a range of IP addresses from which to accept requests.

TFTP server verification.

Create a file at tftp root, like this with 10 bytes.

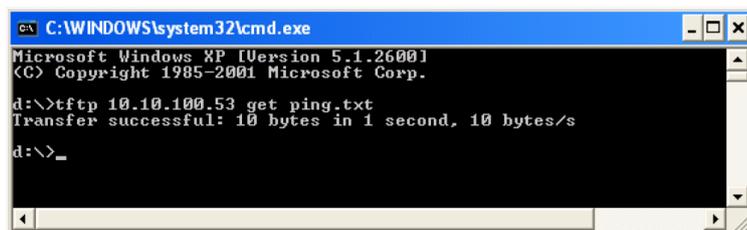
Screen shot



Execute tftp get command [TFTP server IP] get [File name]

If "successful" tftp server is working.

Screen shot



Copy files to the TFTP server (or HTTP/HTTPS)

You can create whatever main folder you like to store the firmware files. In this case the main folder I called "Firmware"

The subfolders cannot be renamed, if you unpack the downloaded zip file with the firmware files into your main folder the files will be no need to make any changes.



Screen shot

> TFTP-Root > Firmware

Name	Date modified	Type
4024	03-05-2018 13:02	File folder
8430	03-05-2018 13:02	File folder
8630	03-05-2018 13:02	File folder
8660	03-05-2018 13:02	File folder
8663	03-05-2018 13:02	File folder
8830	03-05-2018 13:02	File folder
9430	03-05-2018 13:02	File folder
Beatus	03-05-2018 13:02	File folder
Raffle	03-05-2018 13:02	File folder

In the folders you will find different files, do not change, or move these files.

Setting up HTTP/HTTPS server is not a part of this guide.

How to find out what firmware the unit are running now.

Before you start the firmware updates you need to determine what firmware the system am running now.

This can be done by logging on to the base station.

Base Station:

On the Welcome/Status screen you can see what firmware the base station is running:

If you are on a multi Cell system, all base station is running the same firmware.

Screen shot

Welcome

System Information:	Multi cell Disabled
Phone Type:	IPDECT (8660)
System Type:	Generic SIP (RFC 3261)
RF Band:	EU
Current local time:	03/May/2018 06:39:38
Operation time:	13 Days 05:01:47 (H:M:S)
RFPI Address:	116E61CD; RPN:00
MAC Address:	00087b079229
IP Address:	192.168.11.158
Firmware Version:	IPDECT/04.10/B0001/01-Feb-2018 13:04
Firmware URL:	Firmware update server address:
	Firmware path:
Base Station Status:	Idle

SIP Identity Status on this Base Station:

Press button to reboot.

Reboot	Forced Reboot
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Handset/Headsets

To find what firmware the handset/headset are running go to the extension page

Screen shot

	<u>Idx</u>	<u>IPEI</u>	<u>Handset State</u>	<u>Handset Type FW Info</u>
<input type="checkbox"/>	1	02779FE7F7	Present@RPN00	8830 410.2
<input type="checkbox"/>	2	027888194D	Present@RPN00	8430 410.2
<input type="checkbox"/>	3	02EB60928B	Present@RPN04	8630 410.2
<input type="checkbox"/>	4	02E690040A	Present@RPN00	8930g 410.1

Repeaters:

To find what firmware the repeaters are running go to the Repeaters page

Screen shot

	<u>Idx</u>	<u>RPN</u>	<u>Name/ IPEI</u>	<u>DECT sync source</u>	<u>DECT sync mode</u>	<u>State</u>	<u>FW Info</u>	<u>FWU Progress</u>
<input type="checkbox"/>	<u>1</u>	RPN01	RPN1/ 005AD85D90	RPN00 (-30dBm)	Local Automatical	Present@RPN00	41.1	Off

Update the units to the latest version

Depending on what firmware the units are running the firmware update must be done in steps.

Always start by updating the base stations, then Handset, Headsets and repeaters.

Update time:

Base stations: 5-10 minutes (Base stations will reboot before firmware update is complete)

Handsets: 20-45 minutes (the handset can be used while updating)

Headsets: 10-15 minutes (the headsets can be used while updating)

Repeater: 10-20 minutes (Repeaters will reboot before firmware update is complete)

NOTE: All calls will be dropped when the base stations reboot.



Firmware upgrade steps

In the below table you can find an overview on the steps needed to upgrade to the latest firmware version.

If your firmware version is between the mentioned version, you need to upgrade to the nearest version.

E.g. v0316 need to upgrade to v0324 and then continue from there.

Starting version	Step 1	Step 2	Step 3	Step 4
V0306	V0324	V0355	V0410	V0420
V0324	V0355	V0410	V0420	
V0355	V0410	V0420		
V0410	V0420			

NOTE: If the current firmware version is older than v0306 please contact Support@rtx.dk

Start the firmware update

NOTE: Always update the base stations first, then the handsets and headset. (NB Handset and Headset do not need to be updated in steps.)

Repeaters are independent and can be updated at any time.

