

TW810 Series LTE CAT M1/NB-IoT Modems



Introduction

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 with rich and flexible interfaces, such as RS232, RS485 and RS422, and TTL GPIOs is also customizable.

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

- Support NB-IoT cellular, LTE CAT M1 and compatible with EDGE/GPRS(only available on LTE-M version),
- 1x RS232, 1x RS485 (Or RS422, option), 5x I/O(Optional).
- Transparent data transfer, supports UDP/IP and COAP protocol(NB-IoT version only) and TCP IP and UDP protocols(LTE CAT M1 version only).
- Multi data centers (up to 5), able to access center with domain name and IP address.
- Support heartbeat link detection, keep device always online.
- Hardware and software auto inspection technology, enable operation fault auto repairing.

Specifications

Cellular Interface

LTE CAT M1: B1/B3/B5/B8, and NB-IoT, B1/B3/B8/B5/B20/B28 for option.

Cellular Antenna Interface

Number of Ports: 1

Note: Standard SMA female antenna interface, characteristic impedance 50Ω

SIM Interface

Number of Ports: 1

Note: Standard drawer type card holder, support 1.8V/3V

SIM/UIM card, built-in 15KV ESD protection

Serial Interface (Industrial terminal block)

Number of interfaces: 1x RS232, 1x RS485

Serial Communication Parameters

Baudrate: 300~230400bits/s

Data Bit: 5, 6, 7, 8 bits

Stop Bit: 1, 1.5, 2 bits

Check: No, Even-parity, Odd Parity, SPACE and MARK

Analog Input (Industrial terminal block)

Number of Ports: 2(Can be customized to 3)

Note: 10-bit AD, support 4-20mA current signal input, optional 0-5V voltage signal input

I/O (Industrial terminal block)

Numbers of Ports: 3x GPIOs, able to configured as input and output, communication level: 3.3V

Note: Built in 15KV ESD protection, TTL GPIOs is customizable.

Power Requirements

Standard Power: DC 12V/0.5A

Power Range: DC 5~35V

Communication Current: <85mA(12V)

Note: Built-in power inverting protection and over voltage protection

Power Consumption

Communication: <1W

Note: 12V(<85mA), 5V(<155mA)

Standby: <0.4W

Note: 12V(<30mA), 5V(<55mA)

Sleep: <0.1W

Note: 12V(<0.8mA), 5V(<18mA)

LED Indicators

Online, Act, Power, System

Reliability

Ultra-low consumption design, includes sleep mode, scheduled online and offline mode

EMC up to level 3

Use NTP technology, build-in RTC

SIM/UIM card port built-in 15KV ESD protection

Warranty

Warranty Period: 12 months

Environmental Limits

Operating Temperature: -35~+75°C(-31~+167 °F)

Storage Temperature: -40~+80°C(-40~+176 °F)

