NJ-IOT-520

Product use manual of
Smart cloud box--smart lamp pole

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Content

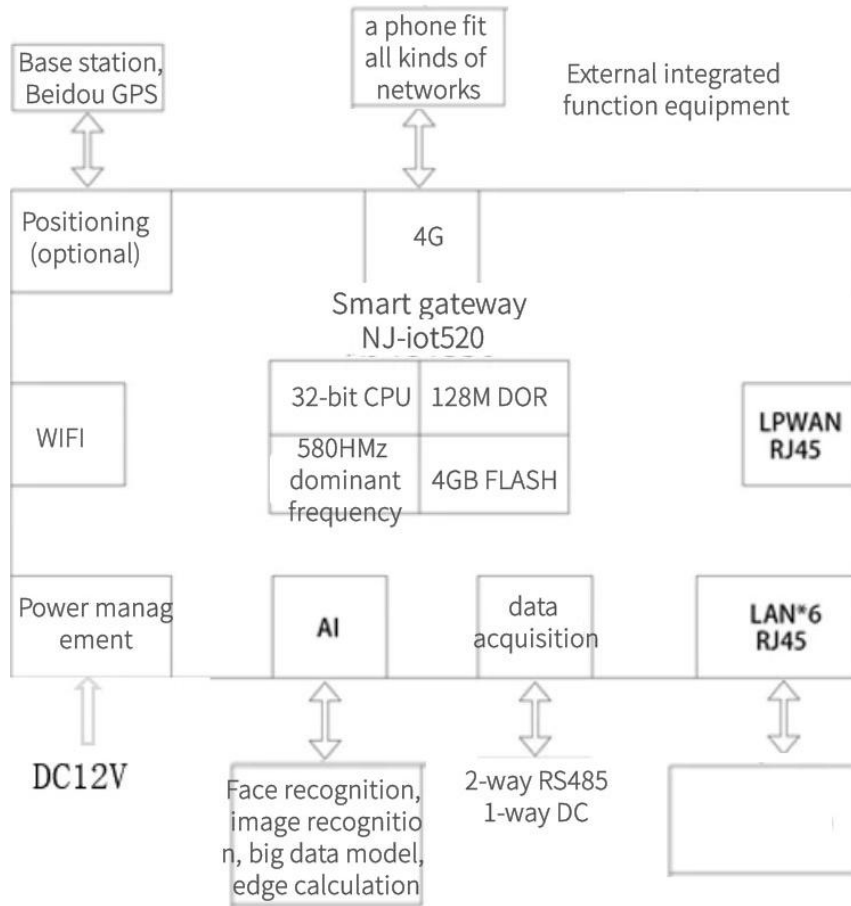# I. Product brief introduction

1. Product brief description

NJ-IOT-520 is the fifth generation of intelligent street lamp gateway that can be independently developed and produced by new energy technology, It is a new type of remote central control equipment for outdoor use specially designed to meet the needs of intelligent end users for remote intelligent control of equipment, On the basis of the previous generation of smart gateway, the upgrade and improvement, In a much smaller volume, Signal stability, Online rate of 99.9%, High integration degree, Reserved multifunctional interface, More sensors and devices can be accessed, Aveveraging 2G / 3G / 4G networks, Ethernet networks and WIFI networks provide users with long-distance big data transmission functions, Connect to the upper cloud, Control the power supply output, Strong edge computing power, Reserve the interface, For the secondary development, More powerful features provide stable support.

The product incorporates a 2.4 GHz IEEE 802.11b/g/n WI-FI transceiver, a dual-core 880MHz CPU equipped with the Mediatek MT7621AT, 4GB EMMC Flash memory, 4 High Speed Ethernet Port

Physical Layers (Ethernet PHY), HNAT Memory Accelerator, and Multiple Universal Input and Outputs (I / O), With Linux (Ubuntu14.04) as the software support platform, Provide both 2 * RS485 interface, 8 Ethernet LAN simultaneously, One Ethernet WAN and 2 WIFI interfaces, 2 Gigabit optical fiber ports, You can connect multiple Ethernet devices, serial port devices, WIFI devices at the same time, Realize the transparent data transmission and routing function.

NJ-IOT-520 design fully considers versatility and stability, based on the design of Internet of Things technology architecture, can meet the data collection and intelligent control of smart terminal devices, and has a certain degree of scalability, to facilitate the access of new devices under the existing hardware.

