

!!!!!!!!!!!!Please Read before upgrading!!!!!!!!!!!!

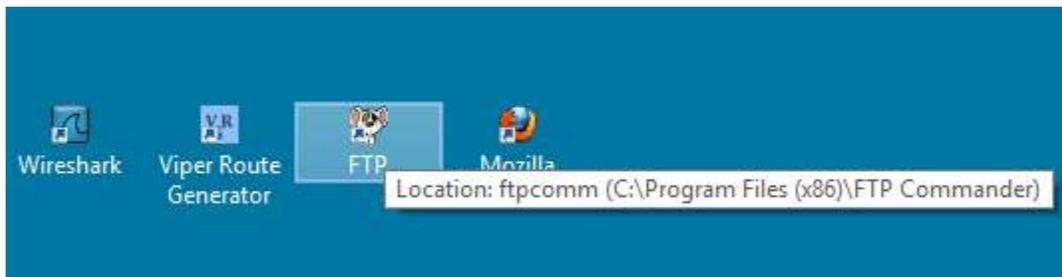
This procedure details how to upgrade **only the Viper SC** modem and radio firmware. This procedure cannot be used to upgrade a **non-Viper SC**. Please refer to the non-Viper SC firmware upgrade procedure. **Damage to a non-Viper SC can occur** if you try to use this procedure and files intended for a Viper SC.

Viper SC Firmware Upgrade Procedure

The Viper SC has an internal file system that the Viper's operating system accesses to display web pages and to perform operational tasks. The Viper's operating system itself is contained in the Viper's file system. The Viper's firmware can be upgraded by transferring new files in to the Viper's file system. The file transfer protocol (FTP) is used to transfer the files required to upgrade the Viper. A FTP utility must be used to transfer these files to the Viper. Any FTP utility can be used including the Windows DOS FTP utility, Filezilla, however CalAmp recommends using FTP Commander. The FTP Commander has a free download on their web site that the user can download.

CalAmp will provide the user with a firmware upgrade folder that will contain all the files required to upgrade the Viper's firmware. The user should store the upgrade folder to a known location on their PC.

Start up the FTP Commander utility.



FTP Commander Utility

Click on the New Server button and enter in the basic information required such as User ID, Password, Name, and FTP Server. The FTP Port number must be 21. In this example, see the below entries. CalAmp recommends using the FTP Server IP address also as the Name.

