TW810 Series
Industrial LTE-M/NB-IoT Modems

Bivocom®

Better Coverage
Lower Power Consumption

✓ **Ideal for upgrading utility meters and sensors to the cloud**

✓ **Cost-effective for applications with low data needs**

LTE-M / NB-IoT | Modbus | TCP / IP

Key Features

1. Global LTE CAT M1, NB-IoT, EDGE/GPRS supported[1]

2. Industrial serial port: 1x RS232, 1x RS485

3. Modbus RTU/Master, TCP/UDP/COAP protocol, support converted and transparent data transmission mode

4. Up to 5 data centers for sync data storage and backup

5. TCP heartbeat link detection, keep device always online

6. Hardware and software auto inspection technology, enable operation fault auto repairing

7. Sleep mode to save data and power consumption

Overview

TW810 is a cost-effective industrial LTE CAT M1 and NB-IoT modem, designed for industrial applications with low data needs that requires better coverage and lower power consumption.

TW810 has a built-in independent industrial MCU, and multi-layer software and hardware protection mechanism to ensure the robust and reliable serial connectivity for mission-critical industrial applications. Besides, It supports global LTE CAT M1(eMTC), NB-IoT, EDGE/GPRS cellular network, with rich protocols such as, Modbus RTU, Modbus master, TCP/UDP protocols, and serial port RS232, RS485, helping you transfer the data from utility meters, sensors and controller to the cloud via the cellular network, and remotely monitor and control field industrial devices.

TW810 has been widely used in industrial IoT and M2M applications, such as,

- Automatic meter reading
- Air quality monitoring
- Humidity, temperature sensor
- Weather station
- Digital road sign
- Electricity distribution

Applications

Meter · Environment Sensor · PLC — RS232/485 — TW810 — Cellular Network — Data Center

Success Cases

Electricity | Air Quality | Mining | Gas Pipeline | Digital Road Sign

Specifications

Cellular Interfaces

- **Antenna Connector** — 1 × 50 Ω SMA Female
- **SIM Slot** — 1
- **ESD Protection** — 15KV

Serial Interfaces

- **Connector** — Terminal block, 3.5 mm female socket with lock
- **Ports²** — 1-RS232/RS485
- **Baud Rate** — 300bps to 230400bps
- **ESD protection** — 8KV for RS232, 15KV for RS485

Power Supply and Consumption

- **Connector** — Terminal block, 3.5mm female socket with lock
- **Standard Power** — DC 12V/0.5A
- **Input Voltage** — 5-35 VDC
- **Power Consumption** — < 1W (85mA@12VDC, 155mA@5VDC)
- **Idle Consumption** — < 0.4W (30mA@12VDC, 55mA@5VDC)

Software

- **Network Protocols** — TCP/UDP transparent data transmission, Modbus Mater, Modbus Gateway (Modbus RTU to Modbus TCP), COAP, DNS
- **Management** — Config Tool, SMS, Cloud DMP (Device Management Platform)³

Physical Characteristics

- **Ingress Protection** — IP30
- **Housing & Weight** — Metal, 218 g (0.48 lbs, without accessories)
- **Dimensions** — 91 x 58 x 22 mm (3.58 x 2.28 x 0.87 in)
- **Mounting** — Desktop, Wall mounting

Environmental

- **Operating Temperature** — -35°C to +75°C (-31°F to +167°F)
- **Storage Temperature** — -40°C to +80°C (-40°F to +176°F)
- **Relative Humidity** — 5% to 95% (non-condensing)
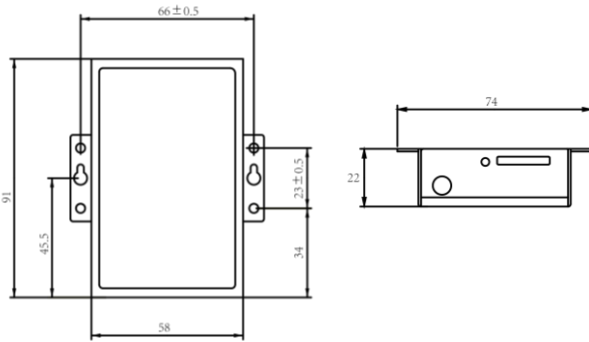- **Ethernet Isolation** — 1.5 kV RMS

Others

- **LED Indicators** — Online, Act, Power, System
- **Built-in** — Industrial MCU, Watchdog, RTC, Timer
- **Approvals⁴** — CE, RCM*, FCC*, NBTC*
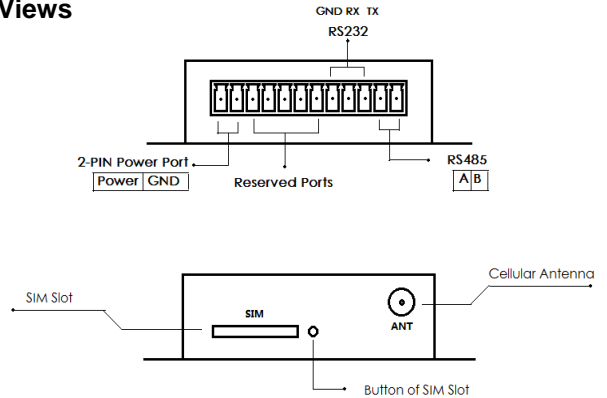- **Warranty Period⁵** — Standard: 12 Months / Extended: 2-5 Years

Standard Package Content

1. TW810 Modem — 1 PCS
2. Power Adapter(DC 12V/0.5A, EU/US/UK/AU plug optional) — 1 PCS
3. Mag-mount Cellular Antenna(SMA Male, 1 meter, 5dBi) — 1 PCS
4. RS232 Cable (DB9 Female, 1 meter) — 1 PCS
5. 12-Pin Terminal Block — 1 PCS

Dimensions(mm)

Side Views

Related Products

4G LTE Modem
TD210 Series

Mini Compact RTU
TG501 Series

Order Information

Model	Part Number⁶	Cellular Network	Frequency Band⁷
TW810-M	TW810-M<1>	LTE CAT M1/NB-IoT EDGE/GPRS	APAC: FDD-LTE B1/B3/B5/B8 GPRS/EDGE 900/1800 MHz NA: FDD-LTE B2/B4/B12/B13 EU/AU: FDD-LTE B3/B8/B20/B28 GPRS/EDGE 900/1800Mhz Global: FDD-LTE B1/B2/B3/B4/B5/B8/B12/B13/B17/B18/B19/B20/B25/B26/B28/(B39 CAT-M1 only); GPRS/EDGE 850/900/1800/1900Mhz
TW810-N	TW810-N<1>	NB-IoT	Global: B1/B3/B5/B8/B20/B28

Note:
1. EDGE/GPRS is only available for TW810-M model.
2. Only one serial port will be active during data transmission.
3. There has a license fee for DMP.
4. * Under progress
5. Price of the extended warranty will be different.
6. <1> means different modules for cellular network, countries and regions.
7. If you couldn't find the frequency band for your regions or have any questions, please contact Bivocom sales representatives for more information.
8. From Sep 1, 2019, I/O on TW810 modem is not available for customization, if you need I/O, please refer to TG501.
9. To save the earth, Bivocom doesn't print the user guide, if you need it, please go to Bivocom website to download.