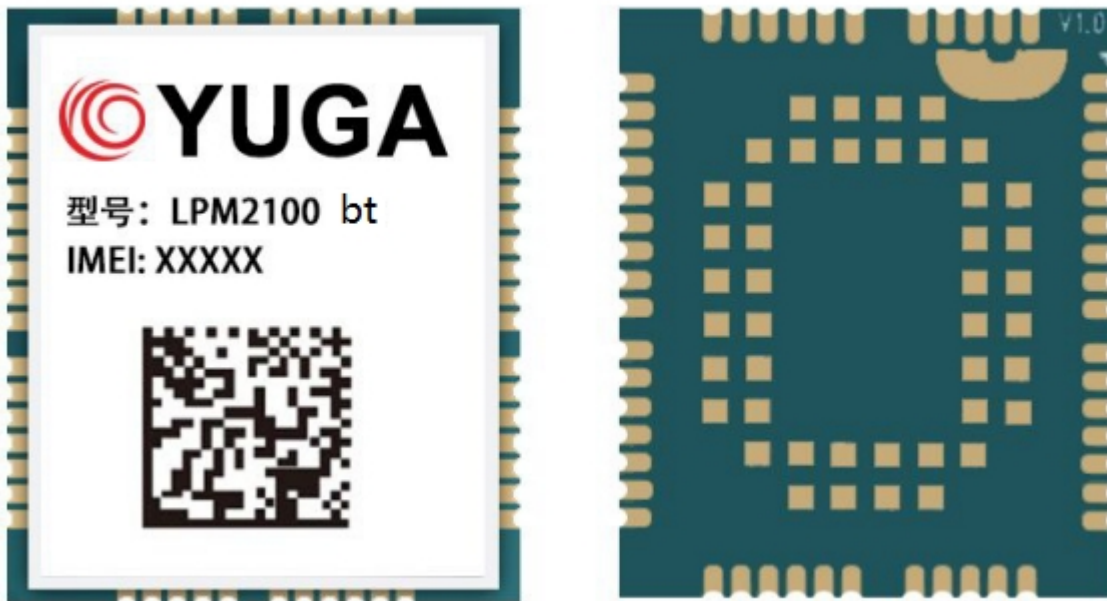




LPM2100 bt

Multi-Band NB-IoT + GNSS Module



LPM2100 bt multi-band NB-IoT module, supporting frequency bands B3, B5, B8. It is a multi-mode IoT wireless communication module with GPS positioning NB-IoT communication module, integrated RF chip baseband chip and core CPU, low voltage, ultra low power consumption, high sensitivity and high positioning accuracy.

The LPM2100 bt module is an LCC package that can be easily embedded into an application circuit. The structural dimensions of the LPM2100 bt module are 23.6 mm x 19.9 mm x 2.2 mm.

The LPM2100 bt module is designed for energy-saving technology with ultra-low power consumption in sleep mode and less than 5uA in deep sleep. The LPM2100 bt supports the following frequency bands: NB-IoT: Band3, Band5, Band8.

LPM2100 bt GNSS positioning, support BDS/GPS/GLONASS parallel reception and joint positioning and AGPS positioning.

The LPM2100 bt module can be used in the following applications:

- Car networking
- Smart home
- Smart city (smart parking, water/gas meters, street lights, smoke alarms, trash cans, etc.)
- Consumption and medical (wearing devices, VIP tracking, life support, remote clinical tracking, etc.)
- Industrial and agricultural intelligent monitoring (machine alarm, gas detection, irrigation, soil pH, etc.)
- Logistics support (industrial assets, container tracking, location and status updates, etc.)



● Main characteristics

Package: LCC (98 feet)

Size: 23.6 × 19.9 × 2.2mm

Weight: about 3g

Supply voltage range: 2.4 ~ 3.4V

Supported frequency band: B3/B5/B8

NB-IoT Band3 1710-1785MHz

NB-IoT Band5 824-849MHz

NB-IoT Band8 880-915MHz

Operating temperature range: -40 to +85 °C

Support BDS/GPS/GLONASS parallel reception and joint positioning

Support AGPS

BDS/GPS: B1-1561.098MHz/L1-1575.42MHz

Tracking sensitivity: -162dBm

Capture sensitivity: -148dBm

Cold start TTFF: ≤30s

Hot start TTFF: ≤1s

Recapture TTFF: ≤1s

Positioning accuracy: <3m

Speed measurement accuracy: <0.1m/s

Data format: NMEA 0183 can be customized

● Software features

Non-IP/built-in TCP/UDP protocol/FTP/HTTP/HTTPS

/CoAP/LwM2M/PPP/SSL/IPv4/IPv6/DTLS/MQTT

● Data transfer rate

Single-tone:

25.5kbps(DL),16.7kbps(UP)

Multi-tone:

25.5kbps(DL),62.5kbps(UP)

● Electrical characteristics

Sensitivity: -128dBm

Maximum output power: 23dBm ± 2dB

Low power consumption (value):

≤1mA @ idle mode

≤5uA @power saving mode

LTE Cat NB1 network connection status:

232mA @RF emission status, 23dBm B3/B5/B8

83mA @RF emission status, 12dBm B3/B5/B8

60mA @RF emission status, 0dBm B3/B5/B8

● Interface

SIM card interface (3V/1.8V supports hot swap) x1

Reset interface x1

Serial interface x2

SPI interface x1

I2C interface x1

Network indicator interface x1

PSM_EINT interface x1

ADC interface x1

NB-IoT antenna interface x1

GNSS antenna interface x1

Charging interface (reserved)

Multiple GPIO interfaces (configurable)

Support RTC and other control interfaces

● Certification

CCC SRRC CTA

● Compatibility

3GPP TS 27.007 V14.3.0 (2017-03) 3GPP Rel-13

and Enhanced AT Command