

Wireless Device Technical Approval Notification

In Confidence



To

Graeme McLindin - Telstra Device Management

Gary Yuen, Benoit Bouju - Sierra Wireless

CC

Andrew Volard - Telstra Device Management

Approval Date


07 February 2013

Business unit

Telstra Operations
 Networks & Access Technologies
 Product Solutions Engineering
 Device Integration and Models

Level 12, 18 Smith St
 Parramatta NSW 2150
 Australia

Telephone +61 2 9865 4668
 Facsimile +61 2 9865 4709
 Mobile +61 400 000 937
 Insert 0 for +61 within Australia

Approval Type (Full, Conditional, Self Declaration)	Conditional
Nature of Approval (New Device, New Device Integrating Approved Data module, Existing Device with new functionality, Bug Fix Only)	Existing device with Bug fixes
Product Type	PCI Express Embedded Module
Manufacturer	Sierra Wireless Inc.
Model	<p>MC8795V (V stands for voice)</p> 
Telstra Product line	To be determined by product integrating the module
Firmware/Bootloader version (and SVN)	K2_0_7_51BAP & K2_0_7_40BT(SVN: 27)
User Interface Client version	To be determined by product integrating the module
AT command to display modem firmware revision	AT Command – “ATI” or “AT+CGMR” and Enter
Receiver Type (1,2,3,hybrid, 3i) Rake Rx Div Only : Type1 Rx Equal Only/ Grake : Type 2 Decision based on Rx-Eq or Rx-Div : Hybrid *Simul Rx-Equ and Rx Div/GRake2 : Type 3 *Simul Rx-Equ and Rx Div/GRake2 with interference cancellation: Type 3i	Receive equalizer with antenna diversity on 850/2100/1900: Type 3

Integrated Antenna Assessment	To be determined by product integrating the module
External Antenna Connector Type	To be determined by product integrating the module
International Roaming Suitability	Quad Band UMTS 850/1900/2100/900 MHz Supports 3G Roaming to Europe and USA. Quad band EDGE/GSM: 850/900/1800/1900 MHz
Locked to Telstra Network	To be determined by product integrating the module
Device Ranging Information	Not Applicable
Device Accessories	To be determined by product integrating the module
Firmware Upgrade procedure	To be determined by product integrating the module
Data Throughput	HSDPA Category 8 (7.2Mbps Network Peak). HSUPA Category 6 (5.8Mbps Network Peak)
Other Comments	<p>The main purpose of this software update is to integrate several patches from Qualcomm and address the following major issues:</p> <ul style="list-style-type: none"> Addressed intermittent device crash issue which occurs after long data transfer due to host driver bug. Fixed a bug that resolve 3 party call issue (AT command +CHLD doesn't return when CS voice call and PS data call are simultaneous). Added Qualcomm patch SBAM6290AKPRZL24006518 _8S. Fixed the problem modem cannot acquire network service if AT+COPS=0 is sent before unlocking PIN. Fixed a rare issue where a data stall is observed when the device is making frequent cell changes. <p>For detailed list, refer Release Notes in "Basis of Approval" section.</p>

Main Device strengths noted


- | |
|--|
| <ul style="list-style-type: none"> Supports Type III receiver (Simultaneous Receiver equalization and Receiver diversity) |
| <ul style="list-style-type: none"> Module supports roaming to UMTS 900 networks. |

Main Device weaknesses noted


None

Kate Coburn General Managing Device Integration and Models	Approval Date 04/02/2013
---	-----------------------------