Ambient Relative Humidity: 95%, non-condensing

Physical Characteristics

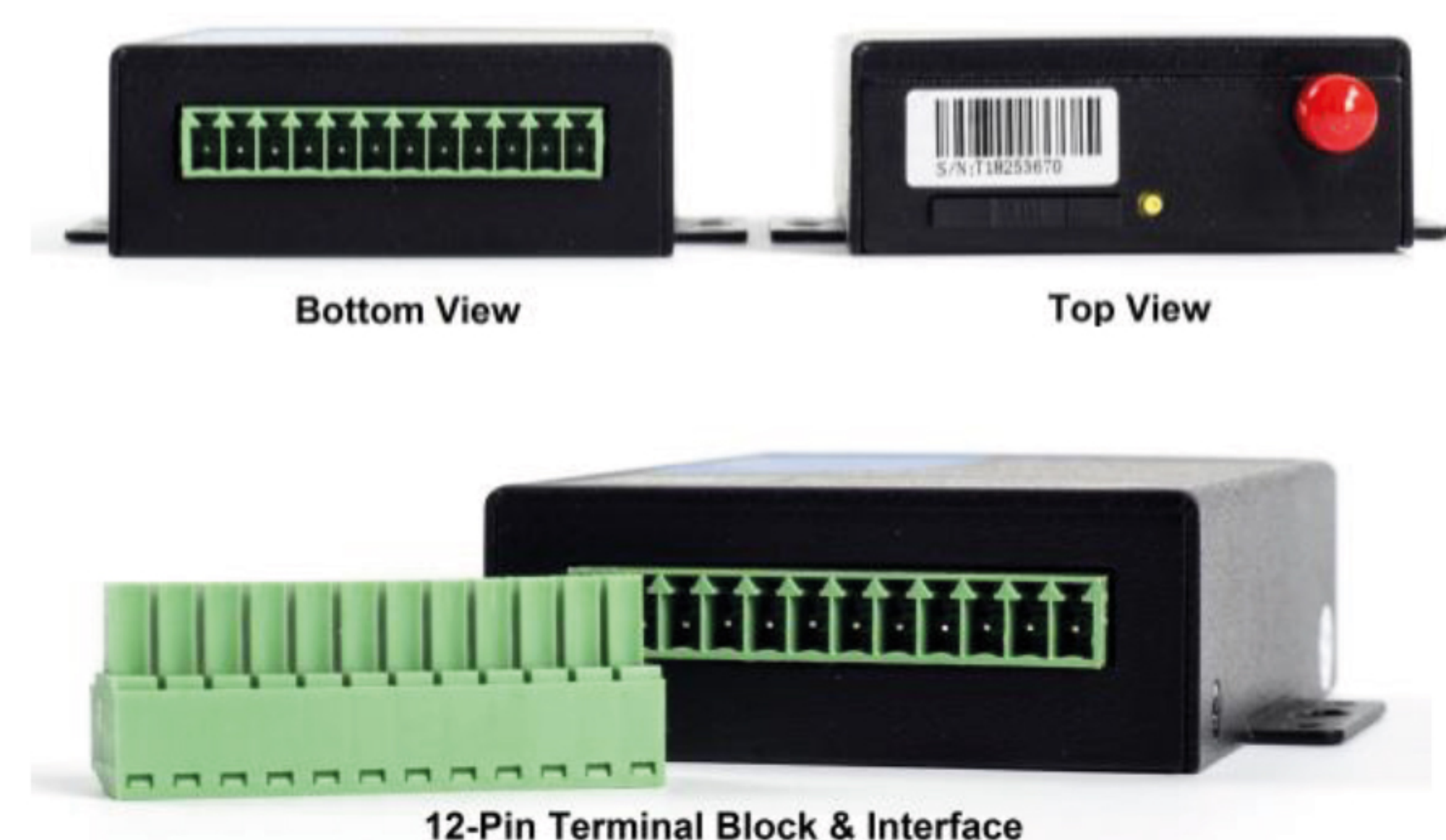
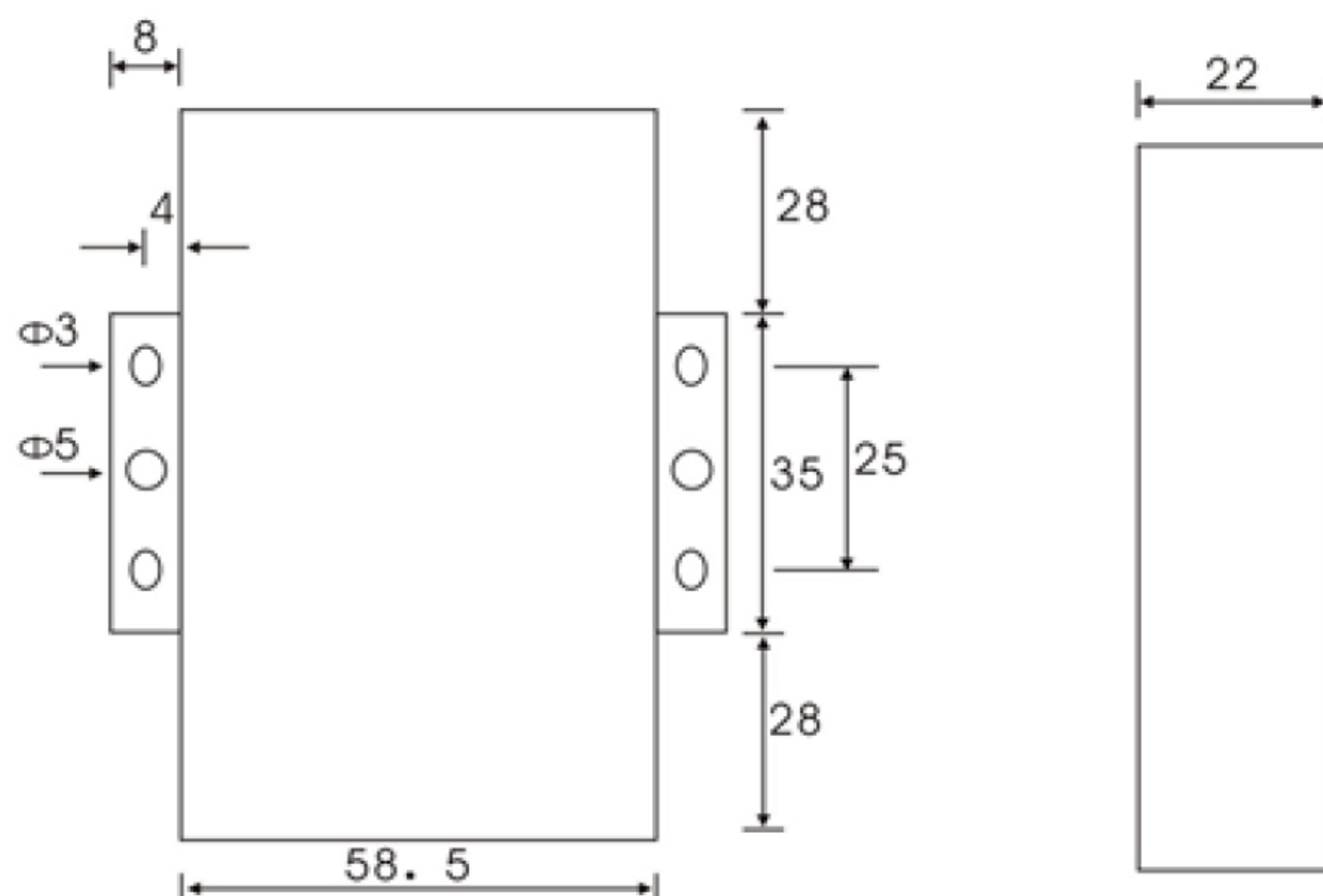
Protection Class: IP30, Housing and system are isolated safely, ideal for industrial automation application

