

# Quectel BC92

## Compact NB-IoT/GSM Dual-mode Module with Ultra-low Power Consumption



BC92 is a high-performance, multi-band NB-IoT/GSM dual-mode module with extremely low power consumption. The ultra-compact 23.6mm × 19.9mm × 2.2mm profile makes it a perfect choice for size sensitive applications. Designed to be compatible with Quectel GSM/GPRS M95 module and LPWA BC95 module, BC92 provides abundant external interfaces and protocol stacks, providing great convenience for customers' applications.

BC92 adopts surface-mount technology, making it an ideal solution for durable and rugged designs. The low profile and small size of LCC package enables BC92 to be easily embedded into space-constrained applications and provides reliable connectivity with applications.

Due to the compact size and ultra-low power consumption, BC92 is one of the best choices of IoT applications, such as smart metering, bike sharing, smart wearables, smart parking, smart city, security and asset tracking, home appliances, agricultural environment monitoring, etc. Also it provides a complete range of SMS\*, voice call\* and data transmission functions to meet customers' diversified demands.



### Key Benefits

- ✓ LTE Cat NB1/GSM dual-mode module with ultra-low power consumption, compact size and high sensitivity
- ✓ GSM voice call\* supported
- ✓ Build-in eSIM reserved for option
- ✓ Multi-band and rich external interfaces ensure convenient application
- ✓ Pin-to-pin compatible with Quectel GSM/GPRS and LPWA modules, easy for future upgrading
- ✓ Embedded with abundant Internet service protocols
- ✓ BLE\* based on BT4.2 (Partial Protocol)



Compact Size



Multi Frequency Bands



Build-in eSIM Reserved (Optional)



LCC Package



Multiple Serial Ports



Ultra-low Power Consumption



Quectel Enhanced AT Commands



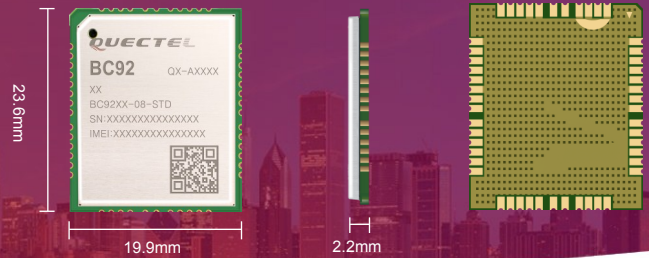
Embedded Internet Services Protocols



BLE\* based on BT4.2 (Partial Protocol)

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### Variant for the Global

#### BC92

##### LTE Cat NB1:

LTE FDD: B3/B5/B8/B20/B28

##### GSM:

850/900/1800/1900MHz

### Data

#### Cat NB1:

Single-Tone: Max. 25.5kbps (DL)/16.7kbps (UL)

Multi-Tone: Max. 25.5kbps (DL)/62.5kbps (UL)

#### GSM:

GPRS Class 12: Max. 85.6kbps (DL)/85.6kbps (UL)

### SMS\*

Text/PDU Mode

### Voice\*

#### Speech Codec Modes:

Half Rate (HR)

Full Rate (FR)

Enhanced Full Rate (EFR)

Adaptive Multi-Rate (AMR)

#### Echo Arithmetic:

Echo Cancellation

Echo Suppression

Noise Reduction

### Electrical Specification

#### Output Power:

23dBm±2dB @LTE FDD Bands

33dBm±2dB @GSM850/EGSM900

30dBm±2dB @DCS1800/PCS1900

#### Sensitivity:

-129dBm @LTE FDD Bands

-110dBm @GSM850/EGSM900

-109dBm @DCS1800/PCS1900

### Power Consumption (Typ.):

Cat NB1: About 4µA @PSM

About 850uA @Idle Mode

GSM: 1.2mA @DRX=5

0.8mA @DRX=9

### Interfaces

USIM ×2

PSM\_EINT ×1

UART ×2

ADC\* ×1

RESET ×1

PWRKEY ×1

RI\* ×1

NETLIGHT ×1

Main Antenna ×1

BT Antenna\* ×1

Analog Audio\* ×3

### Enhanced Features

GSM Voice Call\*

Build-in eSIM Reserved (Optional)

Firmware Upgrade via UART

DFOTA: Delta Firmware Upgrade Over-The-Air

### Software Features

#### Protocol Stacks:

UDP/TCP/LwM2M/SNTP/PPP/MQTT/CoAP\*/

HTTP\*/HTTPS\*/FTP\*

### General Features

50 Pins

#### Supply Voltage Range:

3.4V~4.2V, 3.8V Typ.

#### Temperature Range:

-25°C ~ +75°C

#### Dimensions:

23.6mm × 19.9mm × 2.2mm

### LCC Package

Weight: 1.8±0.1 g

### AT Command:

3GPP Rel.13/Rel.14\* and Quectel Enhanced AT Commands.

### Approvals

#### Carrier:

Vodafone\* (Global)

#### Regulatory:

GCF\* (Global)

CE\* (Europe)

RCM\* (Australia/New Zealand)

#### Others:

RoHS Compliant

\* Under Development/Planning