

# NetComm Wireless M2M Family

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# Firmware Upgrade Instructions

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This document covers the following products:

NetComm Wireless NTC-6200-02

NetComm Wireless NTC-6908

NetComm Wireless NTC-6908-02

NetComm Wireless NTC-6520

NetComm Wireless NTC-30WV

NetComm Wireless NTC-40WV

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1.0 - Initial document release	27/02/2014
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1.2 – Updated for v2.0.11.2	23/07/2014
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*Table 1 - Document Revision History*

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# Document Description

This document is written as a step-by-step guide for upgrading the NetComm Wireless NTC-6200-02, NTC-6908, NTC6908-02, NTC-6520, NTC-30WW and NTC-40WW M2M Routers to the latest official family firmware release.







## Important Notice:

- This version of firmware is only applicable to the following models: NTC-6200-02, NTC-6908, NTC-6908-02, NTC-6520, NTC-30WW and NTC-40WW
- It is not possible to downgrade the router or restore a configuration file from firmware version 2.x.x.x to an older 1.x.x.x version due to the improvement made to u-boot for environment redundancy. Please refer to the firmware release notes for new features and bug fixes before proceeding with the firmware upgrade process.
- NTC-6200-02 users should follow the instructions under “Upgrading from firmware version 2.X.X.X to a newer release”

# Requirements

You will need the following test equipment to complete the firmware upgrade procedure:

-  1 x PC with Ethernet port
-  1 x Ethernet Cable
-  1 x 12VDC 1.5A power adapter
-  2 x 3G Antennas

In addition to this, the following files are required:

MODEL	FIRMWARE FILENAME	SDK	MODULE BOOTLOADER FILENAME	MODULE FIRMWARE FILENAME	LARGE FILE SUPPORT IPK (ONLY REQUIRED IF UPGRADING FROM 1.X FIRMWARE)
NTC-6908	ntc_6908_2.0.24.3.cdi (39.3MB) MD5: 565d36098dca6a19150a4fa666650deb	SDK_Bovine_ntc_6908_2.0.24.3.tar.bz2 (178MB) MD5: 00c103724cf1fbc7d6ab293c75cc0232	MC8790_DLEX_K2.0.7.28.cwe (609KB)	MC8790_K2.0.7.30.cwe (15.3MB)	appweb-large-file-support_1.2.1_arm.ipk (1.50KB) MD5: 2105fe90157d5c0cda12dd00404d2ea2
NTC-6908-02			MC8704_DLEX_T3_0_2_2.cwe (492KB)	MC8704_T3_0_2_2.cwe (21.3MB)	
NTC-6520			R3B01 (Note: Ericsson module does not support firmware upgrade via web GUI)		
NTC-30WV	ntc_30wv_2.0.24.3.cdi (42.2MB) MD5: 37d986f1559b729ccd581f0f1743a95c	SDK_Bovine_ntc_30wv_2.0.24.3.tar.bz2 (184MB) MD5: 9ad36e06cfd49377b3d6e1081c9d638	Bootloader_MC8704_T3.0.6.4.cwe (507KB) MD5: 65448660cef3971d92ed7f0e141a98f2	Application_MC8704_T3.0.6.4.cwe (21.3MB) MD5: 1721fc378e34d7529f5f19edfeb11c59	
NTC-40WV	ntc_40wv_2.0.24.3.cdi (41.9MB) MD5: 338da32061ce732b093ebc03888eeb4e	SDK_Bovine_ntc_40wv_2.0.24.3.tar.bz2 (183MB) MD5: 7c167a136c8e12e0aebcdc14b4a9e9b0			
NTC-6200-02	ntc_6200_2.0.24.3.cdi (46.2MB) MD5: a9faa87ba0f5978cece2ff85e4b92ee6	SDK_Bovine_ntc_6200_2.0.24.3.tar.bz2 (193MB) MD5: 499f323e8a279abb8561a5088e78b8c2	N/A	N/A	N/A

# Firmware Upgrade Process

## Upgrading from firmware version 1.X.X.X to 2.X.X.X

This section describes how to upgrade a NetComm Wireless M2M Router from firmware version 1.X.X.X to firmware version 2.X.X.X.



### Important Notes:

1. Before uploading the firmware image to the router, you must install the **appweb-large-file-support\_1.1\_arm.ipk** file otherwise you will not be able to upload the file to the router.
2. It is assumed that you have a backup copy of your current device configuration before performing the firmware upgrade.

