

HowTo: Use a PC com port and a Terminal program to Upload Firmware to the DeviceMaster.

Download the current firmware versions. Please note the extension of the file is .cmtl and this will need to be renamed to .zip. Extract the renamed file and you will have two files. One with a .bin extension, the other with a .nxpbin extension. The .bin extension file is the file to use unless otherwise instructed by your Control Technical Support Representative.

Download links:

You can download SocketServer using this link:

http://downloads.comtrol.com/dev_mstr/rts/software/socketserver/

You can download Bootloader using this link:

http://downloads.comtrol.com/dev_mstr/rts/software/bootloader/

To create a null modem cable (required) you may download this document:

http://downloads.comtrol.com/tech_misc/cabling/customcables.pdf

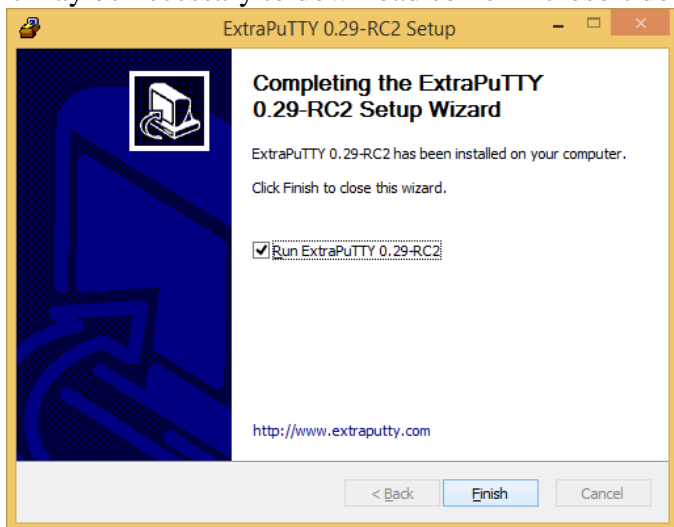
ExtraPuTTY is a freeware terminal program that is recommended.

You can download ExtraPuTTY using this link:

<http://sourceforge.net/projects/extraputty/>

Install ExtraPuTTY using its defaults.

It may be necessary to download some Microsoft dot.net files during the ExtraPuTTY installation.



Once the installation is complete, you can Run or Finish.

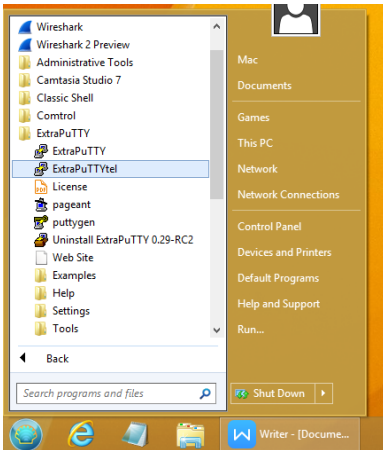
Select Finish

Connect a null modem cable from your PC com port to the DeviceMaster serial port #1 which is the Command Console port.

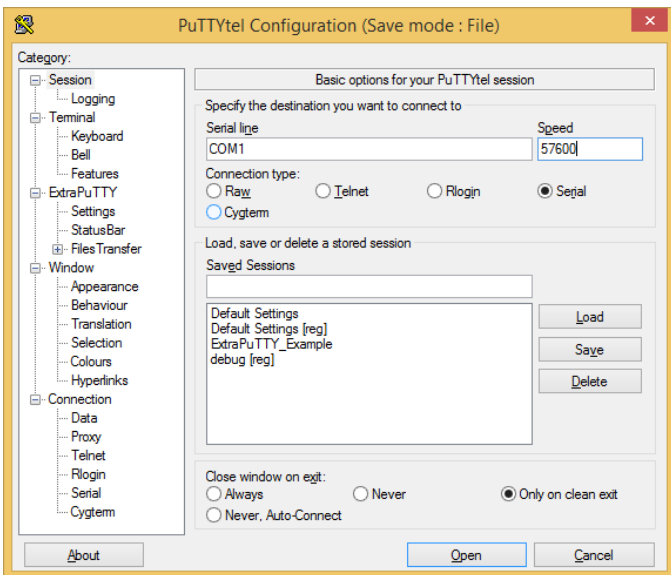
Very Important Note: The DeviceMaster models have 2 different baud rates on the console port based on the serial number(s) of the DeviceMaster.