Base stations

1: Login into the base station

2: Go to Firmware update

Screenshot: v0324 or below

Firmware Update Settings

Firmware update server address:

Firmware path:

Handset Type **Required version**

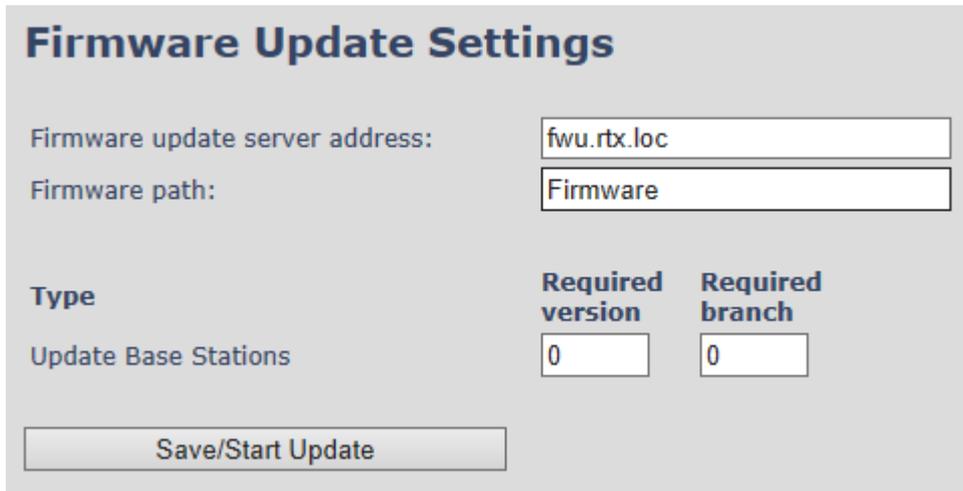
Update Base Stations

Update this Base Station only

Update all Base Stations

Required version

Screenshot: v0355 and newer



Type	Required version	Required branch
Update Base Stations	0	0

Save/Start Update

3: Enter the IP or HOST name of the TFTP, HTTP/HTTPS server. (in this case the host name is fwu.rtx.loc)

The default Management transfer protocol is TFTP, this can be changed on the management page of the base station. It can be changed to HTTP or HTTPS if needed...

It is also possible to enter [HTTP://<IP-address>](http://<IP-address>) or [HTTPS://<IP-address>](https://<IP-address>) in the Firmware update server address then you do not need to make any changes on the management page.

4: Enter the Firmware path (in this case "Firmware")

On firmware v0324 and older you need to press "Save" before entering the Version number.

5: Enter the version and branch (if branch is required) If you are updating a multi cell system and firmware is v0324 and older remember to check "Update All Base Stations" This is not necessary from v0355 and newer.

6: Press "Save/Start update"

DO NOT unplug or power off the base stations while updating, this can cause permanent damage to the product.



Handsets/Headsets

When the base station has updated a rebooted you can update the handsets and headsets.

7: Enter the version number and branch number of the handset type that you want to upgrade, just as the base stations.

Screen shot

Type	Required version	Required branch
Update Base Stations	<input type="text" value="0"/>	<input type="text" value="0"/>
8630	<input type="text" value="410"/>	<input type="text" value="2"/>
8930g	<input type="text" value="410"/>	<input type="text" value="1"/>
8830	<input type="text" value="410"/>	<input type="text" value="2"/>
8430	<input type="text" value="410"/>	<input type="text" value="2"/>
DECT4024	<input type="text" value="0"/>	<input type="text" value="0"/>

NOTE: it is possible to update different handset and headset at the same time, and the unit can be used while the firmware files are being sent to the units.

8: Press "Save/start update"

After a few minutes the handsets/headsets will start updating. In the FWU Progress you can see how many of percentage of the firmware file is loaded. (during this stage the handset/headset can still be uses as normal)

Screen shot

	<u>Idx</u>	<u>IPEI</u>	<u>Handset State</u>	<u>Handset Type FW Info</u>	<u>FWU Progress</u>
<input type="checkbox"/>	1	<u>02779FE7F7</u>	Present@RPN04	8830 400.2	1%
<input type="checkbox"/>	2	<u>027888194D</u>	Present@RPN04	8430 400.2	1%
<input type="checkbox"/>	3	<u>02EB60928B</u>	Present@RPN04	8630 400.2	5%
<input type="checkbox"/>	4	<u>02E690040A</u>	Present@RPN00	8930g 400.2	22%

When the FWU Progress reaches 100% it will state "Waiting for charger"

Screen shot

	<u>Idx</u>	<u>IPEI</u>	<u>Handset State</u>	<u>Handset Type FW Info</u>	<u>FWU Progress</u>
<input type="checkbox"/>	1	<u>02779FE7F7</u>	Present@RPN04	8830 400.2	Waiting for charger
<input type="checkbox"/>	2	<u>027888194D</u>	Present@RPN04	8430 400.2	Waiting for charger
<input type="checkbox"/>	3	<u>02EB60928B</u>	Present@RPN04	8630 400.2	Waiting for charger
<input type="checkbox"/>	4	<u>02E690040A</u>	Present@RPN00	8930g 400.2	Waiting for charger



Place the units in the charger.

DO NOT remove the handsets or headset while updating, this can cause permanent damage to the product.

When the units reboot the update is complete and the unit can be removed from the charger.

When the FWU Progress changes state to Complete the update is completed.

9: Set all versions and branches to "0" this tells the system that firmware update is OFF and it don't have to look for new files.

10: Press "Save/Start update" to save the settings.

11: Go to MENU – SETTINGS – Reset settings to finish the handset update.

Repeaters

Updating repeaters are done in the same way as handset but don't have to be upgraded in steps.

Perform step 7 and 8 to update repeaters.

DO NOT unplug or power off the repeaters while updating, this can cause permanent damage to the product.

Trouble shooting

If the firmware update doesn't start as expected, go to management page on the base station and set the syslog level to "Debug" and save.

NOTE: Change the syslog level back to "Normal Operation" when you are done trouble shooting.

When the syslog level is set to debug you can see different information about the system.

Can't find file

E.g. loc2 .Not 2018-05-04T12:51:52Z 158-[FWU Downloading File
tftp://10.1.24.103/Firmware/8630/8630_v0400_b0012.fwu]

In this case you can see exactly where the base station looks for the needed firmware file.

NOTE: HOST name is not used only the IP

Check that the file is in the right directory and that the file information is right.