To upgrade your device's firmware, follow the steps below:

1. Plug the network (CAT5) cable into the Ethernet port, and then plug in the power cable.
2. Log in to the web administration page by opening your web browser and typing the URL for your router:

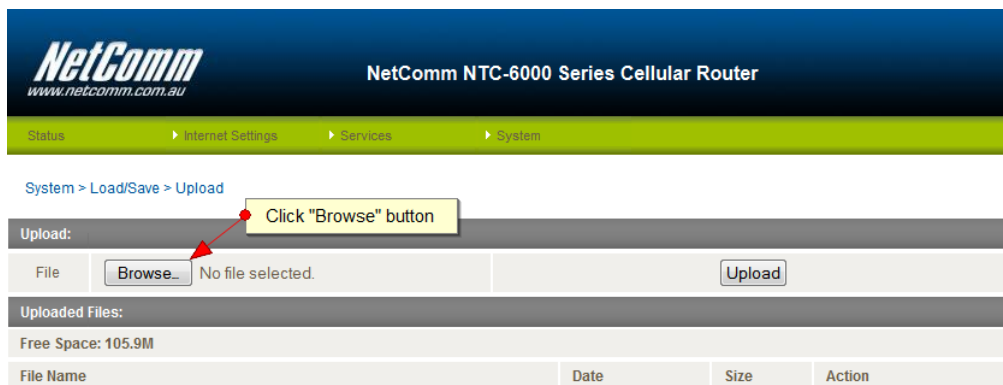
NTC-6000 SERIES	NTC-30WW / NTC-40WW
<a href="http://192.168.20.1/">http://192.168.20.1/</a>	<a href="http://192.168.1.1/">http://192.168.1.1/</a>

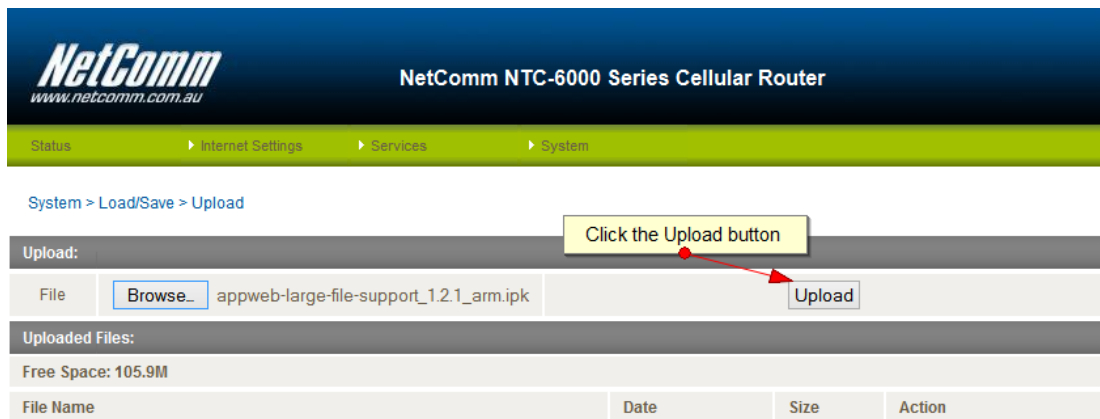
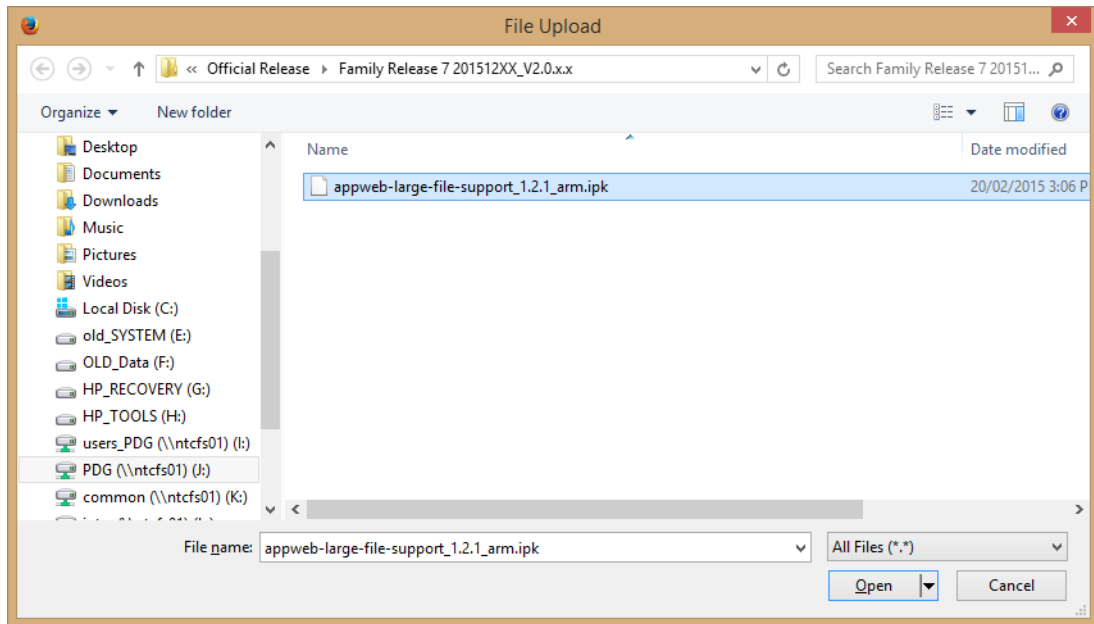
Enter the following credentials when prompted:

USERNAME	PASSWORD
root	admin

Upon successful login, you are presented at the router's **Main** system mode. The status page is displayed, providing system information.

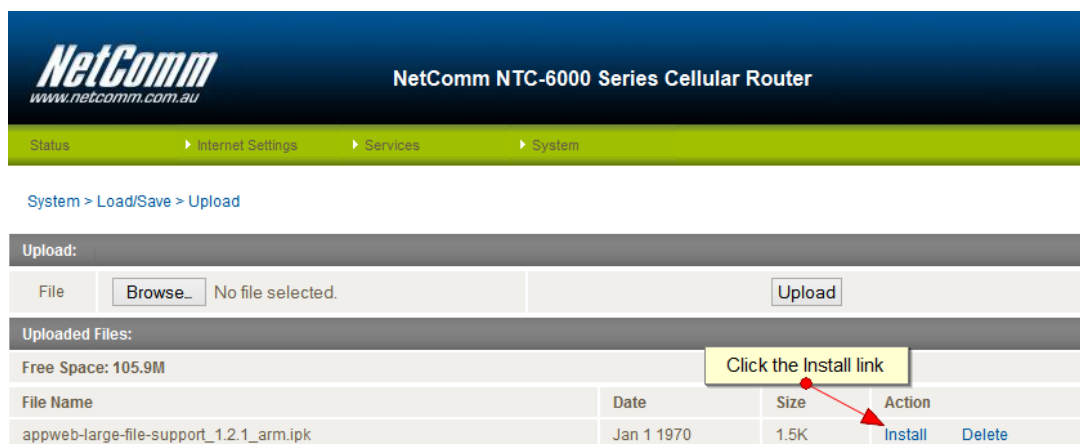
3. Navigate to "**System > Load/Save > Upload**" page, click "**Choose File**" or "**Browse**" and locate the "**appweb-large-file-support\_1.2\_arm.ipk**" file. Click "**Open**" and then Select "**Upload**". Wait for the file to finish uploading to the router.





The file appears in the Uploaded files list.

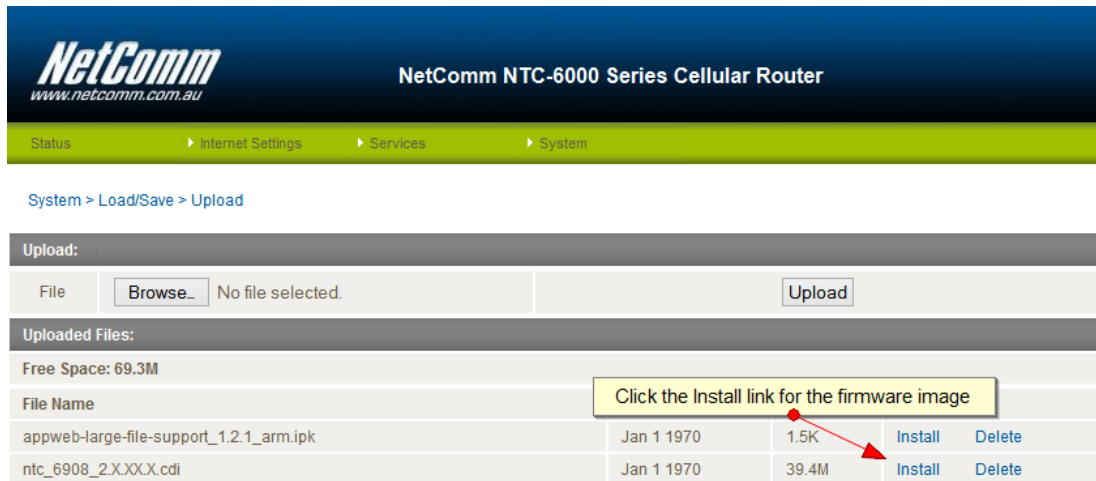
4. Click the Install link next to the `appweb-large-file-support_1.2.1_arm.ipk` file.



