



# IoT APPLICATION EXPERT



Professional



Stable



Efficient



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## About Us

Chengdu Ebyte Electronic Technology Co., Ltd. was established in 2012, with an office area of over 4,000 square meters. It is a high-tech enterprise integrating R&D, production and sales, with a complete industrial chain, focusing on Internet of Things communication applications. Products cover LoRa, WiFi, Bluetooth, ZigBee, CAN bus modules, data transmission radio stations, industrial routers/gateways, LORAWAN, remote I/O modules, industrial signal transmission, etc., with nearly 100 inventions and utility model patents, and the products have passed SRRC, FCC, CE, MIC, KC, NCC and other authoritative certifications, the company is committed to providing professional communication solutions for customers in industries such as artificial intelligence, industrial control, energy conservation and environmental protection, and rail transit.

## Main business

- LoRa / WiFi / Bluetooth / ZigBee wireless module
- Serial server
- GPRS / 4G-DTU / NB-IoT Data transmission terminal

 Vision	 Values	 Development strategy	 Quality promise	 Commitment to employees
Become an expert in wireless data transmission industry	Integrity Quality Development Innovation	International R&D level standardized production	Excellent quality strive for better	Family and business develop simultaneously



# Provide customers with software

hardware one-step IoT application solutions



- |                               |                  |                           |                  |                          |                                  |
|-------------------------------|------------------|---------------------------|------------------|--------------------------|----------------------------------|
| • Digital Radio               | • LoRa           | • UART Serial Port Module | • SPI RF module  | • SoC RF module          | • BLE Bluetooth Module           |
| • Wi-Fi Module                | • ZigBee Module  | • 4G/GPRS/NB/GPS module   | • Serial Server  | • Industrial IoT Devices | • Antenna and accessories        |
| • Power Module                | • Remote Control | • Industrial Router       | • 4G/CAT1/NB DTU | • Remote IO module       | • Industrial Signal Transmission |
| • Signal Conversion Interface | • Gateway Device | • LoRaWan                 | • CAN bus        | • Sensing and Detection  | • Cloud/O Hardware               |

## CE certification





## Ebyte product has exported to many countries and regions around the world

has been recognized by the world



Berlin Electronics Fair



Singapore Electronics Fair



U.S. CES Electronics Show



Hong Kong Electronics Fair



India Electronics and Communications Exhibition



①

The company's research and development capabilities are at the international advanced level

②

Products have passed FCC/CE/RoHS/KC and other international certifications

③

Ebyte product has Exported to many countries and regions around the world

## Believe in big brands Believe in Ebyte

Ebyte provides customized wireless data transmission solutions  
standing at the forefront of technology to provide you with the best products and services

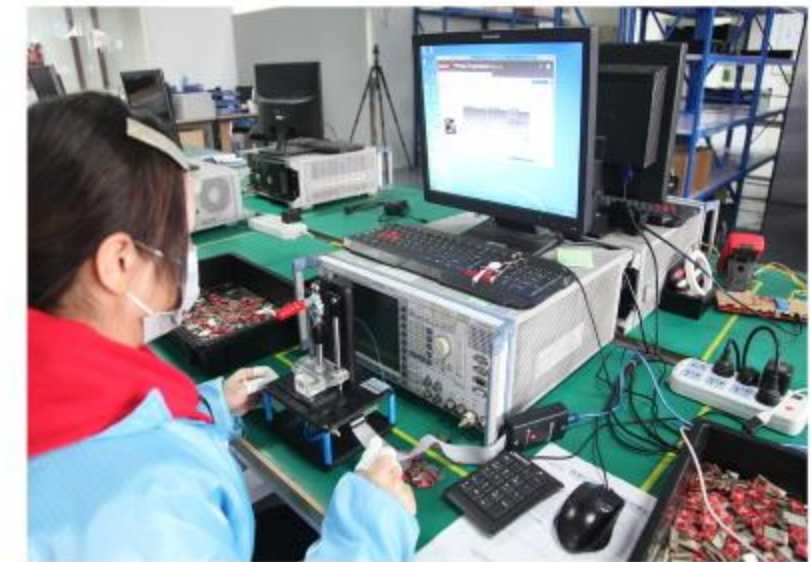


Ebyte takes the Internet of Things communication technology as the core, and cooperates with many large enterprises and institutions to launch a variety of industrial communications, Internet of Things modules and wireless data transmission radio communication equipment. The products have industrial-grade quality, excellent performance, stable and reliable, and have been recognized by customers at home and abroad.



