



**AirPrime HL7539**

## **Firmware 2.11 Customer Release Note**



**SIERRA**  
WIRELESS®

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1.0  
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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.

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*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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# Document History

| Version | Date          | Updates  |
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# 1. Introduction

## 1.1. Document Scope

This document is the Firmware 2.11 customer release note of the AirPrime HL7539. Firmware 2.11 is a maintenance release based on Firmware 2.8.

## 1.2. Main Features

Table 1. Main Features

| Feature                     | Description   |
|-----------------------------|---|
| LTE                         | Wireless stack and 3GPP AT commands                 |
| Diversity                   | 1 x Main Antenna and 1 x RX Diversity               |
| 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                       |
| Temperature monitoring      | Temperature monitoring AT command                   |
| IP AT commands              | Internet AT commands for TCP/UDP/FTP (Experimental) |



## 2. Abbreviations and Definitions

Table 2. Abbreviations and Definitions

| Abbreviation/Acronym | Definitions                                 |
|----------------------|---|
| ADC                  | Analog Digital Converter                    |
| 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 HL7539 Product Technical Specification  
Reference number: 4118584
- [2] AirPrime HL7539 AT Commands Interface Guide  
Reference number: 4118453

## 4. Compatibility

This firmware is compatible with DV1.1 or newer versions of the AirPrime HL7539.



# 5. Software Release Description

## 5.1. Release Identification

Table 3. Firmware Release Information

|  |   |
|--|---|
| <b>Identification (ATI3)</b>                                   | RHL7539.2.11.190800.201903011416.x7160_3  |
| <b>Full Firmware Identification (ATI10)</b>                    | Modem-Firmware: RHL7539.2.11.190800.201903011416.x7160_3<br>Primary-Boot: RHL7539.2.11.0200151028.201903011416.x7160_3<br>Secondary-Boot: RHL7539.2.11.0200151028.201903011416.x7160_3<br>Update-Agent: RHL7539.2.11.0200151028.201903011416.x7160_3<br>4G-Firmware: 7160.S3.561.16.4.909.06.16890.18265<br>3G-Firmware: 202.999.123.43-54.35 |
| <b>ALL-IN-ONE Firmware FLS Image</b>                           | Filename = RHL7539.2.11.190800.201903011416.x7160_3.fl5<br>File size in bytes = 20677155<br>Checksum(CRC32) = 0x8DF5C33C<br>Checksum(MD5) = 8EB9F0343C4BCDEA63E06B57147BB9F5  |
| <b>ALL-IN-ONE Firmware Image, Windows one-click Downloader</b> | Filename = RHL7539.2.11.190800.201903011416.x7160_3.exe<br>File size in bytes = 8821190<br>Checksum(CRC32) = 0x62178E37<br>Checksum(MD5) = 1FF53E7BFCC871469C8D1EB80788A6F7   |
| <b>Date of Generation</b>                                      | 2019-03-01 14:16:39 GMT+9   |
| <b>IMEI SV</b>   | 05 (HL7539)   |
| <b>Stack Version</b>   | M2M_7160_HL7538_HL7539_1908.00  |

## 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 | RHL7539.2.11.190800.201903011416.x7160_3.exe |
| All in one FLS file            | RHL7539.2.11.190800.201903011416.x7160_3.flx |
| All in one DWL file            | RHL7539.2.11.190800.201903011416.x7160_3.dwl |

## 6. Software Changes

### 6.1. Validated Corrections/Improvements

This section lists all corrections or improvements integrated in Firmware 2.11 from Firmware 2.8.

**Table 6. Validated Corrections and Improvements**

| <b>ID</b>      | <b>Description</b>   | <b>Impacted Functionality/<br/>Sub-Functionality</b> |
|----------------|--|--|
| INT7160JPN-318 | Dial-up connection on IPv6 may disconnect after connect success in a short time.   | AT/Data  |
| INT7160JPN-369 | The module may return an unsolicited response when opening UDP socket without valid DNS.   | AT/Data  |
| INT7160JPN-367 | Stress testing of HTTPSGET for longer hours could restart the module.  | AT/HTTP  |
| INT7160JPN-397 | CIND commands may not show correct status and return 0.  | AT/Other   |
| INT7160JPN-396 | There could be some delay in response of KCELL command.  | AT/Other   |
| INT7160JPN-368 | OK may not be received after sending EOF pattern if the TCP server closes the socket before OK could be generated by the firmware.   | AT/SIM   |
| INT7160JPN-408 | Sometimes it is not possible to send large data over TCP socket to the peer and data loss is observed on the peer.   | AT/TCP   |
| INT7160JPN-398 | In very rare case the module may not boot after many power cycles.   | BOOT/Power   |
| INT7160JPN-364 | Module restart could happen when ppp connection is established with Callbox and the output power of callbox is then gradually reduced.   | GPRS/Other   |
| INT7160JPN-341 | The module could very rarely not connect to the network after Dial-up disconnect.  | GPRS/PDP   |
| INT7160JPN-399 | The module may reset in rare condition when it was in connected mode with an active data session and at the same time performed mobility handover between cells with different downlink bandwidth. | LTE/Handover   |
| INT7160JPN-370 | In rare cases, the module may not be able to attach to LTE cell in particular locations and network condition.   | LTE/Other  |
| INT7160JPN-325 | +COPS (Manual Operator Selection) on particular operator SIM card may not respond even after SIM is given correct LTE PLMN and initially SIM registration has been rejected for unknown IMSI.      | SIM/Other  |
| INT7160JPN-324 | Very occasionally the module may not attach to network after SIM remove and then re-insert.  | SIM/Other  |
| INT7160JPN-442 | The module may not be able to create a SSL connection with servers that expect Signature Algorithm TLS extension in the client hello.  | TLS1.2/Other   |
| INT7160JPN-391 | The module restart can happen in rare cases while performing data transfer on UART 4 wire.   | UART/Driver  |

## 6.2. Interface Changes

Table 7. Interface Changes

| Command  | Changes  |
|----------|--|
| AT+KCELL | Added supported values for <revision> parameter of KCELL command |



## 7. Restrictions and Additional Information

This section lists important known issues.

Table 8. Restrictions and Known Issues

| ID             | Description   |
|----------------|---|
| INT7160JPN-103 | Display wrong URC for +KTCP_DATA  |
| INT7160JPN-126 | Remaining data still can be read if the UDP socket contains more data than <ndata> bytes                          |
| INT7160JPN-153 | Display many <NULL> after toggling DTR during TCP/UDP receiving process.  |
| INT7160JPN-216 | With dummy and valid cert key pair, Module return error code when perform HTTPS method with client authentication |
| INT7160JPN-352 | The module restart could occasionally occur when uploading a large size of file on an FTP connection.             |
| INT7160JPN-384 | The module may not open socket after repeatedly opened, processed and closed 32 times.                            |
| INT7160JPN-401 | The module may not be able to connect to HTTPS server that expects Server name indication TLS extension.          |

## 8. Troubleshooting

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

## 9. Certification Description

This firmware has passed certifications for NTT DoCoMo.