DEVICE FEATURE SUMMARY	
Type Approval Designation	MC8795V
TA Codes (TAC) – List All	35531003
Declared Specific Absorption Rate (SAR)	Radiated tests (SAR, effective radiated power, and spurious harmonics) are dependant on the antenna configuration and must be done on the end-product integrating the module.
Size	Weight: 10g - Dimensions: 51x30x4.5mm
Environmental Operating temperature	Operating Temperature: -25 to +60° C Reduced RF performance: +60°C to +75°C
Lead Free, RoHS Compliant Packaging	Yes
UE HS-DSCH Category (Maximum downlink speed)	HSDPA Category 8 (7.2Mbps Network Peak)
UE HSUPA Category (Maximum uplink speed)	HSUPA Category 6 (5.8Mbps Network Peak)
Mobile Station Modem Version	MSM6290
AMSS Revision/ Qualcomm Stack Version	2.4.0065
Radio processor models	RTR6285
Hardware Version	1.0
Memory type and size (NAND/NOR Flash)	NAND 64 MB
Supports external memory	To be determined by product integrating the module
Connection Manager Software Version- (x32) Windows 7, (x32/x64) Vista (SP1/SP2), (x32/x64) XP (SP2/SP3), Zero-Install Plug 'n' Play support	To be determined by product integrating the module Module tested with AirCard Watcher R11.3.1206.1 (Build 3507) .
Network Adapter Interface	Yes
Modem Interface	Yes
Driver version Windows XP and Win-7	To be determined by product integrating the module Tested with NDIS Driver : 6.20.0.24 & Modem Driver : 12.5.1005.10
Microsoft WHQL certified drivers	Yes
Driver version Linux	Yes (Not Tested) http://mycusthelpadmin.net/SIERRAWIRELESS/ cs/AnswerDetail.aspx?sSessionID=74F074B128884C7597AC534CC7B7CCF1QJCFVNFH&inc=44&caller=~%2fFindAnswers.aspx%3fstFilter_a%3d4%261stFilter_b%3d202%261stFilter_c%3d-1%26txtCriteria%3dlinux%26sSessionid%3d74F074B128884C7597AC534CC7B7CCF1QJCFVNFH
GCF and PTCRB Report	GCF-CC V.3.34.1 for Bands I/II/V/VIII
Status Indicator LEDs (Power, 2G, 3G, Roaming)	To be determined by product integrating the module
HSDPA / W-CDMA Air interfaces	Quad band UMTS: 850/1900/2100/900 MHz
EDGE/GSM Air Interfaces	Quad band E-GPRS/GSM 850/900/1800/1900 MHz
Multimode Support	HSUPA/HSDPA/UMTS/EDGE/GPRS/GSM
Supports Voice	Yes
AMR-Wide Band	Not Supported
Supports SMS	Yes
Supports GPS	Not enabled
Supports AGPS	Not enabled
Receiver Equalization	Yes
Dual antenna Receiver Diversity	Yes. All Bands
3GPP FDD compliance	WCDMA: Release 6, GSM / GPRS / EDGE: Release 99
WCDMA power class	Class 3
EDGE Power	Class E2
GSM Power Class	Power Class 1 at 1800/1900 MHz, Power Class 4 at 850/900 MHz



DEVICE FEATURE SUMMARY	
Multi-slot (E)GPRS Class 12, (E)GPRS Class B Type 1 MT	Yes
Supported Quality of Service Classes (Streaming, Background and Interactive)	Yes
Supported Circuit-switched data speeds	64, 57.6, 28.8 and 14.4 kbps
Support for UMTS QoS traffic classes	Yes
Support for PPP, IP transparent/non-transparent modes	Yes
Transparent support for IPSec and VPN technology	Yes
Handover between UMTS and GSM/E-GPRS networks	Yes
Supports PAP/CHAP	Yes
SIM Application toolkit	Yes
Band Selection Options (All bands, 3G-850-Only, 3G-2100-Only, 3G-850/2G900/1800, etc)	AT!BAND or "Telstra Turbo Connection Manager -> Tools -> Options -> Network -> Frequency Band": 00, All bands (Default) 05, GSM ALL 08, WCDMA ALL 0C, WCDMA 850 GSM 900/1800 0D, WCDMA 850
A separate icon is provided to indicate HSPA activity (in addition to WCDMA\2.5G\2G download indications)	To be implemented by the user interface of the end-product. Watcher implements HSPA/HSDPA/3G/EDGE/2G
Diagnostics Monitoring tool	QXDM
IP version supported	IPV4
Multiple PDP/RAB support	Yes
SIM-ME interface	As specified in TS11.14 and GSM 11.14 and with compliance to ISO/IEC 7816-3.
AT Interface	3GPP TS27.007: Yes AT+Eclo support: Yes  2130616 AirPrime MC8xxx Extended AT [MC8795V AT Commands.pdf]

