

# Quectel RM551E-GL

IoT/eMBB-Optimized

5G Sub-6 GHz & mmWave M.2 Module



## RM551E-GL-00AA

## Release Notes

### 5G Module Series

Rev. RM551E-GL-00AA\_Firmware\_Release\_Notes\_V0104\_A0.001.A0.001

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## 1. Release Content

This document provides the Release Notes for RM551E-GL-00AA. The current release includes the following firmware package.

Package	Firmware Version	Configuration Version
Firmware	RM551EGL00AAR01A03M8G	A0.001.A0.001

## 2. Matters Needing Attention

Please strictly adhere to the following matters needing attention.

SN	Item
[1]	To extend the service life of flash, it is recommended that the total number of operations related to powering on/off the module, CFUN switching, SIM card hot swapping, dual-SIM switching, or repeated execution of NVM commands should not exceed 30 times per day.
[2]	It is not recommended to directly modify the pre-set APN profiles. Please create an APN profile after the existed CID number. Suppose you modify the APN profile of IMS, SOS, etc. with added specific attributes, these attributes are hidden after modification, causing the profile to still be unavailable.
[3]	During the FOTA upgrade process, it is necessary to ensure the stable power supply of the module. If the power is disconnected during the upgrade, there is a small probability that the flash will be damaged.
[4]	Windows Host driver integrates the NDIS driver and RNDIS driver, and uses PID to specify different network interfaces. The PID supported by NDIS network interface is 0x0122, and the PID supported by RNDIS network interface is 0x0133. If <b>AT+QCFG="USBCFG"</b> is executed for the relevant configuration, the <b>&lt;PID&gt;</b> parameter in the command must be set according to the network interface to prevent the yellow label problem.
[5]	M.2 module is encapsulated without SPI, and SLIC cannot be mounted on the module.
[6]	The firmware version whose description is "only for sample" is only used for debugging, and is prohibited from mass production, certification or any other purposes.
[7]	The current firmware version supports Secure Boot and Secure Debugging, and the Quectel signature is included in the security firmware versions by default. Whether Secure Boot is enabled by default when the firmware version is shipped from the factory depends on the OC you select. Secure Debugging is disabled by default and you can enable it with AT commands as required.
[8]	It is not recommended to use non-mass production firmware versions for mass production. If necessary, please contact Quectel Technical Support for evaluation to mitigate risks.

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[9]	Please perform thorough acceptance testing of firmware versions, covering both normal and abnormal scenarios. Please also confirm that the firmware version used in production matches the one that has been tested and accepted.
[10]	Please use only the features supported by the module as specified in the product specification and avoid using any unsupported features. For special requirements, please contact Quectel Technical Support for evaluation to mitigate risks.
[11]	When performing firmware flashing, ensure that the target firmware version matches the module hardware. Incompatibility may lead to various issues, such as degraded RF performance.
[12]	It is strongly recommended to integrate FOTA functionality.
[13]	Please strictly follow Quectel technical documentation when modifying partitions. If necessary, please contact Quectel Technical Support for evaluation.
[14]	Do not modify the contents of the FOTA upgrade package, recompress it after decompression, or perform other similar operations, because these may lead to upgrade failure. Renaming the FOTA package is currently supported.

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## 3. Release History

### 3.1. Firmware Release History

Firmware Version	Configuration Version	Description
RM551EGL00AAR01A04M8G	A0.001.A0.001	Only for sample
RM551EGL00AAR01A03M8G	A0.001.A0.001	Only for sample
RM551EGL00AAR01A02M8G	01.001.01.001	Only for sample
RM551EGL00AAR01A01M8G	01.001.01.001	Only for sample

### 3.2. New Features

RM551EGL00AAR01A04M8G_A0.001.A0.001	
Item	Brief Description
Network	Added <b>AT+QNWCFG="c_rnti"</b> to obtain the C_RNTI information from RACH Msg4.
Network	Added <b>AT+QNWCFG="up/down"</b> to get average uplink and downlink data transmission rates.
RM551EGL00AAR01A03M8G_A0.001.A0.001	
Item	Brief Description
Security	This version was signed with Secure Boot.
Security	Added Secure Debugging.
RM551EGL00AAR01A02M8G_01.001.01.001	
Item	Brief Description
General	Supported the use of UCI commands to configure whether the execution information of AT commands is output to dmesg logs.
RM551EGL00AAR01A01M8G_01.001.01.001	
Item	Brief Description