# Quality is the key to ensuring the competitiveness of peers

Always keep in mind the expectations of customers, strictly screen parts and strictly monitor the production process,  
Only to provide good products with reliable performance and excellent quality





## Wireless module

### Original imported chip industrial-grade wireless module

Ebyte has established long-term strategic cooperation with chip companies such as NORDIC, SEMTECH, SILICON LABS, etc.

The wireless module produced uses imported original chips, high-quality capacitive and inductive devices, and industrial-grade high-precision

Equipment such as crystal oscillator can work stably for a long time. Relevant materials are detailed, and users can use and develop without barriers.

### Maintain long-term and deep cooperation with the world's leading chip manufacturers



### Application industries



**Automated irrigation**  
Remote data collection  
and control



**Protection monitoring**  
Centralized monitoring  
improve efficiency



**Exhibitions**  
Fast networking  
improve work efficiency



**Smart power**  
Real-time remote monitoring  
fast sensor data transmission



#### Wireless UART module

SX1278 Chip Solution  
High power 1W  
Support air wakeup  
Support FEC forward error correction



#### UART LoRa module

SX1268 Chip Solution  
LoRa wireless module  
LBT/RSSI  
Automatic relay network



#### UART LoRa module

LLCC68 Chip Solution  
LoRa wireless module  
LBT/RSSI  
Automatic relay network



#### High-speed LoRa module

SX1280 Chip Solution  
High-speed continuous transmission  
Support RSSI  
Multiple working modes



## Wireless modem

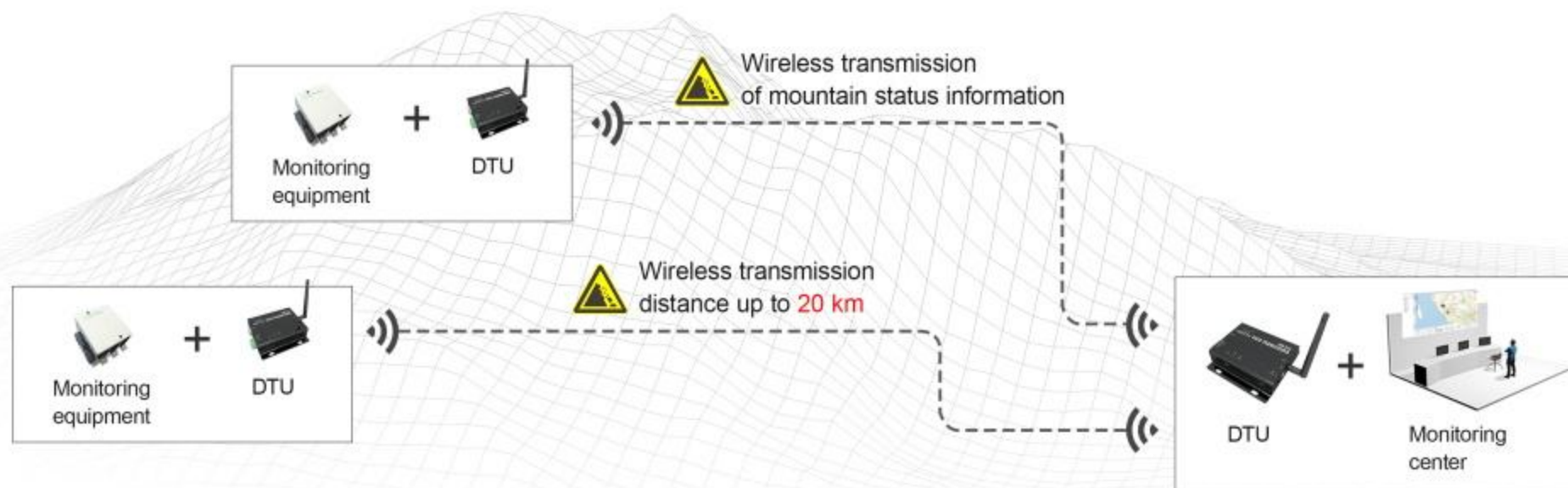
National Radio  
Transmission Equipment Type Approval Certificate

