
Advanced Firmware Upgrade & Recovery Guide



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Introduction

This document shows how to perform an advanced firmware upgrade procedure for the following BlueTree modems:

- **Generation 1**
 - BT-4200, BT-5200
 - BT-4400, BT-5400
 - BT-4600, BT-5600

- **Generation 2**
 - BT-5600v2
 - BT-5800v2
 - BT-6600, BT-6601, BT-6601EB, BT-6621
 - BT-6800, BT-6801, BT-6601EB, BT-6821

This procedure will rewrite the modem's FLASH entirely, recovering the modem from any potential firmware-related issues and restoring its factory defaults. It is also the only way to upgrade the Generation 1 modems from firmware versions 1.x and 2.x, to versions 3.x.

This procedure can only be performed locally via the Ethernet port. It cannot be performed remotely over the wireless network.

IMPORTANT:

After completing this procedure, the modem will lose any modified configuration settings and revert to the factory defaults.

Requirements

The following tools are required:

- A cross-over RJ-45 cable to connect the host PC to the modem's Ethernet port
- A PC with the Microsoft Windows operating system
- If upgrading a 4000/5000 modem with old firmware such as 1.x or 2.x, the latest version of BlueVue Device Manager is required (1.7.5 or newer). BVDM is available for download on the BlueTree website here, <http://www.bluetreewireless.com/support/downloads/software/details.asp?id=57> .
- The advanced firmware upgrade and recovery package. If you're reading this document, you likely have it already. If by chance you were forwarded this document only, you will be able to find the full advanced upgrade package here, http://www.bluetreewireless.com/extranet/firmware_and_drivers/Firmware/ under the version numbers of 3.6.0 and higher.
- A thin object to press the modem's reset button, such as a paperclip or a toothpick

Advanced Upgrade Procedure

Step 1: Note the modem model number

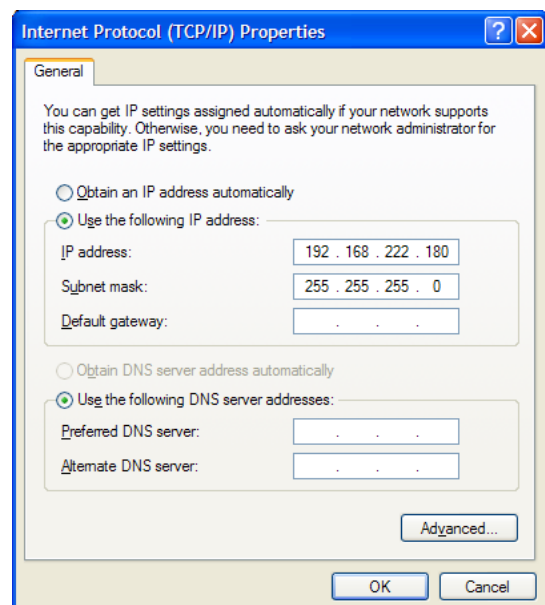
- This document includes instructions for many different models and depending on the existing firmware, there may be an extra step involved to complete the process. Please read these instructions thoroughly before making any attempt so that you are aware of all that is required from start to finish.
- If you are upgrading a **Generation 1** modem as listed above, you will need to start the procedure from the **Gen1** folder and if you are upgrading any **Generation 2** modem you will need to start the procedure from the **Gen2** folder

Step 2 : Perform the minor upgrade in BlueVue Device Manager (if necessary)

