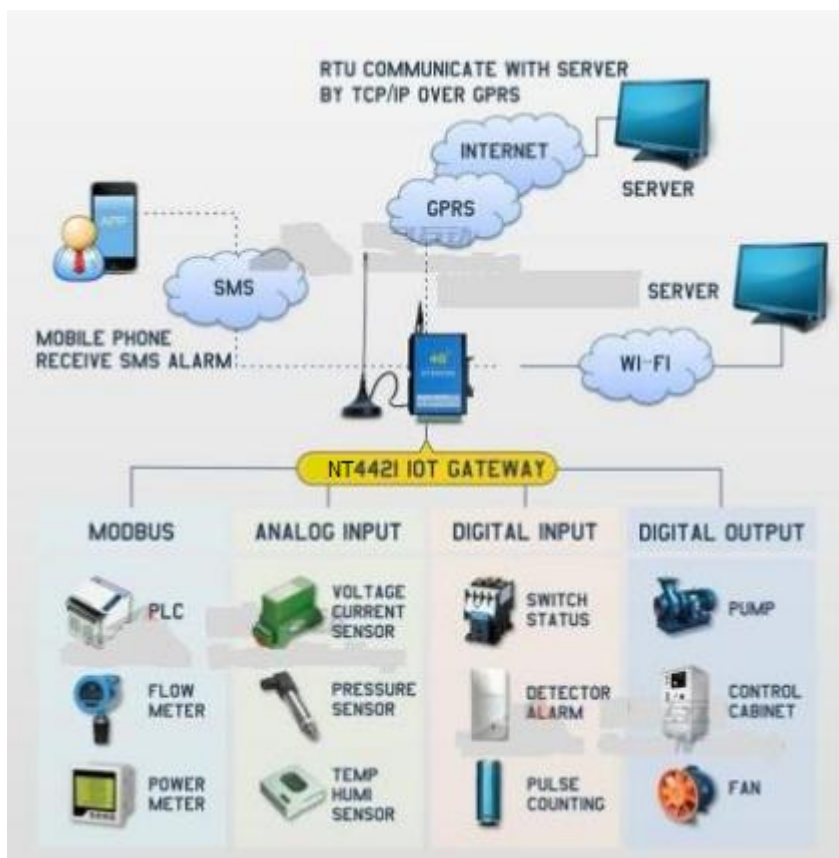




Product overview

NT4421 IoT gateway with 4DI, 2DO, 4AI, RS485 standard electrical interface can connect various industrial equipment, such as PLC, meters, sensors, electrical switches. It monitors the industrial system real-time running status and data, as well as constructs the remote device to a proprietary central computer and mobile phones through the 4g or Wi-Fi communication network. It efficiently acquires the remote equipment operating parameters and process management, can be widely used in industrial automatic control, base station / computer room monitoring, environmental monitoring, water conservancy project, power industries, agriculture, etc.



System Features

- Adopted highly integrated industrial 32-bit ARM MCU
- Reliable performance with built-in double watchdog, 24×7 operation
- With signal filtering mechanisms
- Network-reconnect and retransmission to ensure data accurately transmit
- Update RTC automatically or manually, clock source support Sms, NTP, CwtIO Server
- Can set multiple timers execute actions, e.g., output, upload data, change setting
- Event-based linkage programming, e.g., alarm linkage output
- Provide configure software, visual programming
- Support remote update firmware via FTP
- Optional inside battery that life is 8-20 hours, cellular module Intelligent sleep when power lost

Port Features

Port	Qty	Features
DI (digital input)	4	<ul style="list-style-type: none"> ● Accept dry contact
DO (digital output)	2	<ul style="list-style-type: none"> ● Transistor output (drive voltage=power supply voltage, Drive current≤500mA) ● Remote or local event activate DO on/off/pulse ● Remember status when power lost
AI (analog input)	4	<ul style="list-style-type: none"> ● Accept 4-20mA (option: 0-5V), Sampling frequency: 33Hz, 16-bit precision) ● Convert signal to actual measure value, support adjustment ● Configurable parameters for signal acquisition, alarm, data communication ● Detect connect or disconnect to alarm
RS485	1	<ul style="list-style-type: none"> ● Support Modbus RTU protocol ● Can work as a Modbus master to read/write 32 data from slaves ● Can work as a Modbus slave to be read/write by master

Communication Features



Wireless network communication

- Option network: 4G, Wi-Fi, 4G&Wi-Fi
- TCP/IP connect at most 4 servers (support Static IP address or domain)
- Events (e.g., alarm, timer) trigger upload data
- Communication protocol: Modbus TCP, http post, Cwt_IO(two-way communication)
- Support two-way data transparent transmission with RS485



