SIERRA WIRELESS

HEART OF THE WIRELESS MACHINE®

MC8790 / MC879xV

K1_1_1_9ap & K1_1_1_6bt

Release Notes & Upgrade Instructions

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1 General

1.1 Purpose

This document is intended to capture technical changes to the MC8790 card release package. The document covers changes in the hardware design and modem firmware (Bootloader and Application).

These release notes are NOT intended for the end user.

A new revision of this document will be issued when any of the firmware components of the product are updated.

1.2 Scope

This document covers issues that affect carriers and end users.

In this document, unless noted otherwise, MC8790 shall refer to the MC8790 and MC879xV device family.

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2 Installing and Upgrading the Release

2.1 Download the entire necessary upgrade files

Download the files and follow any additional instructions from the restricted access MiniCard SharePoint website:

From: www.sierrawireless.com/minicard

Please contact your Sierra Wireless representative for access information.

There are two methods of upgrading a module, One-Click Tools and binary files. One-Click Tools are supplied in EXE format and are meant to run on Windows platforms such as on a PC which is connected to a MiniCard dev kit. Binary files are supplied in CWE format and may be used when the module is in the target platform. The following table summarizes the file types to use for each method.

	One-Click Tools	**Binary Files***
Application	K1.1-Release2-K1_1_1_6BT_K1_1_1_9AP.exe	K1_1_1_9ap.cwe
Boot loader	Included in above	K1_1_1_6bt.cwe

*Note that the CWE files are contained in a zip file

2.2 Windows One-Click Tools

This software tool supports the Sierra Wireless MC8790 series on the following Microsoft Operating Systems:

1. Windows XP SP2 (Service Pack 2) or higher
2. Windows 2000 SP4 (Service Pack 4)
3. Windows Vista

Sierra Wireless MC8790 firmware upgrades are provided in a One-Click Tool that contains the binary firmware files within it. Before you start your upgrade, please ensure the following:

- Your computer is connected to an AC power supply, or that it has at least ½ hour of battery life remaining
- Please close all active sessions such as Hyperterminal, etc. that you may have open, debug logging sessions, etc.
- Please ensure that your card is powered and operating normally

To proceed with the firmware upgrade, please follow the next steps:

1. Click on the One-Click Tool executable to start the upgrade process
2. When the One-Click Tools runs, starts you will see the following image:

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3. The firmware upgrade should run automatically. If not, then click OK to begin the upgrade process.

NOTE: The upgrade can take up to 10 minutes to complete. Do not remove the power to either the laptop or the card until the One-Click Tool announces that the upgrade has been successful, as shown below.

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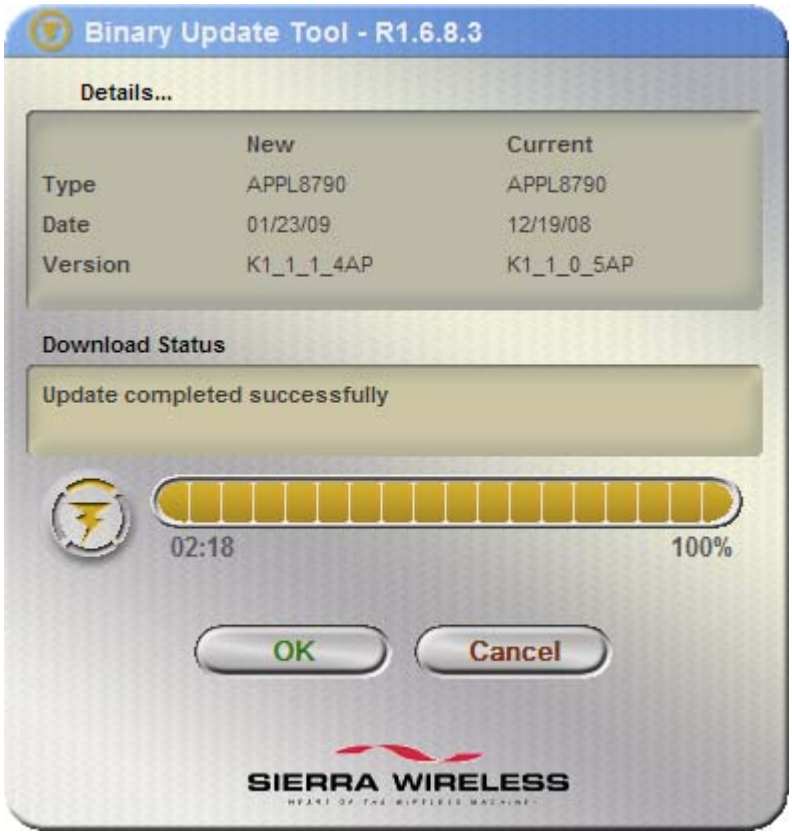