CMIIT ID : 2017FP5780



### Mountain (debris flow) monitoring application program

The traditional landslide monitoring and early warning system mainly uploads data to the main console through a wired network, and then broadcasts the early warning information manually. Because the landslide monitoring area is located in a remote area with complex geographic conditions, it is difficult to erect the line and the power supply is limited, which leads to the low degree of automation of the traditional method, poor monitoring accuracy, and low real-time performance. Ebyte's wireless modem series products can effectively replace traditional data lines, greatly enhance the ability to resist environmental interference, and reduce construction and maintenance costs.



### Application industries

- Pipeline monitoring**  
automatic warning to prevent it before it happens
- Automatic irrigation**  
Remote data collection saving management costs
- Building automation**  
Efficient management reducing enterprise management costs
- Engineering projects**  
Data is quickly connected to the Internet



#### High-speed continuous DTU

High-speed continuous transmission  
Support high-speed continuous  
Adapt to Modbus protocol  
Ultra-low power consumption



#### RS485 to ZigBee wireless modem

ZigBee wireless modem  
Strong diffraction ability  
Flexible network structure  
Far coverage



#### Narrowband wireless modem

Multiple certifications  
Low frequency narrow band  
strong penetration and diffraction  
Industrial quality

## LoRa

### Oil well data monitoring solution

Monitoring the working status of oil well equipment is an important basic task of oilfield management. At present, manual inspection is commonly used for regular maintenance, which consumes manpower, material resources and time, and it is impossible to obtain the latest working status in the first time. Ebyte's LoRa series products can quickly transfer data scattered across the site to the data center, allowing the center to control the working status of the entire oilfield for the first time, laying the foundation for data dynamic analysis.



LoRa spread spectrum communication: anti-interference, longer transmission distance, and stable communication

### Application industries



#### Advanced meter

Realize remote collection  
Reduce labor



#### Wireless remote control

Improve work efficiency  
and freely control remote



#### Wireless alarm

Real-time alarm  
faster response



#### Industrial sensors

No wiring, more convenient  
adapt to more applications



#### LoRa wireless module

LoRa Wireless Module  
Automatic relay networking  
Set communication key by yourself  
Wireless parameter configuration



#### New LoRa wireless modem

Military-grade LoRa modulation wireless DTU  
Single package supports 240 bytes  
230MHz power frequency band penetration  
Support multi-level relay networking"



#### RF to 2G/4G network server

Radio frequency to 2G/4G network server  
Sub-1G and 2G/4G network data transmission  
Support LoRa spread spectrum technology  
Built-in high-performance MCU



