



## How to Update Falcon Firmware using a 1K X-Modem

*For models FMS8, FMS20, FMS20U, FMS32, FLS,  
FLS-M, FMS-X/FMS-XXXX Series & FLS-X*

1. Download the latest firmware from our support page at [www.rletech.com](http://www.rletech.com) , or contact us directly via email at [support@rletech.com](mailto:support@rletech.com) . Be sure to select the appropriate firmware for your Falcon model.
  - FMS8, 20, 20U and FMS32 Falcons support firmware version 6.x **only**.
  - FLS and FLS-M (Falcon Lite) support firmware version 2.x **only**.
  - FMS-X/FMS-XXXX support firmware version 7.x **only**.
  - FLS-X (Falcon Lite II) supports firmware version 7.x **only**.
2. Copy the Falcon firmware to a directory on the PC.
3. Connect to the Falcon using HyperTerminal. For instruction on how to do so, see our support document: "How to Connect to HyperTerminal".
4. From the Main Menu, enter EX <enter> to exit to Bootloader.

```
** System Menu/Help **
SS - System Status
CA - Current Alarms
KA - Kill All Alarms
LM - Log Menu
TI - Display Date/Time
AD - ADC Input Values
MS - Modem Stats
NS - Network Stats
SC - System Config
DU - Dump Network Packets
NT - Network Trace
EX - Exit to Bootloader
EX

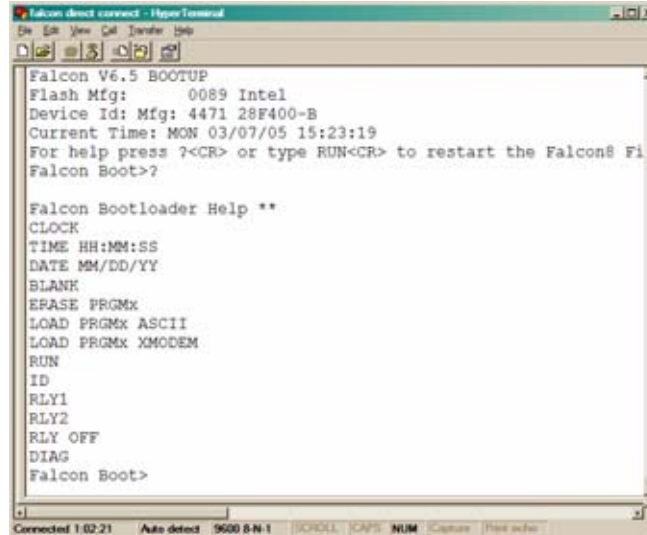
Falcon V6.5 BOOTUP
Flash Mfg:      0089 Intel
Device Id: Mfg: 4471 28F400-B
Current Time:  MON 03/07/05 15:17:28
For help press ?<CR> or type RUN<CR> to restart the Falcon8 Fi
Falcon Boot>
```



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- From the Falcon Boot prompt, type ? <enter> to see the list of available commands.



```
Falcon direct connect - HyperTerminal
Falcon V6.5 BOOTUP
Flash Mfg: 0089 Intel
Device Id: Mfg: 4471 28F400-B
Current Time: MON 03/07/05 15:23:19
For help press ?<CR> or type RUN<CR> to restart the Falcon8 Fi
Falcon Boot?

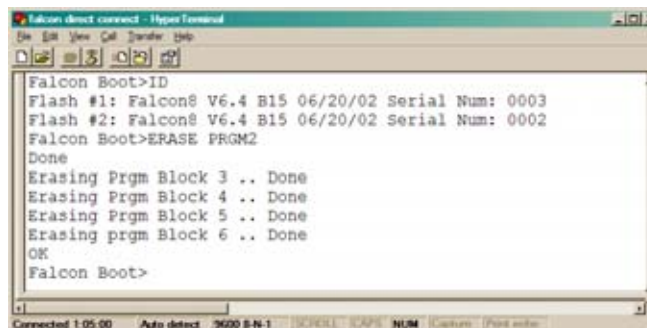
Falcon Bootloader Help **
CLOCK
TIME HH:MM:SS
DATE MM/DD/YY
BLANK
ERASE PRGMx
LOAD PRGMX ASCII
LOAD PRGMX XMODEM
RUN
ID
RLY1
RLY2
RLY OFF
DIAG
Falcon Boot>
```