Housing: Iron

Weight: 208g (0.46lbs)

Dimension: 91x58.5x22 mm (3.58x2.30x0.87 inches), Antenna and other accessories not included

Dimension



Order Information

Model	Part Number	Product Description	Frequency Band	Network
TW810	TW810-NQG	Industrial NB-IoT Modem	B1/B3/B5/B8/B20/B28	NB-IoT only
TW810-M	TW810-MS7C	Industrial LTE CAT M1/NB1 Modem	FDD-LTE B1/B3/B5/B8 GPRS/EDGE 900/1800 MHz	LTE CAT M1, NB-IoT, GPRS/EDGE
TW810-M	TW810-MS7A	Industrial LTE CAT M1 Modem	FDD-LTE B2/B4/B12/B13	LTE CAT-M1 only
TW810-M	TW810-MS7E	Industrial LTE CAT M1/NB1 Modem	FDD-LTE B3/B8/B20/B28 GPRS/EDGE 900/1800Mhz	LTE CAT M1, NB-IoT, GPRS/EDGE
TW810-M	TW810-MS7G	Industrial LTE CAT M1/NB1 Modem	FDD-LTE B1/B2/B3/B4/B5/B8/B12/B13/B17/B18/B19/B20/B25/B26/B28/B39 (B39 CAT-M1 only); GPRS/EDGE 850/900/1800/1900Mhz	LTE CAT M1, NB-IoT, GPRS/EDGE

Note: TW810-MS7A, TW810-MS7E, TW810-MS7G will be available middle of Nov, 2018.

Package Content

- TW810 Modem Host
- Cellular antenna(SMA Male)
- Power Adapter(12VDC/0.5A)
- 3- Pin RS232 cable
- 12-Pin Terminal Block