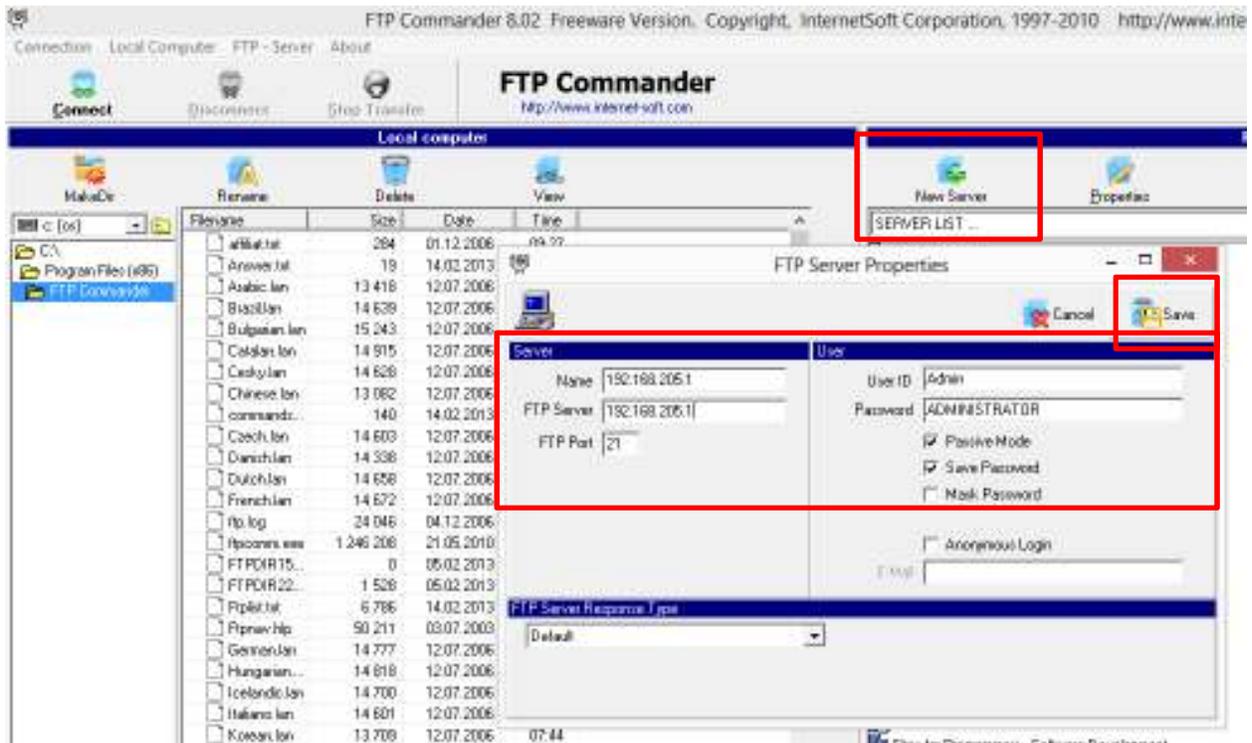
User ID: Admin

Password: ADMINISTRATOR

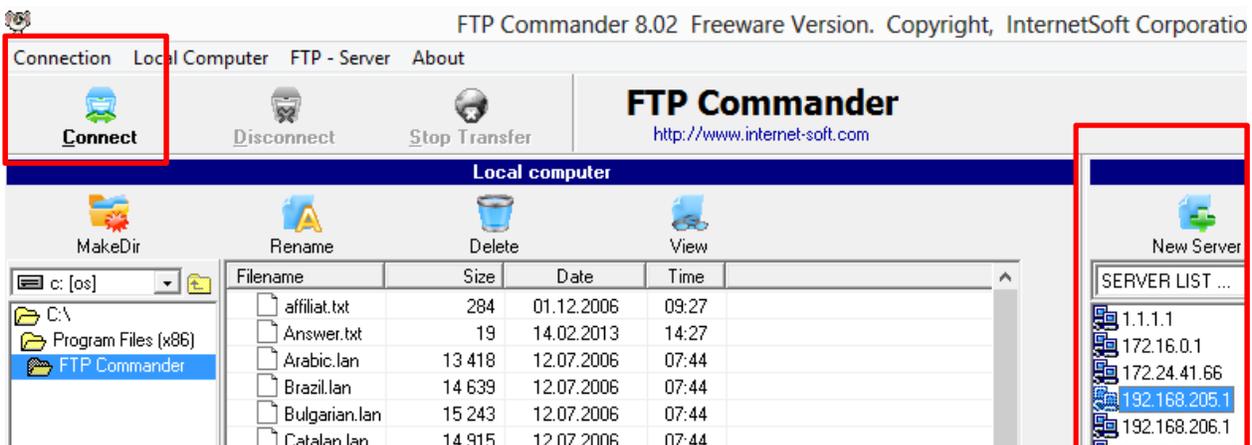
Name: 192.168.205.1

FTP Server: 192.168.205.1

Then Click the Save button.

