JANUS REMOTE

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LTE POTSwapTM Firmware Loading Instructions

Overview

The LTE 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 CONFIG port (USB mini 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:

- LTE POTSwap
- USB-to-mini USB cable
- PC running Windows, loaded with:
 - SiLabs CP210x USB to UART Bridge driver for the POTSwap USB CONFIG port.
 - Terminal emulation program with Xmodem-1K file transfer support.
 - POTSwap binary file. Available for download on the Janus website. (File name takes the form 'POTSWAP3-LTE-yymmdd-RCn.bin')

The SiLabs CP210x USB to UART Bridge driver may be automatically installed by the Windows operating system when the POTSwap is connected to a PC with internet access.

The driver is also available from Sllicon Laboratories at:

```
www.silabs.com/developers/usb-to-uart-bridge-vcp-drivers
```

The terminal emulation program must have the ability to send a binary file using the XMODEM-1K protocol. Acceptable programs include:

- ExtraPuTTY A PuTTY variant that includes support for the XMODEM-1K file transfer protocol.
- Terra Term An open source terminal emulator.
- HyperTerminal Included on Windows XP and earlier Windows operating systems.

This Application Note uses the ExtraPuTTY program to demonstrate the POTSwap firmware loading procedure.

ExtraPutty can be downloaded from:

www.sourceforge.net/projects/extraputty/

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Procedure:

This procedure demonstrates LTE POTSwap firmware loading using the ExtraPutty application.

With the POTSwap powered on connected via the USB CONFIG port, use the Windows Device Manager to determine the COM port that the POTSwap is using:



Open ExtraPutty.

On the configuration page, select "Terminal" under the Category list.

Check the box for "Implicit CR in every LF"

🕵 PuTTY Configuration (Save mode : File)						×
Category:						
Session	^	Op	tions controlling the term	inal emulation		
	<	Set various terminal op Auto wrap mode ir DEC Origin Mode Implicit CR in ever Use background of Enable blinking te: Answerback to ^E: PuTTY Line discipline options				
Translation Selection Colours Hyperlinks Onnection Proxy Telnet Rlogin €		Local echo: Auto Local line editing: Auto Remote-controlled prin Printer to send ANSI p	Force on Force on Tring Force output to:	Force off	:	~
About	~		O	pen	Cancel	



Procedure continued

On the configuration page, select "Session" under the Category list.

Set Connection Type to Serial

Set the Serial line to the COM port determined by Device Manager.

Set the Speed to 115200

It is suggested to give these settings a name and save them.

🕵 PuTTY Configuration (S	-		\times	
Category:				
	Basic options for your PuTTY s	ession		
Logging	Specify the destination you want to connect to			
. Kevboard	Serial line	S	peed	
Bell	COM4		15200	>
Features	Connection type:			
ExtraPullY	Curterm	ББН	 Senal 	ノー
StatusBar	Cygrein			
	Load, save or delete a stored session			
Window	Saved Sessions			
	COM4-115200			_
Translation	COM4-115200		Load	
Selection			Save	
Colours			Delete	
			Delete	
Data				
Proxy				
Rlogin	Close window on exit:			
⊕ SSH	O Always O Never	Only	on clean exi	t
Serial	O Never, Auto-Connect			
About	Open		Cancel	

Start the terminal emulator program.

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

The POTSwap will output diagnostic information for about 30 seconds, at the end of which the following is output:

```
WireLine III Board - 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
```

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:

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

?, H This help page

Q, QUIT Exit Terminal Mode

XMODEM Download upgrade binary

UPDATE Update Application

REBOOT Restart Application

CONFIG Configure Settings

IDENTIFY Display PHONE#/IMEI/MEID

APN Context Access Point Name

READY - Stack:nnn
```



Procedure continued

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 while it waits for the XMODEM transfer.

[At this point you can abandon the file transfer by sending the <ESC> character two times.]

From the drop-down menu at the top of the ExtraPutty window select:

File Transfer >> Xmodem 1k >> Send.

Putty							_		\times	
Session	Special Com	mand	Window	Logging	Files Transfer	Hangup	?			
					Ymodem	1	>	1		^
					Xmodem		>			
					Xmodem	1K	>	Sen	d	
					Zmodem	I.	>	Rec	eive	
					TFTP		>]			
					FTP		>			
							_			
00:02:13 C	onnected	SERIAL/	115200 8 N	1						

POTSwap will send a series of "." (period) characters when the transfer is complete.

Pres ESC, POTSwap should respond with 'READY".

Enter "UPDATE" followed with <enter>.

Potswap will respond with:

Update Flash..

If the POTSwap does not automatically reboot, power cycle it.



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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.