- From the Falcon Boot prompt, enter ID <enter>. Note which Flash has the lowest serial number. The Flash with the lowest serial number is the backup. The idea is to erase the backup, load the new version – which becomes the active flash, then erase and load the other Flash. In this example Flash #2 (program #2) is the backup because the serial number is lower than Flash #1.



```
Falcon direct connect - HyperTerminal
Falcon Boot>ID
Flash #1: Falcon8 V6.4 B15 06/20/02 Serial Num: 0003
Flash #2: Falcon8 V6.4 B15 06/20/02 Serial Num: 0002
Falcon Boot>_
```

- From the Falcon Boot Prompt, erase the back up Flash program (the one with the lowest serial number). Type ERASE PRGM1 <enter> or ERASE PRGM2 <enter>.



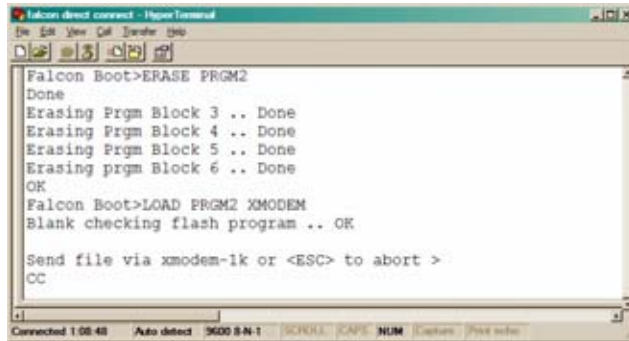
```
Falcon direct connect - HyperTerminal
Falcon Boot>ID
Flash #1: Falcon8 V6.4 B15 06/20/02 Serial Num: 0003
Flash #2: Falcon8 V6.4 B15 06/20/02 Serial Num: 0002
Falcon Boot>ERASE PRGM2
Done
Erasing Prgm Block 3 .. Done
Erasing Prgm Block 4 .. Done
Erasing Prgm Block 5 .. Done
Erasing prgm Block 6 .. Done
OK
Falcon Boot>
```



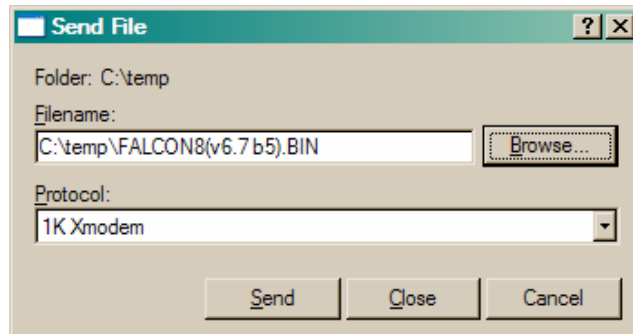
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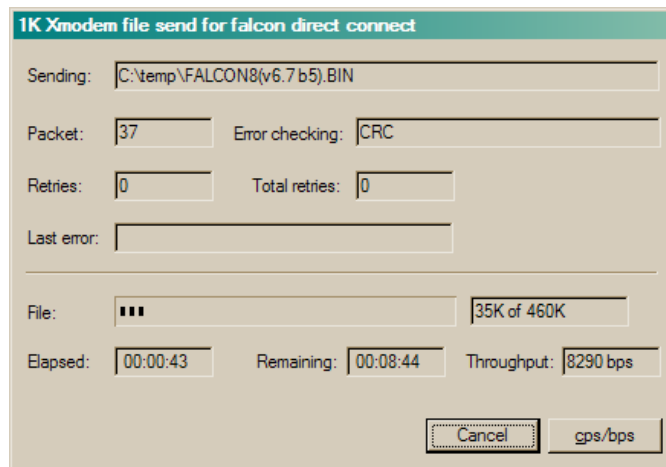
- From the Falcon Boot prompt, enter LOAD PRGM1 XMODEM <enter> or LOAD PRGM2 XMODEM <enter>. Select the same program that was erased.