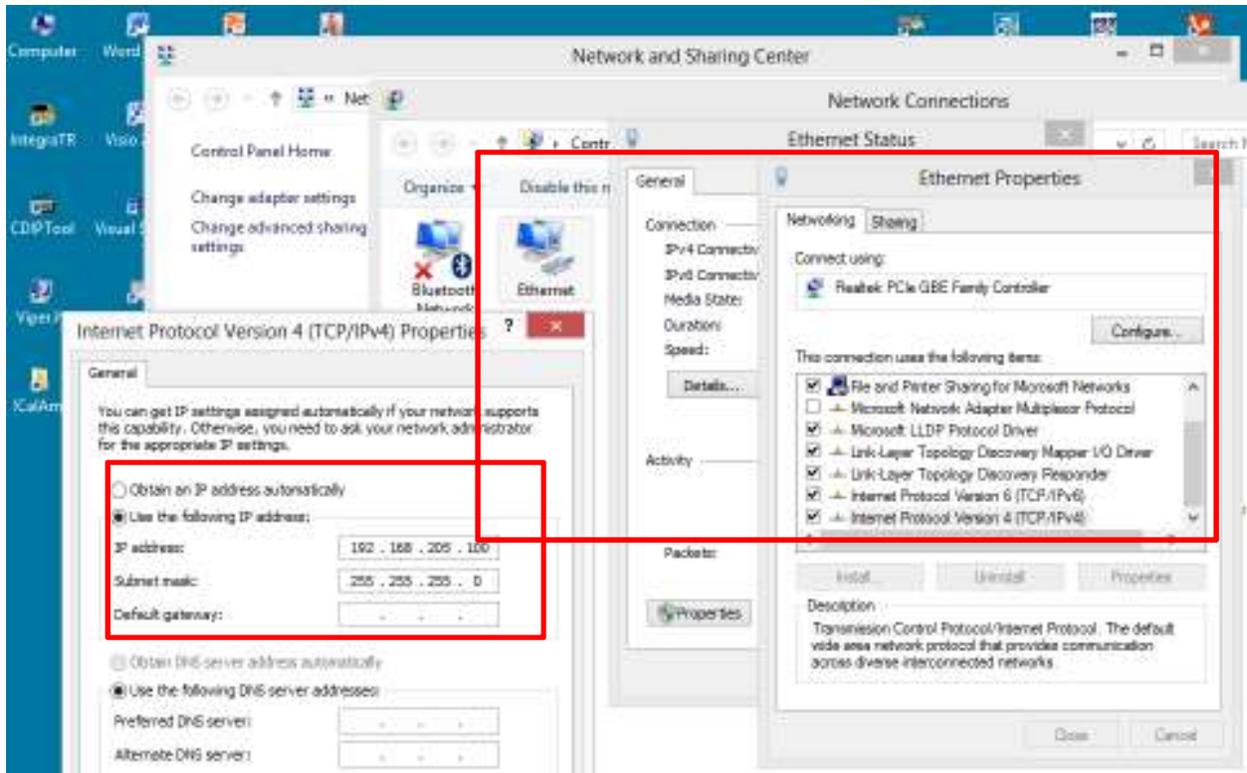


This will add a new server to the list to choose from on under the Server List on the right panel. Highlight the new server just added. The user can modified the server properties to upgrade multiple Vipers or just add new servers.



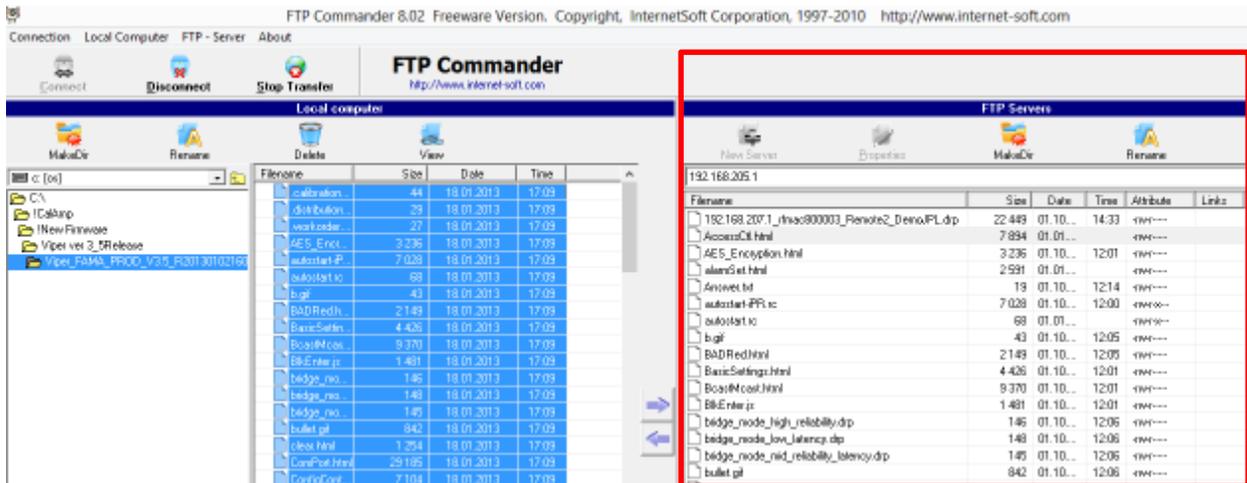
Viper Server 192.168.205.1 Selected

Click on Connect button FTP to read all the files that are currently in the Viper SC. The FTP Commander will try to connect to the Viper SC via the PC's Ethernet LAN 45 connection. The user's PC must be on the same subnet as the Viper SC. In this example the PC's IP LAN connection is 192.168.205.100.