If your serial number is less than xxxx-029000 the baud rate will be 57600 as shown in the following examples.

If your serial number is greater than xxxx-030000 the baud rate will be 115200. The serial number(s) may be found on the label on the bottom of the unit. This will be the only difference that attention will need to be paid to.

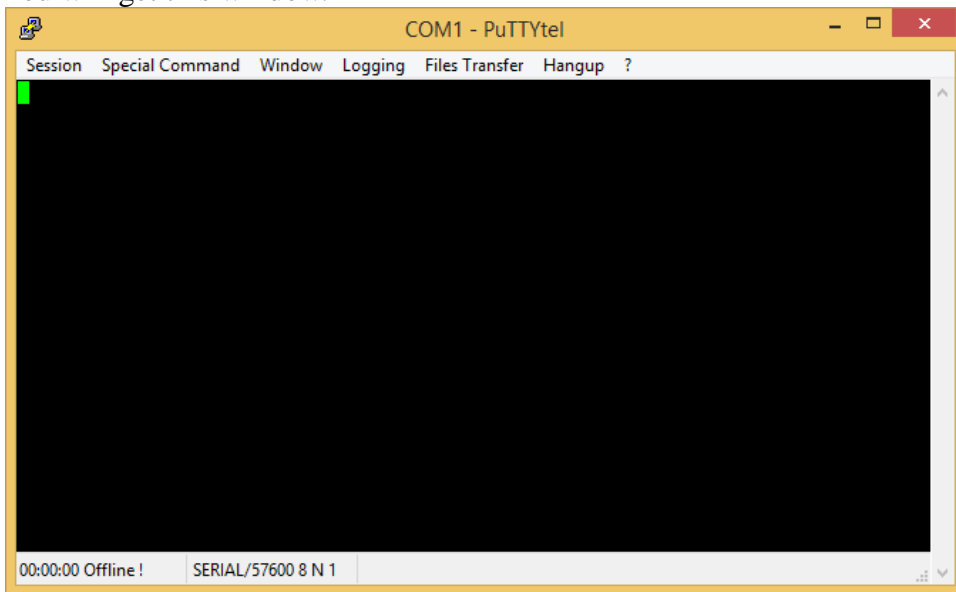


From the Start Button>All Programs>ExtraPuTTYtel using the name with the ‘tel’ addition.



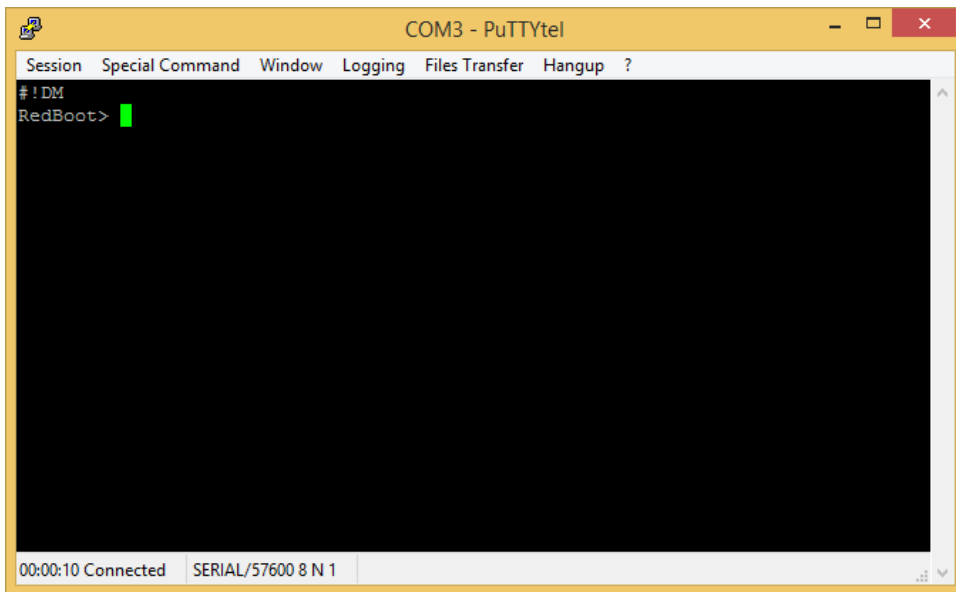
Set the option to “Serial” for the Connection Type, then enter to com# you will be using and enter the Speed of 57600 and then click on Open.

