

LTE/WCDMA/GSM Module GM520_M.2

- ◆ Domestic core
- ◆ Low cost
- ◆ High performance
- ◆ Multi-functions



GM520 M.2 is designed to provide customers with global network coverage on the connectivity of LTE. It delivers 50Mbps-up and 150Mbps-down data rates on LTE FDD networks and can also be fully backward compatible with existing WCDMA and GSM networks.

The module is a module with M.2 form factor, optimized for eMBB and IoT applications.

A rich set of embedded protocols (TCP/UDP, FTP, HTTP/HTTPS, SSL, MQTT, etc.) and abundant functions (Remote wakeup, SMS, USB drivers for win, Linux, Android) extend the applicability of the module to a wide range of M2M applications, such as industrial router, home gateway, STB, industrial laptop, consumer laptop, industrial PDA, rugged tablet PC, video surveillance and digital signage, etc.

- Support LTE FDD/LTE TDD/WCDMA/GSM
- M.2 package
- Chip adopts 22nm process, better supply chain
- Higher CPU frequency, lower power consumption
- High cost performance and high reliability
- Support FTP/HTTP FOTA
- Support rich hardware interfaces
- Support multiple network protocols



LTE FDD/ TDD/
WCDMA/GSM



Compatible
design



Multiple network
protocols



FOTA



Certification



Industrial grade
reliability

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- ◆ Low cost
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- ◆ Multi-functions

GM520_M.2 Series

PID	Band	Diversity	Flash	OS	GNSS
C1A	LTE FDD: B1, B3, B5, B8 LTE TDD: B34, B38, B39, B40, B41	No	128Mb NOR flash	RTOS	No
C1B	WCDMA: B1, B8 GSM: B3, B8	Yes	128Mb NOR flash	RTOS	No
E1B	LTE FDD: B1, B3, B7, B8, B20, B28 LTE TDD: B38, B40, B41 WCDMA: B1, B8 GSM: B3, B8	Yes	128Mb NOR flash	RTOS	No
L1B	LTE FDD: B1, B2, B3, B4, B5, B7, B8, B28 LTE TDD: B40 WCDMA: B1, B2, B4, B5, B8 GSM: Quad-Band	Yes	128Mb NOR flash	RTOS	No

General Features

- ❑ M.2 Card
- ❑ Dimensions: 30mm×42mm×4.1 mm

Electrical characteristics

- ❑ Receiving characteristics:
 - Diversity reception (optional)
- ❑ Transmit power:
 - LTE: 23 ± 2.7dBm (Power Class 3)
 - WCDMA: 24 +1/-3dBm (Power Class 3)
 - GSM900 : 33 ± 2dBm (Power Class 4)
 - GSM1800: 30 ± 2dBm (Power Class 1)
- ❑ Voltage range:
 - 3.3V~4.2V (recommended value 3.8V)

Environmental adaptability

- ❑ Normal temperature range: -30° C ~ +75° C
 - Extreme Operating temperature: -40° C ~ +85° C
- ❑ Humidity range: 5%~95%

Interfaces

- ❑ USB 2.0 High speed (480 Mbps)
- ❑ SIM interface (1.8/3.0V)
- ❑ Antenna (RF connector for Primary, Diversity)
- ❑ LED indication
- ❑ W_DISABLE# & SIM DETECT
- ❑ FULL_CARD_POWER_OFF# and Reset

Data characteristics

- ❑ LTE
 - LTE FDD 50Mbps(UL) / 150 Mbps(DL)
 - LTE TDD 30Mbps(UL) / 130Mbps(DL)
- ❑ UMTS
 - HSPA+ 21Mbps(DL)
 - HSUPA 5.76Mbps(UL)
 - WCDMA 384Kbps(DL) / 384Kbps(UL)
- ❑ GSM
 - EDGE 236.8 Kbps(UL) / 236.8 Kbps(DL)
 - GPRS 85.6 Kbps(UL) / 85.6 Kbps(DL)

Applications

- ❑ Support FOTA/USB/UART update
- ❑ Support TCP/UDP/PPP/FTP/HTTP/HTTPS/MQTT
- ❑ Support low-power applications
- ❑ ECM/RNDIS/PPP
- ❑ Support 3GPP TS27.005, 27.007
- ❑ Support GOSUNCN enhanced AT command
- ❑ Support Android 4.x/5.x/6.x/7.x/8.x/9.x RIL driver
- ❑ Support Windows 7/8/10
- ❑ Support Linux 2.6 and above

Certification

- ❑ SRRC/CTA/CCC*
- ❑ CE/ROHS*

Note: 1. * means function is under development.

2. The pictures of module are for reference only, please refer to the actual product .

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