

Industrial LTE-M/NB-IoT Modems

Product Overview



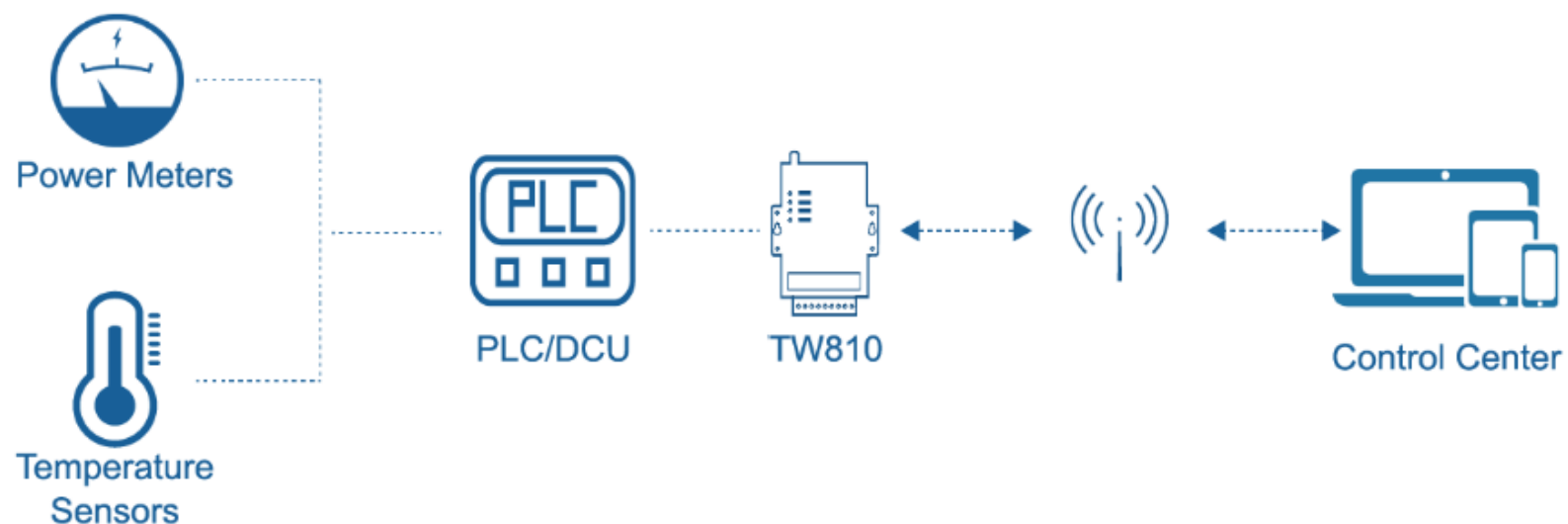
TW810 Series LTE CAT M1/NB-IoT Modem is a type of industrial wireless terminal based on LPWA technology, designed to fully meet the needs of industrial standards and industrial users. It adopts high-powered industrial 32-bits CPU, multi-layer software detection and hardware protection mechanism to ensure reliability and stability of the device. It supports carrier LTE CAT M1(eMTC) and NB-IoT network, and it has serial port RS232, RS485.

TW810 Series LTE CAT M1/NB-IoT Modem can help users to quickly access the LTE CAT M1/NB-IoT network, to ensure low power consumption, secure and reliable data transmission. It's ideal for IoT (Internet of Things) and M2M (Machine to Machine) applications, and has been widely used in many applications, such as Smart Grid, Water and Gas Metering, Street Lamp, Environmental Protection, Energy Saving, etc.

