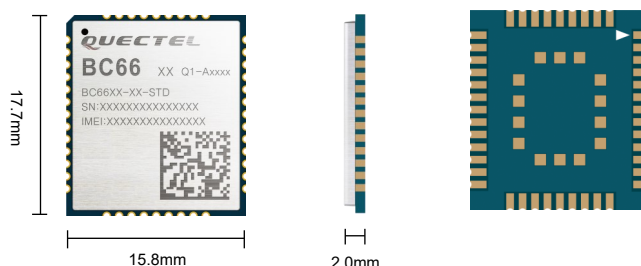# Quectel BC66

Compact LTE Cat NB1 Module with Ultra-low Power Consumption

BC66 is high-performance, multi-band LTE Cat NB1 module with extremely low power consumption. The ultra-compact 17.7mm × 15.8mm × 2.0mm profile makes it perfect choice for size sensitive applications. Designed to be compatible with Quectel GSM/GPRS M66 module in the compact and unified form factor, BC66 provides a flexible and scalable platform for migrating from GSM/GPRS to NB-IoT network. Also it is compatible with Quectel NB-IoT modules BC66-NA, BC68 and BC65. BC66 provides abundant external interfaces and protocol stacks, as well as specialized PSM_ENIT for easy module wake-up via the external interrupt.

BC66 adopts surface mounted technology, making it an ideal solution for durable and rugged designs. The low profile and small size of LCC package allow BC66 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 is a best choice for a wide range of IoT applications, ranging from smart metering, bike sharing, smart wearables, smart parking, smart city, security and asset tracking to home appliances, agricultural and environmental monitoring, etc. Additionally, it is able to provide a complete range of SMS and data transmission services to meet client-side demands.

Key Benefits

- ✓ Compact LTE Cat NB1 module with ultra-low power consumption
- ✓ Low power supply voltage: 2.1V~3.63V
- ✓ OpenCPU solution minimizes application design
- ✓ Specialized PSM_ENIT for easy module wake-up via external interrupt
- ✓ 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 ~ +85°C

LCC Package

Multiple Serial Ports

Ultra-low Power Consumption

Quectel Enhanced AT Commands

Embedded Internet Services Protocols

EMAIL US: info@quectel.com   VISIT US: www.quectel.com

Quectel BC66

Compact LTE Cat NB1 Module
with Ultra-low Power Consumption

Frequency Bands

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

B20/B25/B26*/B28/B66

Data

Data Rate:

Single-Tone:

25.5kbps (DL)/16.7kbps (UL)

Multi-Tone:

25.5kbps (DL)/62.5kbps (UL)

SMS*

Text/PDU Mode

Electrical Characteristics

Output Power:

23dBm±2dB

Sensitivity:

-129dBm

Power Consumption (Typ.):

3.5μA @PSM

0.24mA @Idle Mode (eDRX=81.92s)

0.35mA @Idle Mode (DRX=2.56s)

110mA @LTE Cat NB1, 23dBm, Single-tone

Interfaces

USB × 1

USIM × 1

PSM _EINT × 1

UART × 3

ADC* × 1

RESET × 1

PWRKEY × 1

NETLIGHT × 1

Antenna × 1

SPI × 1 (OpenCPU Version Only)

I2C × 1 (OpenCPU Version Only)

I2S × 1 (OpenCPU Version Only)

GPIO: Configurable (OpenCPU Version Only)

Software Features

Protocol Stacks:

UDP/TCP/LwM2M/MQTT/DTLS/SNTP/CoAP*/

PPP*/TLS*/HTTP*/HTTPS*

Firmware Download Methods:

UART

DFOTA

USB

General Features

58-Pin LCC Package

Supply Voltage Range:

2.1V~3.63V, 3.3V Typ.

(GPIO Voltage Domain: 1.8V)

Temperature Range:

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

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

Dimensions:

17.7mm × 15.8mm × 2.0mm

Weight: 1.2g±0.2g

AT Commands:

3GPP Rel.13 Compliant AT Commands

Quectel Enhanced AT Commands

Approvals

Carrier:

Vodafone (Global)

Telefónica* (Europe)

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

LGU+* (South Korea)

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

QUECTEL®