F2920D Series User Manual	Product Version	Page
	V1.1.1	
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F2920D Series User Manual

The user manual is suitable for the following models:

Model No.	Product Type
F2920D-G	GPRS+WIFI+LoRa+433/ZigBee
F2920D-C	CDMA+WIFI+LoRa+433/ZigBee
F2920D-W	WCDMA+WIFI+LoRa+433/ZigBee
F2920D-TL	TDD+WIFI+LoRa+433/ZigBee
F2920D-FL	FDD+WIFI+LoRa+433/ZigBee
F2920D-L	LTE+WIFI+LoRa+433/ZigBee

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

Files Revised Record

Date	Version	Remark	Author
2016-6-20	V1.0.0	Initial Version	Zxz/Faine
2016-11-28	V1.1.0	Addition of parameter configuration instructions	Hfq/qch
2016-12-22	V1.1.1	Addition of three-wire and four-wire power supply module description	Jzq

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Content

Chapter 1 Brief Introduction of Product

1.1 General

F2920D Terminal of Internet of things is a high-performance measuring and monitoring equipment, which integrates analog signal acquisition, switch input, relay output, RS485 communication, LoRa, WIFI, 433MHz, ZigBee, and cellular wireless communication. It can access different equipments and realize the monitoring and control function of the equipment through different communication modes.

It has been widely used in the M2M fields, such as smart grid, intelligent transportation, smart home, finance, POS, supply chain automation, industrial automation, intelligent building, fire, public safety, environmental protection, weather, Digital medical, telemetry, military, space exploration, agriculture, forestry, water supply, coal, petrochemical, and so on. Typical applications are shown in Figure 1-1:

1.2 Features and Benefits

Designed for industrial application

- Adopt high-powered industrial module
- Adopt high-powered industrial 32 bits CPU
- Embedded Real Time Clock(RTC) circuit which can realize timing online/offline function
- Housing: iron, providing IP30 protection. The iron housing safely isolates the terminal from the system, which is especially suitable for the industrial application.
- Power Range: DC 5~36V

Stability and Reliability

- WTD design ensures the stability of the system
- Auto recovery mechanism makes it always online
- RS232/RS485/RS422 port: 15KV ESD protection

- SIM/UIM port: 15KV ESD protection
- Power port: reverse-voltage and overvoltage protection
- Antenna port: lightening protection (optional)

Standard and Convenience

- Adopt terminal block interface, convenient for industrial application
- Support standard RS232 and RS485 port that can connect to serial devices directly
- Support intellectual mode, enter into communication state when powered
- Provide management software for remote management (optional)
- User-friendly, flexible, and multiple operating modes
- Convenient configuration and maintenance interface
- Support serial software upgrading and remote maintenance

High-Performance

- Support TCP server and TCP 4 clients connection (optional)
- Support 8 digital inputs, 2 analog inputs, 3 relay output channels and 1 10M/100M Ethernet interface
- Compatible 2G/3G/4G LTE full band and frequency
- Support WiFi hot spot
- Support LoRa, 433MHZ, and ZigBee
- Support domain name(DNS) and IP access to data center
- Design with standard TCP/IP protocol stack, and support transparent data transfer
- Support mass storage expansion
- Interactive management: remote management(optional), APP(optional), and local management via RS232

Standards

- Functional and Technical Standard of Rural Intelligent Power Distribution Terminal: Q/GDW615-2011.
- Communication Protocol of Electricity Data Acquisition and Management System: Q/GDW-11-143.
- Functional Specifications of Power Distribution Automation Terminal (Sub-Station): Q/GDW514.
- Implementing Rules of DL/T 634.5101-2001 Protocol.
- Performance of insulation, vibration, and anti-interference meet the standard of Q-GDW615-2011.
- Electrostatic Discharge: can withstand GB/T 17626.2-2006 of the IV level of electrostatic discharge interference test.
- Radiated susceptibility: can withstand the GB/T 17626.3 of the IV level RF electromagnetic field immunity.
- EFT/B immunity test：can withstand the GB/T 17626.12 of the IV class fast pulse group interference test.
- Surge immunity:can withstand the GB/T 17626.5 of the IV level surge (impact) interference test.
- Damped oscillatory magnetic field immunity: Can withstand the GB/T 17626.10 of the IV level damping oscillation magnetic field immunity test.

Applications

- Monitoring and Protection of Transformer: collect data of the smart meters and switchgears on the incoming lines.
- User Electricity Data Monitoring: collect meter data of users.

- Distribution Meter Monitoring: collect meter data and monitor its operating conditions.
- Monitoring of Residual Current Operated Circuit Breaker: residual current value monitoring, residual current state monitoring, and remote control switch breaking/closing.
- Status Monitoring: 8 input and output channels of switchgear and the accuracy of remote communication is 100%.
- Power Quality Management: monitoring of smart capacitors for reactive compensation, three-phase unbalanced management and power quality data monitoring.
- Load Management: power control, remote control, and voltage monitoring
- Security: burglar alarm; support camera capture(optional).

1.3 Working Principle

The principle chart is shown in Figure 1-2.