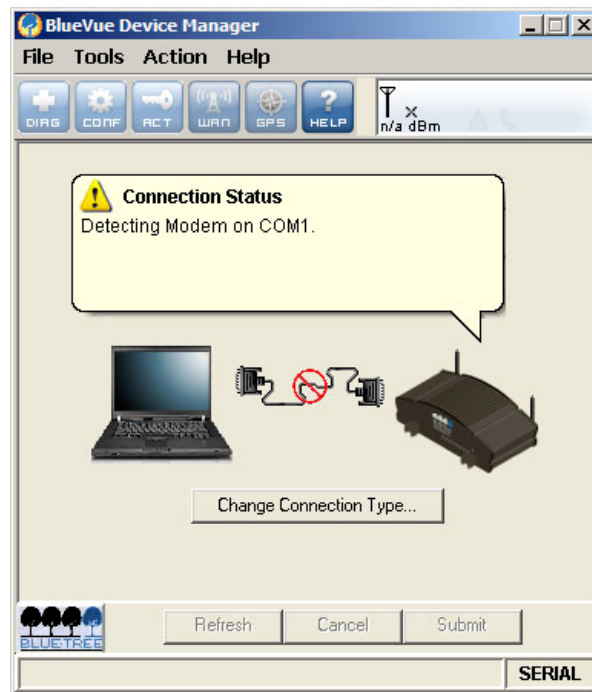
IMPORTANT - This step is only required when upgrading a 4X00/5X00 series modem that currently has firmware version 1.x or 2.x. Please go to step 3 if your modem has a firmware version of 3.0 or newer.

- In Windows, go to **Start > Control Panel > Network Connections**
- Right-click on the LAN connection that represents the Ethernet adapter you're using (this is usually **Local Area Connection**) and click **Properties**
- Click the **General** tab, and in the connection properties window, double-click on **Internet Protocol (TCP/IP)** in the list under **This connection uses the following items**

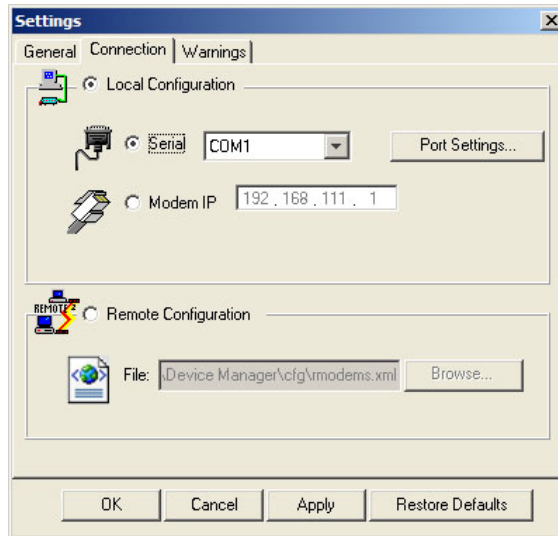
Note: write down any existing values you see here so that you may revert to the previous configuration once the firmware upgrade is complete.



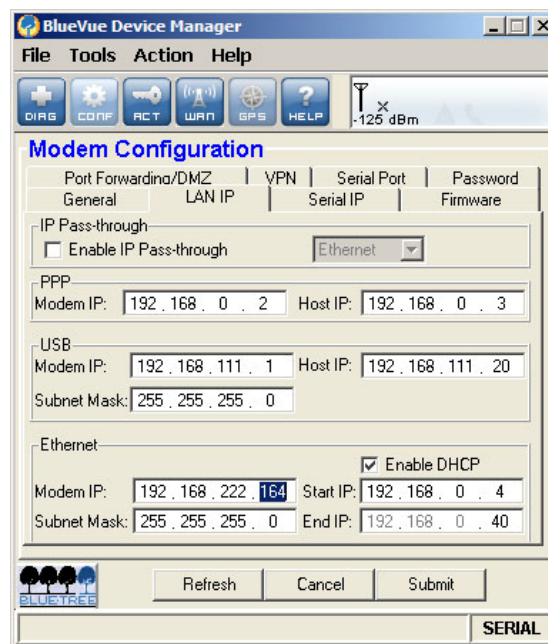
- Select the **Use the following IP address** radio button
- Set the **IP address** to **192.168.222.180** if you are upgrading a **4000/5000 series modem**, or to **192.168.88.180** if you are upgrading a **6000 series modem**.
- Set the **Subnet mask** to **255.255.255.0**
- Leave the rest of the fields blank
- Click **OK** to close any open windows
- Connect a straight serial cable from the computer to the modem
- Open BlueVue Device Manager and click on **Change Connection Type...** in the opening screen