You will get this window.

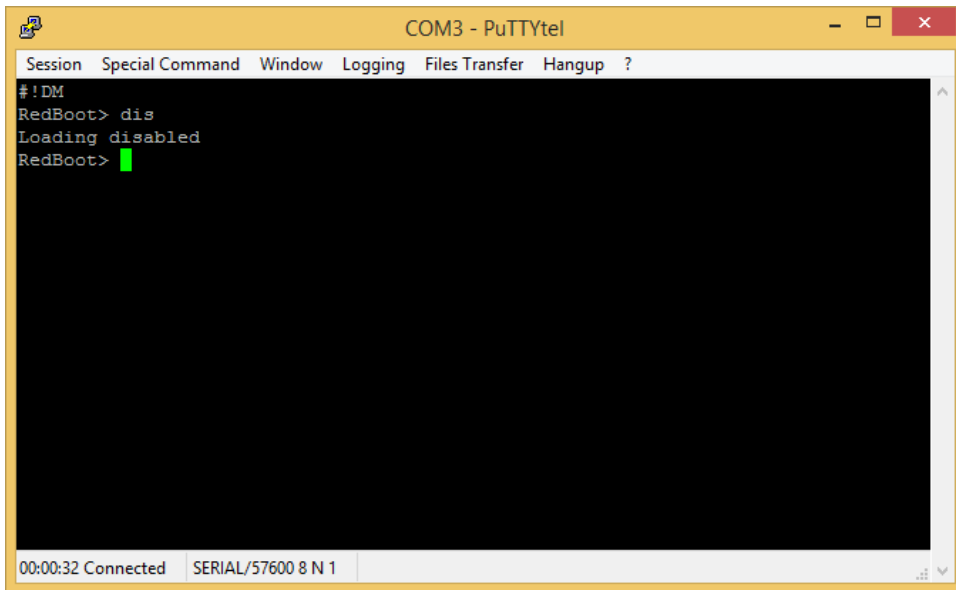


Power Cycle the DeviceMaster

As the DeviceMaster is booting up, enter `#!DM` and press enter. You may not see the `#!DM` being echoed to the screen. The D and the M must be in upper case, but this is the only time case will matter. (Wait approximately 2 seconds after applying power before entering the `#!DM`.)



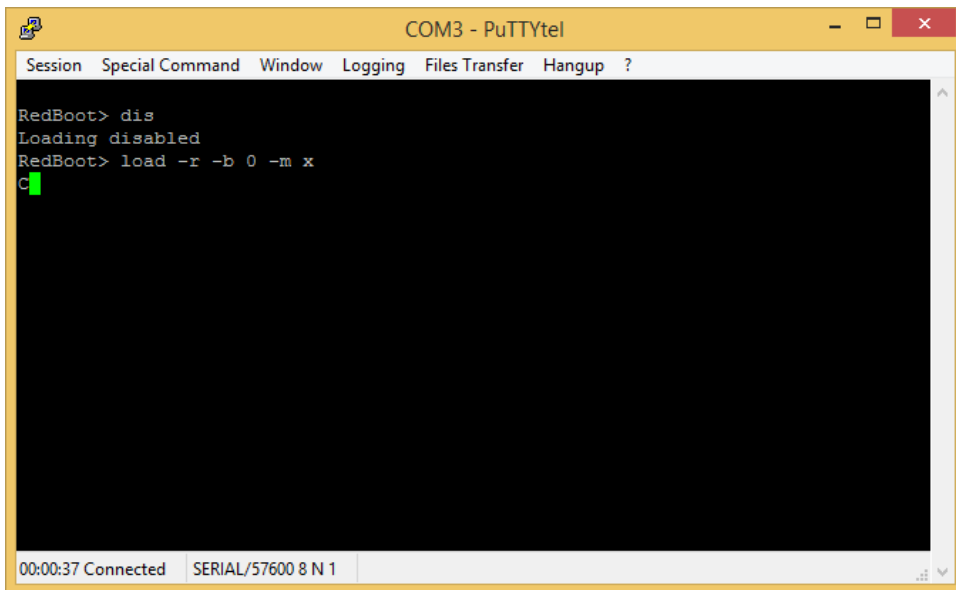
You should get a `RedBoot>` prompt. If you do not, try rebooting and entering the `#!DM` again. It may take more than one or two tries to get the timing just right. If the BootLoader Timeout has been set to less than 5 seconds it may not be possible without many attempts.



```
COM3 - PuTTYtel
Session Special Command Window Logging Files Transfer Hangup ?
#!DM
RedBoot> dis
Loading disabled
RedBoot>
```

