



AirPrime HL7588

Firmware V.3.15 Customer Release Note



SIERRA
WIRELESS®

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Important Notice

Due to the nature of wireless communications, transmission and reception of data can never be guaranteed. Data may be delayed, corrupted (i.e., have errors) or be totally lost. Although significant delays or losses of data are rare when wireless devices such as the Sierra Wireless modem are used in a normal manner with a well-constructed network, the Sierra Wireless modem should not be used in situations where failure to transmit or receive data could result in damage of any kind to the user or any other party, including but not limited to personal injury, death, or loss of property. Sierra Wireless accepts no responsibility for damages of any kind resulting from delays or errors in data transmitted or received using the Sierra Wireless modem, or for failure of the Sierra Wireless modem to transmit or receive such data.

Safety and Hazards

Do not operate the Sierra Wireless modem in areas where cellular modems are not advised without proper device certifications. These areas include environments where cellular radio can interfere such as explosive atmospheres, medical equipment, or any other equipment which may be susceptible to any form of radio interference. The Sierra Wireless modem can transmit signals that could interfere with this equipment. Do not operate the Sierra Wireless modem in any aircraft, whether the aircraft is on the ground or in flight. In aircraft, the Sierra Wireless modem **MUST BE POWERED OFF**. When operating, the Sierra Wireless modem can transmit signals that could interfere with various onboard systems.

Note: Some airlines may permit the use of cellular phones while the aircraft is on the ground and the door is open. Sierra Wireless modems may be used at this time.

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1. Introduction

1.1. Document Scope

This document is the Firmware V.3.15 for Verizon customer release note of the HL7588.
Firmware V.3.15 is a maintenance release based on Firmware V.3.13.

1.2. Main Features

Table 1. Main Features

Feature	Description
LTE	Wireless stack and 3GPP AT commands
Diversity	1x Main Antenna and 1x RX Diversity
USB/UART interface	USB 2.0 and UART serial interface, V24 AT commands
USB/UART	USB 2.0 interface and UART serial interface
SIM	SIM access AT commands
GPIO	12 GPIO interfaces and related control AT commands
Cell information/monitoring	Cell information/monitoring AT commands
Band	Band RAT configurations AT commands
RF test	RF TX and RX test AT commands
AVMS	AirVantage FOTA and monitoring features
Temperature monitoring	Temperature monitoring AT command
IP AT commands	Internet AT commands for TCP/UDP/FTP/HTTP/HTTPS
Delta Firmware update	Download with 1K X-modem/FOTA, delta Firmware format supported
System Clock Out	System Clock Output pins



2. Abbreviations and Definitions

Table 2. Abbreviations and Definitions

Abbreviation/Acronym	Definitions
ADC	Analog Digital Converter
DV1.1	Development verification build #1.1
GPIO	General Purpose Input Output
PCM	Pulse Code Modulation
PWM	Pulse Width Modulation
SIM	Subscriber Identity Module
UART	Universal Asynchronous Receiver Transmitter
UICC	Universal Integrated Circuit Card
USB	Universal Serial Bus



3. Related Documentation

- [1] AirPrime HL7548 and HL7588 Product Technical Specification
Reference number: 4116369
- [2] AirPrime HL7588 AT Commands Interface Guide
Reference number: 4117137

4. Compatibility

This firmware is compatible with DV1.1 or newer versions of the AirPrime HL7588.



5. Software Release Description

5.1. Release Identification

Table 3. Firmware Release Information

Modem Firmware Identification (ATI3)	RHL75xx.V.3.15.151600.201802071640.x7160_1
Full Firmware Identification (ATI10)	Modem-Firmware: RHL75xx.V.3.15.151600.201802071640.x7160_1 Primary-Boot: RHL75xx.V.3.15.0202170420.201802071640.x7160_1 Secondary-Boot: RHL75xx.V.3.15.0202170420.201802071640.x7160_1 Update-Agent: RHL75xx.V.3.15.0202170413.201802071640.x7160_1 4G-Firmware: 7160.S3.561.34.4.744.04.2769.18265 3G-Firmware: 202.999.423.42-54.35
ALL-IN-ONE Firmware FLS Image	Filename = RHL75xx.V.3.15.151600.201802071640.x7160_1_signed.flx File size in bytes = 20710559 Checksum(CRC32) = 0xAEBA50EE Checksum(MD5) = E586601A48E4F06B008D94C3B47732F2
ALL-IN-ONE Firmware image, Windows one-click Downloader	Filename = RHL75xx.V.3.15.151600.201802071640.x7160_1_signed.exe File size in bytes = 8799410 Checksum(CRC32) = 0x37D496A0 Checksum(MD5) = 1F2879D9454BF132D8C1FCC4EE8C2608
Date of Generation	2018-02-07 17:19:52 GMT+8
IMEI SV	13 (HL7588)
Baseline Version	M2M_7160_HL7588_1743.00 + M2M_7160_HL7588_01.1743.00_SMS22898564_SMS22876719_SWI00180849_Patch01

5.2. Software Tools Versions

Table 4. Software Tools Versions

Software Tools Name	Version
FlashTool	v.4.140.3.66 DLL: v.4.140,0.0
Command Line FlashTool (DownloadTool.exe, dll)	v.1.37 DLL: v.4.140,0.0
USB Host Driver version	4.19

5.3. Released Files

Table 5. Released Files

Download Option	Files
All in one download executable	RHL75xx.V.3.15.151600.201802071640.x7160_1_signed.exe
All in one FLS file	RHL75xx.V.3.15.151600.201802071640.x7160_1_signed.flis

6. Software Changes

This section lists all corrections or improvements integrated in Firmware V.3.15. Changes were based on Firmware V.3.13.

Table 6. Validated Corrections and Improvements

ID	Description	Impacted Functionality / Sub-Functionality
INT7160VZW-1630	In rare cases, the module may not be able to attach to an LTE cell in a particular network condition because the module is unable to decode some SIB messages and skip additional information element introduced in higher than 3GPP versions 9.13.0. The module will fallback to 3G if the corresponding cell is available.	LTE/Other

7. Restrictions and Known Issues

This section lists out important known issues.

Table 7. Restrictions and Known Issues

ID	Description
INT7160VZW-1563	Signal strength and quality reported by the module to the server is different from the values reported by AT+CSQ command on the module.
INT7160VZW-1554	AT+KCELL=0 sometimes return OK in wrong order.
INT7160VZW-445	ATS8 command is not supported.
INT7160VZW-443	ATS5 command is not supported.



8. Troubleshooting

Please contact Sierra Wireless customer service for support and debugging information.



9. Certification

This firmware has passed certifications for Verizon.