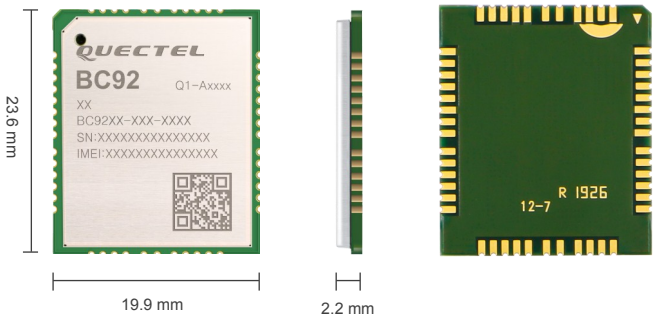
Quectel BC92

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 Benefits

- 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

LCC Package

Multiple Serial Ports

Ultra-low Power Consumption

AT

Quectel Enhanced AT Commands

Rev.: V1.2 | Status: Released

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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 ±2 dB @ LTE FDD Bands

33 dBm ±2 dB @ GSM850/EGSM900

30 dBm ±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 μA @ PSM

1.2 mA @ Idle, DRX = 2.56 s

GSM:

1 mA @ DRX = 5

0.9 mA @ DRX = 9

Interfaces

USIM × 2 (1.8/3.0 V)

PSM_EINT × 1

UART × 2

ADC* × 1

RESET × 1

PWRKEY × 1

RI × 1

NETLIGHT × 1

Antenna × 1

Enhanced Features

Firmware Upgrade via UART

QuecLocator ®

DFOTA: Delta Firmware Upgrade Over-The-Air

Software Features

Protocol Stacks:

UDP/TCP/LwM2M/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 × 19.9 mm × 2.2 mm

Weight: 1.8 ±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)

RCM (Australia & New Zealand)

ICASA* (South Africa)

Others:

RoHS Compliant

* Under Development

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