User PC's LAN IP Address 192.168.205.100

If FTP Commander connects successfully, then the right panel of the FTP utility will be populated with the listing of all the files in the Viper SC.



Files in the Viper SC

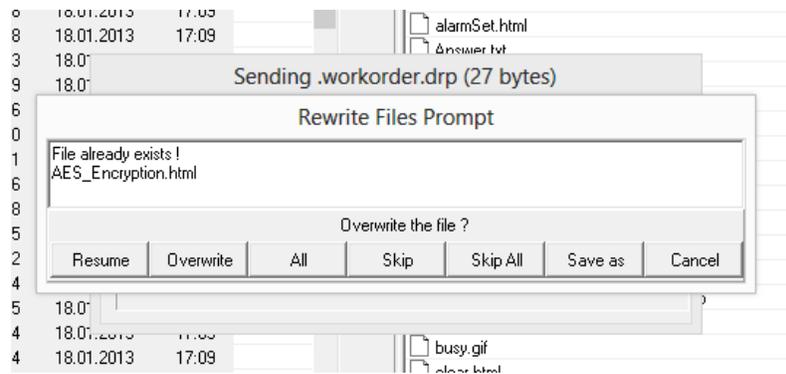
In this example the Viper's upgrade folder containing all the files to upgrade have been stored on the C:\ drive at the location shown below.



Viper Upgrade Folder Location

Once the folder has been selected, click on a single file then right click and select all to select all the files in the upgrade folder sent by CalAmp. All the files should be highlighted in the left panel of the FTP utility as shown above. Click on the arrow pointing to the right to start the FTP process.

The user will be asked to Overwrite all the files. **The user must select all.**



Overwrite All

A progression popup window will show the files being transferred from the PC to the Viper. When all the files have been transferred, the FTP utility will indicate Transfer Complete in the lower left corner of the FTP window.



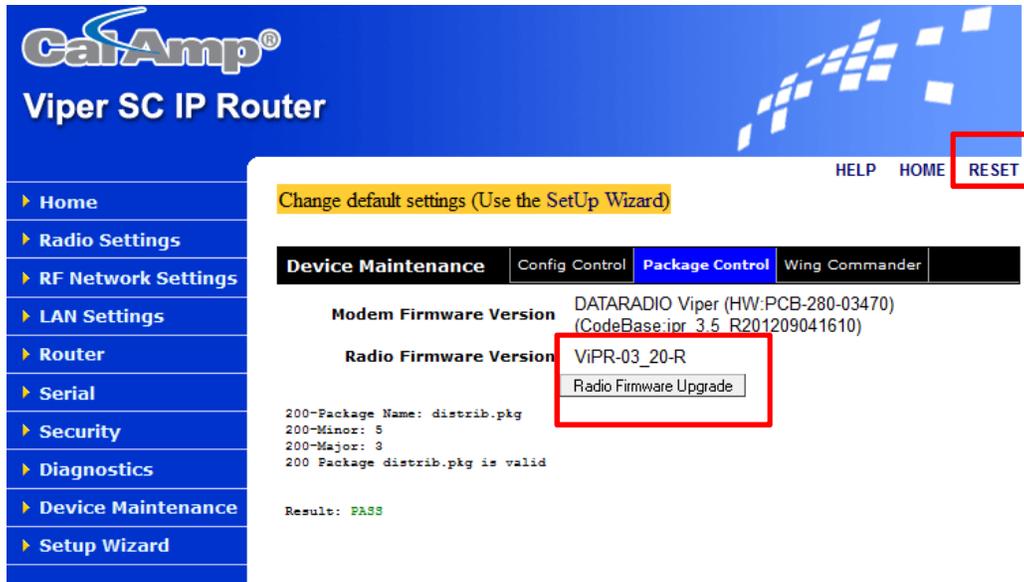
File Transfer Complete

This completes the file transfer. The user must now check the Viper to ensure all the files have been transferred correctly. The user must start up a web browser and navigate to the Device Maintenance page, then to the Package Control tab. The Package Control tab will indicate if a file has failed the file check.