## 4G/GPRS/NB

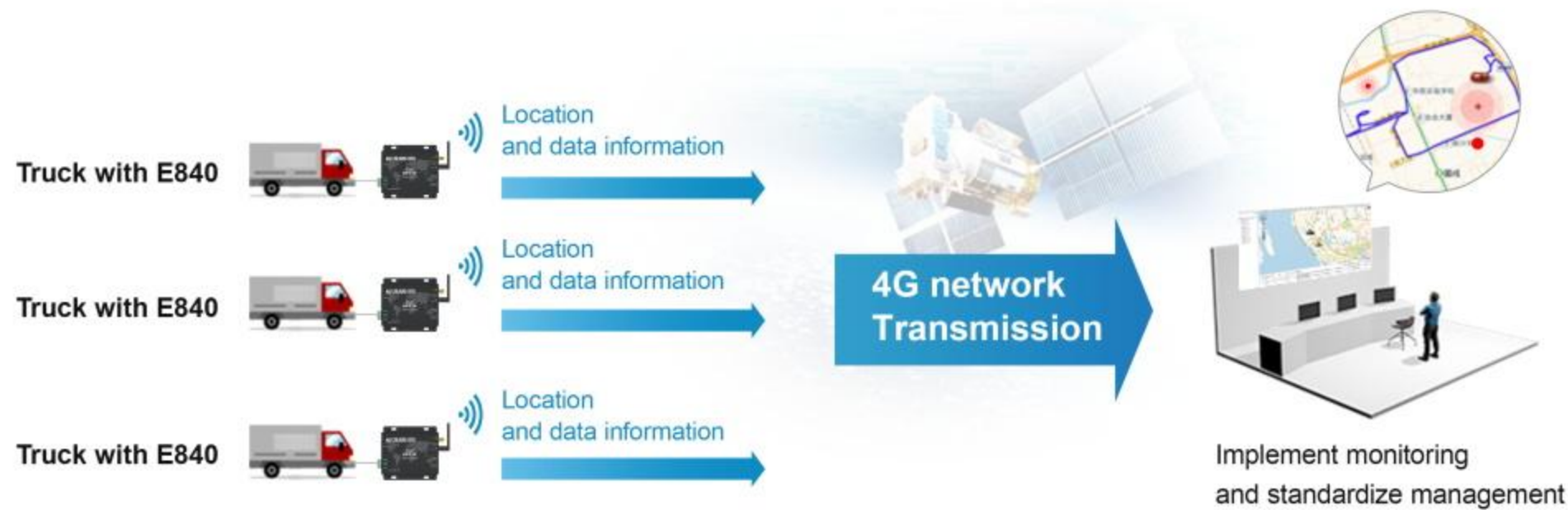
GPRS

4G

NB-IoT

### Cold chain logistics vehicle application

In the current cold chain transportation business, most of the independent temperature recording and management are carried out by placing an isolated temperature detection recorder on the car. Therefore, cold chain logistics encounters the bottleneck that it is difficult to monitor the temperature and analyze data in real time. The 4G/GPRS/NB series products launched by Ebyte use the operator's network to upload data to the Internet in real time, enabling real-time monitoring anytime, anywhere.



### Application industries

- 
**Automotive applications**  
 Improve operating efficiency and view vehicle status
- 
**Shared equipment**  
 More convenient to use and realize remote monitoring
- 
**Wind monitoring**  
 Real-time control of data effective monitoring
- 
**Vending machine**  
 Reduce labor costs and collect transaction information remotely



#### Serial port to 2G/4G wireless module

4G LTE data transmission module  
 Support transparent transmission  
 Support up to 230400 baud rate  
 Large serial port buffer function



#### Serial port to 2G/4G wireless modem

GSM/GPRS digital modem  
 Support data transparent transmission  
 Support TCP, UDP network protocol  
 Support heartbeat package, registration package



#### Serial port to NB network wireless module

NB data transmission module  
 Support mobile NB card  
 With anti-interference ability  
 Anti-electromagnetic interference

## Remote control



### Remote control solution for smart agriculture and fishery

Smart agriculture and fishery uses the 4G mobile phone cloud smart remote control switch to realize remote control of the aerator on the mobile phone APP through the 4G network. The remote control switch supports multiple control methods (mobile phone APP/remote control/keys), and has multiple working modes (self-locking/jogging/interlocking). The remote control solution is highly efficient and low-cost, making smart agriculture and fishery more "smart"



### Application industries

- 
**Industrial control**  
 Remote control  
 High efficiency
- 
**Agricultural irrigation**  
 Automated control to improve energy efficiency
- 
**Household appliances**  
 Remote control  
 convenient and worry-free
- 
**Security systems**  
 Real-time remote control  
 Fast and efficient