NOTE 1: When a boot image is released it is usually bundled with the application firmware within the same One-Click Tool executable. That One-Click Tool will automatically install both the boot and application images for you.

2.3 Binary Files

If you are using binary CWE files to update your module, your platform must be setup to handle these files. Use the method that you have setup for your platform in order to update the module.

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3 Revision History

Note that some of the change described in the following Firmware Changes section only apply to the MC879xV devices.

3.1 K1_1_1_9ap and K1_1_1_6bt (Release 2)

3.1.1 Firmware Component Revision Levels

Component		Revision	Compatibility
Hardware	MC879x/MC897xV	1.0 or Newer	
Firmware	Boot loader	K1_1_1_6bt	1.0 or Newer
	Application	K1_1_1_9ap	1.0 or Newer
	Qualcomm Stack Version	1.2.0070	

3.1.2 Firmware Changes

- Added support for Mobile-Terminated PDP over AT command port
- Added W900 band selection support for AT!BAND and Watcher
- Added AT commands to support wake-up event notifications
- Fixed various PAD-related issues
- Fixed issue where number of SMS messages received was incorrectly reported in Watcher
- Fixed problem with voice and Mobile Terminated CS data calls
- Fixed issue where AT!PING command consistently timed out
- Fixed issue where modem did not accept max downlink PDP QoS setting of 21000bps
- Updated SVN to 7

3.2 K1_1_1_7ap and K1_1_1_6bt (Release Candidate 1)

3.2.1 Firmware Component Revision Levels

Component		Revision	Compatibility
Hardware	MC879x/MC897xV	1.0 or Newer	
Firmware	Boot loader	K1_1_1_6bt	1.0 or Newer
	Application	K1_1_1_7ap	1.0 or Newer
	Qualcomm Stack Version	1.2.0070	

3.2.2 Firmware Changes

- Fixed issue where modem does not respond to AT commands in non-composite mode
- Fixed issue where DISCONNECT message was not issued after call is terminated by remote party
- Fixed issue where CTM=0 after TTY mode is enabled by AT!AVSETPROFILE
- Fixed issue where UART DCD signal was inverted
- Fixed issue where AT!GPSLOC? always reported HEPE value as "F"
- Fixed issue where all PDP contexts were not deactivated if PIN became blocked
- Fixed issue where PCM audio was not working with 128kHz clock

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- Fixed issue where modem was unable to initiate multiple PDP contexts successfully
- Fixed AT+CGPADDR so that it properly retrieves IP address for a profile
- Fixed issue where AT!PING with timeout parameter causes modem to reset

3.3 K1_1_1_4ap and K1_1_1_2bt (Beta1 Release)

3.3.1 Firmware Component Revision Levels

Component		Revision	Compatibility
Hardware	MC879x/MC897xV	1.0 or Newer	
Firmware	Boot loader	K1_1_1_2bt	1.0 or Newer
	Application	K1_1_1_4ap	1.0 or Newer
	Qualcomm Stack Version	1.2.0070	

3.3.2 Firmware Changes

- Added support for PAD server mode
- Added AT!PING command
- Added AT+ETFCI command
- Added support for additional channels and bands in AT!UMTSCHAN
- Added support for mobile-terminated (MT) PDP
- Changed default setting of DCD behaviour to AT&C1 instead of AT&C2
- Changed pin-out mappings of UART status signals for compatibility with dev kit
- Fixed issue where AT+CREG and AT+CGREG returned the wrong response
- Fixed issue where DTR is not ignored when AT&D0 is set for packet data calls
- Fixed issue where CnS messages not working if connected via AT port to PDP Type PPP
- Fixed issue where PDP context can't be activated over AT command port in non-mux mode
- Updated firmware to use Qualcomm 1.2.0070 stack
- Updated support of AT!MAPUART command
- Updated IMEI SVN to 5
- Updated SE list