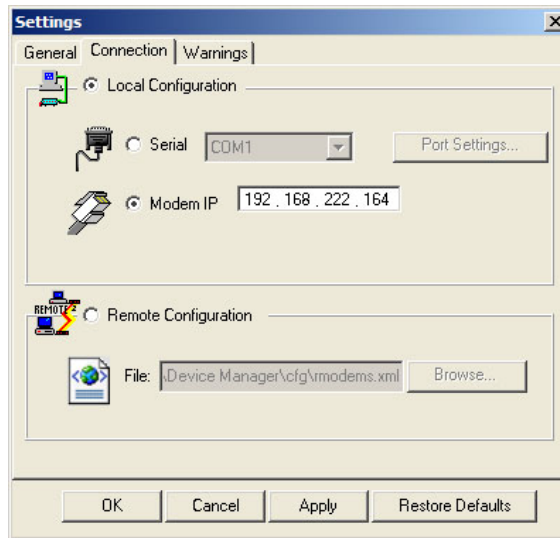
- Under the **Connection** tab in the **Settings** window, select the COM port that the modem is connected to



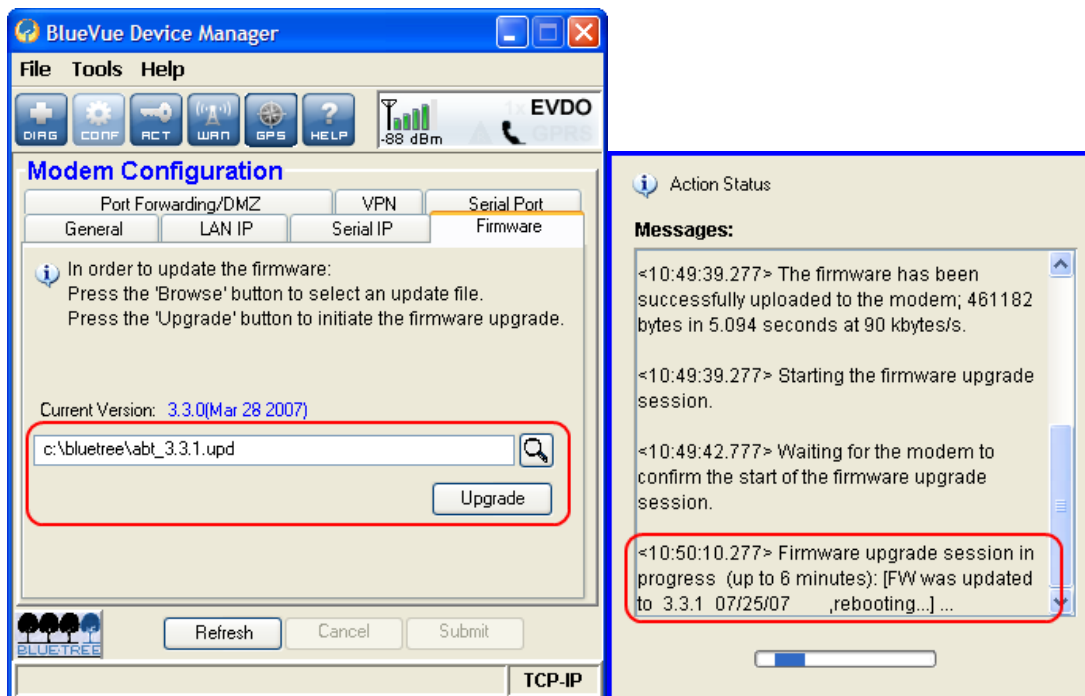
- Once BlueVue Device Manager detects the modem, click on the button labeled **CONF** and then click on the **LAN IP** tab
- In the **Ethernet** section near the bottom of the window, change the **Modem IP** address to **192.168.222.164** and click on **Submit**



- Select the IP connection type under **Tools > Settings > Connection**. Set the **Modem IP** to **192.168.222.164** and click **OK**



- BlueVue Device Manger should now connect to the modem over the Ethernet connection
- Once BlueVue Device Manager has finished accessing the modem, go to **Configuration > Firmware**. Click the magnifying glass and browse for the **abt.upd** file located in the advanced firmware package **Gen1 \ images** folder. Click the **Upgrade** button to begin the **Upgrade** process.

