

Document version	Confidential
V1.0.0	

# 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, asset tracking, wearables intelligent transportation, smart grid, industrial automation, telemetry, finance, POS, water supply, environment protection, post, weather, and so on.



## Product Feature

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### Design for Industrial Application

- ◆ High-powered industrial cellular NB-IoT module
- ◆ High-powered industrial 32 bits CPU
- ◆ Low power consumption design, support multi-sleep and trigger modes to reduce the power dissipation farthest
- ◆ 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

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### NB-IoT Specification

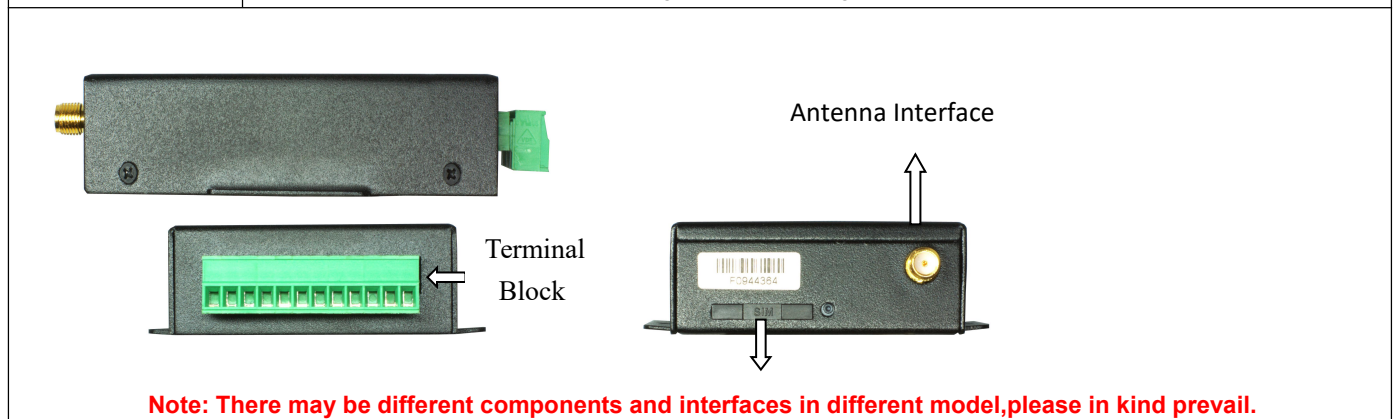
Item	Content
F2910 NB-IoT Terminal	
Standard and Band	B5: 850MHz B8: 900MHz B20: 800MHz
Bandwidth	100bps~100Kbps
TX power	23±1dBm
RX sensitivity	<-129dBm

## 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



## 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.