00:00:32 Connected SERIAL/57600 8 N 1

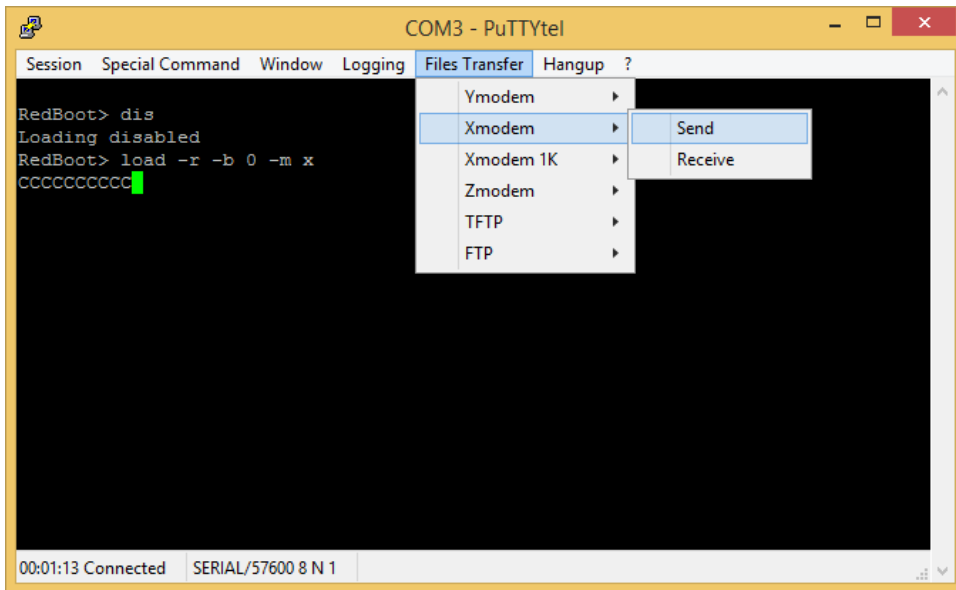
Enter “dis” (without quotes) and press Enter.
Loading should now be disabled. (as seen in the above graphic)



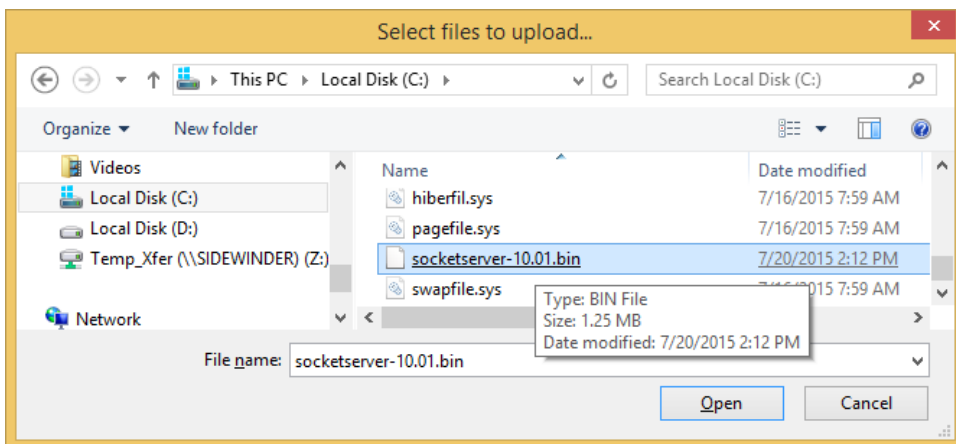
```
COM3 - PuTTYtel
Session Special Command Window Logging Files Transfer Hangup ?
RedBoot> dis
Loading disabled
RedBoot> load -r -b 0 -m x
C
```