The Package Control will indicate if a file has failed.

If a file fails the test then the single file can be transferred again or the entire folder can be transferred again. Once all the files have passed the user must also click on the Radio Firmware Upgrade button to also upgrade the Radio firmware which is different than the Viper's modem firmware. The Radio firmware was contained in the files transferred to the Viper. Sometimes the Radio will not need to be updated but clicking on the Radio Firmware Upgrade button will upgrade the file if need be.

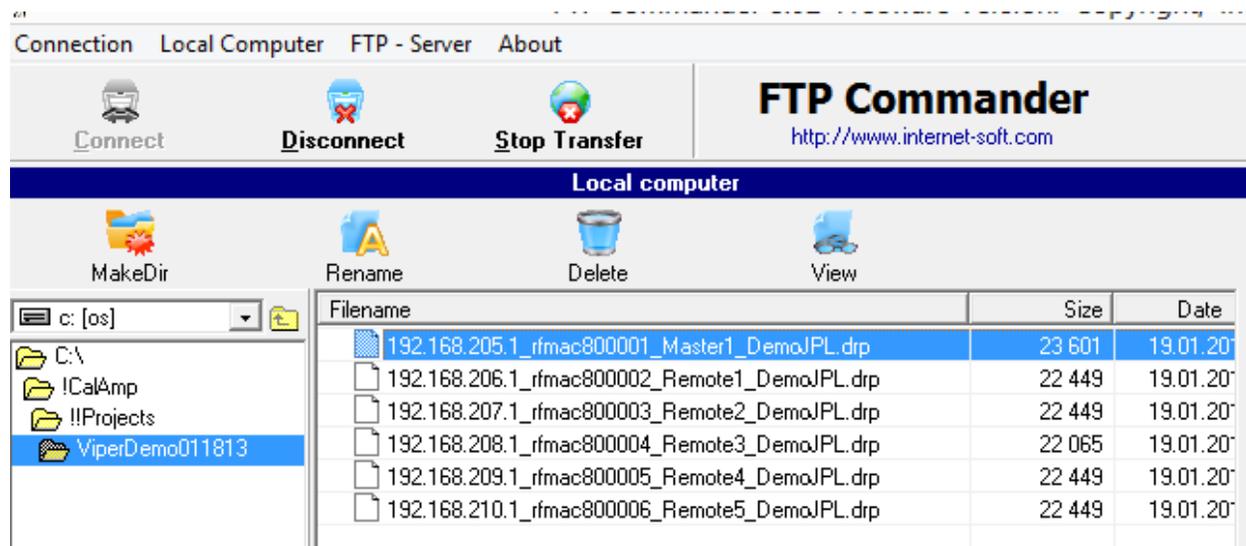


Radio Firmware Upgraded

The user must Reset the viper to complete the Firmware Upgrade process. Click the Reset button then the Reboot button then the OK to complete the Viper Reset and firmware upgrade process.