#### 4G phone smart remote control switch

- Free for life (support sim card)
- Multiple control methods (APP/remote control/keys)
- Multiple working modes
- Flexible power supply (AC/DC)
- Multi-specification output (channel 1/2/4)
- Support rail installation



#### 4G phone smart remote control switch

- Free for life (support sim card)
- Multiple control methods (APP/remote control/keys)
- Multiple working modes
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- Support rail installation



#### Wireless remote control switch

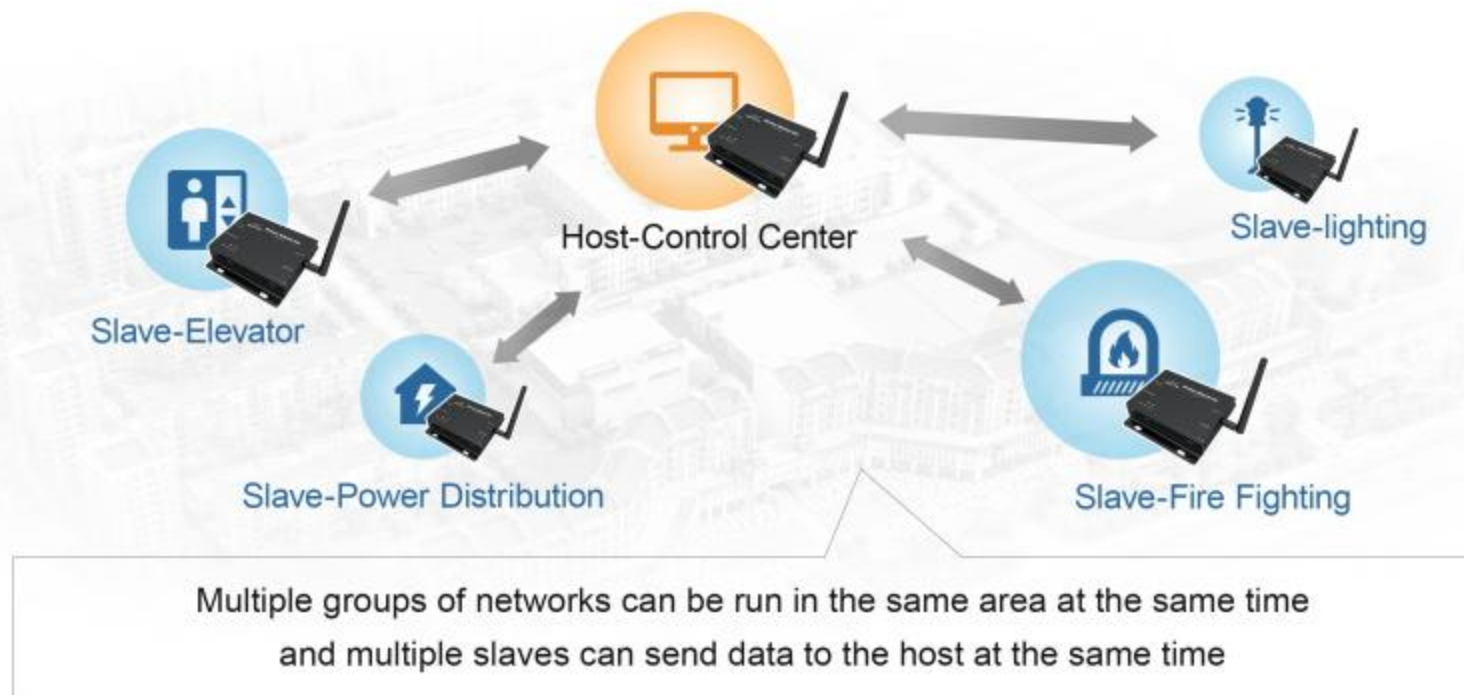
- No 4G network required
- Remote control (wireless)
- Multiple working modes
- Flexible power supply (AC/DC)
- Multi-specification output (channel 1/2/4)
- Support rail installation



## Wi-Fi/Serial server

### Smart community application solution

Building automation adopts IoT technology to conduct comprehensive and effective monitoring and management of HVAC, water supply and drainage, power supply and distribution, lighting, elevators, and fire protection in the community, expand the comprehensive use of the community and improve the efficiency of property management, and ensure community equipment in the best operating state of high efficiency and energy saving. Ebyte's wifi/serial server series products are easy to operate and simple to use. The use of data transparent transmission can quickly connect to different use environments, reducing the pressure of system development.