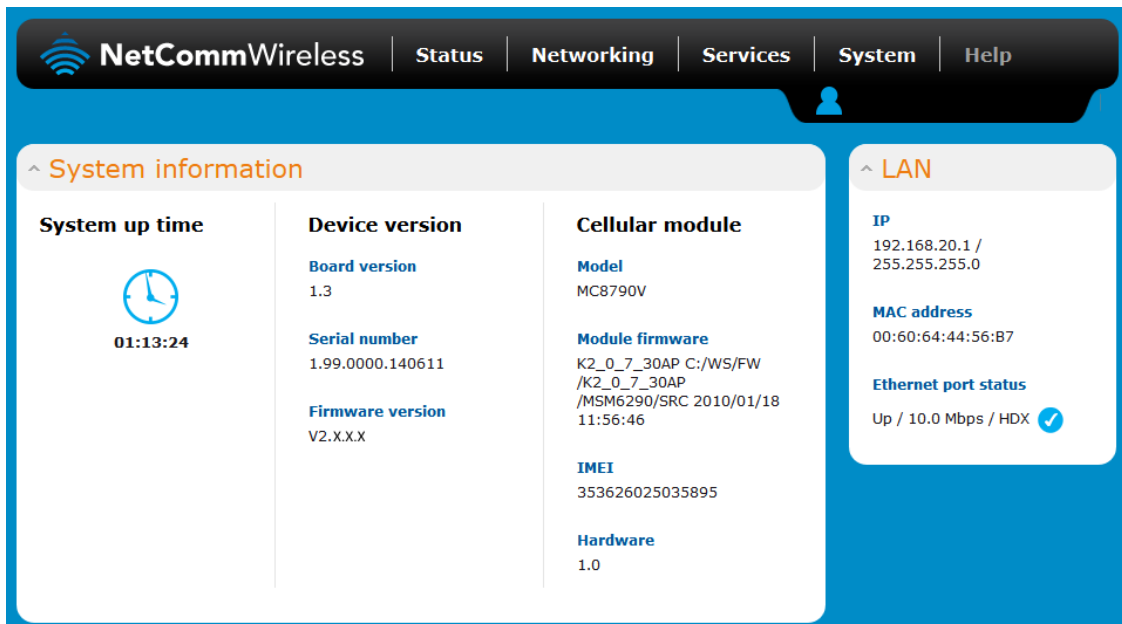
The appweb service is restarted and the connection to the router is lost temporarily. Wait 10 seconds and then attempt to connect to the router once more by navigating to <http://192.168.20.1> and entering the login credentials again.

Upgrade timeout increased to 240 seconds.  
 Patched web server to allow large file upload.  
 This page will now become inactive when web server restarts.  
 Please wait at least 10 seconds, login again and proceed with upgrade.

5. Navigate to “**System > Load/Save > Upload**” page, click “**Choose File**” or “**Browse**” and locate the “**ntc\_6908\_2.x.x.x.cdi**” file. Select “**Upload**”. Wait for the file to finish uploading to the router.
6. Click the Install link next to the **ntc\_6908\_2.x.x.x.cdi** file.



The router firmware is upgraded. When it has completed, you are redirected to the new status page.





7. To complete the firmware upgrade, you must restore the default settings of the router. Navigate to **System > System configuration > Settings backup and restore** and click on the **Restore defaults** button, then click on **OK**.



Note: Ensure that you have a backup of your current device configuration before performing this step.



You have now completed the router firmware upgrade. If your router uses a Sierra Wireless module MC8704 or MC8790V, you may upgrade the phone module firmware via the web GUI.