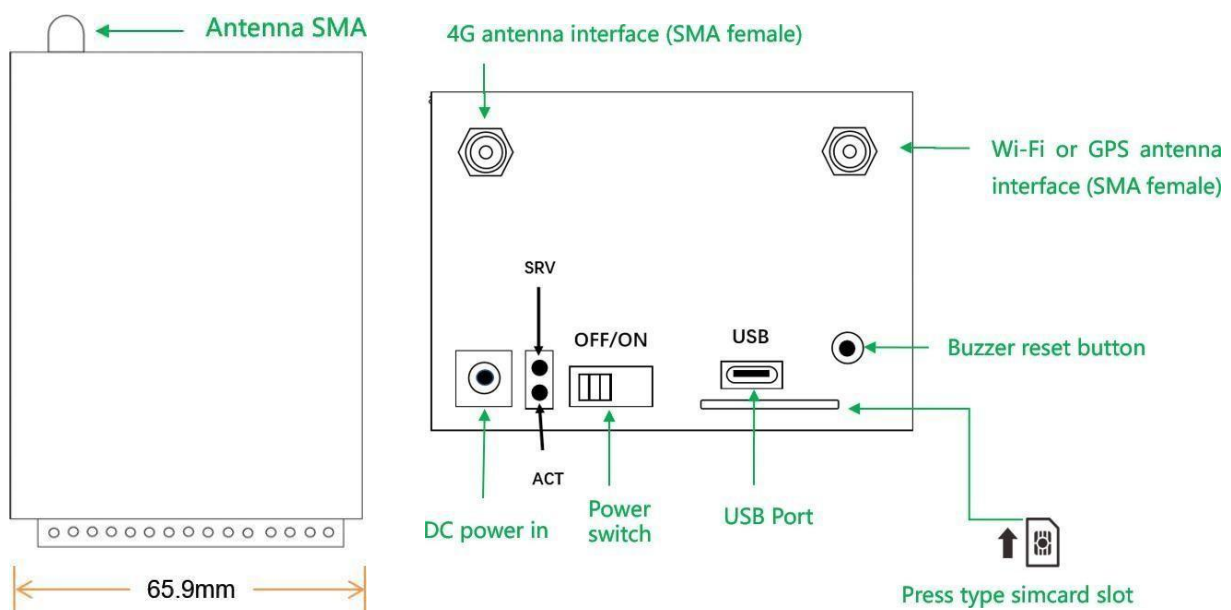
RS485 Modbus communication

- Support Modbus RTU protocol
- Can work as a Modbus master to read/write 32 data from slaves (like meter, PLC, transducer etc.)
- Can work as a Modbus slave to be read/write by master (HMI, SCADA etc.)
- Support Modbus RTU to TCP convert over Ethernet or GPRS/3G

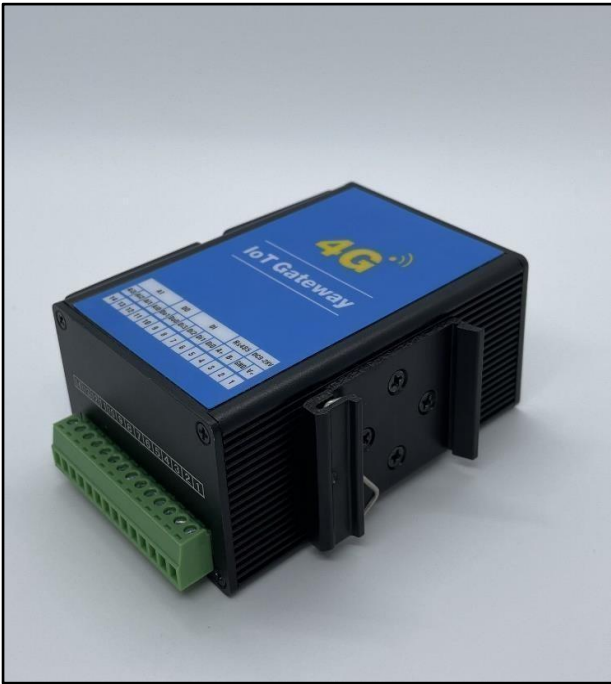
Specifications

Core	MCU	STM32
Power	Power supply	9-28V DC (Standard adapter: DC 12V/1.5A)
	Consumption	12V input Max. 150mA/Average 50mA
Network	Wireless Network	Option: FDD LTE(4G) Wi-Fi, 802.11 b/g security WEP/WPA/WPA2
IO channel	Digital input (DI)	4 channels, Dry contact trigger Can be set as counter with counting frequency: 10Hz
	Digital output (DO)	2 channels, Transistor output (drive voltage=power supply voltage, Drive current \leq 500mA)
	Analog Input (AI)	4 channels, receive 4-20mA (option: 0-5V), Sampling frequency: 33Hz, 10-bit precision, Dual digital filters for anti-noise
Series port	RS485	1 port, baud rate: 1200~115200dps, default 9600,n,8,1
	USB	1 configuration port
Other interface	SIM/UIM	Standard user card interface
	Antenna	Standard SMA female interface (50 Ω)
Others	Battery	Optional lithium-polymer, 1000mAh/3.7V, life:8-20 hours
	GPS module	Optional
Working Environment	temperature	-30 $^{\circ}$ C~+70 $^{\circ}$ C
	humidity	5~95%(non-condensing)
Physical	Terminals	1 \times 14pin 3.81mm spacing, pluggable
	Housing	Providing IP30 protection
	Dimension	65 \times 43 \times 94 mm
	Weight	230g
	installation	35mm Din rail

Size diagram



Package list



RTU×1, antenna×1, Standard adapter: DC 12V/1.5A×1, serial cable×1, USB cable×