00:00:37 Connected SERIAL/57600 8 N 1

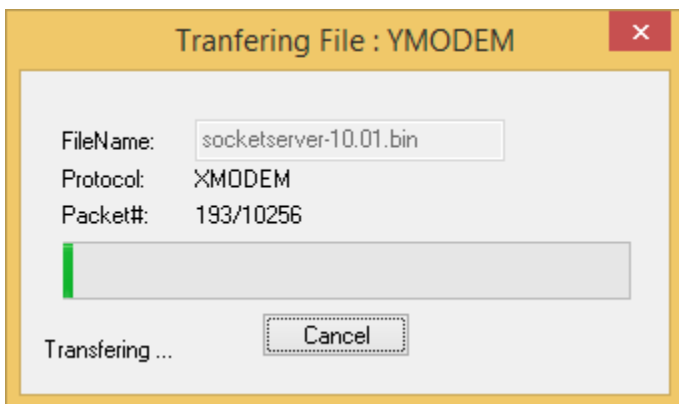
Enter the command “load -r -b 0 -m x” (without quotes) and press Enter.
The ‘C’ will now continue to be repeated until the next operation is started.



Here you can see several of the 'C's.
Select the Files Transfer drop down menu
Use the Xmodem>Send option.

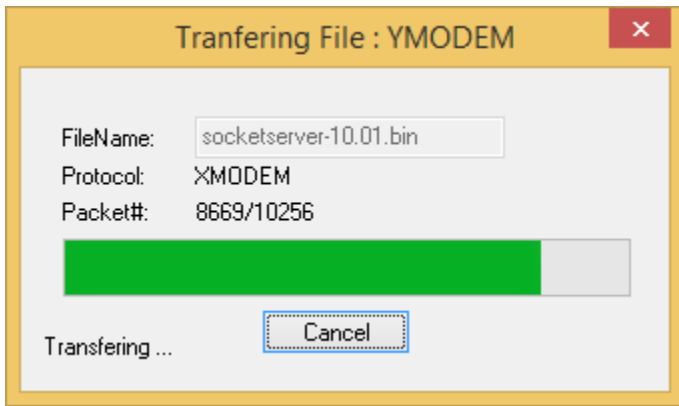


Path to the SocketServer.bin file extracted earlier and select "Open".



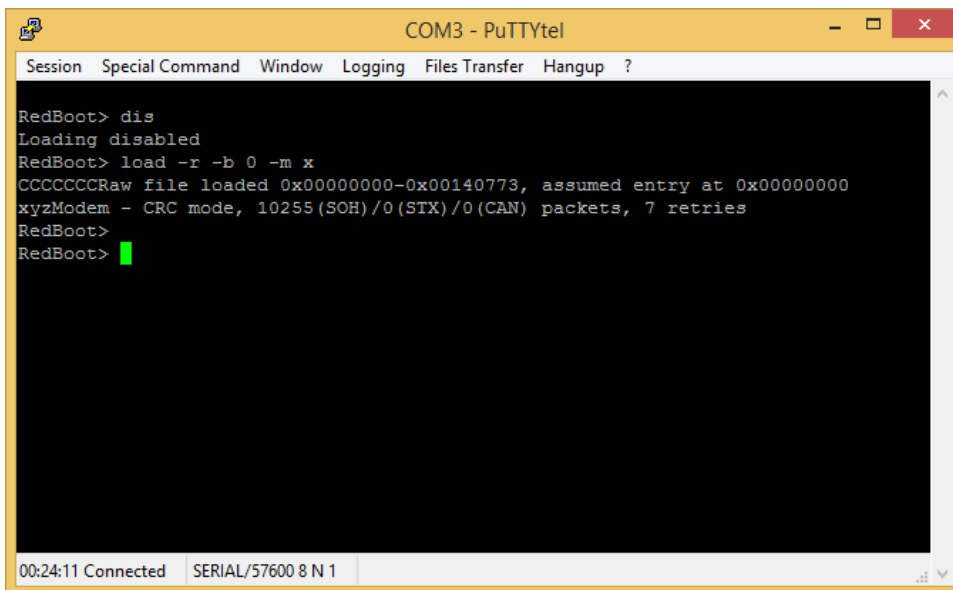
The file transfer should begin. The title bar shows it using YMODEM, but it is using XMODEM for the protocol.