SPECIAL CONDITIONS OR CONFIGURATIONS FOR APPROVAL

Conditions on Future Releases	Approval is given on basis that future software upgrades will have adequate change information to Telstra as operator to assess whether additional networking tests are required
Basis for Approval	Compatibility status is given based on vendor's declaration. Release notes provided by Sierra Wireless. <div style="text-align: center;">  MC8790_K2.0_Relea se22_K2_0_7_51BAP. <i>[MC8790_K2.0_Release22_K2_0_7_51BAP_K2_0_7_40BT_FW_ReleaseNotes.pdf]</i> </div>
Compliance Requirements of the End Products integrating MC8795V embedded module.	The end product integrating MC8795V must comply with Australian customer equipment and safety labelling requirements for A-Tick and C-Tick as specified by the Australian Communications & Media Authority (ACMA). Radiated tests (SAR, ERP, spurious harmonics) are dependent on the antenna configuration and cannot be done by module provider. These tests can only be performed with final product.
Testing Covered	Based on the Release Notes, testing was conducted covering the following scenarios. <ul style="list-style-type: none"> - Radio Compliance Testing - Emergency call. - Subjective Voice and data test plans - Extended data Stability testing. Testing conducted in Telstra model environment and in live network.

Conditions Of Approval: Sierra Wireless to address the following issues in future Maintenance Releases

<p>1. During a bi-directional data transfer session (UL and DL), the Uplink Peak data throughput rates achieved for UDP and FTP data transfer under ideal network conditions is lower than expected, when compared to an "Uplink only" data transfer session. The device seems to prioritise the DL throughput over the UL throughput. [Issue #21]</p> <p>Network Impact: None</p> <p>Customer Impact: Customers will experience lower UL throughput performance by 90 to 650 Kbps (approx) when in bi-directional data transfer session under ideal network conditions. However the actual customer experience impact should be low as this issue only limits the extreme high end of the uplink throughput range, and should not be noticeable under typical network conditions.</p>	Telstra requires Sierra Wireless to resolve this issue in the next maintenance release. This issue has been accepted by CMO (MSI6449) Issue existed in the previous release.
<p>2. With one NodeB (in Model Environment) device reports incorrect RSCP when in Compressed mode. [Issue #40]</p> <p>Network Impact: None</p> <p>Customer Impact: When the device reports low RSCP (~10dbm lower than expected) network</p>	This issue is observed on one nodeB setting in Telstra model environment. In all other nodeB settings the device reports correct RSCP value. Analysis could not identify any major difference between the nodeB settings. Sierra Wireless is currently investigating this issue and requires more time to find a resolution. Telstra requires Sierra Wireless to resolve this issue in the next maintenance

<p>will initiate/perform handover well before the actual conditions requiring handover are met.</p>	<p>release.</p> <p>Issue also existed in previous MC8790/MC8790V modules.</p> <p>This issue has been accepted by CMO (MSI6449) Issue existed in the previous release.</p>
<p>Outstanding Issues Register</p> <p>(Class 3 issues should be addressed in future releases or products)</p>	 <p>Sierra_MC8795V_Iss ues.xls</p> <p><i>[Sierra_MC8795V_Issues.xls]</i></p>
<p>Approved Manufacturer Firmware Customisation File</p>	 <p>Product_Config_MC8 795V_Telstra_v1.0.xl</p> <p>< <i>Product_Config_MC8795V_Telstra_v1.0.xls</i> ></p>

Fusun Candaner

For
Steve Vodicka
Wireless Devices and Applications