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POTSwap™

Firmware Loading Instructions

Overview

The POTSwap operates on firmware that can be updated in order to incorporate new features or address operating issues. New firmware can be loaded via a connection to the POTSwap's SERIAL PORT (DB9 connector). The firmware upgrade procedure is accomplished using a terminal emulation program running on a personal computer (PC) and transferring the firmware using the Xmodem protocol.

Requirements:

- POTSwap
- PC running Windows, loaded with:
 - terminal emulation program
 - POTSwap binary file available on PC (file name takes the form 'wlr2_ddMMMyyyy_RCn.bin')
- DB9 serial cable (M-F straight thru)
- USB to serial DB9 adaptor (optional)

The terminal emulation program must have the ability to send a binary file using the Xmodem protocol. Acceptable programs include:

HyperTerminal	Included on Windows XP and earlier operating systems.
Terra Term	An open source terminal emulator.

Procedure:

Connect a serial cable from a PC COM port to the POTSwap

Start the terminal emulator program. Configure the COM port, 115200 baud, 8 data bits, no parity, one stop bit (8N1). Set the flow control to 'none'. Enable the connection.

Power the POTSwap, or use the reset push button to re-start it.

The POTSwap will output diagnostic information for 10 to 20 seconds, at the end of which the following is output:

```
POTSwap [version]
Entering Terminal Mode, 10 seconds to type first command
Type ? for help, Q to exit
FW: hh:mm:ss MMM DD YYYY
READY
```

Application Note 113

Procedure continued

You have 10 seconds to enter a “?” character followed by the “Enter” key.

(Otherwise it proceeds to begin normal operation.)

The POTSwap will respond with:

```
Terminal Mode Help - USART1 Debug Port (WLR) hh:mm:ss MMM DD YYYY
```

```
? , H      This help page
Q, QUIT    Exit Terminal Mode
DEBUG xx   Set Debug variable to supplied hex mask
DUMP Adr Len Dump memory
XMODEM Download upgrade binary
REBOOT Restart Application
CONFIG Configure Settings
READY:
```

Enter “xmodem” (not case sensitive) followed by the “Enter” key.

The POTSwap will respond with:

```
Waiting for XMODEM transfer..
```

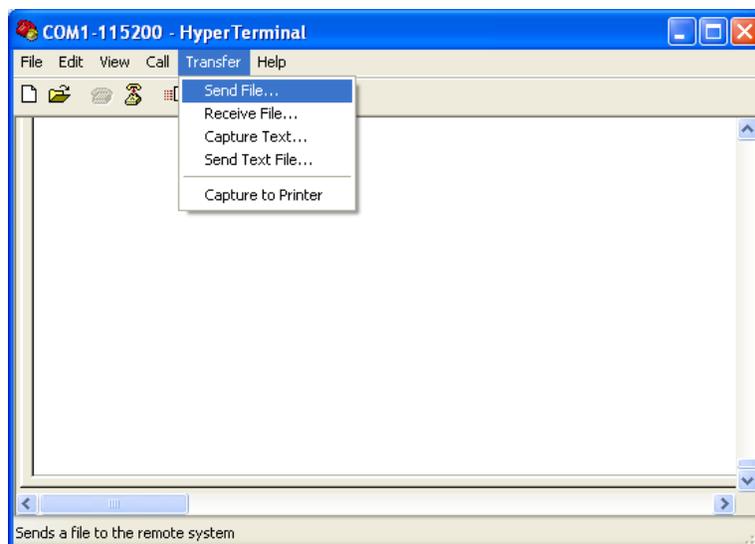
The POTSwap will begin sending ‘C’ characters to start the XMODEM transfer.

Begin the file transfer. Depending upon the terminal emulator being used, proceed as follows:

HyperTerminal:

