

# Quectel M65

## Ultra-small Quad-band GSM/GPRS Module



Quectel M65 is an ultra-small quad-band GSM/GPRS module using LCC castellation packaging on the market. With ultra-compact 17.7mm × 15.8mm × 2.4mm profile, it can meet the needs of small-size terminal products to the greatest extent, effectively helping customers to reduce product size and cost. Additionally, M65 is pin-to-pin compatible with Quectel GSM/GPRS M66 and M66 R2.0 modules, with highly competitive price.

M65 adopts surface mount technology, making it an ideal solution for durable and rugged designs. The low profile and small size of LCC package ensures M65 can be easily embedded into size-constrained applications, and provides reliable connectivity with applications. This kind of package is ideally suited for large-scale manufacturing which has strict requirements for cost and efficiency.

The compact form factor, low power consumption and extended temperature extend the applicability of M65 to a wide range of M2M applications such as wearable devices, industrial PDA, personal tracking, wireless POS, smart metering, telematics, etc.



### Key Benefits

- ✓ Ultra-small quad-band GSM/GPRS module
- ✓ Easier soldering process with LCC package
- ✓ Power consumption as low as 1.2mA
- ✓ Support voice, QuecFOTA® and QuecLocator\* functions
- ✓ Embedded powerful Internet service protocols, multiple sockets & IP addresses
- ✓ Fast time-to-market: simple product design, evaluation tools and timely technical support minimize design-in time and development efforts



Quad-band



Extended Temperature  
Range: -40°C ~ +85°C



LCC Package



GPRS Multi-slot  
Class 12



Highly Compact  
Size



Embedded Internet  
Services Protocols



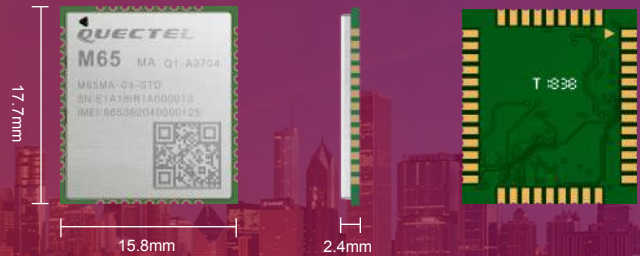
Quectel Enhanced  
AT Commands



Audio Function

# Quectel M65

## Ultra-small Quad-band GSM/GPRS Module



### Frequency Bands

#### Quad-band:

GSM850  
EGSM900  
DCS1800  
PCS1900

### Data

#### GPRS Class 12:

Max. 85.6kbps (Downlink)  
Max. 85.6kbps (Uplink)

#### Coding Schemes:

CS-1, CS-2, CS-3, CS-4

#### USSD

#### Non-transparent Mode

### SMS

Point-to-point MO and MT  
Text and PDU Mode

### Voice

#### Speech Codec Modes:

Half Rate (HR)  
Full Rate (FR)  
Enhanced Full Rate (EFR)  
Adaptive Multi-Rate (AMR)

#### Echo Arithmetics:

Echo Cancellation  
Echo Suppression  
Noise Reduction

### Interfaces

(U)SIM Interface × 1: 3.0V/ 1.8V

RTC × 1

UART × 3:

Main Port, Debug Port and Auxiliary Port

Analog Audio Channel × 3:

2 Output Channels and 1 Input Channel

ADC × 1

Antenna Pad × 1: GSM Antenna Pad

### Enhanced Features

QuecFOTA®

QuecCell

QuecFile

CMUX

DTMF\*

OpenCPU\*

QuecLocator\*

Audio Play/Audio Recording

### Electrical & Sensitivity

#### Output Power:

Class 4 (2W @850/900MHz)  
Class 1 (1W @1800/1900MHz)

#### Consumption:

1.2mA @DRX=5  
1.1mA @DRX=9

#### Sensitivity:

GSM850: -108dBm  
EGSM900: -108dBm  
DCS1800: -107dBm  
PCS1900: -107dBm

#### Supply Voltage:

3.45V~4.25V, Typ. 4.0V

### Software Features

Protocols: TCP/ UDP/ PPP/ HTTP/ NTP/ PING/  
IPv6/ TTS/ FTP/ SSL/ MQTT/ HTTPS

### General Features

GPRS Multi-slot Class: Class 12  
GPRS Mobile Station: Class B  
Extended Temperature: -40°C ~ +85°C  
Dimensions: 17.7mm × 15.8mm × 2.4mm  
LCC Package  
Weight: Approx. 1.1g  
GSM 07.07, 07.05 and other Enhanced AT  
Commands

### Approvals

#### Regulatory:

CE (Europe)

#### Others:

RoHS Compliant

\* Under Development.