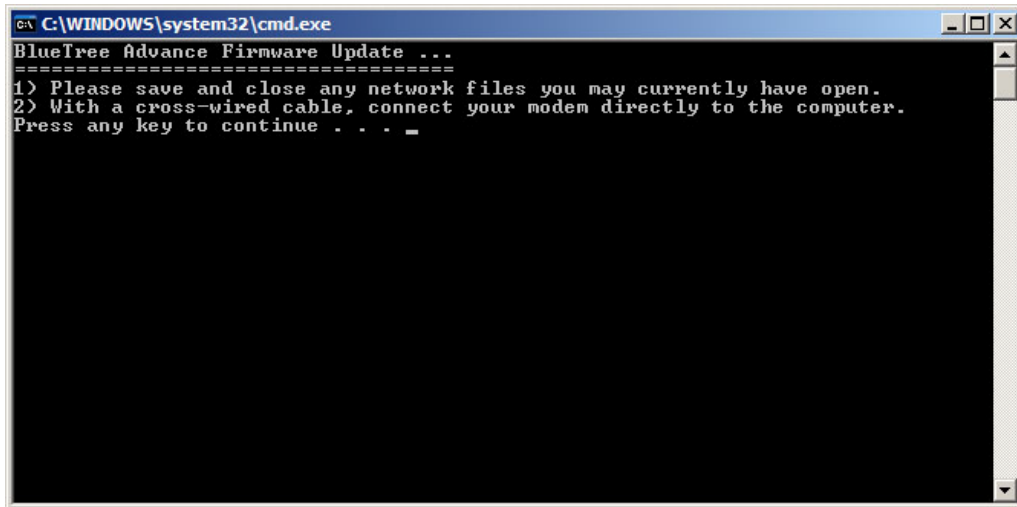


- When the “**Firmware upgrade session in progress...**” message appears, wait for one minute while the modem restarts. The modem will not fully initialize: only the PWR, TX and RX light will be on because at this point, BlueVue Device Manager can

no longer reach the modem. You can ignore BlueVue Device Manager (or close it using the Windows Task Manager) while you complete the next step of the upgrade.

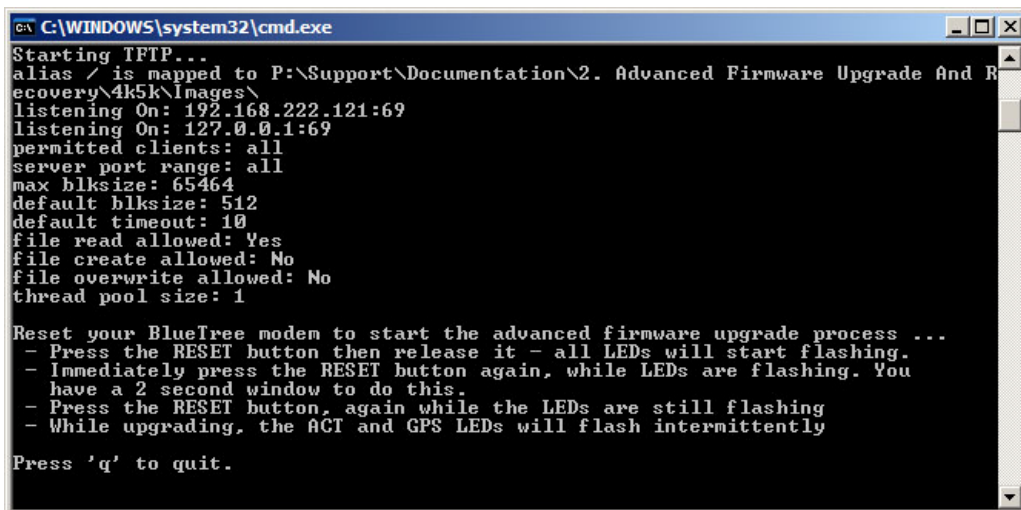
Step 3: Start the Upgrade

- Run the **advanced_upgrade.bat** file included in the appropriate folder of the firmware package by double-clicking it (the **Gen1** folder for generation 1 modems and the **Gen2** folder for generation 2). A command window will open and ask you to confirm that there are no files open across any network and then will set the server to listen for requests on the adapter connected to the modem. It is important to disable any local firewalls while doing this procedure. Please note that if your LAN adapter has a name that is anything other than the default: **Local Area Connection**, this step will not work. If you feel you need assistance, please call support at 1-877-422-9110.



```
C:\WINDOWS\system32\cmd.exe
BlueTree Advance Firmware Update ...
=====
1) Please save and close any network files you may currently have open.
2) With a cross-wired cable, connect your modem directly to the computer.
Press any key to continue . . . _
```

