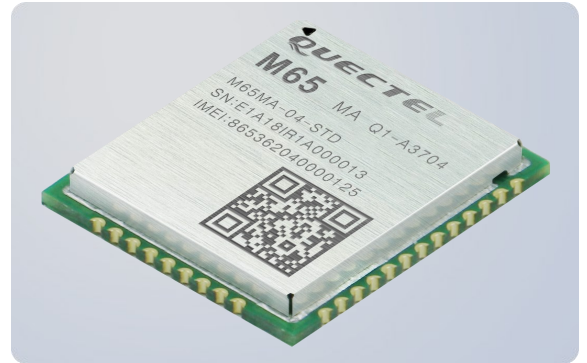# Quectel M65

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
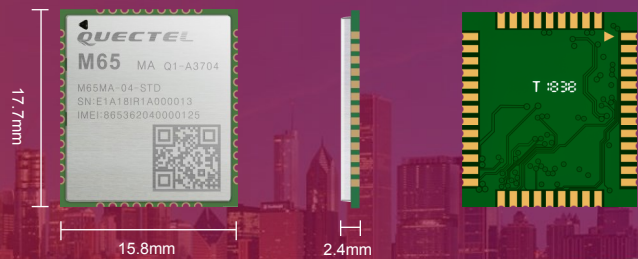
Embedded Internet Services Protocols

Quectel Enhanced AT Commands

Audio Function

Rev.: V1.3 | Status: Released

Quectel M65

Ultra-small Quad-band GSM/GPRS Module

17.7mm **15.8mm** **2.4mm**

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.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Quectel:

  M65MA-04-STD   M65MATEA-04-STD