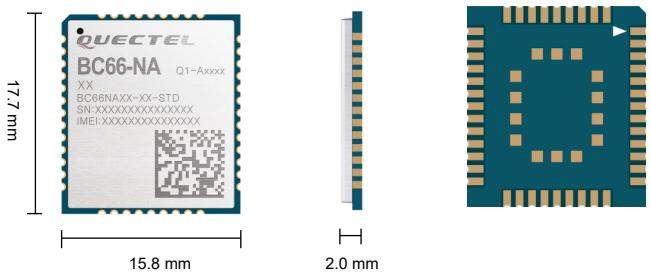
# Quectel BC66-NA

## Compact LTE Cat NB2 Module with Ultra-low Power Consumption




BC66-NA is a high-performance, multi-band LTE Cat NB2 module with extremely low power consumption. The ultra-compact 17.7 mm × 15.8 mm × 2.0 mm profile makes it a perfect choice for size sensitive applications. Designed to be compatible with Quectel GSM/GPRS module M66 in the compact and unified form factor, it provides a flexible and scalable platform for migrating from GSM/GPRS to NB-IoT network. Also it is pin-to-pin compatible with Quectel LTE Cat NB1 module BC66/BC65 and LTE Cat NB2 module BC68, and additionally supports band 71 and band 85 to accommodate more operators. BC66-NA provides abundant external interfaces and protocol stacks, providing great convenience for customers' applications.

The surface-mount technology makes BC66-NA an ideal solution for durable and rugged designs. The low profile and small size of LCC package allow it to be easily embedded into space-constrained applications and provide reliable connectivity with applications.

Due to compact form factor, ultra-low power consumption and extended temperature range, BC66-NA is a best choice for a wide range of IoT applications, such as smart metering, bike sharing, smart wearables, smart parking, smart city, security and asset tracking, home appliances, agricultural and environmental monitoring, etc. It is able to provide a complete range of SMS and data transmission services to meet client-side demands.

## Key Benefits

- Compact LPWA module with ultra-low power consumption
- Low power supply voltage: 2.1–3.63 V
- QuecOpen® solution minimizes application design
- Build-in eSIM reserved
- Multi-band and rich external interfaces ensure convenient application
- Compatible with Quectel GSM/GPRS module, easy for future upgrading
- Embedded with abundant Internet service protocols

Compact Size

Multi-Band NB-IoT

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

LCC Package

Multiple Serial Ports

Ultra-low Power Consumption

Quectel Enhanced AT Commands

Embedded Internet Services Protocols

Rev.: V1.1 | Status: Released

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## Compact LTE Cat NB2 Module with Ultra-low Power Consumption

### Frequency Bands

B1/B2/B3/B4/B5/B8/B12/B13/B17/B18/B19/

B20/B25/B26*/B28/B66/B71/B85

### Data Rate

Cat NB2:

Max. 103 kbps (DL)/151 kbps (UL)

### SMS*

Text/PDU Mode

### Electrical Characteristics

Output Power:

23 dBm ±2 dB

Sensitivity:

-129 dBm

Power Consumption (Typ.):

3.5 μA @ PSM

0.13 mA @ Idle Mode (eDRX = 81.92 s)

0.25 mA @ Idle Mode (DRX = 2.56 s)

95 mA @ LTE Cat NB2, 23 dBm

### Interfaces

USB × 1

USIM × 1

PSM_EINT × 1

UART × 3

ADC* × 1

RESET × 1

PWRKEY × 1

NETLIGHT × 1

Antenna × 1

SPI × 1 (QuecOpen® Version Only)

I2C × 1 (QuecOpen® Version Only)

I2S × 1 (QuecOpen® Version Only)

GPIO: Configurable (QuecOpen® Version Only)

### Software Features

Protocol Stacks:

UDP/TCP/LwM2M/MQTT/SNTP/TLS/DTLS/PPP*/

HTTP*/HTTPS*/CoAP*

Firmware Download Methods:

UART

DFOTA

USB

### Enhanced Features

ECID*:

Enhanced Cell ID

OTDOA*:

Observed Time Difference of Arrival

eSIM:

Build-in eSIM reserved

### General Features

58-Pin LCC Package

Supply Voltage Range:

2.1–3.63 V, 3.3 V Typ.

(GPIO Voltage Domain: 1.8 V)

Temperature Range:

Operation Temperature Range: -35 °C to +75 °C

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

Dimensions:

17.7 mm × 15.8 mm × 2.0 mm

Weight: 1.2 ±0.2 g

AT Command:

3GPP Rel. 14 Compliant AT Commands

Quectel Enhanced AT Commands

### Approvals

Carrier:

Vodafone (Global)

Deutsche Telekom* (Europe)

T-Mobile/Verizon*/AT&T* (North America)

NTT DOCOMO*/SoftBank* (Japan)

Telstra* (Australia)

Regulatory:

GCF (Global)

CE (Europe)

FCC/PTCRB (North America)

IC (Canada)

KC* (South Korea)

NCC* (Taiwan)

JATE/TELEC (Japan)

RCM (Australia)

NBTC* (Thailand)

IMDA* (Singapore)

Others:

RoHS

ATEX* (Europe)

* Under Development/Planning


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