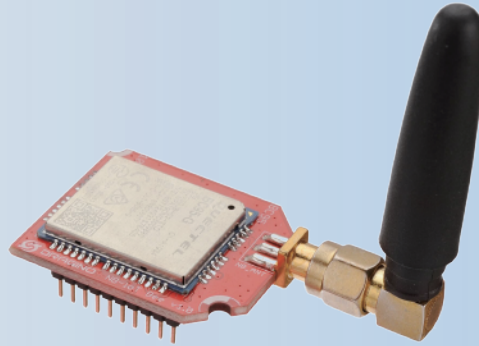# Global Regions NB-IoT Module

NB-IoT Bee 95G

OVERVIEW:

NarrowBand-Internet of Things (NB-IoT) is a standards-based low power wide area (LPWA) technology developed to enable a wide range of new IoT devices and services. NB-IoT significantly improves the power consumption of user devices, system capacity and spectrum efficiency, especially in deep coverage. Battery life of more than 10 years can be supported for a wide range of use cases.

New physical layer signals and channels are designed to meet the demanding requirement of extended coverage – rural and deep indoors – and ultra-low device complexity. Initial cost of the NB-IoT modules is expected to be comparable to GSM/GPRS. The underlying technology is however much simpler than today's GSM/GPRS and its cost is expected to decrease rapidly as demand increases.

NB-IoT Bee 95G is a Ultra-low power consumption , Super high sensitivity NB-IoT module supports global regions. This module can be used with Dragino NB-IoT Shield and Arduino to study/evaluate and do POC for NB-IoT solution rapidly. The module can be also used to build Nb-IoT products in a rapid way.

Features:

· Support Bands: B1/B3/B8/B5/B20/B28 @H-FDD
· Global Regions
· Ultra-low power consumption
- Super high sensitivity
- Embedded with abundant Internet service protocols
- Small size: 2.7 x 3.3 cm
· AT command to control
-·Micro SIM Interface

Applications:

• Wireless Alarm and Security Systems
• Home and Building Automation
• Automated Meter Reading
• Industrial Monitoring and Control
• Long range Irrigation Systems,etc.

Global Regions NB-IoT Module

NB-IoT Bee 95G
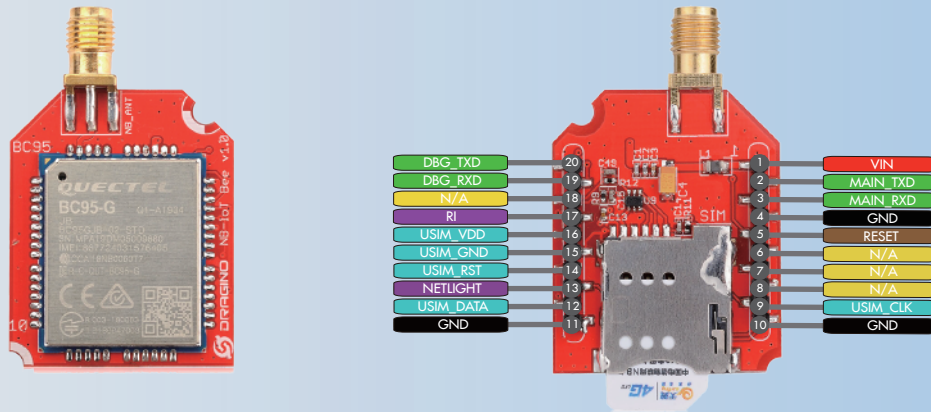
Specifications:

Frequency Bands:

- B1 @H-FDD: 2100MHz
- B3 @H-FDD: 1800MHz
- B8 @H-FDD: 900MHz
- B5 @H-FDD: 850MHz
- B20 @H-FDD: 800MHz
- B28 @H-FDD: 700MHz

Electrical Characteristics:

- Maximum Output Power:23dBm±2dB
- Sensitivity:-129dBm±1dB
- Power Consumption (Typical) :
- - 3.6uA @PSM2mA @Idle Mode, DRX=1.28s

LTE CatNB1 Connectivity:

- 250mA @Radio Transmission, 23dBm (B1/B28)
- 230mA @Radio Transmission, 23dBm (B3/B8/B5/B20)
- 80mA @Radio Transmission, 12dBm (B1/B3/B8/B5/B20/B28)
- 65mA @Radio Transmission, 0dBm (B1/B3/B8/B5/B20/B28)
- 50mA @Radio Reception

SMS

- Point-to-point MO and MT
- Text/PDU Mode

Supply Voltage Range:

- 3.1V~4.2V, 3.6V Typ.

Temperature Range:

- -40°C ~ +85°C

Data

Data Transmission:

- Single Tone: DL:25.2kbps UL:15.625kbps
- Multi Tone:DL: 25.2kbps UL:54kbps
- Extended TBS/2 HARQ: DL: 125kbps UL: 150kbps

Protocol Stacks:

- IPv4,
- IPv6
- UDP
- CoAP
- LwM2M
- Non-IP
- DTLS
- TCP
- MQTT

Download Method:

- UART
- DFOTA

Enhanced Features

- DFOTA: Delta Firmware Upgrade Over-The-Air
- RAI: Release Assistance Indication
- ECID: Enhanced Cell ID
- OTDOA: Observed Time Difference of Arrival