## Module Firmware Upgrade Process

This section describes how to perform a module firmware upgrade if your device is using a Sierra Wireless MC8704 or MC8790V. If your device is already using the following official module firmware, you may skip this section:

- NTC-6908 (MC8790V): K2.0.7.30
- NTC-6908-02 (MC8704): T3\_0\_2\_2
- NTC-30WW / NTC-40WW: T3\_0\_6\_4

### Phone module bootloader upgrade

To upgrade the phone module bootloader:

1. Plug the network (CAT5) cable into the Ethernet port, and then plug in the power cable.
2. Log in to the web administration page by opening your web browser and typing the URL for your router:

NTC-6000 SERIES	NTC-30WW / NTC-40WW
<a href="http://192.168.20.1/">http://192.168.20.1/</a>	<a href="http://192.168.1.1/">http://192.168.1.1/</a>

Enter the following credentials when prompted:

USERNAME	PASSWORD
root	admin

Upon successful login, you are presented at the router's **Main** system mode. The status page is displayed, providing system information.

3. Under the Web 2.0 GUI Structure, navigate to **"System > System configuration > Upload"** page.
  - \* For NTC-6908 using MC8790V: Select **Choose a File** and locate the phone module boot loader file named **"MC8790\_DLEX\_K2.0.7.28.cwe"**. Click the **"Upload"** button.
  - \* For NTC-6908-02 using MC8704: Select **Choose a File** and locate the phone module boot loader file named **"MC8704\_DLEX\_T3\_0\_2\_2.cwe"**. Click the **"Upload"** button.
  - \* For NTC-30WW / NTC-40WW using MC8704: Select **Choose a File** and locate the phone module boot loader file named **"Bootloader\_MC8704\_T3.0.6.4.cwe"**. Click the **"Upload"** button.
4. Click the **"Install"** link for the phone module bootloader file and then click the **OK** button on the pop-up window.
  - \* For NTC-6908 using MC8790V

MC8790_DLEX_K2.0.7.28.cwe	Feb 18 2014	609.4K	<a href="#">Install</a>	<a href="#">Delete</a>
---------------------------	-------------	--------	-------------------------	------------------------

- \* For NTC-6908-02 using MC8704

MC8704_DLEX_T3_0_2_2.cwe	Feb 19 2014	492.8K	<a href="#">Install</a>	<a href="#">Delete</a>
--------------------------	-------------	--------	-------------------------	------------------------

- \* For NTC-40WW / NTC-30WW

Bootloader_MC8704_T3.0.6.4.cwe	Mar 26 2015	507.4K	<a href="#">Install</a>	<a href="#">Delete</a>
--------------------------------	-------------	--------	-------------------------	------------------------

The progress of the bootloader upgrade is displayed in the log window as shown below. When the upgrade is complete, the words “The installation was successful” are displayed.

```

writing -- 0 % complete.
writing -- 10 % complete.
writing -- 20 % complete.
writing -- 30 % complete.
writing -- 40 % complete.
writing -- 80 % complete.
writing -- 90 % complete.
writing -- 100 % complete.
Done - uploading
15. terminating boot loader uploading
16. waiting for application mode
17. terminating processes
18. loading sierra driver
19. enabling supervisor
20. power-cycling to normal operation mode
21. waiting...
22. launching connection_mgr
Done
The installation was successful
    
```

[Close](#)

### Phone module firmware upgrade

- Under Web 2.0 GUI Structure, navigate to “**System > System configuration > Upload**” page.
  - \* For NTC-6908 using MC8790V: Select **Choose a File** and locate the phone module boot loader file named “MC8790\_K2.0.7.30.cwe”. Click the “**Upload**” button.
  - \* For NTC-6908-02 using MC8704: Select **Choose a File** and locate the phone module boot loader file named “MC8704\_T3\_0\_2\_2.cwe”. Click the “**Upload**” button.
  - \* For NTC-30WV / NTC-40WV using MC8704: Select **Choose a File** and locate the phone module boot loader file named “Application\_MC8704\_T3.0.6.4.cwe”. Click the “**Upload**” button.
- Click the “**Install**” link for the phone module firmware file and then click the **OK** button on the pop-up window.
  - \* For NTC-6908 using MC8790V

MC8790_K2.0.7.30.cwe	Feb 19 2014	15.3M	<a href="#">Install</a>	<a href="#">Delete</a>
* For NTC-6908-02 using MC8704V				
MC8704_T3_0_2_2.cwe	Feb 19 2014	21.3M	<a href="#">Install</a>	<a href="#">Delete</a>
* For NTC-40WV / NTC-30WV using MC8704V				
Application_MC8704_T3.0.6.4.cwe	Mar 26 2015	21.4M	<a href="#">Install</a>	<a href="#">Delete</a>

