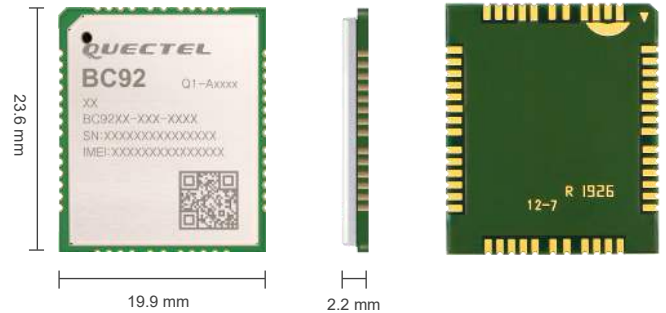


# Quectel BC92

## 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 23.6 mm × 19.9 mm × 2.2 mm profile makes it a perfect choice for size-sensitive applications. Designed to be compatible with Quectel GSM/GPRS M95 module, NB-IoT BC95-G module and LPWA BG95 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\* and data transmission functions to meet customers' diversified demands.



### Key Features

- ✓ NB-IoT/GSM dual-mode module with ultra-low power consumption, compact size and high sensitivity
- ✓ Multi-band and rich external interfaces ensuring convenient application
- ✓ Compatible with Quectel GSM/GPRS M95 module, NB-IoT BC95-G module and LPWA BG95 module, easy for future upgrading
- ✓ Embedded with abundant Internet service protocols



Compact Size



Multi Frequency Bands



Embedded Internet Services Protocols



LCC Package



Multiple Serial Ports



Ultra-low Power Consumption



Quectel Enhanced AT Commands

# Quectel BC92

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

### Variant for the Global

#### BC92

LTE Cat NB2: B3/B5/B8/B20/B28

GSM: 850/900/1800/1900 MHz

#### Data

##### Data Transmission:

##### LTE Cat NB1:

Single-Tone:

DL: Max. 25.5 kbps

UL: Max. 16.7 kbps

Multi-Tone:

DL: Max. 25.5 kbps

UL: Max. 62.5 kbps

##### LTE Cat NB2:

DL: Max. 127 kbps

UL: Max. 158.5 kbps

##### GSM:

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

#### SMS\*

Text/PDU Mode

### Electrical Specification

#### Output Power:

23 dBm  $\pm$ 2 dB @ LTE FDD Bands

33 dBm  $\pm$ 2 dB @ GSM850/EGSM900

30 dBm  $\pm$ 2 dB @ DCS1800/PCS1900

#### Sensitivity:

-129 dBm @ LTE FDD Bands (with Repetitions)

-109 dBm @ GSM850/EGSM900

-109 dBm @ DCS1800/PCS1900

### Power Consumption (Typ.):

#### Cat NB1:

4  $\mu$ A @ PSM

1.2 mA @ Idle, DRX = 2.56 s

#### GSM:

1 mA @ DRX = 5

0.9 mA @ DRX = 9

### Interfaces

(U)SIM  $\times$  2 (1.8/3.0 V)

PSM\_EINT  $\times$  1

UART  $\times$  2

ADC  $\times$  1

RESET  $\times$  1

PWRKEY  $\times$  1

RI  $\times$  1

NETLIGHT  $\times$  1

Antenna  $\times$  1

### Enhanced Features

Firmware Upgrade via UART

QuecLocator<sup>®</sup>

DFOTA: Delta Firmware Upgrade Over-The-Air

### Software Features

#### Protocol Stacks:

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

HTTPS\*/FTP

### General Features

LCC Package

50 Pins

#### Supply Voltage Range:

3.4–4.2 V

Typical 3.8 V

#### Operation temperature:

-25 °C to +75 °C

Dimensions: 23.6 mm  $\times$  19.9 mm  $\times$  2.2 mm

Weight: 1.8  $\pm$ 0.1 g

#### AT Command:

3GPP Rel-13/Rel-14

Quectel Enhanced AT Commands

### Approvals

#### Carrier:

Vodafone (Europe)

Vodacom/ MTN (South Africa)

#### Regulatory:

GCF (Global)

CE (Europe)

Anatel (Brazil)

RCM (Australia & New Zealand)

ICASA (South Africa)

#### Others:

RoHS Compliant

\* Under Development