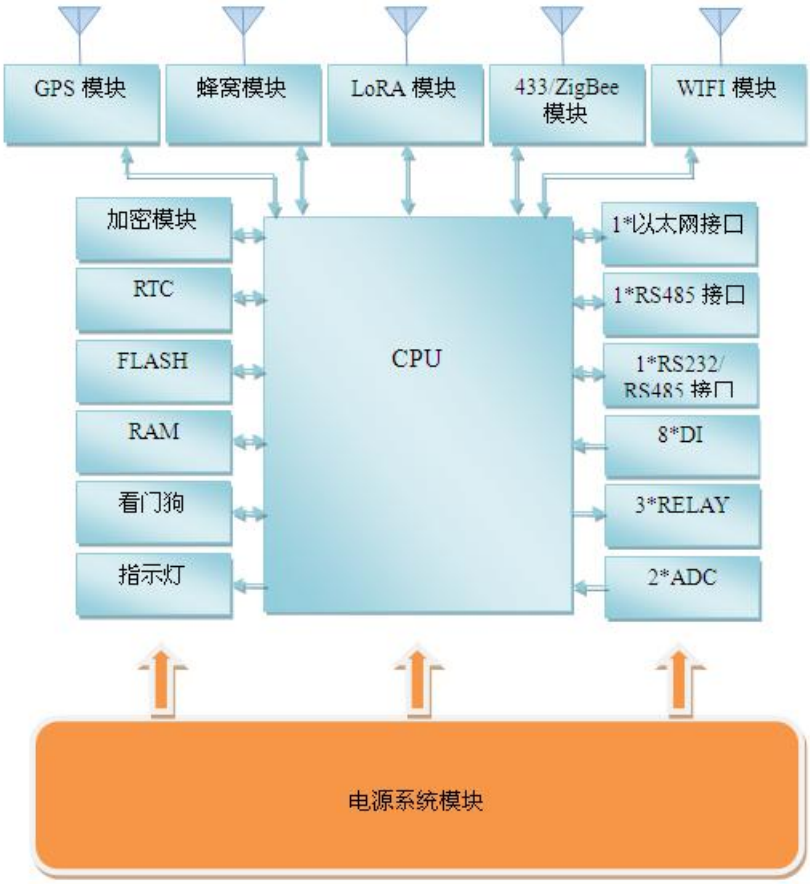


Figure 1-2

1.4 Specifications

Cellular

Item	Content
F2920D-G	
Standard and band	EGSM 900/GSM 1800MHz, GSM 850/900/1800/1900MHz(optional)

	Compliant to GSM phase 2/2+ GPRS class 10, class 12(optional)
Bandwidth	85.6Kbps
TX power	GSM850/900:<33dBm GSM1800/1900:<30dBm
RX sensitivity	<-107dBm
F2920D-C	
Standard and band	CDMA2000 1xRTT 800MHz, 800/1900MHz(optional), 450MHZ(optional)
Bandwidth	153.6Kbps
TX power	<30dBm
RX sensitivity	<-104dBm
F2920D-W	
Standard and band	UMTS/WCDMA/HSDPA/HSUPA/850/1900/2100MHz, 850/900/1900/2100MHz(optional) GSM 850/900/1800/1900MHz GPRS/EDGE CLASS 12
Bandwidth	HSUPA: Upload speed 5.76Mbps HSDPA: Download speed 7.2Mbps, UMTS: 384Kbps (Download&Upload Speed)
TX power	<24dBm
RX sensitivity	<-109dBm
F2920D-V	
Standard and band	CDMA2000 1X EVDO Rev A 800MHz, 800/1900MHz(optional), 450MHz(optional) IS-95 A/B, CDMA2000 1X RTT
Bandwidth	Download speed 3.1Mbps, Upload speed 1.8Mbps
TX power	<23dBm
RX sensitivity	<-107dBm
F2920D-TL	
Standard and band	LTE TDD 2600/1900/2300MHz(Band38/39/40), Optional: 800/1400/1800MHz(Band 27/61/62) TD-SCDMA 2010/1900MHz(A/F frequency band, Band 34/39) GSM /GPRS/EDGE 900/1800/1900MHz
Bandwidth	LTE TDD: Download speed 61Mbps, Upload speed 18Mbps TD-HSPA+: Download speed 4.2Mbps, Upload speed 2.2Mbps TD-HSPA: Download speed 2.8Mbps, Upload speed 2.2Mbps
TX power	<23dBm
RX sensitivity	<-97dBm

F2920D-FL	
Standard and band	LTE FDD 2600/2100/1800/900/800MHz, 700/1700/2100MHz(optional) DC-HSPA+/HSPA+/HSDPA/HSUPA/UMTS/850/900/2100MHz, 800/850/1900/2100MHz(optional) EDGE/GPRS/GSM 850/900/1800/1900MHz GPRS CLASS 10 GPRS CLASS 12
Bandwidth	LTE FDD: Download speed 100Mbps, Upload speed 50Mbps DC-HSPA+: Download speed 42Mbps, Upload speed 5.76Mbps HSPA+: Download speed 21Mbps, Upload speed 5.76Mbps HSDPA: Download speed 7.2Mbps, HSUPA: Upload speed 5.76Mbps UMTS: 384Kbps
TX power	<23dBm
RX sensitivity	<-97dBm
F2920D-L	
Standard and band	LTE FDD,LTE TDD,EVDO,WCDMA,TD-SCDMA,CDMA1X,GPRS/EDGE
Bandwidth	LTE FDD: Download speed 100Mbps, Upload speed 50Mbps LTE TDD: Download speed 61Mbps, Upload speed 18Mbps DC-HSPA+: Download speed 42Mbps, Upload speed 5.76Mbps TD-HSPA+: Download speed 4.2Mbps, Upload speed 2.2Mbps EVDO Rev. A: Download speed 3.1Mbps, Upload speed 1.8Mbps
TX power	<23dBm
RX sensitivity	<-97dBm