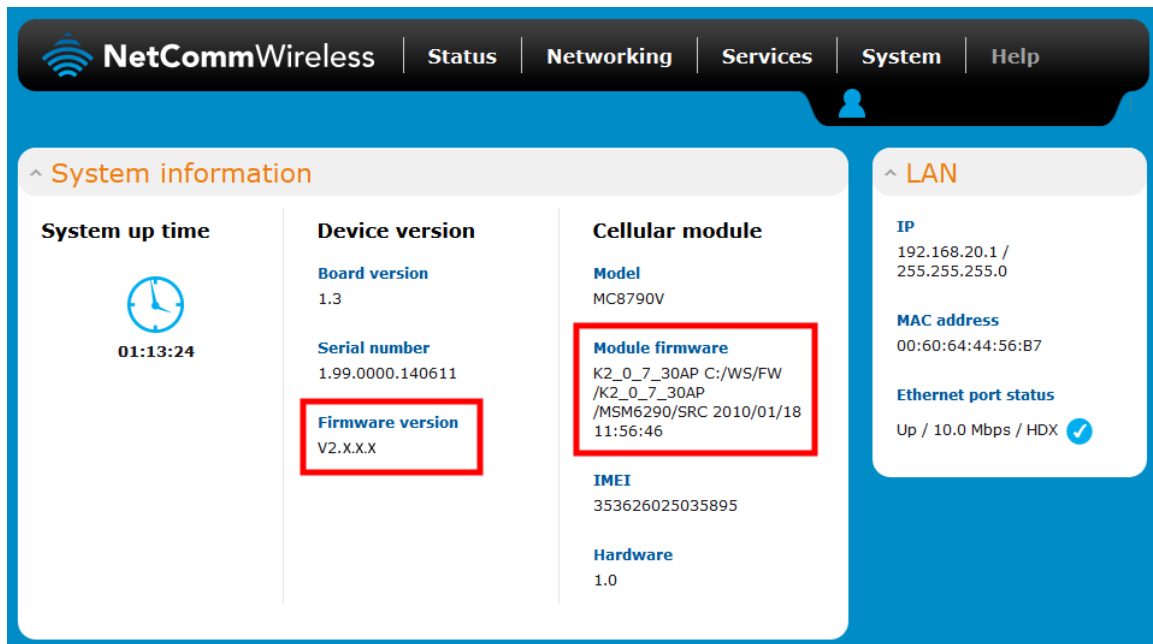
The progress of the phone module firmware upgrade is displayed in the log window as shown below. When the upgrade is complete, the words “The installation was successful” are displayed.

```
writing -- 30 % complete.
writing -- 40 % complete.
writing -- 50 % complete.
writing -- 60 % complete.
writing -- 70 % complete.
writing -- 80 % complete.
writing -- 90 % complete.
writing -- 100 % complete.
Done - uploading
15. terminating application uploading
16. waiting for application mode
17. terminating processes
18. loading sierra driver
19. enabling supervisor
20. power-cycling to normal operation mode
21. waiting...
22. launching connection_mgr
Done
The installation was successful
```

[Close](#)


3. Navigate to the Status page and confirm that the cellular module firmware has been upgraded and that the router firmware version has been upgraded.

NTC-6908 (MC8790V)



**NetCommWireless** | Status | Networking | Services | System | Help

**System information**

<b>System up time</b>  <b>01:13:24</b>	<b>Device version</b> <b>Board version</b> 1.3 <b>Serial number</b> 1.99.0000.140611 <b>Firmware version</b> V2.X.X.X	<b>Cellular module</b> <b>Model</b> MC8790V <b>Module firmware</b> K2_0_7_30AP C:/WS/FW /K2_0_7_30AP /MSM6290/SRC 2010/01/18 11:56:46 <b>IMEI</b> 353626025035895 <b>Hardware</b> 1.0
---	---	---