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### 3.3. Improved Features

RM551EGL00AAR01A04M8G_A0.001.A0.001	
Item	Brief Description
Diagnosis	Solved the problem that the module operated abnormally when the UDP data throughput test was performed on the USB network interface.
Network	Fixed the problem that uplink data rates were low in the NSA network.
Network	Aligned variables in Fastmap to reduce system overhead caused by cache misses, thereby avoiding low UDP throughput during data transmission in SFE scenario.
Network	Optimized the implementation of <b>AT+QRSSI</b> to ensure that the command can be executed normally under the NSA network.
Thermal Management	Adjusted the sensing node for triggering the module PA mechanism from sys-thermal-1 to sys-thermal-2, and modified the software configuration accordingly to solve the problem of abnormal temperature reading.
(U)SIM	Solved the problem of UIM polling failure due to the existence of multiple commands in the UIM polling queue.
RM551EGL00AAR01A03M8G_A0.001.A0.001	
Item	Brief Description
Data Call	Fixed the problem that the data traffic statistics were abnormal when <b>AT+QGDNRCNT</b> was executed to query data traffic after the data call connection was disconnected.
Diagnosis	Added UCI configuration to dynamically control the log output of tftp_server and qseecomd.
Diagnosis	Redirected the output of QMAP debugging information from dmesg to QXDM.
Secure Login	<b>AT+QADBKEY</b> was no longer supported.
General	Merged the JSC 8+8 MCP compatibility solution modifications.
General	Merged the chip manufacturer's patches to fix the problems of mmWave cellular network registration failure and low-power functionality anomalies caused by PMK.
RM551EGL00AAR01A02M8G_01.001.01.001	
Item	Brief Description

Network	Solved the problem of IP passthrough failure when performing an RNDIS dial-up on Windows system.
Network	Solved the probabilistic problem of IPA failure during WAN-LAN data transmission.
RM551EGL00AAR01A01M8G_01.001.01.001	
Item	Brief Description
/	/

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### 3.4. Known Issues

Item	Bug Description
FOTA	Some error codes reported during the FOTA upgrade need to be optimized.

#### NOTE

Verification Environment is shown below. For more details, please contact Quectel Technical Support.

For Windows: Windows10

USB Driver: Quectel\_Windows\_USB\_Driver(Q)\_V1.0.2

Qflash Tool: QFlash\_V7.0

For Linux:

QMI\_WWAN Driver: Quectel\_Linux\_Android\_QMI\_WWAN\_Driver\_V1.2.6

GobiNet Driver: GobiNet\_Lateset

QFirehose Tool: QFirehose\_Linux\_Android\_V1.4.19

Quectel-CM Tool: Quectel\_QConnectManager\_Linux\_V1.6.0.26

QLog Tool: QLog\_Linux\_Android\_V1.5.22

## 4. Functions List

Category	Item	Supported Version (Since)	Note
Basic Function	Data Call	RM551EGL00AAR01A01M8G_01.001.01.001	/
	Diagnosis	RM551EGL00AAR01A01M8G_01.001.01.001	/
	Thermal Management	RM551EGL00AAR01A01M8G_01.001.01.001	/
	PHB	RM551EGL00AAR01A01M8G_01.001.01.001	/
	Upgrade	RM551EGL00AAR01A01M8G_01.001.01.001	/
	FOTA	RM551EGL00AAR01A02M8G_01.001.01.001	/
	SMS	RM551EGL00AAR01A01M8G_01.001.01.001	/
Interface Function	PCIe	RM551EGL00AAR01A01M8G_01.001.01.001	/
	USB	RM551EGL00AAR01A01M8G_01.001.01.001	/
Interface Protocol	ECM	RM551EGL00AAR01A01M8G_01.001.01.001	/
	RNDIS	RM551EGL00AAR01A01M8G_01.001.01.001	/
Locate Function	AGPS	RM551EGL00AAR01A01M8G_01.001.01.001	/
Protocol Function	QMI	RM551EGL00AAR01A01M8G_01.001.01.001	/
RF Function	FTM	RM551EGL00AAR01A01M8G_01.001.01.001	/
Security Function	Secure Boot	RM551EGL00AAR01A01M8G_01.001.01.001	Disabled by default.
	Secure Debugging	RM551EGL00AAR01A02M8G_01.001.01.001	/
	Secure Login	RM551EGL00AAR01A03M8G_A0.001.A0.001	/
SIM Function	SIMlock	RM551EGL00AAR01A01M8G_01.001.01.001	/
	(U)SIM	RM551EGL00AAR01A01M8G_01.001.01.001	/
	(U)SIM Hotswap	RM551EGL00AAR01A01M8G_01.001.01.001	/
	DSSS	RM551EGL00AAR01A01M8G_01.001.01.001	/

Special Function	Slice	RM551EGL00AAR01A01M8G_01.001.01.001	/
	5G LAN	RM551EGL00AAR01A01M8G_01.001.01.001	/
	Low Power	RM551EGL00AAR01A01M8G_01.001.01.001	/
	Security	RM551EGL00AAR01A03M8G_A0.001.A0.001	Support Secure Boot and Secure Debugging.

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## About Quectel

Quectel's passion for a smarter world drives us to accelerate IoT innovation. As a highly customer-centric organization, we are a global IoT solution provider backed by outstanding support and services. Our growing global team of 5,900 professionals sets the pace for innovation in cellular, automotive, smart, GNSS, satellite, Wi-Fi and Bluetooth modules as well as antennas and services.

With regional offices and support across the globe, our international leadership is devoted to advancing IoT and building a smarter world.