2. Product framework

Base station, Beidou GPS

a phone fit all kinds of networks

External integrated function equipment

Positioning (optional)

4G

Smart gateway NJ-iot520

| 32-bit CPU | 128M DOR |

WIFI

| 580HMz dominant frequency | 4GB FLASH |

LPWAN RJ45

Power management

AI

data acquisition

LAN*6 RJ45

DC12V

Face recognition, image recognition, big data model, edge calculation

2-way RS485 1-way DC

3. Product function

● Support WIFI, 4G, gigabit network port, gigabit optical fiber port in various ways to access the Ethernet.

● Equipped with two-way optical fiber interface, with two-layer networking capability, it is suitable for ring and interactive chain networking scenarios. In the case of insufficient network ports, the

number of network ports is increased by increasing the exchange of communication ports.

- Support three netcom, compatible with telecom, mobile, Unicom 2G \ 3G \ 4G network.

- Support Micro sim card, using anti-line drop mechanism.

- Wired and wireless backup each other to ensure normal and stable transmission of data, intelligent switch network backup, off the case of data storage offline, wait for the network recovery data can be continued.

- Powerful WIFI function, support AP, STA, Repeater, multiple modes free switching.

- Protocols are rich, easy to connect, transparent data transmission, MODBUS RTU to TCP / IP, MQTT.

- Support active polling of different address segment MODBUS devices to make operation easier.

- Using the industrial-grade high-speed 4G wireless communication module, configured with a 32-bit high-sex processor, the front-end of the information collected is more timeliness and accurate.

- Industrial design, aluminum alloy shell, facing a variety of outdoor environment, industrial environment and strong interference, can be stable 7X24 hours uninterrupted work.

4. Technical parameter

specifications	parameter	remarks
型号	NJ-iot520	Gateway (Smart Light)
sensor	Temperature sensor, humidity sensor	built-in
Network system	No.1 WAN port	10 / 100 / 1000 Adaptive
	4G	4G / 3G / 2G full netcom
	No.2 fiber port	Support ring network
power input	scope	12V/3A
classification of waterproof	IP65	IP65
size	Length* width *height (mm)	315mm*110mm*49mm

temperature	Storage temperature -40℃ ~85℃ Operating temperature -25℃ ~70℃	Storage temperature -40℃ ~85℃ Operating temperature -25℃ ~70℃
4G	service frequency	FDD LTE：B1/B3 TDD LTE：B38/B39/B40/B41 TDSCDMA：B34/B39 CDMA2000 1x/EVDO：BC0 GSM：900/1800MHz
	transmission speed	LTE-FDD：Max 100Mbps(DL) Max 50Mbps(UL) LTE-TDD：Max 61Mbps(DL) Max 18Mbps(UL) SCDMA-TD：Max 4.2Mbps(DL) Max 2.2Mbps(UL) CDMA：Max 5.4Mbps(DL) Max 14.7Mbps(UL) GPRS：Max 85.6Kbps(DL) Max 85.6Kbps(UL)

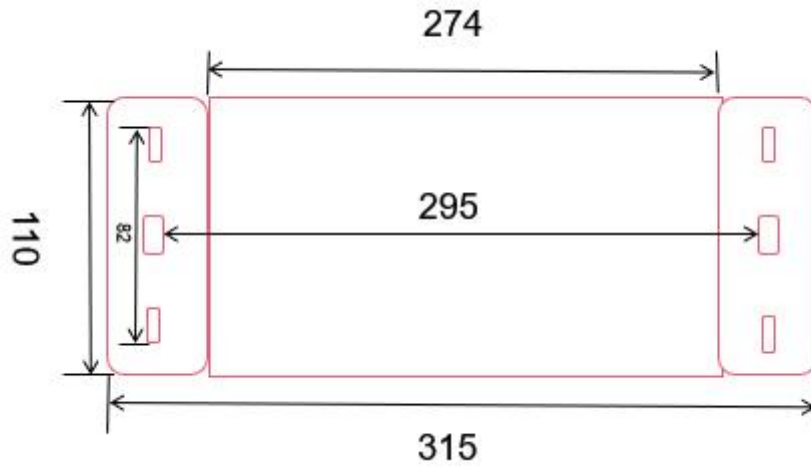|	transmitting power	FDD LTE：23dbm±2db TDD LTE：23dbm±2db TDSCDMA : 24dbm +1/-3db GSM 900Mhz：33dbm±2dbm GSM 1800Mhz：30dbm±2dbm
	receiving sensitivity	FDD B1: -97dBm(20M) FDD B3: -96dBm(20M) TDD B38: -94dBm(20M) TDD B39: -94dBm(20M) TDD B40: -94dBm(20M) TDD B41: -93.5dBm(20M) TDSCDMA B34: -110dbm TDSCDMA B39: -110dbm CDMA BC0: -108dbm GSM 900: -110dBm GSM 1800: -109dBm
WIFI	frequency range	support IEEE802.11b/g/n
	tape width	Highest 300Mbps
	power	20dbm