- Follow the displayed instructions carefully to set the modem in upgrade mode



```
C:\WINDOWS\system32\cmd.exe
Starting TFTP...
alias / is mapped to P:\Support\Documentation\2. Advanced Firmware Upgrade And R
ecovery\4k5k\Images\
listening On: 192.168.222.121:69
listening On: 127.0.0.1:69
permitted clients: all
server port range: all
max blksize: 65464
default blksize: 512
default timeout: 10
file read allowed: Yes
file create allowed: No
file overwrite allowed: No
thread pool size: 1

Reset your BlueTree modem to start the advanced firmware upgrade process ...
- Press the RESET button then release it - all LEDs will start flashing.
- Immediately press the RESET button again, while LEDs are flashing. You
  have a 2 second window to do this.
- Press the RESET button, again while the LEDs are still flashing
- While upgrading, the ACT and GPS LEDs will flash intermittently

Press 'q' to quit.
```

Upgrade mode process for the 4x00 / 5x00 series modems

```
C:\WINDOWS\system32\cmd.exe
TFTP Server MultiThreaded Version 1.53 (<+ BT1.2>) Windows Built 1530

Starting TFTP...
alias / is mapped to P:\Support\Documentation\2. Advanced Firmware Upgrade And R
ecovery\6k\Images\
listening On: 192.168.222.121:69
listening On: 127.0.0.1:69
permitted clients: all
server port range: all
max blksize: 65464
default blksize: 512
default timeout: 10
file read allowed: Yes
file create allowed: No
file overwrite allowed: No
thread pool size: 1

Reset your BlueTree modem to start the advanced firmware upgrade process ...
- Press the RESET button of the modem for approximately 8 to 12 seconds
  then release it when only the WAN LED is flashing.

Press 'q' to quit.
```

Upgrade mode process for the 6x00 series

Step 5: Monitor the upgrade progress:

- While the modem is downloading the files, you will notice activity in the TFTP server application. Wait until you see the message “**All firmware files have been successfully loaded**” and then press q to quit. The advanced firmware upgrade process should take no longer than 5 minutes.

```
C:\WINDOWS\system32\cmd.exe
default timeout: 10
file read allowed: Yes
file create allowed: No
file overwrite allowed: No
thread pool size: 1

Reset your BlueTree modem to start the advanced firmware upgrade process ...
- Press the RESET button of the modem for approximately 8 to 12 seconds
  then release it when only the WAN LED is flashing.

Press 'q' to quit.

Client 192.168.88.161:2370 P:\Support\Documentation\2. Advanced Firmware Upgrade
And Recovery\6k\Images\bt66xx-upgrade.flag, 1 Blocks Served
Client 192.168.88.161:2396 P:\Support\Documentation\2. Advanced Firmware Upgrade
And Recovery\6k\Images\bt66xx-u-boot.bin, 640 Blocks Served
Client 192.168.88.161:1044 P:\Support\Documentation\2. Advanced Firmware Upgrade
And Recovery\6k\Images\bt66xx-kernel.gz, 2459 Blocks Served
Client 192.168.88.161:1043 P:\Support\Documentation\2. Advanced Firmware Upgrade
And Recovery\6k\Images\bt66xx-rootfs, 9636 Blocks Served

All firmware files have been successfully loaded.
Either connect another modem to upgrade and reset, or press 'q' to quit.
```

- Wait for the modem to reset, and boot up normally.

Step 6: Confirmation and restoration of previous settings

If step 2 was necessary, undo all the changes you made and then open BlueVue Device Manager and go to **Configuration > Firmware** to confirm that the modem was upgraded successfully.

Note that the modem has now reverted to factory settings.

To connect to the modem over **Ethernet**, use **192.168.0.1** as the IP address

To connect to the modem over **USB**, use **192.168.111.1** as the IP address

To connect to the modem over **Serial**, connect to the appropriate COM port using the following settings: **115200, 8, N, 1, Hardware Flow Control**