### Application industries



#### Wireless alarm

Real-time alarm to ensure fast reception



#### Remote keyless entry

Intelligent control door lock  
Convenient and quick



#### Smart home

Remote viewing  
intelligent control  
improve the quality of life



#### Shared equipment

More convenient to use  
realize remote monitoring management



#### Serial port to WiFi network

Serial port and WiFi two-way transparent transmission  
CC3200 chip solution  
3M high-speed continuous transmission  
Support OneNet



#### RS485 to Ethernet serial server

RS485 to Ethernet serial server  
Two-way transparent transmission  
Cost-effective  
Support TCP/UDP



#### RF to Ethernet serial server

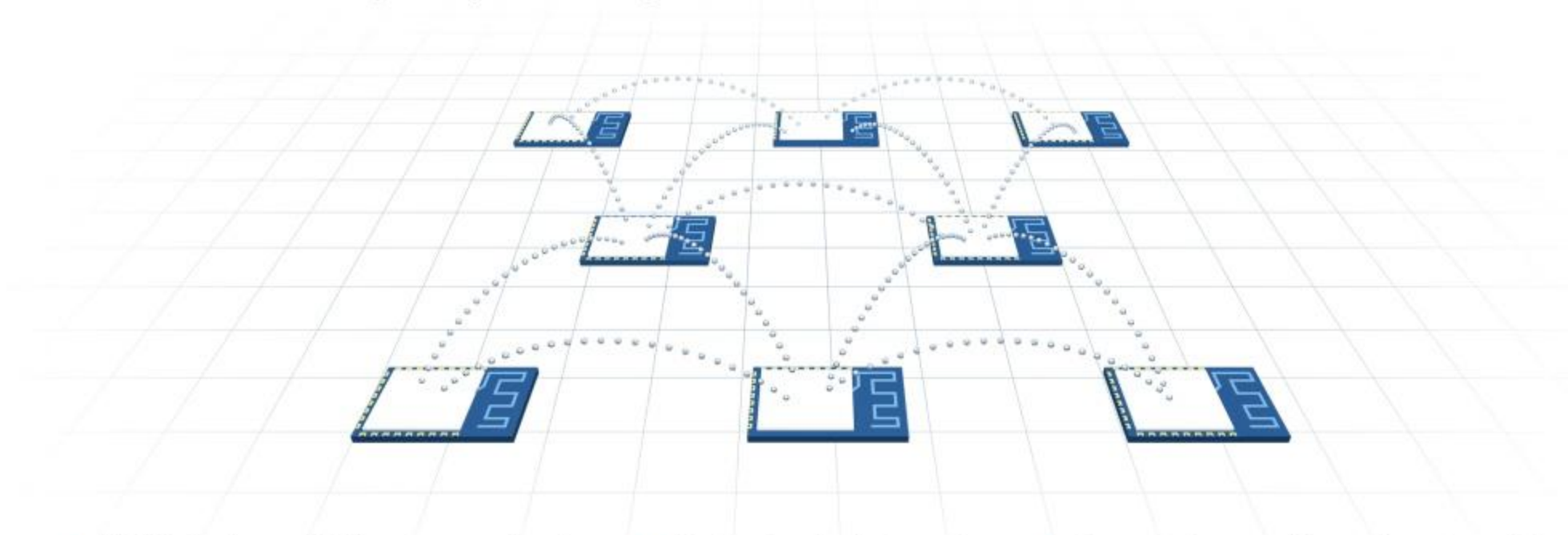
Star Ad Hoc Network  
Integrate coordinator and terminal as one  
Long-distance and high-speed transmission modes  
PC operation

## Bluetooth



### ■ SigMesh Ad Hoc Network

SigMesh especially improves the communication efficiency of building a large-scale network coverage, and will be more suitable for building automation construction, allowing tens of thousands of devices to transmit information in a safe, reliable, and stable environment. In the relay network, any module is a relay, and data can be received at the same time as the relay. Data signal covers a range of 50 meters.



