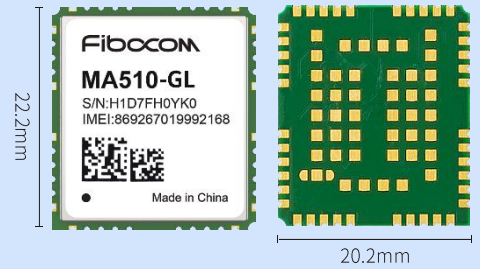


Fibocom MA510-GL

Global LPWA Module Series

Key Benefits

- Worldwide frequency bands coverage
- LTE Cat M1/Cat NB2/EGPRS module with ultra-low power consumption
- Unique 450MHz variant for utility application
- Unique NTN variant supports satellite communication
- Pin compatible design with Cat 1 bis MC610/MC665 and Cat 1 MG110
- Professional reference design, evaluation kits and timely technical support to help customers quickly complete product development



LTE Cat M1/ NB2



Release 14 & 17* (NTN Variant)



Ultra low power consumption



LCC+ LGA Package



VoLTE



GNSS (Optional)



USB2.0



Fibocom Enhanced AT Commands



Professional reference design, evaluation kits

Fibocom MA510-GL is a high-performance IoT module series tailor-made for the global IoT market. The series is based on the Qualcomm platform and packaged in LCC+LGA. It supports Global LTE Cat M1/Cat NB2/EGPRS frequency bands, has global certification, and offers an optional built-in GNSS.

Compliant with 3GPP Rel. 14, MA510-GL series are equipped with Power Saving Mode (PSM) and extended Discontinuous Reception (eDRX) capabilities. They also integrate MQTT/CoAP/LWM2M rich network protocols and UART/USB/I2C/I2S multiple standard industrial interfaces, catering to industrial customers' needs. These modules are suitable for IoT applications with low power consumption and ultra-small size, such as Smart meter, Smart parking, Tracking and trace, and Smart city, while maintaining long battery life.

New MA510-GL-33 variant extends its support to 3GPP Rel. 17 NTN feature, which allows it to exploit highly resilient GEO (Geostationary Earth Orbit) satellite communication and cellular connectivity in IoT scenarios, such as Maritime transportation, Emergency communication, and Scientific research in rural areas, etc.



Model	MA510-GL-00	MA510-GL-01	MA510-GL-20	MA510-GL-21	MA510-GL-33	MA510-GL-50
Region	Global					
Basic Features						
Package	LCC+LGA					
Dimension	22.2x20.2x2.1mm					
LTE	Cat M1: B1/2/3/4/5/8/12/13/18/19/20/25/26/27/28/66/85 Cat NB2: B1/2/3/4/5/8/12/13/18/19/20/25/26/28/66/71/85				Cat M1: B1/2/3/4/5/8/12/13/18/19/20/25/26/27/28/31/66/72/73/85 Cat NB2: B1/2/3/4/5/8/12/13/18/19/20/25/26/28/31/66/72/73/85	
EGPRS	850/900/1800/1900 MHz		850/900/1800/1900 MHz		850/900/1800/1900 MHz	850/900/1800/1900 MHz
NTN	No	No	No	No	B23/256 GEO/GSO	No
GNSS	Optional	Optional	No	No	GPS/GLONASS/BDS/Galileo/QZSS	No
Power Supply	3.3~4.5V	2.65~4.5V	3.3~4.5V	3.3~4.5V	3.3~4.5V	3.3~4.5V
Max Output Power	LTE: 21dBm Power Class 5	LTE: 21dBm Power Class 5	LTE: 23dBm Power Class 3	LTE: 23dBm Power Class 3	LTE: 23dBm Power Class 3	B31/72: 27dBm Power Class 2(Cat.M); Other LTE: 23dBm Power Class 3
Power Consumption @ PSM	3.5 μA	3.5 μA	3.2 μA	3.2 μA	Under development	Selectable
Operating Temperature	-30 °C~+75 °C					
Extended Temperature	-40 °C~+85 °C					
Storage Temperature	-40 °C~+90 °C					
Antenna	x2	x2	x1	x1	x2	x1
AT Command	3GPP TS 27.007 and 27.005, proprietary FIBOCOM AT commands					
Data Transmission						
Cat M1 (Kbps)	Max 375 (DL)/ Max 1119 (UL)	Max 375 (DL)/ Max 1119 (UL)	Max 375 (DL)/ Max 1119 (UL)	Max 375 (DL)/ Max 1119 (UL)	Max 588 (DL)/ Max 1119 (UL)	Max 588 (DL)/ Max 1119 (UL)
Cat NB2 (Kbps)	Max 127 (DL) / MAX 158.5 (UL)					
EGPRS (Kbps)	Max 296 (DL) / MAX 236.8 (UL)					
Enhanced Features						
Voice	VoLTE for Cat M1/ CS Voice for GSM (variants with 2G fall back)					
DFOTA	●					
Jamming Detection	●					
Software Features						
Driver	Linux/Windows/Android					
Network Protocol	PPP/TCP/UDP/SSL/TLS/FTP(S)/HTTP(S)/MQTT/CoAP/LwM2M/NITZ/PING					
Interfaces						
SIM	1.8V					
UART	x3					
USB2.0	x1					
I2C	x1					
SPI	x1					
I2S	x1					
ADC	x2					
GPIO	x4					
Certification Approvals	MA510-GL-00	MA510-GL-01	MA510-GL-20	MA510-GL-21	MA510-GL-33	MA510-GL-50
Regulation	CCC/CE/GCF/UKCA/FCC/IC/HF/RoHS/REACH/PTCRB/RCM/NCC/Anatel/JATE/TELEC/Colombia_CRC/TSCA/KC	CE/UKCA/HF/RoHS/REACH/JATE/RCM/TELEC/NCC/PTCRB/KC	CE/RCM/JATE/TELEC/KC/HF/REACH/RoHS/KC	CE/GCF/RCM/JATE/TELEC/KC/HF/REACH/RoHS	Under development	CE/GCF/HF/RoHS/REACH
Operator	AT&T/Verizon/T-Mobile/Deutsche Telekom/Telefonica/Vodafone/KDDI	Deutsche Telekom	Orange	NTT Docomo/LGU+/SKT/Telstra	Under development	

* = planning/under development ● = support

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