TD210 Series
Industrial Cellular Modems

Bivocom®

Bring Serial Data to Cloud Over Cellular Network

✓ **Robust and reliable serial connectivity for industrial IoT**

✓ **Rich protocols and modes for data transmission**

✓ **Remote control and manage your data and equipment**

4G LTE | MQTT | Modbus | JSON

Key Features

1. Global 4G/3G/2G/GSM supported
2. Industrial serial port: 1x RS232, 1x RS485
3. Modbus RTU, MQTT, TCP/UDP protocols support converted and transparent data transmission mode
4. Circuit switched data call mode(CSD)[1]
5. SMS data backup, SMS configuration and SMS alarm
6. Up to 5 data centers for sync data storage and backup
7. Support TCP/UDP client and server
8. TCP heartbeat link detection, keep device always online
9. Hardware and software auto inspection technology, enable operation fault auto repairing
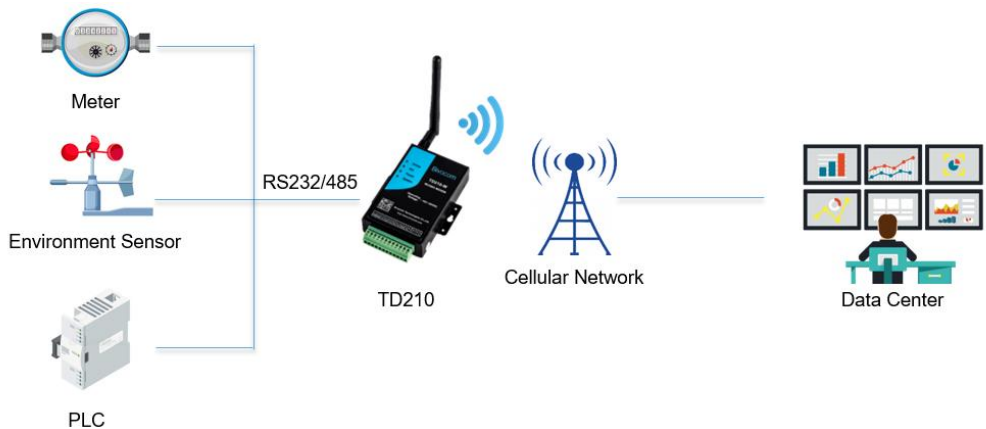10. Sleep mode to save data and power consumption

Overview

TD210 series industrial cellular modem, also called DTU or IP modem, is designed for helping industrial slave devices, such as meters, sensors, controllers or PLCs with serial ports RS232/RS485, to transfer the data to the cloud via the cellular network, and remotely monitor and control field industrial devices.

TD210 supports worldwide 4G LTE/3G/2G/GSM cellular and CSD network, with rich protocols such as, Modbus RTU, MQTT, TCP/UDP, and serial ports RS232, RS485. In addition, it has a built-in independent industrial MCU, and with multi-layer software and hardware protection mechanism to bring a robust and reliable serial connectivity for mission-critical industrial applications.

TD210 has been widely used in industrial IoT and M2M applications, such as,

- Automatic meter reading
- Air quality monitoring
- PLC remote control
- Weather station
- Digital road sign
- Electricity distribution

Applications

Meter — Environment Sensor — RS232/485 — TD210 — Cellular Network — Data Center — PLC

Success Cases

Environment

Electricity

Automatic Meter Reading

Gas

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
- **Ports[2]** — 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** — MQTT, Transparent (TCP Client/Server, UDP Client/Server), Modbus Gateway (Modbus RTU to Modbus TCP), SMS Alarm, 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)
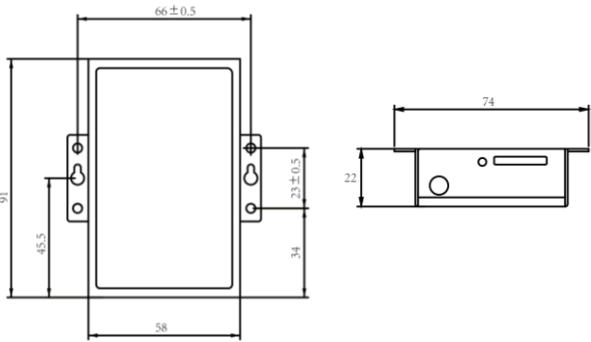- **Ethernet Isolation** — 1.5 kV RMS

Others

- **LED Indicators** — Online, Act, Power, System
- **Built-in** — Industrial MCU, Watchdog, RTC, Timer
- **Approvals[4]** — CE, RCM*, FCC*, NBTC*
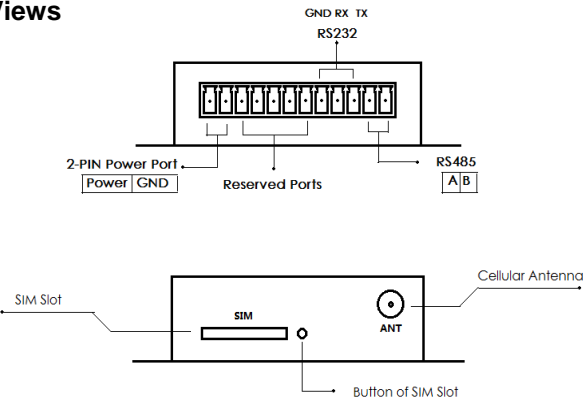- **Warranty Period[5]** — Standard: 12 Months / Extended: 2-5 Years

Standard Package Content

1. TD210 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

LTE CAT M1/NB-IoT Modem
TW810 Series

Mini Compact RTU
TG501 Series

Order Information

Model	Part Number[6]	Cellular Network	Frequency Band[7]
TD210-LF	TD210-L<1>	4G LTE CAT4/UMTS/HSPA+	EMEA/Asia: B1/B3/B5/B7/B8/B20/B38/B40/B41 ANZ/LATAM: B1/B3/B5/B7/B8/B28 NA: B2/B4/B5/B12/B13/B14
TD210-W	TD210-W<1>	3G/WCDMA/UMTS/HSPA	Global: 800/850/900/1900/2100
TD210-G	TD210-G<1>	GPRS/GSM	Global:850/900/1800/1900MHz

Note:
1. CSD mode is not a standard feature and requires customized firmware, besides, it is available on certain cellular modules.
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 different 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 TD210 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.