Key Features

1. Support NB-IoT, LTE CAT M1 network and compatible with EDGE/GPRS (only available on LTE-M version).
2. 1-RS232, 1-RS485
3. Modbus RTU, MQTT¹ and TCP/UDP protocol supported.
4. Transparent data transfer, with built in standard TCP/IP stack
5. Multi data centers (up to 5) and TCP server, able to access center with domain name and IP address.
6. TCP heartbeat link detection, keep device always online
7. Hardware and software auto inspection technology, enable operation fault auto repairing
8. Support COAP protocol(NB-IoT version)

Application Diagram



Specifications

Cellular Interfaces

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

Serial Interface

Connector	Terminal block, 12-pin 3.5 mm female socket with lock
Ports	1-RS232, 1-RS485
Baud Rate	300bps to 230400bps
ESD protection	8KV for RS232, 15KV for RS485

Power Supply and Consumption

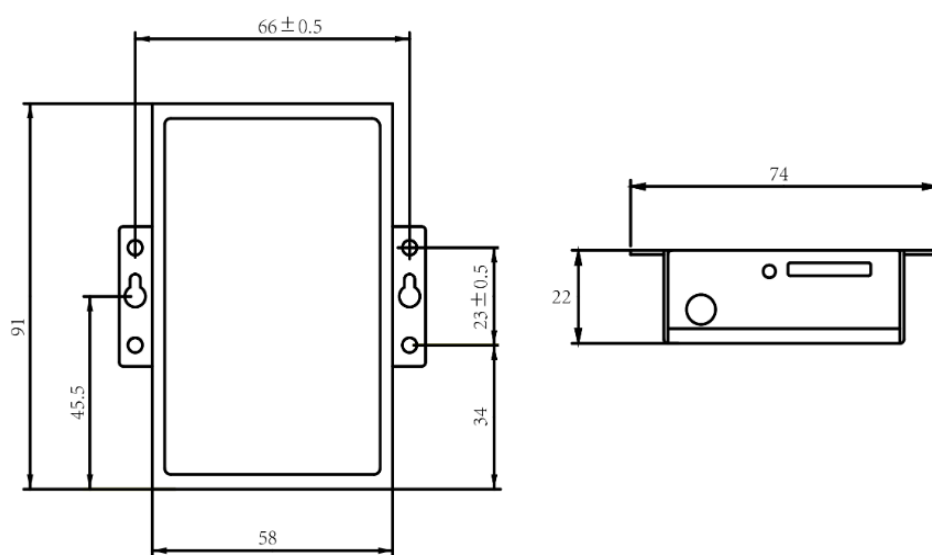
Connector	Terminal block, 3.5mm female socket with lock
Standard Power	DC 12V/0.5A
Input Voltage	5-35 VDC
Power Consumption	< 1W (85mA@12VDC, 155mA@5VDC)
Idle Consumption	< 0.4W (30mA@12VDC, 55mA@5VDC)

Software

Network Protocols	MQTT, Transparent (TCP Client/Server, UDP Client/Server), Modbus Gateway (Modbus RTU to Modbus TCP), COAP, DNS, etc.
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Management	Config Tool, Cloud DMP (Device Management Platform)
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Dimensions(mm)



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	0% to 93% (non-condensing) at 25°C/77°F
Ethernet Isolation	1.5 kV RMS

Others

LED Indicators	1-Online, 1-Act, 1-Power, 1-System
Built-in	Watchdog, RTC, Timer
Approvals	CE, RCM*, FCC*, NBTC>(*Under progress)
Warranty Period	Standard: 12 Months Extended: 2-5 Years ²

Standard Package Content

TW810 Modem
 Power Adapter(DC 12V/0.5A, EU/US/UK/AU plug optional)
 Mag-mount Cellular Antenna (SMA Male, 1 meter, 5dBi)
 RS232 Cable (DB9 Female, 1 meter)
 12-Pin Terminal Block
 Quick Start Guide(Printed)

Order Information

Model	Frequency Band ³
TW810-M	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/E (B39 CAT-M1 only); GPRS/EDGE 850/900/1800/1900Mhz
TW810-N	NB-IoT Global: B1/B3/B5/B8/B20/B28

Note:

- Under development
- Price of extended warranty will be different.
- If you couldn't find the frequency band for your regions or have any questions, please contact Bivocom sales representatives for more information.
- From Sep 1, 2019, I/O on TW810 is not available for customization, if you need I/O, please refer to TG501, which has more I/O ports.