- From the HyperTerminal menu select Transfer -> Send File. Use the browse button to select the Falcon firmware. Select the “1K Xmodem” protocol. Then click SEND.



- The following transfer status screen will be displayed. The transfer time will take about 10 minutes.





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11. Once the transfer is complete, the transfer status window will automatically close. The HyperTerminal window will indicate that the upload is complete.

```
Falcon Boot>LOAD PRGM2 XMODEM
Blank checking flash program .. OK

Send file via xmodem-1k or <ESC> to abort >
CC
Program upload complete

Setting checksum
Falcon8 V6.7 B05 04/30/04 Serial Num: 0004
Bytes = 473340
Blocks = 460
Falcon Boot>
```

12. From the Falcon Boot prompt, enter RUN <enter>. Verify that the correct Flash program runs. In this example, program 2 was erased and downloaded so Flash program 2 started.

```
Falcon Boot>RUN
Checking flash program 1 .. Checking flash program 2 .. Running flash program 2

System Bootup
Falcon8 V6.7 B05 04/30/04
Current time: 03/07/05 15:43:07

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NvRam Initialized @ 00020000
Initializing log @ 00028000
Loading Block 1
DATA LOADED
This device is an EIA-485 Master
Option Card Detected - 24DI
PC Ethernet address = 00:90:5B:02:01:1C
IP address = 10.0.0.107
Cold Start Completed
```

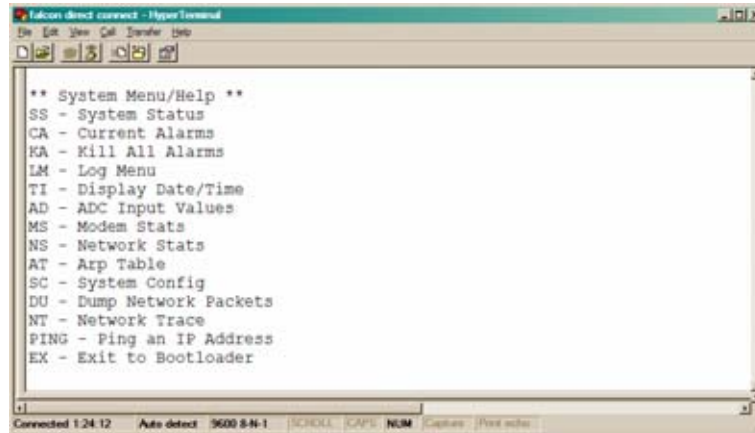
13. The Falcon will restart and run the new firmware.



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14. Press Enter to display the Falcon main menu.



```
Falcon direct connect - HyperTerminal
File Edit View Call Transfer Help
[Icons]
** System Menu/Help **
SS - System Status
CA - Current Alarms
KA - Kill All Alarms
LM - Log Menu
TI - Display Date/Time
AD - ADC Input Values
MS - Modem Stats
NS - Network Stats
AT - Arp Table
SC - System Config
DU - Dump Network Packets
NT - Network Trace
PING - Ping an IP Address
EX - Exit to Bootloader
[Icons]
```

Connected 1.24.12 Auto detect 9600 8-N-1 [SCROLL] [CAPS] NUM Capture Print setup

15. Repeat steps 4 thru 14 to erase and download to the other Flash program chip.

16. The firmware upgrade is complete. Verify that you can access the Falcon web pages. Disconnect the serial cable and close HyperTerminal.