3.4 K1_1_0_5ap and K1_1_0_0bt (Alpha3 Release)

3.4.1 Firmware Component Revision Levels

Component		Revision	Compatibility
Hardware	MC8790/MC8790V	1.0 or Newer	
Firmware	Boot loader	K1_1_0_0bt	1.0 or Newer
	Application	K1_1_0_5ap	1.0 or Newer
	Qualcomm Stack Version	1.2.0060	

3.4.2 Firmware Changes

- Fixed issue where escape sequence not working correctly over UART
- Fixed issue where AT+CPAS should return 3 with incoming CSD call
- Fixed issue where ATH works only for the first packet switched call

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- Fixed issue where all DIO channels are initialized after one channel is configured
- Fixed incorrect USB configuration descriptor setting for self power and max power fields

3.5 K1_1_0_3ap and K1_1_0_0bt (Alpha2 Release)

3.5.1 Firmware Component Revision Levels

Component		Revision	Compatibility
Hardware	MC8790/MC8790V	1.0 or Newer	
Firmware	Boot loader	K1_1_0_0bt	1.0 or Newer
	Application	K1_1_0_3ap	1.0 or Newer
	Qualcomm Stack Version	1.2.0060	

3.5.2 Firmware Changes

- Added support for enhanced analog input and digital input/outputs
- Added persistency for AT+ICF and AT+IPR comands
- Added support for UART status lines
- Added support for a PAD connection at various baud rates
- Changed DIO AT command output responses
- Fixed DIO query output format
- Fixed issue with DIO disable channel persistance settings
- Fixed issue where PDP context fails over UART if USB not connected
- Fixed crash during stability testing with 128 byte packets
- Fixed modem crash when ATD is issued over UART

3.6 K1_1_0_1ap and K1_1_0_0bt (Alpha1 Release)

3.6.1 Firmware Component Revision Levels

Component		Revision	Compatibility
Hardware	MC8790/MC8790V	1.0 or Newer	
Firmware	Boot loader	K1_1_0_0bt	1.0 or Newer
	Application	K1_1_0_1ap	1.0 or Newer
	Qualcomm Stack Version	1.2.0060	

3.6.2 Firmware Changes

- Initial release with EMConnect features

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4 Known Issues

Below is a list of known issues for this release.

4.1 Firmware

- None

4.2 Hardware

- None

4.3 Software

- None

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A. Vista Recommendations

For optimum performance and stability in Microsoft Vista, it is recommended that USB Selective Suspend be disabled. In order to disable Selective Suspend properly, follow both procedures (A.1 and A.2) below:

A.1 Disabling Global Selective Suspend

The following procedure will disable the global selective suspend setting in Microsoft Vista.

2. Open the **Control Panel**
3. Select the **Power Options** applet
4. For whichever item is selected as the current Power Mode (ie: Maximum Battery Life), select **Change plan settings**
5. Select **Change advanced power settings**
6. Expand **USB Settings**
7. Expand **USB Selective Suspend settings**
8. Change the settings for **Plugged in** to **DISABLED**
9. Change the settings for **On Battery** to **DISABLED**
10. Close the **Power Options** applet

A.2 Disabling Device-Specific Selective Suspend for Generic Drivers

The following procedure will disable the device-specific selective suspend setting in Microsoft Vista when using a device configured with the generic Sierra Wireless drivers:

1. Open a notepad
2. Type the following text into notepad

```
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\SWUMX3C\Parameters]
"IdleDetect"=dword:00000000
"UsbSelSus"=dword:00000000
```

3. Save the text file you just created with the filename ***disableSelSus.reg*** to the Desktop
4. Exit Notepad
5. Double-click the file you just created (***disableSelSus.reg***)
6. When prompted by Vista to allow this information to be added to the registry, select Yes.
7. Select OK
8. Reboot the PC

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