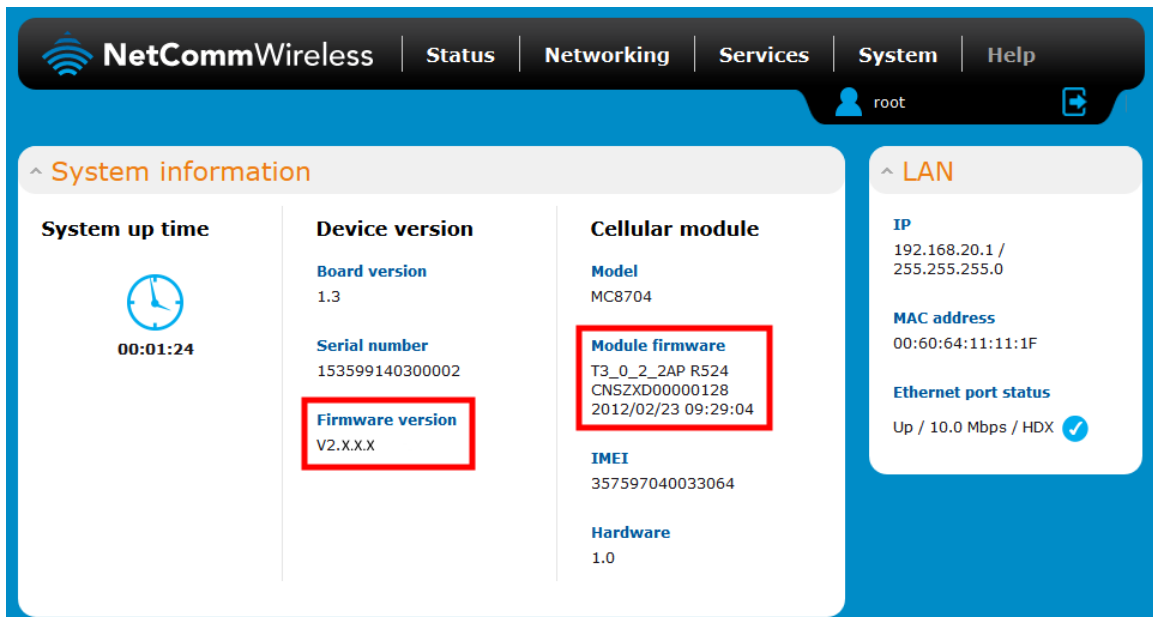
**LAN**

**IP**  
192.168.20.1 / 255.255.255.0

**MAC address**  
00:60:64:44:56:B7

**Ethernet port status**  
Up / 10.0 Mbps / HDX


NTC-6908-02 / NTC-30WV / NTC-40WV (MC8704)



**NetCommWireless** | Status | Networking | Services | System | Help

root

**System information**

<b>System up time</b>  <b>00:01:24</b>	<b>Device version</b> <b>Board version</b> 1.3 <b>Serial number</b> 153599140300002 <b>Firmware version</b> V2.X.X.X	<b>Cellular module</b> <b>Model</b> MC8704 <b>Module firmware</b> T3_0_2_2AP R524 CNSZXD00000128 2012/02/23 09:29:04 <b>IMEI</b> 357597040033064 <b>Hardware</b> 1.0
---	--	--

**LAN**

**IP**  
192.168.20.1 / 255.255.255.0

**MAC address**  
00:60:64:11:11:1F

**Ethernet port status**  
Up / 10.0 Mbps / HDX

## Upgrading from firmware version 2.X.X.X to a newer release

If your router already has a version 2.X.X.X firmware on it, the upgrade process is simpler. In this case, you only need to use the firmware image file to upgrade the router. The firmware image file contains a script that updates all the required components automatically.

To upgrade your router from a version 2.X.X.X base firmware:

1. Plug the network (CAT5) cable into the Ethernet port, and then plug in the power cable.
2. Log in to the web administration page by opening your web browser and typing the URL for your router:

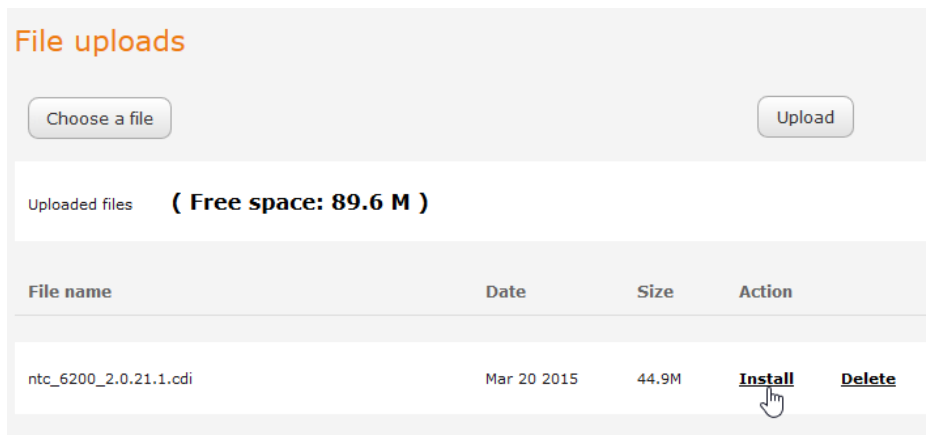
NTC-6000 SERIES	NTC-30WV / NTC-40WV / NTC-6200-02
<a href="http://192.168.20.1/">http://192.168.20.1/</a>	<a href="http://192.168.1.1/">http://192.168.1.1/</a>