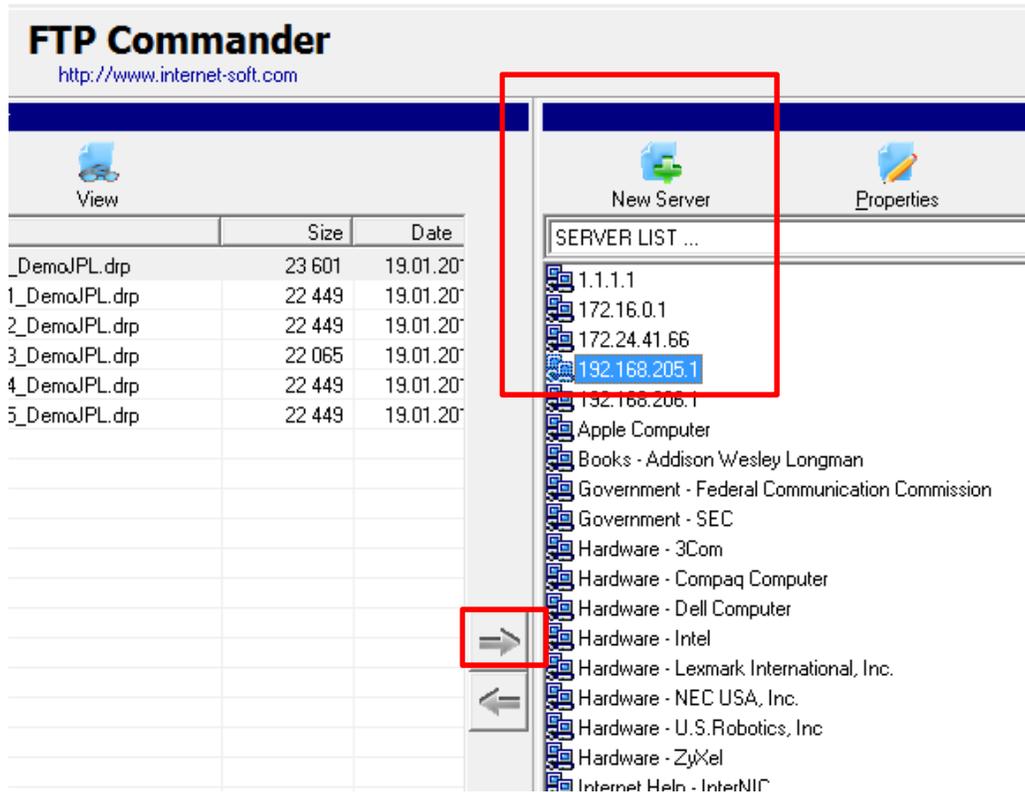
Cloning A Viper's Configuration file (.drp file)

Sometimes a Viper unit in the field must be replaced. It is possible to transfer it's configuration to the new a new radio. The process is very similar to the firmware upgrade procedure just described. The Viper's configuration file is stored with the file extension **.drp**. In this example the configuration was created by the Viper Route Generator application and stored in a project folder.

