Chapter 3. UPDATING FIRMWARE

3.1 Introduction

TO ENSURE OPTIMAL PERFORMANCE, IT IS IMPORTANT TO OPERATE THE LPOD WITH ITS LATEST AVAILABLE FIRMWARE.

Comtech EF Data's LPOD family of Outdoor Amplifiers / Block Up Converters (BUCs) are factory-shipped with the latest version of operating firmware. Firmware updates may be applied to an LPOD system without having to remove it from operation. If a firmware update is needed, it can be acquired:

- By download from the Comtech EF Data Web site (www.comtechefdata.com);

- From Comtech EF Data Customer Support during normal business hours, via e-mail or on CD by standard mail delivery.

The LPOD Firmware Update process is as follows:

- Download the firmware update archive file via the Internet to a user-supplied Microsoft Windows®-compatible computer such as CEFD's LPOD*net* M&C Netbook Accessory and Kit.

- Use an adapter cable to connect the LPOD to the serial port of the user PC (or the Ethernet port of the LPOD*net*).

- Extract the firmware update files from the archive download file, and then transfer the files from the user PC to the LPOD via File Transfer Protocol (FTP).

3.2 FTP Upload Procedure

Step	Task
1	**Identify the LPOD product, its firmware number, and the firmware version required for download.** Using serial remote control, the firmware revision levels can be obtained with the following remote queries: *Abbreviated:* **<0/SWR?** *(returns basic Boot, Bulk1 and Bulk2 information)* **or** *Detailed:* **<0/FRW?** *(returns complete Boot, Bulk1 and Bulk2 information)* For more information on remote commands/queries, see **Chapter 5. SERIAL-BASED REMOTE PRODUCT MANAGEMENT.** Alternately, when using the Web Server Interface, the Bootrom, Image1 and Image2 firmware loads may be viewed using the **Config	Utility** or **Status	Status** page hyperlinks. For more information, refer to **Chapter 4.5 Web Server (HTTP) Interface**.
2	**Create a temporary folder** (directory) on an external PC: **(Note:** The drive letter **c:** is used in this example. Any valid writable drive letter can be used.) • *For Windows Explorer:* Select **File > New > Folder** to create a new folder, and then rename it from "**New Folder**" to "**temp**" or another convenient, unused name. Assuming "**temp**" works, a "*c:\temp*" folder should now be created. • *For Windows Command-line:* Click **[Start]** on the Windows taskbar, then click the "**Run...**" icon (or, depending on Windows OS versions *prior* to Windows 95, click the "**MS-DOS Prompt**" icon from the Main Menu). Then, to open a Command-line window… o *For Windows 95 or Windows 98* – Type "**command**". o *For any Windows OS versions later than Windows 98* – Type "**cmd**" *or* "**command**". *Alternately,* from **[Start],** select *All Programs > Accessories > Command Prompt*. o At the Command-line prompt (c:\>), type "**mkdir temp**" or "**md temp**" (without quotes – **mkdir** and **md** stand for *make directory*). This is the same as creating a new folder from Windows Explorer. There should now be a "*c:\temp*" subdirectory created.

Step	Task
3	**Download the correct firmware file to this temporary folder:** a) Go online to: www.comtechefdata.com. b) On the *Main* page – under Support Information or the Support tab, select the Software Downloads hyperlink. Alternately, from the *Support* page: Click the *Software Downloads* hyperlink. c) Click the *Download Flash and Software Update Files* icon. d) Click the *(Select a Product Line:) Amplifiers* hyperlink provided on the *Flash and Software Update Files* page. e) Click the *LPOD* product hyperlink. f) Select the appropriate firmware hyperlink. **About Firmware Numbers, File Versions, and Formats:** Comtech EF Data's Web site catalogues its firmware update files by product type (e.g., modem, converter, etc.) and specific model/optional configuration. For the LPOD, the firmware download hyperlink appears as **F0000078X_V###**, where 'X' denotes the revision letter, and V### represents the firmware version. The current version firmware release is provided; if applicable, one version prior to the current release is also available. Be sure to identify and download the desired version. The downloadable files are stored in two archive formats: ***.exe** (self-extracting) and ***.zip** (compressed). Some firewalls will not allow the downloading of ***.exe files**; in this case, download the ***.zip** file instead. For additional help with "zipped" file types, refer to *PKZIP for Windows*, *WinZip*, or *ZipCentral* help files. *PKZIP for DOS* is not supported due to file naming conventions.
4	**Extract the files into the temporary folder on the PC.** At least two files should be extracted: • *The bulk image file*, FW-0000078X.bin, *where 'X' denotes the firmware revision letter;* • *The firmware release notes.*
5	**Confirm** that the files have been extracted to the specified temporary folder on the PC. In DOS, use "**cd c:\temp**" to change to the temporary directory created in Step 2, then use the "**dir**" command to list the files extracted from the downloaded archive file.
6	Connect the PC to the LPOD's **J6 / COM1** port using the appropriate adapter cable.
7	**Send a "ping" command** to the LPOD to verify the connection and communication: *First*, determine the IP address of the LPOD using remote query: • **Via Remote Control:** Use **<0/IPA?** query; *Then*, **using Command-line to PING:** At the Command-line prompt, type "**ping *xxx.xxx.xxx.xxx***" (where '*xxx.xxx.xxx.xxx*' is the IP address of the LPOD). The results should confirm whether or not the LPOD is connected and communicating.

Step	Task
8	**Initiate an FTP session** with the LPOD (this example uses Command-line):
	a) From the PC, at the prompt type "**ftp xxx.xxx.xxx.xxx**" where 'xxx.xxx.xxx.xxx' is the IP address of the LPOD.
	b) Verify the FTP transfer is *binary* by typing "**bin**".
	c) Type "**prompt**" then type "**hash**" to facilitate the file transfer.
9	**Transfer the files.**
	a) Type "**put FW-0000078X.bin bulk:**" (where 'X' denotes the firmware revision letter) to begin the file transfer. **Note:** The destination "bulk:" must be all lower case.
	b) **Wait** while the file transfers.
10	**Verify the file transfer.**
	a) **Terminate the FTP session** by typing "**bye"** and closing the Command-line window.
	b) **Verify** that the new file has properly loaded, as described in **Step 1**.
11	**Clear trending data**. After switching to the new firmware, trending data should be cleared by the following remote command: **<0/CTD=1**

The FTP Upload Procedure is now complete.