系统	processor CPU	Marvell 88F3720 ARM A53 double core 1Ghz
	internal storage	1GB
	Flash Memory	4GB EMMC

II. Product appearance and interface

1. Product appearance

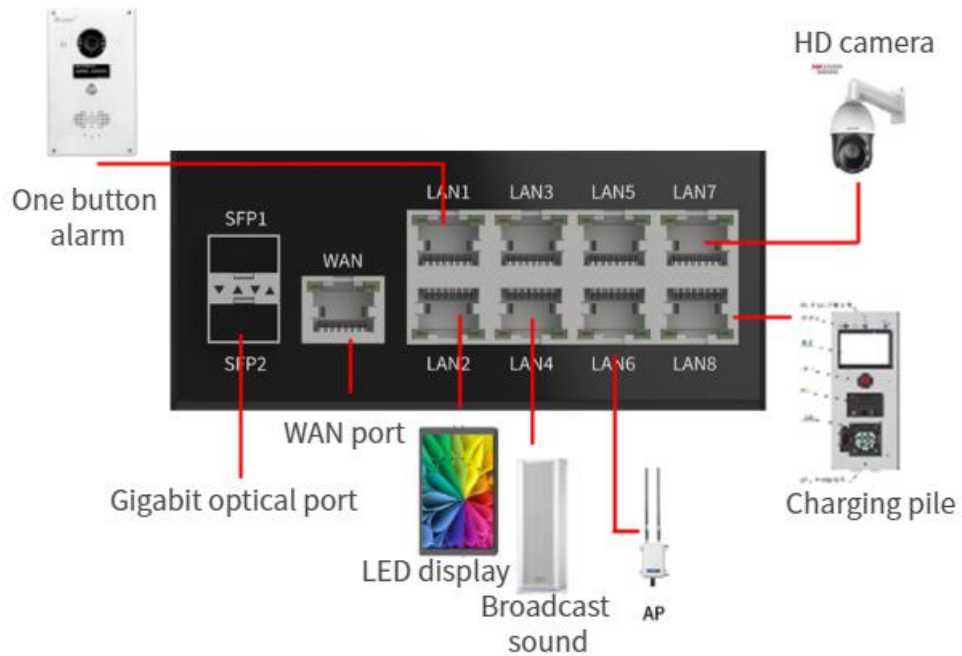Length, width and height = 315mm *110mm * 49mm

Note: The product picture in the manual is only number, type and

location, please refer to the actual model.

2. Product interface

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joggle	explain
1 Route DC12V input	DC12V power supply
1 RJ45WAN	Outnet entrance, 10 / 100 / 1000Mbps adaptive
8 Road to RJ45LAN mouth	Communication network port, 10 / 100 / 1000Mbps adaptive
4-Way antenna interface	4G Full netcom SMA sucker antenna, WIFI antenna, GPS antenna
Two-road gigabit optical fiber ports	1 Into 1 out, support single-mode, multi-mode optical fiber, support ring type, chain type and other network topology
The 2-way RS485 interface	Access to a device with a 485 interface

2. Product wiring

III. Product group matching

1. Product accessories

Accessories name	quantity
NJ-IOT-520 Smart Cloud Box	1
4G suction dish antenna	2
WIFI Antenna (IPEX)	2
485 Line	2
power line	2

IV. Notes and technical support

1. Notes

Please read this product manual before use. If you have any questions, please consult our company engineers for technical support.When using the equipment, the principle must be strong magnetic field and keep the insulation state with other objects. When installing and replacing the SIM card, it must be off before operation.

Smart cloud box wiring attention

2. Technical support

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