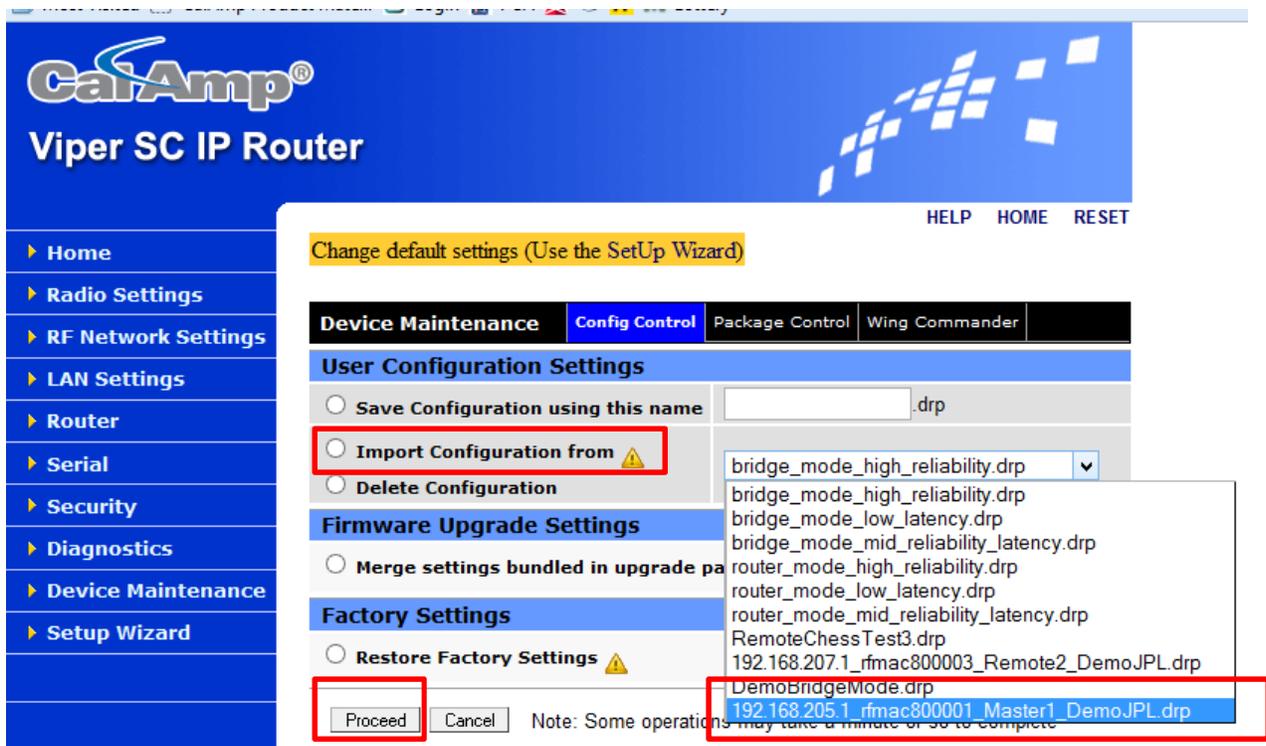


Highlight the desired .drp configuration file to transfer to the Viper

In this example the **192.168.205.1_rfmac800001_Master...** file was selected. Connect to the Viper's files as before by selecting the Vipers Server IP address in the FTP Server list.



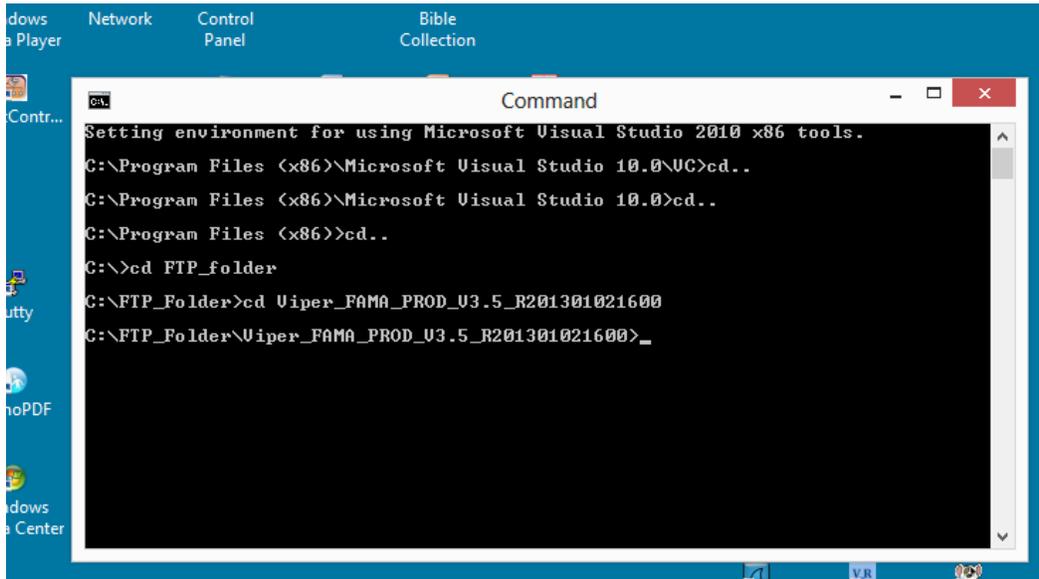
Click on the Right transfer arrow to transfer the single file to the radio. Once the single .drp file has been transferred, navigate to the Device Maintenance page again but use the Config Control tab.



In the drop down box select the desired file to import (clone), then click on the Import Configuration from button. Click the Proceed button and this will import the new configuration file to the Viper. The user can now check the new configuration before resetting the Viper. If the configuration is correct, click on the Reset button to complete the clone process. The new configuration will only take affect after resetting the Viper. This completes the cloning process.

Using the DOS FTP Utility to Upgrade the Viper's Firmware

Store the Vipers firmware upgrade folder to a known location. In this example the FTP_Folder directory is used. Use the **CD** command to change to the required directory. The **CD..** commands backs up one directory at a time. As before ensure your PC's IP address is on the same subnet as the Viper to be upgraded. Refer to the previous procedure if need be.



```
Setting environment for using Microsoft Visual Studio 2010 x86 tools.
C:\Program Files (x86)\Microsoft Visual Studio 10.0\VC>cd..
C:\Program Files (x86)\Microsoft Visual Studio 10.0>cd..
C:\Program Files (x86)>cd..
C:\>cd FTP_folder
C:\FTP_Folder>cd Uiper_FAMA_PROD_U3.5_R201301021600
C:\FTP_Folder\Uiper_FAMA_PROD_U3.5_R201301021600>_
```