LoRa

Item	Content
Standard and band	410MHz - 441MHz/1000KH; 433±5MHz(Suggestion); 433.0MHz(Default Value)
Indoor/Urban Communication Distance	1000m
Outdoor/Visual	3500m

Communication Distance	
TX Power	20dBm
Bandwidth	-140Bm
RX Sensitivity	6 levels selectable（0.3、0.6、1.0、1.8、3.1、5.5Kbps）
Channel	32

433MHZ

Item	Content
Standard and band	387 - 464MHz; 430-436MHz(Suggestion); ±5MHz(Deviation)
Outdoor/Visual Communication Distance	200m @1.2Kpbs
TX Power	10dBm
RX Sensitivity	-110dBm@2.4Kpbs
Modulation	FSK/GFSK/ASK (MSK is not supported)
Maximum Transfer Rate	500Kbps

ZigBee

Item	Content
Standard and band	IEEE 802.15.4, 2.4-2.5GHZ
Indoor/Urban Communication Distance	90m
Outdoor/Visual Communication Distance	2000m
TX Power	20dBm
RX Sensitivity	-103dBm
Bandwidth	250Kbps
Number of Channel	11 to 26
Maximum Serial Memory	300 Bytes

WIFI

Item	Content
Standard and band	IEEE 802.11 b/g/n, 2.4-2.5GHZ
Bandwidth	IEEE802.11 b/g: 54Mbps(Maximum) IEEE802.11n: 150Mbps(Maximum)
Security	WEP/WPA/WPA2
TX Power	<18dBm
RX Sensitivity	<-75dBm

Hardware

Item	Content
CPU	Industrial 32 bits CPU
FLASH	512KB
SRAM	256KB

Interface

Item	Content
Serial	• 1 RS232 port (Compatible RS485) and 1 RS485 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 bits/s
Indicator	"PWR", "SYS", "SIM", "ALM", "Online", "ETH", "WIFI", "433/ZigBee", "LoRa" and signal strength indicator
Antenna	• Cellular: 1 Standard SMA female interface, 50 ohm lighting protection • WIFI: 1 Standard SMA female interface, 50 ohm lighting protection (optional) • 433/ZigBee: 1 Standard SMA female interface, 50 ohm lighting protection (optional) • LoRa: 1 Standard SMA female interface, 50 ohm lighting protection (optional)
SIM/UIM	Standard 3V/1.8V user card interface, 15KV ESD protection
Application	8 input and output channels (optical isolation); Definition: 2ms Logic 0: Wet node 0-3VDC, or dry note conducting Logic 1: Wet node 5-30VDC, or dry note conducting
	3 relay output interfaces Maximum switching voltage: 250VAC/30VDC Maximum switching current: 5A
	2 analog signal input interfaces 4 ~ 20mA current signal input, 0~5V voltage signal input (optional), accuracy: 0.5%
	1 controlled output power supply The output voltage is the same as the device supply voltage, default value is 12V Output Current:1A; ESD protection
Power	Terminal block interface, reverse-voltage and overvoltage protection

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

Power Input

Item	Content
Standard Power	DC 12V/1.5A

Power Range	DC 5~36V

Power Consumption

Item	Content
Average consumption	250mA@12VDC
Maximum dynamic consumption	700mA@12VDC

Physical Characteristics

Item	Content
Housing	Iron, providing IP30 protection. The iron housing safely isolates the terminal from the system, which is especially suitable for the industrial application.
Dimensions	91x58.5x22 mm (Antenna and mounting parts are not included)
Weight	About 800g

Environmental Limits

Item	Content
Operating Temperature	-40 ~ +75°C (-40~ +167°F)
Storage Temperature	-40 ~ +85°C (-40 ~ +185°F)
Ambient Relative Humidity	95% (non-condensing)

Chapter 2 Installation Introduction

2.1 General

The device must be correctly installed to achieve the designed function. Generally, the device must be installed under the guidance of qualified engineers that approved by our company.

Warning: Forbid to install when powered!

