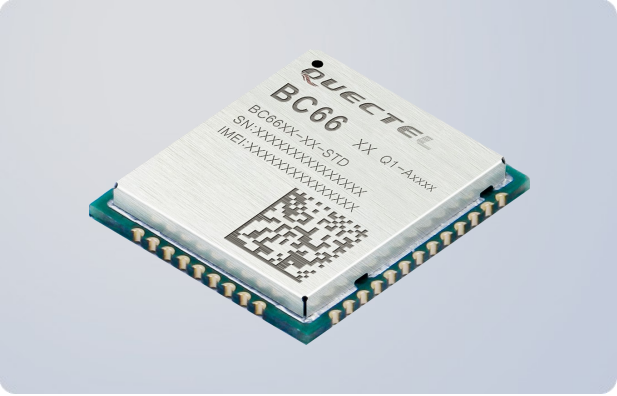
Quectel BC66

Compact NB-IoT Module with Ultra-low Power Consumption



BC66 is high-performance, multi-band NB-IoT 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. BC66 provides abundant external interfaces and protocol stacks, as well 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 NB-IoT module with ultra-low power consumption
- Low power supply voltage: 2.1V~3.63V
- Support high speed movement (80~120km/h)
- 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 Frequency Bands

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

LCC

LCC Package

Multiple Serial Ports

Ultra-low Power Consumption

AT

Quectel Enhanced AT Commands

Embedded Internet Services Protocols

Rev.: V1.4 | Status: Released

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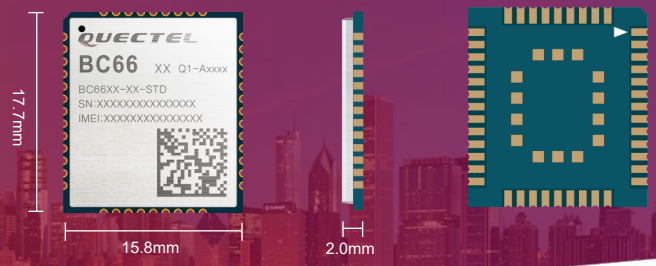

Frequency Bands

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)

Protocol Stacks:

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

TLS*/DTLS*/HTTP*/HTTPS*

Firmware Download Methods:

UART

DFOTA

SMS*

Text/PDU Mode

Electrical Specification

Output Power:

23dBm±2dB

Sensitivity:

-129dBm

Power Consumption (Typ.):

3.5μA @PSM

0.29mA @Idle Mode (eDRX=81.92s)

0.43mA @Idle Mode (DRX=2.56s)

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

Interfaces

USIM ×1

PSM _EINT ×1

UART ×3

ADC* ×1

RESET ×1

PWRKEY ×1

NETLIGHT* ×1

Antenna ×1

SPI ×1

I2C ×1 (OpenCPU Version Only)

I2S ×1 (OpenCPU Version Only)

GPIO: Configurable (OpenCPU Version Only)

General Features

58 pins

Supply Voltage Range:

2.1V~3.63V, 3.3V Typ.

(GPIO Voltage Domain: 1.8V)

Temperature Range:

-40°C ~ +85°C

Dimension:

17.7mm × 15.8mm × 2.0mm

LCC Package

Weight: 1.2g±0.2g

AT Command:

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

Certification

RoHS Compliant

GCF (Global)

IC (Canada)

NCC (Taiwan)

CE/ATEX*/Vodafone* (Europe)

FCC/PTCRB/T-Mobile (North America)

JATE*/TELEC*/SoftBank* (Japan)

KC*/LGU+* (South Korea)

RCM/Telstra* (Australia)

* Under Development/Planning

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