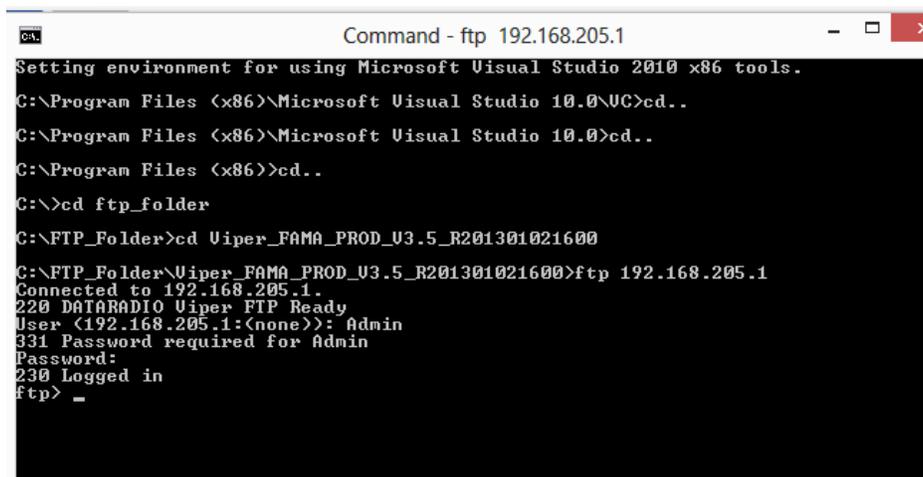
Change to the desire directories

Start the FTP DOS utility by connecting to the Viper's Ip address:

```
ftp 192.168.205.1
```

Enter the user name: **Admin**

And the password of **ADMINISTRATOR** to log in to the viper's FTP server.



```
Setting environment for using Microsoft Visual Studio 2010 x86 tools.
C:\Program Files (x86)\Microsoft Visual Studio 10.0\VC>cd..
C:\Program Files (x86)\Microsoft Visual Studio 10.0>cd..
C:\Program Files (x86)>cd..
C:\>cd ftp_folder
C:\FTP_Folder>cd Uiper_FAMA_PROD_U3.5_R201301021600
C:\FTP_Folder\Uiper_FAMA_PROD_U3.5_R201301021600>ftp 192.168.205.1
Connected to 192.168.205.1.
220 DATARADIO Viper FTP Ready
User (192.168.205.1:(none)): Admin
331 Password required for Admin
Password:
230 Logged in
ftp> _
```

Type the following DOS ftp commands to transfer the files to the Viper:

ftp> **prompt** (enter key)

ftp> **hash** (enter key)

ftp> **mput *** (enter key)

```
C:\FTP_Folder\Viper_FAMA_PROD_U3.5_R201301021600>ftp 192.168.205.1
Connected to 192.168.205.1.
220 DATARADIO Viper FTP Ready
User (192.168.205.1:(none)): Admin
331 Password required for Admin
Password:
230 Logged in
ftp> prompt
Interactive mode Off .
ftp> hash
Hash mark printing On  ftp: (2048 bytes/hash mark) .
ftp> mput *

```

This will transfer all the files in the **current ftp directory**. **It is extremely important to have only the Viper firmware files and no other files in this directory.**

```
Now writing to flash...
226 File written to flash - 15872 bytes in 1.005 sec
ftp: 15872 bytes sent in 0.00Seconds 3968.00Kbytes/sec.
200 Port command okay
150 Opening data connection for STOR command (WCP.html)
#####
226-File received OK - 10376 bytes in 0.045 sec
Now writing to flash...
226 File written to flash - 10376 bytes in 1.000 sec
ftp: 10376 bytes sent in 0.01Seconds 1729.33Kbytes/sec.
200 Port command okay
150 Opening data connection for STOR command (Working.html)
226-File received OK - 773 bytes in 0.030 sec
Now writing to flash...
226 File written to flash - 773 bytes in 1.000 sec
ftp: 773 bytes sent in 0.00Seconds 773.00Kbytes/sec.
ftp> close
221 Goodbye!
ftp>

```

Once all the files have been transferred type

ftp> **close** (enter key)

This will close the ftp connection, and then type **quit** to return back to the normal command prompt directory. This completes the DOS FTP procedure. Note that this process can also be used to transfer a **single** configuration **.drp** file to clone a Viper as well. Just have only the **single .drp file in the current ftp directory.**

