

# Quectel M12

## Dual-band GSM/GPRS Module



Dual-band



GPRS Multi-slot  
Class 12



LCC Type



Embedded TCP/PPP/  
UDP/FTP Protocols



RoHS Compliant



Serial Port  
Multiplexer GSM 0710



Quectel Enhanced  
AT Commands

### Key benefits

- ☛ Dual-band GSM/GPRS module with a size of 29.0 x 29.0 x 3.6mm
- ☛ LCC type for easier and cheaper SMT production
- ☛ Embedded powerful internet service protocols, multiple Sockets & IP addresses
- ☛ Based on mature and field-proven platform

GSM/ GPRS



M12 is a Dual-band GSM/GPRS wireless module in LCC type. It is pin-to-pin compatible with the M10 quadband module. M12 can be embedded in customer's applications, offering good reliability and robustness.

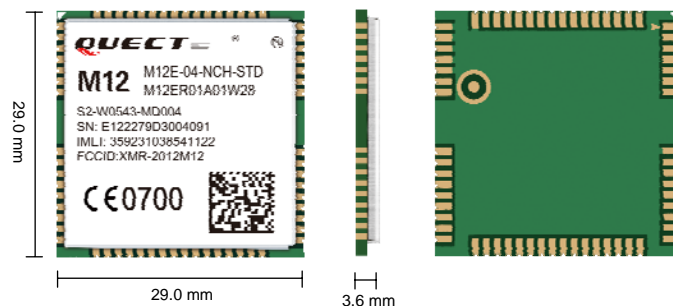
Featuring an industry-standard interface and extremely low power consumption, M12 delivers GSM/GPRS 900/1800MHz performance for Data, SMS, Fax and Voice in a small form factor. M12 can fit into almost all M2M applications, including VTS, Smart Metering, Wireless POS, Security, etc.

M12 supports an important remote upgrade technology which named QuecFOTA. With the unique Quectel protocol, the new firmware of M12 will be perfectly updated by MCU via UART, and this can greatly solve the worries for M2M applications.

As a part of Quectel's corporate policy of environmental protection, all products comply to the RoHS (Restriction of Hazardous Substances) directive of the European Union (EU Directive 2002/95/EG).

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## Dual-band GSM/GPRS Module



### General Features

<b>Dual-band</b>	900/ 1800 MHz
<b>GPRS Multi-slot Class</b>	12, 1~12 configurable
<b>GPRS Mobile Station</b>	Class B
<b>Compliant to GSM Phase 2/2+</b>	Class 4 (2W @ 900 MHz) Class 1 (1W @ 1800 MHz)
<b>Supply Voltage Range</b>	3.3~4.6V 4.0V nominal
<b>Low Power Consumption</b>	1.1mA @ DRX=5 0.95mA @ DRX=9
<b>Operation Temperature</b>	-40 °C to +80 °C
<b>Dimensions</b>	29.0 x 29.0 x 3.6mm
<b>Weight</b>	Approx. 6.0g
<b>Mux Driver</b>	GSM 07.10
<b>Control via AT commands</b>	GSM 07.07 ,07.05 and other enhanced AT Commands
<b>SIM Application Toolkit</b>	

### Specifications for Voice

<b>Speech Codec Modes</b>	Half Rate (HR) Full Rate (FR) Enhanced Full Rate (EFR) AMR Half Rate AMR Full Rate
<b>Echo Arithmetic</b>	Echo Cancellation Echo Suppression Noise Reduction
<b>Hands-free Operation</b>	

### Interfaces

<b>External SIM</b>	3V/ 1.8V
<b>Analog Audio Interfaces</b>	Two channels
<b>RTC Backup</b>	
<b>SD Card Interface</b>	
<b>Serial Port and Debug Port</b>	
<b>Antenna Pad</b>	
<b>GPIOs</b>	

### Specifications for Fax & Data

<b>Fax</b>	Group 3, Class 1 & 2
<b>GPRS Class 12</b>	Max. 85.6 kbps (uplink & downlink)
<b>PBCCH Support</b>	
<b>Coding Schemes</b>	CS 1, 2, 3, 4
<b>CSD</b>	Up to 14.4 kbps
<b>USSD</b>	
<b>Non Transparent Mode</b>	
<b>Protocols</b>	PPP/ TCP/ UDP/ HTTP/ MMS/ SMTP/ MUX

### Certifications

CE UCRF

### Specifications for SMS via GSM/ GPRS

Point-to-point MO and MT

SMS Cell Broadcast