Allow lots of time as this will take several minutes. (It could easily take more than 10 minutes. Be patient.)

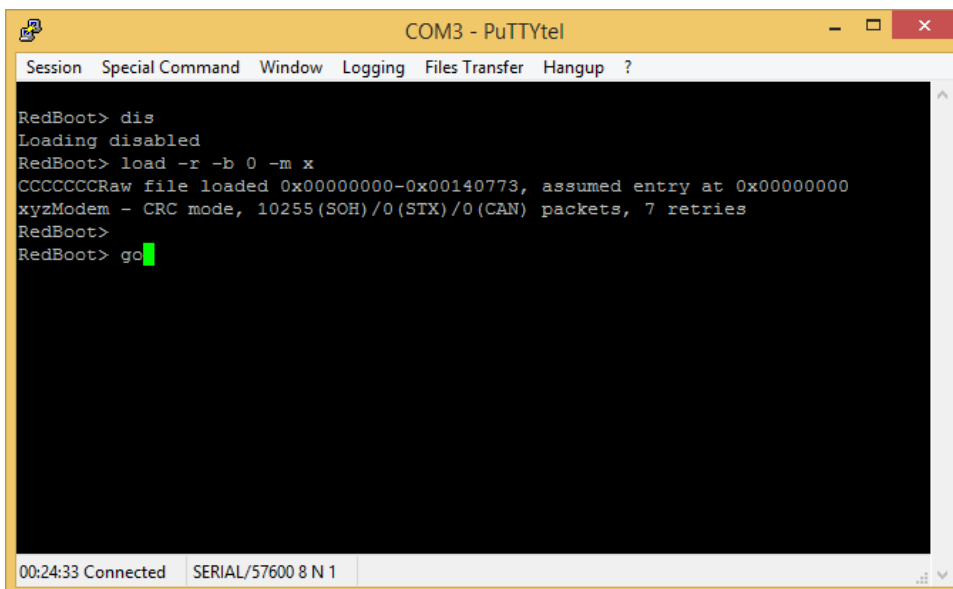


This may take in excess of 20 minutes.

Once the “Tranfering File:YMODEM” window closes, the upload has completed.



You will be returned to the RedBoot> prompt once again.



Once the file has uploaded, type ‘Go’ and press Enter. This will start the ‘burn’ process.