2.2 Encasement List

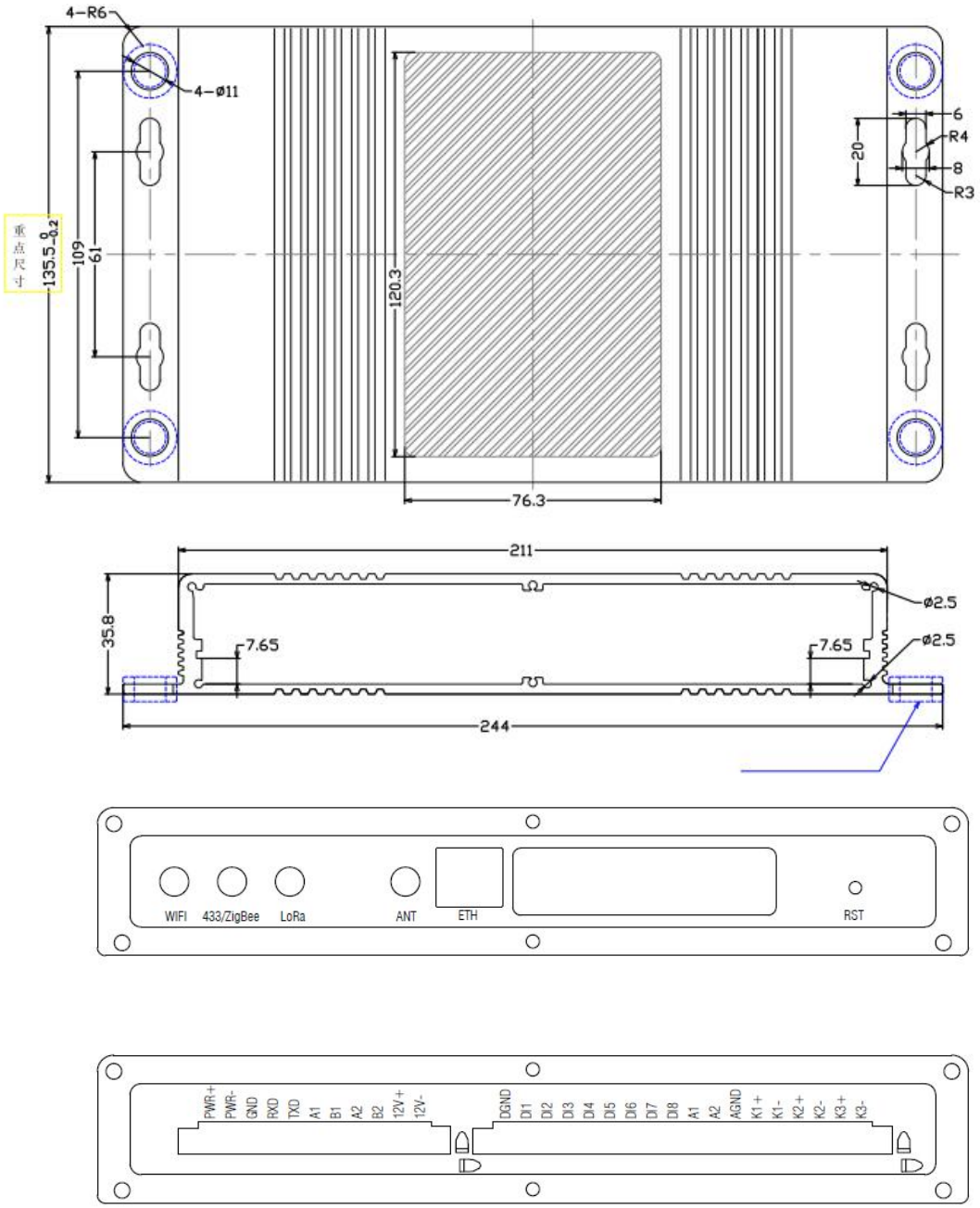
Please keep the packaging material for later use when you unpack it. The list is as follows:

✧ 1 F2920D Terminal (Packing depends on user order)

- ✧ 1 user manual CD
- ✧ 1 card antenna (SMA anode) optional
- ✧ 1 WIFI antenna (SMA cathode) optional
- ✧ 1 LoRa antenna (SMA anode) optional
- ✧ 1 433 antenna (SMA cathode) optional
- ✧ 1 ZigBee antenna (SMA anode) optional
- ✧ 1 Transformer (optional)
- ✧ 1 RS232 cross wire (or 1 RS485 wire, optional)
- ✧ One 1 1 PIN terminal joint

2.3 Installation and Cable Connection

Shape and dimensions: On both sides of the device, there are fixed holes.In order to be user-friendly, following is the specific size of the device. (Unit: mm)



Antenna and SIM Card Installation:

The SMA anode of WAN antenna should be screwed to the SMA cathode socket (marked as "ANT") tightly to make sure it doesn't affect the signal quality.

The SMA cathode of WIFI antenna should be screwed to the SMA anode socket (marked as "WIFI") tightly to make sure it doesn't affect the signal quality.

The SMA cathode of LoRa antenna should be screwed to the SMA anode socket (marked as "LoRa") tightly to make sure it doesn't affect the signal quality.

The SMA cathode of 433/ZigBee antenna should be screwed to the SMA anode socket (marked as "433/ZigBee") tightly to make sure it doesn't affect the signal quality.

When installing or removing SIM / UIM card,remove the bezel with a screwdriver first, then insert the tip of sharp object into the small dot on the right side of the SIM / UIM card holder, and the SIM / UIM card holder will eject.

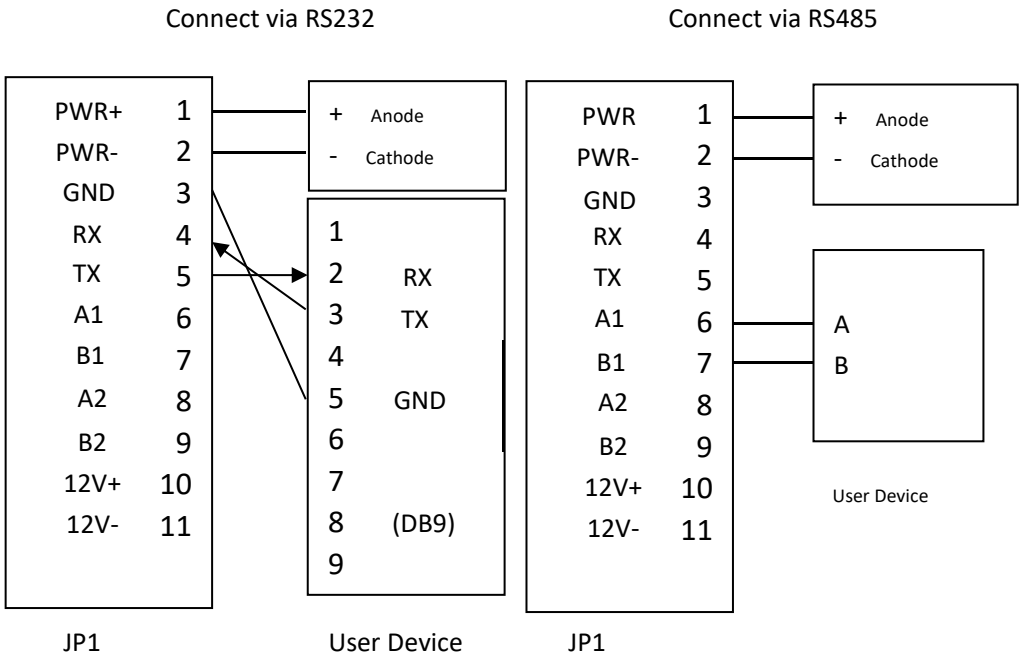
To install the SIM / UIM card, firstly insert the SIM / UIM card into the card holder and make sure the metal surface facing out, then insert the SIM / UIM card holder, ensure it is inserted in place, and finally installed the baffle.

