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F2910 Series NB-IoT Terminal Technical Specification



General

F2910 series NB-IoT Terminal is a kind of Internet of things device that provides data transfer by public NB-IoT network.

It adopts high-powered industrial 32 bits CPU and embedded real time operating system. It supports RS232 and RS485 port that can conveniently and transparently connect one device to a NB-IoT network, allowing you to connect to your existing serial devices with only basic configuration. It has low power consumption states. It has compatible 5 digital I/O channels, ADC, input pulse counter and pulse wave output function.

It has been widely used on M2M fields, such as wireless meter reading, smart city, smart grid, intelligent transportation, fire protection, asset tracking, mobile terminal POS, logistics, industrial automation, digital medical, military, agriculture, forestry, water, coal, petrochemical and other fields of data transmission.



Product Feature

Design for Industrial Application

- ◆ High-powered industrial cellular NB-IoT module
- ◆ High-powered industrial 32 bits CPU
- ◆ Low power consumption design, save the power consumption maximum.
- ◆ Embedded Real Time Clock(RTC) circuit
- ◆ Housing: iron, providing IP30 protection
- ◆ Power range: DC 5~36V

Stability and Reliability

- ◆ Support hardware and software WDT
- ◆ Support auto recovery mechanism, including online detect, auto redial when offline to make it always online
- ◆ RS232/RS485 ports:15KV ESD protection
- ◆ SIM/UIM port: 15KV ESD protection
- ◆ Power port: reverse-voltage and overvoltage protection
- ◆ Antenna port: lightning protection(optional)

Standard and Convenience

- ◆ Adopt terminal block interface, convenient for industrial application
- ◆ Support standard RS232/RS485 ports that can connect to serial devices directly
- ◆ TTL logic level RS232 interface can be customized

- ◆ Support intellectual mode, enter into communication state automatically when powered
- ◆ Provide management software for remote management (optional)
- ◆ Support several work modes
- ◆ Convenient configuration and maintenance interface

High-performance

- ◆ Supply 5 I/O channels, compatible 5 pulse wave output channels, 5 analog inputs and one pulse input counters.
- ◆ Support multi data centers and it can support 5 data centers at the same time
- ◆ Support dynamic domain name(DDNS) and IP access to data center
- ◆ Design with standard UDP/COAP protocol stack,The support of transparent data transmission.

Product Specification

NB-IoT Specification

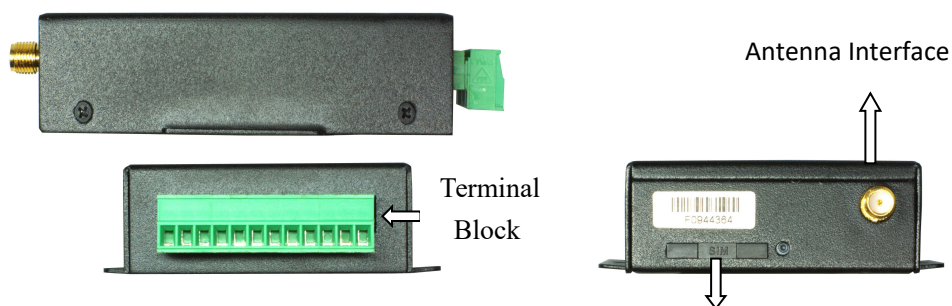
| Item | Content |
|-----------------------|---|
| F2910 NB-IoT Terminal | |
| Standard and Band | B5: 850MHz B8: 900MHz B20: 800MHz |
| Bandwidth | 100bps~100Kbps |
| TX power | 23±1dBm |
| RX sensitivity | <-129dBm |

Hardware System

| Item | Content |
|-------|------------------------|
| CPU | Industrial 32 bits CPU |
| FLASH | 512KB (Extendable) |
| SRAM | 256KB(Extendable) |

Interface type

| Item | Content |
|-----------|---|
| Serial | 1 RS232 port and 1 RS485(orRS422) port, 15KV ESD protection Data bits: 5, 6 ,7, 8 Stop bits: 1, 1.5, 2 Parity: none, even, odd, space, mark Baud rate: 110~230400 bps |
| Indicator | "Power", "ACT", "Online" |
| Antenna | Standard SMA female interface, 50 ohm, lightning protection(optional) |
| SIM/UIM | Standard user card interface, support 1.8V/3V SIM/UIM card, 15KV ESD protection |
| Power | Terminal block interface, reverse-voltage and overvoltage protection |



Note: There may be different components and interfaces in different model, please in kind prevail.

Power supply

| Item | Content |
|----------------|-------------|
| Standard Power | DC 12V/0.5A |
| Power range | DC 5~36V |

Consumption

| Working condition | Consumption |
|-------------------|---------------|
| Deep Sleep | 35-40uA@12VDC |
| Common Sleep | 1-2mA @12VDC |
| Standby | 5~7mA@12VDC |
| Communication | 15~20mA@12VDC |

Physical Characteristics

| Item | Content |
|------------|---------------------------------|
| Housing | Iron, providing IP30 protection |
| Dimensions | 91x58.5x22 mm |
| Weight | 210g |

Environmental Limits

| Item | Content |
|-----------------------|------------------------|
| Operating Temperature | -35~+75°C (-31~+167°F) |
| Storage Temperature | -40~+85°C (-40~+185°F) |
| Operating Humidity | 95% (unfreezing) |

Ordering Information

| Model No. | Description |
|-----------|--|
| F2910-B5 | 850MHz, band5, Facing China and South Korea; Support the China Telecom. |
| F2910-B8 | 900MHz, band8, Facing China Europe and South Korea; Support the China Mobile and Unicom. |
| F2910-B20 | 800MHz, band20, Facing Europe. |