This will take a minute or so and there will be quite a bit of scrolling going on. Some of the screen shots will follow.

```
COM3 - PuTTYtel
Session Special Command Window Logging Files Transfer Hangup ?
RedBoot> dis
Loading disabled
RedBoot> load -r -b 0 -m x
CCCCCCCraw file loaded 0x00000000-0x00140773, assumed entry at 0x00000000
xyzModem - CRC mode, 10255 (SOH)/0 (STX)/0 (CAN) packets, 7 retries
RedBoot>
RedBoot> go

Starting Burn default application

FLASH: Intel device type 0x8897 (4Mbyte)
*** Initialize FLASH Image System
... Erase from 0x05030000-0x053effff: FLASH: Sector erase (addr: 0x05030000)
.FLASH: Sector erase (addr: 0x05040000)
.FLASH: Sector erase (addr: 0x05050000)
.FLASH: Sector erase (addr: 0x05060000)
.FLASH: Sector erase (addr: 0x05070000)
.FLASH: Sector erase (addr: 0x05080000)
00:24:50 Connected SERIAL/57600 8 N 1
```

```
COM3 - PuTTYtel
Session Special Command Window Logging Files Transfer Hangup ?
.FLASH: Sector erase (addr: 0x050e0000)
.FLASH: Sector erase (addr: 0x050f0000)
.FLASH: Sector erase (addr: 0x05100000)
.FLASH: Sector erase (addr: 0x05110000)
.FLASH: Sector erase (addr: 0x05120000)
.FLASH: Sector erase (addr: 0x05130000)
.FLASH: Sector erase (addr: 0x05140000)
.FLASH: Sector erase (addr: 0x05150000)
.FLASH: Sector erase (addr: 0x05160000)
.....
... Erase from 0x053f0000-0x053fffff: FLASH: Sector erase (addr: 0x053f0000)
... Program from 0x007b0000-0x007c0000 to 0x053f0000: FLASH: Programming... (target: 0x053f0000 source: 0x007b0000 bytes: 131072)
... Erase from 0x05030000-0x0516ffff: .....
... Program from 0x0000e7b4-0x00140774 to 0x05030000: FLASH: Programming... (target: 0x05030000 source: 0x0000e7b4 bytes: 131072)
.FLASH: Programming... (target: 0x05040000 source: 0x0001e7b4 bytes: 131072)
00:25:07 Connected SERIAL/57600 8 N 1
```

```
COM3 - PuTTYtel
Session Special Command Window Logging Files Transfer Hangup ?
.FLASH: Sector erase (addr: 0x05160000)
.....
... Erase from 0x053f0000-0x053fffff: FLASH: Sector erase (addr: 0x053f0000)
... Program from 0x007b0000-0x007c0000 to 0x053f0000: FLASH: Programming... (target: 0x053f0000 source: 0x007b0000 bytes: 131072)
... Erase from 0x05030000-0x0516ffff: .....
... Program from 0x0000e7b4-0x00140774 to 0x05030000: FLASH: Programming... (target: 0x05030000 source: 0x0000e7b4 bytes: 131072)
.FLASH: Programming... (target: 0x05040000 source: 0x0001e7b4 bytes: 131072)
.FLASH: Programming... (target: 0x05050000 source: 0x0002e7b4 bytes: 131072)
.FLASH: Programming... (target: 0x05060000 source: 0x0003e7b4 bytes: 131072)
.FLASH: Programming... (target: 0x05070000 source: 0x0004e7b4 bytes: 131072)
.FLASH: Programming... (target: 0x05080000 source: 0x0005e7b4 bytes: 131072)
.FLASH: Programming... (target: 0x05090000 source: 0x0006e7b4 bytes: 131072)
.FLASH: Programming... (target: 0x050a0000 source: 0x0007e7b4 bytes: 131072)
.FLASH: Programming... (target: 0x050b0000 source: 0x0008e7b4 bytes: 131072)
.FLASH: Programming... (target: 0x050c0000 source: 0x0009e7b4 bytes: 131072)
00:25:19 Connected SERIAL/57600 8 N 1
```

```
COM3 - PuTTYtel
Session Special Command Window Logging Files Transfer Hangup ?
.FLASH: Programming... (target: 0x050f0000 source: 0x000ce7b4 bytes: 131072)
.FLASH: Programming... (target: 0x05100000 source: 0x000de7b4 bytes: 131072)
.FLASH: Programming... (target: 0x05110000 source: 0x000ee7b4 bytes: 131072)
.FLASH: Programming... (target: 0x05120000 source: 0x000fe7b4 bytes: 131072)
.FLASH: Programming... (target: 0x05130000 source: 0x0010e7b4 bytes: 131072)
.FLASH: Programming... (target: 0x05140000 source: 0x0011e7b4 bytes: 131072)
.FLASH: Programming... (target: 0x05150000 source: 0x0012e7b4 bytes: 131072)
.FLASH: Programming... (target: 0x05160000 source: 0x0013e7b4 bytes: 16256)
.
... Erase from 0x053f0000-0x053fffff: FLASH: Sector erase (addr: 0x053f0000)
.
... Program from 0x007b0000-0x007c0000 to 0x053f0000: FLASH: Programming... (ta
rget: 0x053f0000 source: 0x007b0000 bytes: 131072)
.
Completed Burn
Resetting unit...
00:25:37 Connected SERIAL/57600 8 N 1
```

You will be informed that the ‘burn’ is finished when ‘Completed Burn’ and ‘Resetting unit...’ are displayed. The DeviceMaster will automatically reboot and load the new firmware.

Close the window.

Repeat the process to upload the Bootloader file. The only difference will be the file selected to Transfer.