Interface signal definition Description (terminal spacing 5.08mm):

<table>
<tr><th colspan="3">JP1</th><th colspan="3">JP2</th></tr>
<tr><td>PIN</td><td>Interface Name</td><td>Explanation</td><td>PIN</td><td>Interface Name</td><td>Explanation</td></tr>
<tr><td>1</td><td>PWR+</td><td rowspan="2">Power Input: DC 12V</td><td>1</td><td>DGND</td><td>Data Ground</td></tr>
<tr><td>2</td><td>PWR-</td><td>2</td><td>DI1</td><td>Data Input 1</td></tr>
<tr><td>3</td><td>GND</td><td>Power Ground</td><td>3</td><td>DI2</td><td>Data Input 2</td></tr>
<tr><td>4</td><td>RXD</td><td>Receive Data</td><td>4</td><td>DI3</td><td>Data Input 3</td></tr>
<tr><td>5</td><td>TXD</td><td>Transmit Data</td><td>5</td><td>DI4</td><td>Data Input 4</td></tr>
<tr><td>6</td><td>A1</td><td>RS485-1 A Port</td><td>6</td><td>DI5</td><td>Data Input 5</td></tr>
<tr><td>7</td><td>B1</td><td>RS485-1 B Port</td><td>7</td><td>DI6</td><td>Data Input 6</td></tr>
<tr><td>8</td><td>A2</td><td>RS485-2 A Port</td><td>8</td><td>DI7</td><td>Data Input 7</td></tr>
<tr><td>9</td><td>B2</td><td>RS485-2 B Port</td><td>9</td><td>DI8</td><td>Data Input 8</td></tr>
<tr><td>10</td><td>12V+</td><td rowspan="2">Output: 12V/1A, Power Supply to Camera</td><td>10</td><td>A1</td><td>Analog Input 1</td></tr>
<tr><td>11</td><td>12V-</td><td>11</td><td>A2</td><td>Analog Input 2</td></tr>
<tr><td colspan="3" rowspan="6">Note: RXD and TXD can not be used with RS485-1 at the same time.</td><td>12</td><td>AGND</td><td>Analog Ground</td></tr>
<tr><td>13</td><td>K1+</td><td rowspan="2">Relay Output 1</td></tr>
<tr><td>14</td><td>K1-</td></tr>
<tr><td>15</td><td>K2+</td><td rowspan="2">Relay Output 2</td></tr>
<tr><td>16</td><td>K2-</td></tr>
<tr><td>17</td><td>K3+</td><td rowspan="2">Relay Output 3</td></tr>
<tr><td>18</td><td>K3-</td></tr>
</table>

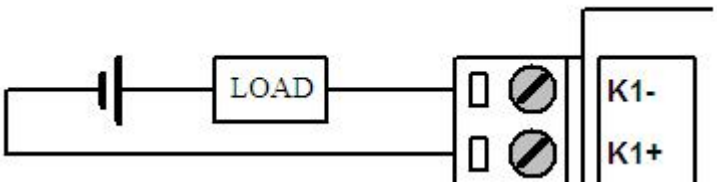
Cable Installation: Adopt industrial terminal interface, the recommended power wire and data cable should be 28-16AWG.

Power and data interface cable connection diagram:



Switch Input Wiring:

Relay Output Wiring:



2.4 Power

Devices are often used in complex external environments. In order to adapt to the complex application environment and improve the stability of the system, the device uses advanced power technology. Users can use the configuration of 12VDC / 1.5A power adapter to power the device, or use DC 5 ~ 36V as power supply directly. When uses the external power supply to power the device, user must ensure the stability of the power supply (ripple < 300mV, instantaneous voltage ≦36V), and the power is more than 18W.

It is recommended to use the standard 12VDC / 1.5A power supply.

Note: When use the equipment as the power supply of camera, the input voltage must be 12V, and select the appropriate power supply according to the power consumption of selected camera.