Enter the following credentials when prompted:

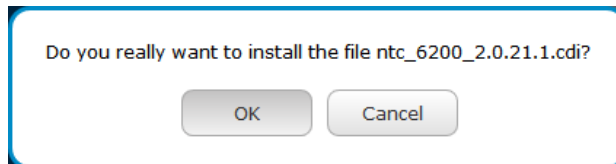
USERNAME	PASSWORD
root	admin

Upon successful login, you are presented at the router's **Main** system mode. The status page is displayed, providing system information.

3. Select the **System** item from the top menu bar, select the **System configuration** item from the menu on the left and then select the **Upload** menu item.
4. Under the **File uploads** section, click the **Choose a file** button. Locate the firmware image and click the **Open** button.
5. Click the **Upload** button. The firmware image is uploaded to the storage on the router.
6. Click the **Install** link in the Action column of the firmware image file.



7. Click the **OK** button on the confirmation pop-up window.



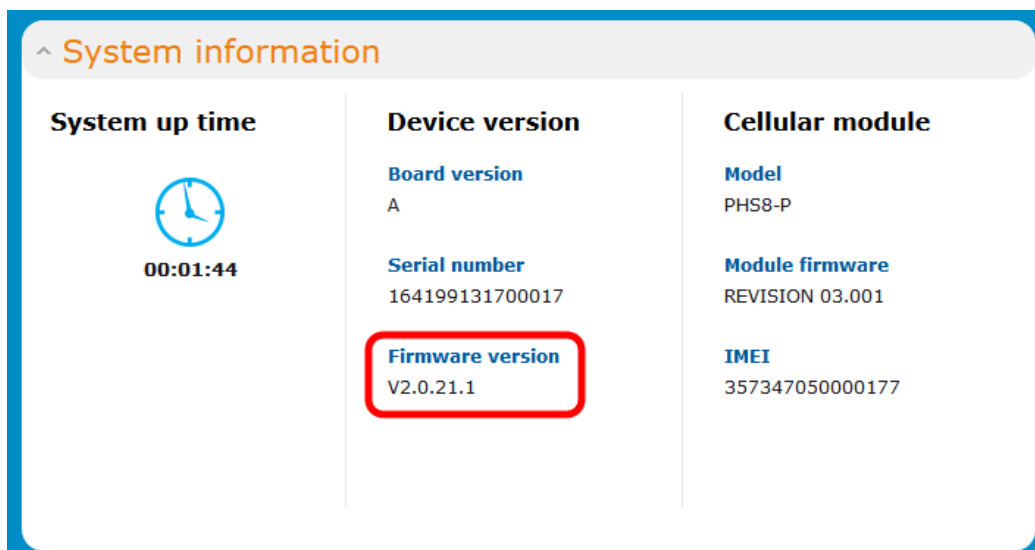
The router performs the firmware image upgrade and reboots. This process takes approximately 4 minutes.

```
Estimated time remaining: 39 seconds
Estimated time remaining: 34 seconds
Estimated time remaining: 29 seconds
Estimated time remaining: 24 seconds
Estimated time remaining: 19 seconds
Estimated time remaining: 14 seconds
Writing data to block 17 at offset 0x220000
Writing data to block 18 at offset 0x240000
Writing data to block 19 at offset 0x260000
Writing data to block 20 at offset 0x280000
Writing data to block 21 at offset 0x2a0000
Done
Done
Skipping install scripts, nothing to do
Skipping post-install, nothing to do
Done
The firmware update was successful
Estimated time remaining: 9 seconds
Estimated time remaining: 4 seconds
Redirecting you to the Status page
```


[Close](#)

When the upgrade is complete, you are taken to the Status page.

8. Confirm that the firmware was upgraded by checking the firmware version listed on the Status page.



The screenshot shows the 'System information' page with three columns of data:

System up time	Device version	Cellular module
 00:01:44	<b>Board version</b> A	<b>Model</b> PHS8-P
	<b>Serial number</b> 164199131700017	<b>Module firmware</b> REVISION 03.001
	<b>Firmware version</b> V2.0.21.1	<b>IMEI</b> 357347050000177