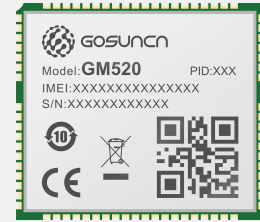


# LTE/WCDMA/GSM Module

## GM520

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



**GM520** is a wireless communication module based on LTE Cat.4 standard and designed for M2M and IoT applications.

Under the LTE standard, it can support up to 50Mbps uplink rate and 150Mbps downlink rate and can be backward compatible with existing WCDMA/GSM networks, ensuring that it can work normally in remote areas lacking 3G and 4G networks. Satisfy customers' application requirements for high-cost performance and low power consumption.

GM520 module supports multiple network protocols (TCP/UDP/FTP/HTTP/MQTT/PAP/CHAP/PPP) and multiple functions (remote wake-up, FOTA, FILE, etc. ), and can provide PCM/AUDIO/USB/UART/SDIO/I2C/SPI/USIM/RMII/ RGMII/ADC and other rich hardware interfaces to meet different needs.

In response to the key needs of industries such as data transmission and CPE, this module can be expanded to support analog voice functions, as well as hardware interfaces such as Ethernet, SDIO, and PCIe. It is a 4G communication tool for the data transmission and routing industry.

- Support LTE FDD/LTE TDD/WCDMA/GSM
- LCC+LGA 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



LCC+LGA Package



Compatible design



LTE FDD/ TDD/ WCDMA/GSM



Analog Audio



Multiple network protocols



FOTA

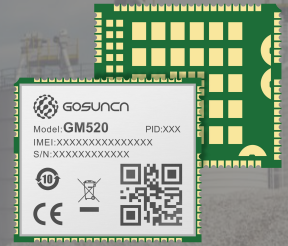


Certification



Industrial grade reliability

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



## GM520 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	Yes	128Mb NOR flash	RTOS	No
E2BG	LTE TDD: B38, B40, B41 WCDMA: B1, B8 GSM: B3, B8	Yes	128Mb NOR flash	RTOS	Yes
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

## Interfaces

- ❑ USB 2.0 (Max. 480Mbps)
- ❑ UART ×2
- ❑ SIM (1.8/3.0V)
- ❑ ADC (12-bit precision)
- ❑ SPI
- ❑ I2C
- ❑ SDIO
- ❑ PCM& AUDIO
- ❑ LED
- ❑ Reset & Power-on
- ❑ Main & Diversity(Optional) antenna
- ❑ RMII/RGMII ( RMII: 1.8V/3.3V; RGMII: 1.8V )
- ❑ GNSS (Optional)

## General Features

- ❑ Package: LCC+LGA (80 LCC pins + 64LGA pins)
- ❑ Dimensions: 29 × 32 × 2.4mm
- ❑ GNSS(Optional)

## 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)

## 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 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
- ❑ 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

## Environmental adaptability

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

## 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 .