2.5 Indicator Lights Instruction

The device provides "PWR", "SYS", "SIM", "ALM", "Online", "ETH", "WIFI", "433/ZigBee", "LoRa", and signal strength indicator. The state of each indicator light is as follows:

Indicator Light	State	Introduction
PWR	ON	F2920D Terminal is powered on
	OFF	F2920D Terminal is powered off
SYS	BLINK	The system is running normally
	OFF	There's something wrong with the system
SIM	ON	The device recognizes the SIM card
	OFF	No SIM card was identified
ALM	ON	Abnormal Situation Occurs
	OFF	Everything is normal
Online	ON	The device has logged on network and the platform
	BLINK	The device has logged on network but not the platform
	OFF	The device hasn't logged on the network
ETH	ON	Ethernet interface has connected
	OFF	Ethernet interface hasn't connected
WIFI	ON	Connected via WIFI
	OFF	Doesn't Connect via WIFI
433/ZigBee	ON	Connected via 433/ZigBee
	OFF	Doesn't Connect via 433/ZigBee
LoRa	ON	Connected via LoRa
	OFF	Doesn't Connect via LoRa
Signal Strength	ONE LIHGHT ON	Weak Signal Strength
	TWO LIGHTS ON	Good Signal Strength

	THREE LIGHTS ON	Excellent Signal Strength

2.6 Reset Button Introduction

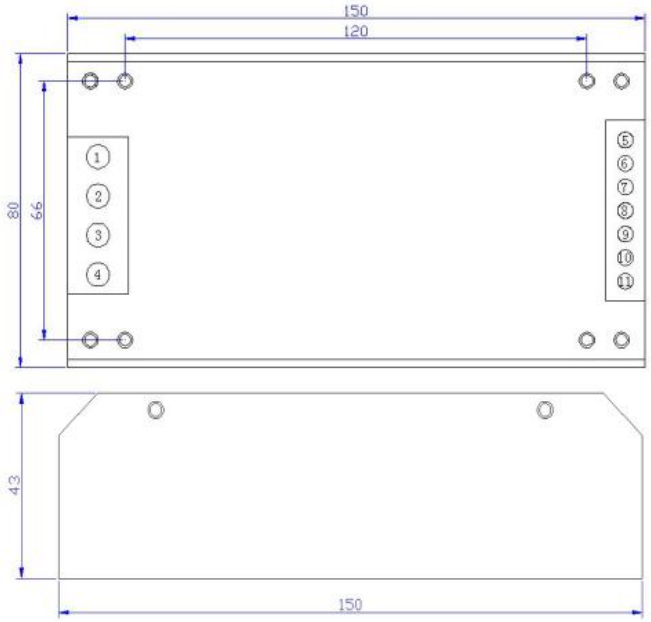
The device has a reset button labeled "RST". The function of the button is to resume to the default value settings.Method is as follows: Insert the "RST" hole with a sharp object and gently press and hold the reset button for about 10 seconds, then the device will automatically restore the parameter configuration to the factory value.After about 10 seconds , the device will automatically restart (auto restart is as follows: "SYS" indicator light will be off for about 10 seconds, and then work normally).

2.7 Three-Phase Four-Wire Power Supply Module (Optional)

In order to use in specific occasions and make sure that there is no missing phrase operation,

users can choose this three-wire&four-wire input power module. The output voltage is 12V/2A. Reserve one 13.5V 0.3-0.6A power supply so as to charge the backup battery.

The dimensions and pins are defined as follows:



Pin Function Definition

1	La	Adopt Three-Phrase Four-Wire System, AC input via A-Phrase	7	B-	Cathode
2	Lb	Adopt Three-Phrase Four-Wire System, AC input via B-Phrase	8	B+	Anode
3	Lc	Adopt Three-Phrase Four-Wire System, AC input via C-Phrase	9	K1	Rechargeable battery output signal when charging
4	N	Adopt Three-Phrase Four-Wire System, AC input via N line	10	K2	Three-phrase four-wire system output signal online
5	-V1	12V Output Cathode	11	GND	Power Ground
6	+V1	12V Output Anode			

- K1: Power failure of AC three-phase is the low battery alarm signal (The normal high-level input voltage is 12V)
- K2: Terminal of power on alarm in the AC three-phase system (The normal high-level input voltage is 12V)
- Rated Power: 30W; Ripple and Noise:120mV
- Support over-voltage protection (AC360-420V)
- Battery Low Voltage Protection: the battery voltage switch will be of when the voltage between 10V-10.5V.

Chapter 3 Configuration

3.1 Configuration Connection

Before configuring the F2920D, connect the F2920D to the configured PC through RS232 cable or RS232-485 conversion cable, as shown in the following figure:

3.2 Parameters Configuration Introduction

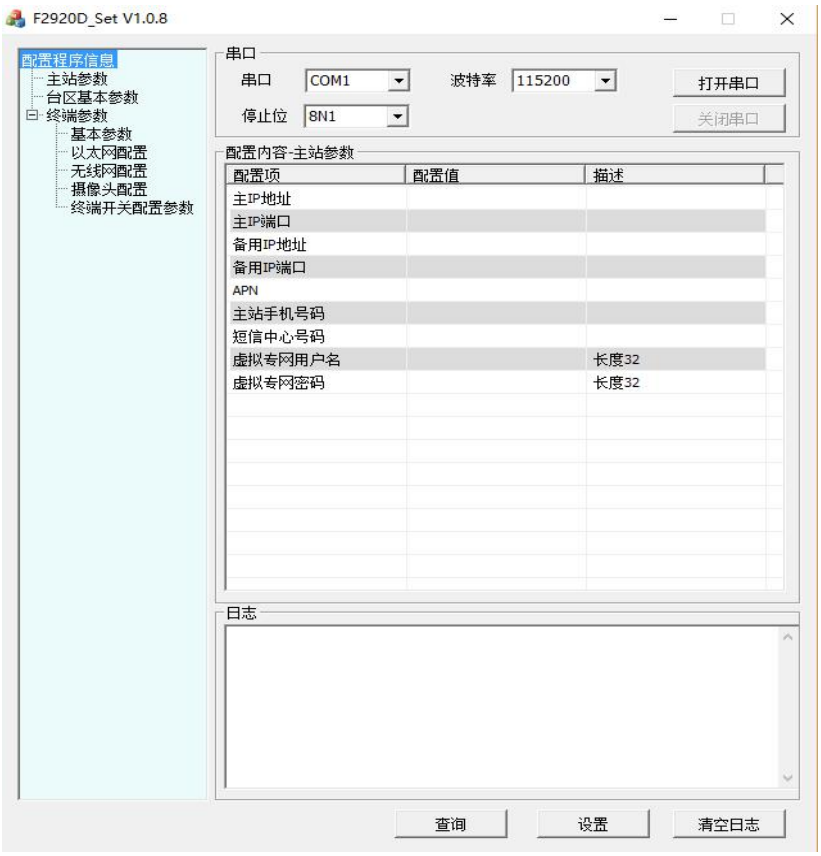
One way for F2920D parameter configuration:

● Configuration software: all the configurations are done through the configuration software.The configuration method is convenient for users to set the parameters through PC.

Following is the specific introduction of F2920D configuration via configuration software.

3.3 Run the Configuration Software

F2920D_Set.exe



The "Serial"area shows the current serial port setting.The default value is COM1,115200. To configure F2920D, please choose correct value to open the serial port.If the button text is "Close", that means the serial port has been opened. If the text is "Open", you should open the port first. When the port opened, the "Output Info"column will display "Port(COM1) Has Opened".

3.4 Configuration

Before using the configuration tool, please click the "Query" button first, the version of all the data will be read into the tool, it's easy to view and revise.

3.4.1 Central Station Parameters

- IP Address and Port of Main Server
- The IP address and port of main server should be set at 1024 or above.
- IP Address and Port of Backup Server
- The IP address of server in the backup center.
- Wireless Network Parameters

APN		
主站手机号码		
短信中心号码		
虚拟专网用户名		长度32
虚拟专网密码		长度32

APN: Password of wireless network access point.
Mobile Number Set in the Main Server: Mobile number that the main station will call via wireless network when Abnormal Situation Occurs.
Number set for Receiving Message from SMS Center: Mobile number that the main station will send message to via wireless network.
Virtual Private Network Username: User name for wireless network authentication.
Virtual Private Network Password: Wireless network authentication password.

3.4.2 Parameters of Monitored Area

According to different customers' requirements, user can set the voltage,current and temperature threshold. The specific items can be set as follows:

配置内容-台区基本参数

配置项	配置值	描述
电压互感器倍率	0	
电流互感器倍率	0	
额定电压	0	单位：V
额定电流	0	单位：A
额定负荷	0	单位：kVA
电压合格上限	250	单位：V
电压合格下限	200	单位：V
电压断相门限	0	单位：V
过压电压上上限（过压门限）	0	单位：V
过压越限持续时间	0	单位:min
过压越限恢复系数	0	单位:%
欠压电压下下限（欠压门限）	0	单位：V
欠压越限持续时间	0	单位:min
欠压越限恢复系数	0	单位:%
过流相电流上上限（过流门限）	0	单位：A
过流越限持续时间	0	单位:min

3.4.3 Basic Parameters

- **Replay Interval**

重拨间隔	3	单位:10秒

PPP Reconnection Interval; Replay Interval; Unit: 10S

- **Terminal address**

终端地址	3	

Be used to identified the terminal address in background, because different terminals has been set different addresses.

- **Main serial port mode**

主串口模式	独立设备	

Pure Data Transparent: data from serial port has been transparently passed.
Serial Port Expansion: need to judge the protocol and forward it.
Standalone Device: standalone device is used for data collection

- **Data Acquisition Interval**

数据采集间隔	5	

The unit of data acquisition time interval is second.

- **Time Interval of Switch State Querying**

开关状态查询间隔	5	单位:秒

The unit of time interval for switch state querying is second.

- **Number of Configured Switches**

开关配置数量	2	范围0~255

The number of switches that can be used and the number of switches that has been set will show in the interface of terminal switch configuration parameters.

• Switch Hardware Interface

开关硬件接口	485-2	

The optional interfaces of terminal hardware are 485-1 and 485-2.

3.4.4 Ethernet Configuration

• Ethernet Parameters

配置项	配置值	描述
终端IP	192.168.1.100	
子网掩码地址	255.255.255.0	
网关地址	192.168.1.1	
代理类型	不使用代理	
代理服务器地址	0.0.0.0	
代理服务器端口	0	
代理服务器连接方式	无需验证	

Set the terminal's Ethernet IP and gateway address and so on. Communication with the platform or communication with the camera can be realized through Ethernet.

3.4.5 Wireless Network Configuration

用户名		
密码		

Set the user name and password for connecting to the network according to the current configuration of wireless network.

3.4.6 Camera Configuration

Types of Camera

摄像头类型	SXH	

Select the type of camera you are using from the drop-down menu, the optional types are SXH, HASX and IPCHK.

Camera Hardware Interface

摄像头硬件接口	485-2	

When selecting the camera to access the terminal hardware interface, users need to note that different cameras use different hardware interfaces. For example,IPCHK uses Ethernet interface.

ID Camera ID

摄像头ID	2	范围1~254

Set the camera ID as communication identification for the terminal and the camera.

Camera Resolution

摄像头分辨率	1280x1024_960	

Used to initialize the camera and set the resolution of collected images.

