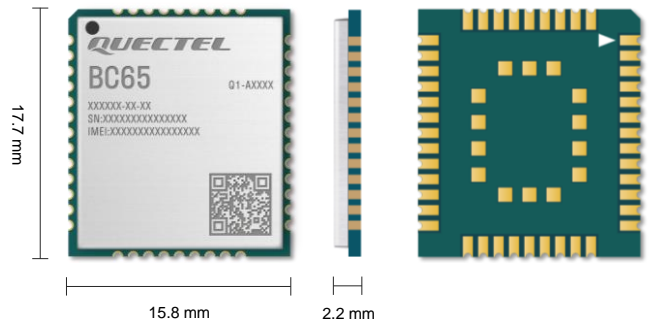


Quectel BC65

Compact NB-IoT Module with Ultra-low Power Consumption



BC65 is a high-performance multi-band NB-IoT module with extremely low power consumption. The ultra-compact 17.7 mm × 15.8 mm × 2.2 mm profile makes it a perfect choice for size sensitive applications. Designed to be compatible with Quectel GSM/GPRS M66, NB-IoT BC66, BC66-NA, BC68 and BC660K-GL modules in the compact and unified form factor, BC65 provides great convenience for migrating from GSM/GPRS to NB-IoT network.

Adopting surface-mount technology, BC65 is an ideal solution for durable and rugged designs. The low profile and small size of LCC package allow the module to be easily embedded into space-constrained applications and provide reliable connectivity with applications.

Due to its compact form factor, ultra-low power consumption and extended operating temperature range, BC65 is one of the 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 provides a complete range of SMS* and data transmission services to meet client-side demands.



Key Features

- ✓ Power saving design ensures ultra-low power consumption
- ✓ Specialized PSM_EINT for easy module wake-up via external interrupt
- ✓ Built-in eSIM reserved
- ✓ Multi-band and rich external interfaces ensuring convenient application
- ✓ Compatible with Quectel GSM/GPRS M66, NB-IoT BC66, BC66-NA, BC68 and BC660K-GL modules, easy for future upgrading and migration
- ✓ Embedded with abundant Internet service protocols



Compact Size



Multi Frequency Bands



Operating Temperature:
-25 °C to +75 °C



LCC Package



Multiple Serial Ports



Ultra-low Power Consumption



Quectel Enhanced AT Commands



Embedded Internet Services Protocols

Quectel BC65

| LTE Cat NB2 | BC65 |
|---|---|
| Region/Operator | Global |
| Dimensions (mm) | 17.7 × 15.8 × 2.2 |
| Temperature Range | |
| Operating Temperature | -25 °C to +75 °C |
| Extended Temperature | -40 °C to +85 °C |
| Frequency Bands | |
| LTE-FDD | B3/ 5/ 8/ 20/ 28 |
| Certifications | |
| Carrier | Europe: Vodafone/ Deutsche Telekom/ Telefónica |
| Regulatory | Global: GCF Europe: CE Australia/ New Zealand: RCM |
| Data Rate (Max.) | |
| LTE Cat NB1 | Single-Tone: DL: 25.5 kbps UL: 16.7 kbps Multi-Tone: DL: 25.5 kbps UL: 62.5 kbps |
| LTE Cat NB2 | DL: 127 kbps UL: 158.5 kbps |
| Interfaces | |
| (U)SIM | × 1 |
| PSM_EINT | × 1 (wake up device via external interrupt) |
| UART | × 3 (Main/ Debug/ Auxiliary UART) |
| RESET | × 1 |
| PWRKEY | × 1 |
| NETLIGHT | × 1 |
| Antenna | × 1 |
| ADC | × 1 (10 bits) |
| RI | × 1 |
| Enhanced Features | |
| PSM_EINT for Module Wake-up | ● |
| ECID: Enhanced Cell ID | ● |
| RAI: Release Assistance Indication | ● |
| OTDOA: Observed Time Difference of Arrival | ● |
| DFOTA: Delta Firmware Upgrade Over-The-Air | ● |
| (U)SIM Detection | ● |
| Software Features | |
| Protocol Stacks | UDP/ TCP/ SNTP/ MQTT/ CoAP*/ PPP/ TLS/ DTLS |
| AT Command | • 3GPP Rel-13/ Rel-14 • Quectel Enhanced AT Commands |
| Electrical Features | |
| Supply Voltage Range | 3.2–4.2 V, typ. 3.8 V |
| Power Consumption (Typical) | • 4 μA @ PSM • 1.0 mA @ Idle Mode, DRX = 2.56 s, ECL0 |

Notes:

- *: under development.
- : Supported.