From the HyperTerminal drop-down menus, select

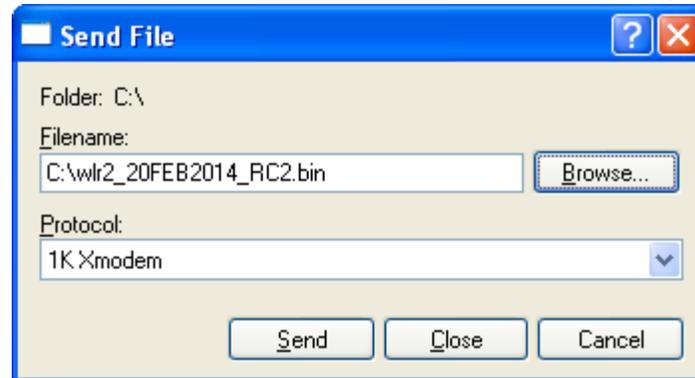
Transfer -> Send file



Application Note 113

Procedure continued

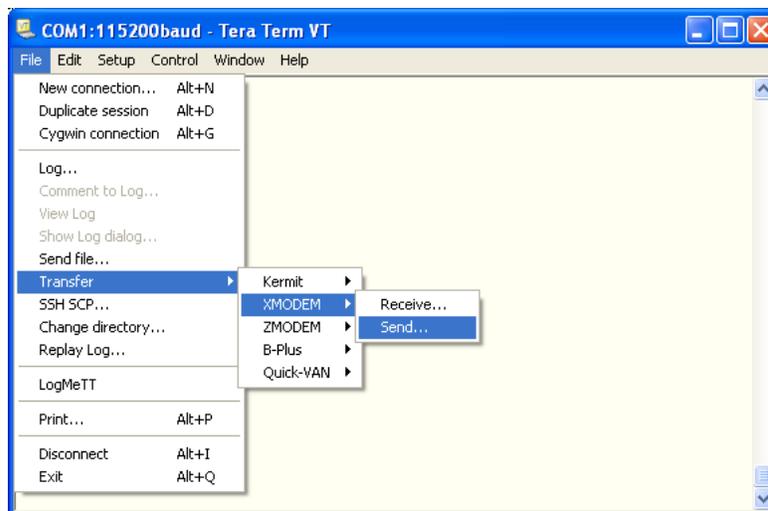
In the 'Send File' window, browse and select the POTSwap binary file. Make sure the Protocol is set to 1K Xmodem. Click on the 'Send' button.



HyperTerminal should display the transfer progress.

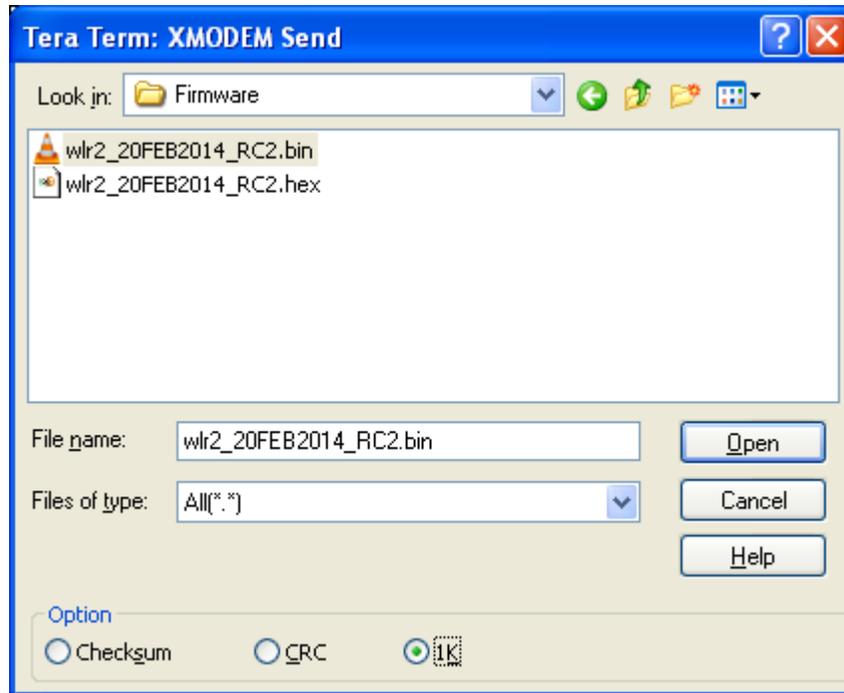
TeraTerm:

From the Tera Term drop-down menus, select
File -> Transfer -> XMODEM -> Send



Procedure continued

In the 'XMODEM Send' window, browse and select the POTSwap binary file. Make sure the '1K' Option is selected. Click on the 'Open' button.



Tera Term should display the transfer progress.

Completion

After a successful transfer, the POTSwap will repeatedly send the '.' (period) character. Press the 'Esc' (Escape) key and the POTSwap should respond with "READY - Stack:xxxx".

Enter "reboot" (not case sensitive) followed by the "Enter" key.

The POTSwap will reboot and install the new firmware.



Do not interrupt the power or press the RESET button on the POTSwap during the few seconds following the reboot. Doing so risks corrupting the new firmware load and rendering the POTSwap inoperative.