3.4.7 Terminal switch parameter configuration

配置内容-终端开关配置参数

编号	序号	波特率	通信端口号	通信地址	采集器通信地址
0	0	9600	0	4	0
1	0	9600	0	5	0
2	0	默认	0	0	0
3	0	默认	0	0	0
4	0	默认	0	0	0
5	0	默认	0	0	0
6	0	默认	0	0	0
7	0	默认	0	0	0
8	0	默认	0	0	0
9	0	默认	0	0	0

Please see the"Number of Configured Switches" in 3.4.3 Basic Parameters to set the number of terminal switches.

Chapter 4 Data Transmission Environment Test

4.1 Network Structure of the Test Environment

Cloud Platform: Simulating the actual application of the data center to log on the page,and select the corresponding terminal address, user can query the data that sent by terminal. Assuming that the cloud platform IP address is 121.40.136.108, and the monitoring via port 19011.

APP: Open the APP, select the corresponding terminal (distinguish through the terminal address), then the data collected by the terminal and the configuration information will show on the APP in real-time.

Data acquisition: According to the set collection interval on PC, F2920D terminal will collect the value of the sensor through related media and protocols. (Media includes Ethernet, RS232, RS485, LoRa, 433, IO port, etc.).

Following are the procedures of data transmission from collection terminal to server:

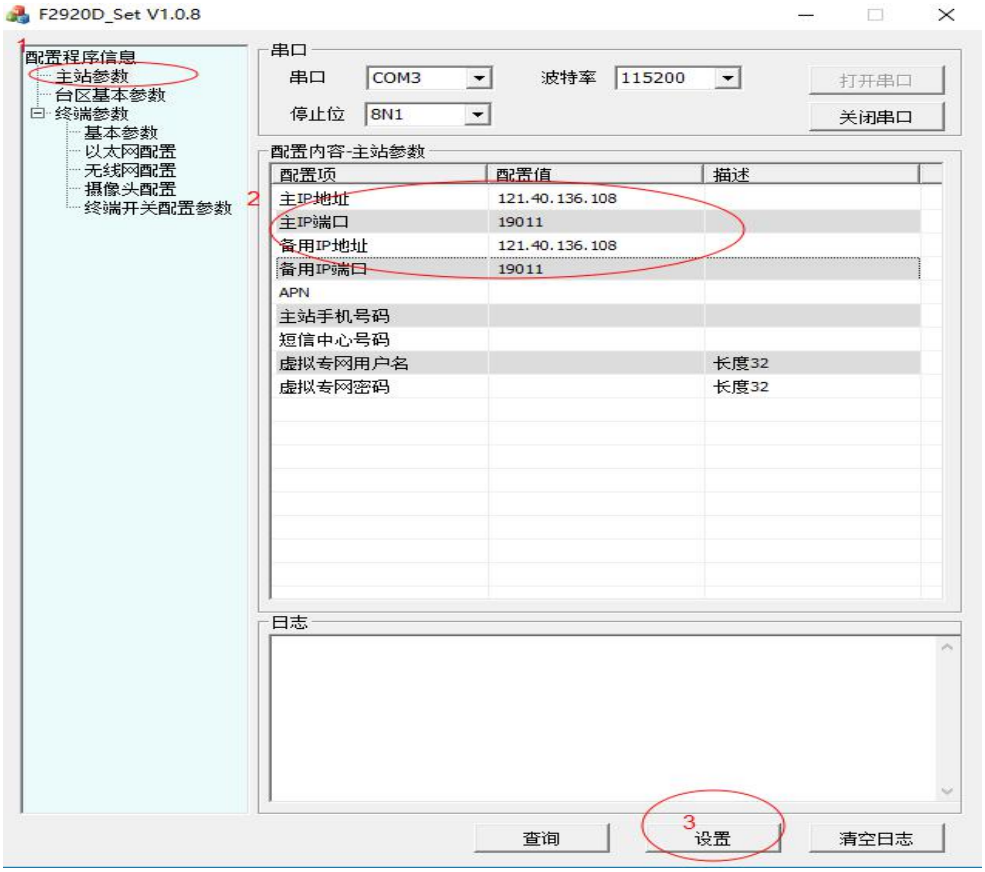
Data Sensor→ F2920D analyses the received data, and encapsulate the information according to the 101 protocol → F2920D TCP / IP protocol stack encapsulate the data → sent to the wireless network → wireless network forwarding the data to the INTERNET →INTERNET forwarding the data to the Server.

The procedures for server to send data to the PC are as follows:

Server sends data to INTERNET-> INTERNET forwards data to wireless network -> F2920D 101 data for data analysis -> F2920D will be analyzed out of the data related settings.

4.2 Test Procedures

1. Run the F2920D_Set software on the PC, fill in the corresponding IP and port in the server parameters interface,then click "Set"when it's done (If needed,it can be configured as different port). Please operate as the 1,2,3 steps show in the picture, and click the "Query" button before filling in IP and port information.



2. Connect the sensor and F2920D terminal, and power on. If user need to read the terminal data, connect RS232 to the PC, then open the serial port.

3. Open the phone APP or web page (http://121.40.136.108:8056/index.do), select the corresponding terminal,remember different terminals has different addresses. Terminal address setting please refer to the "Terminal address" in 3.4.3 Basic Parameters. The collected data can be viewed via APP or web pages, and the terminal device can be operated.
APP interface is as follows:


智能台区
台区工况
今日报警
运行参数
温度监控
系统设置
系统退出