- Multiple-to-multiple communication
- Relay/node integration
- Supporting multi-node networking

### ■ Application industries



#### **Street light control**

Simple maintenance  
intelligent control



#### **Building automation**

Efficient management  
reducing costs



#### **Wireless remote control**

Ultra-low power consumption  
small size



#### **Wireless audio**

Simple and easy to use  
convenient for secondary development



#### **Bluetooth Mesh Ad Hoc Network Module**

TLSR8269 chip solution  
Multi-node networking  
Automatically remember network information  
Mobile APP can proxy to any node to access the network



#### **High-speed Bluetooth module**

CC2640 Chip Solution  
Ultra small size  
Bluetooth Low Energy 4.2  
Multi-role mode



#### **Low power Bluetooth module**

nRF51822 Chip Solution  
High-performance low-power processor  
Support BLE4.2, BLE5.0  
256KB FLASH, 16KB RAM



# ZigBee

## Smart street lighting solution

The Internet of Streetlights can support intelligent monitoring and command control applications such as streetlights, environmental parameters, traffic flow, etc. in the upper layer of smart cities, and realize the intercommunication and sharing of equipment resources and data resources in smart cities through cloud services, avoiding basic transmission in smart cities. The repeated construction of sensor network facilities achieves a high degree of sharing and sharing of multiple sensor terminal equipment and information resources. The ZigBee products launched by Ebyte feature fast networking, strong self-healing, and adapt to complex road conditions which are the best choice for smart street lighting.



## Application industries

- Security systems**
  - No wiring required
  - Maintenance cost
- Building automation**
  - Efficient management
  - Reducing costs
- Healthcare products**
  - Stable data transmission
  - Protect user data privacy
- Hotel solutions**
  - Flexible networking
  - Convenient management



### ZigBee to UART module

ZigBee 3.0  
Support ZHA/ZLL  
ZigBee Ad Hoc Network  
Adopt AES 128-bit encryption function



### RS485 to ZigBee modem

ZigBee wireless modem  
Strong diffraction ability  
Flexible network structure  
Wide coverage



### High-power ZigBee gateway

High power 500mW  
Automatic networking  
Network self-healing  
Two-way Socket link

## Industrial router

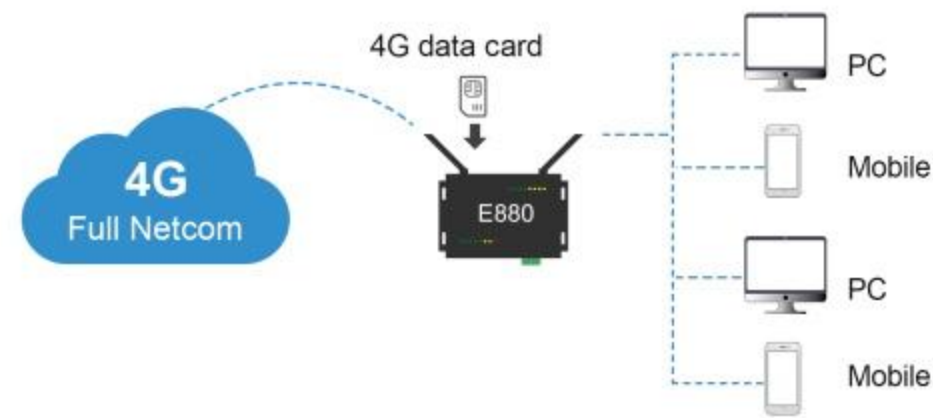
### ■ Mining production system solutions

Mining production is in a complex system that dynamically changes with time. This characteristic determines that the traditional mine production management project separates production personnel, physical infrastructure and information infrastructure, and various actualities formed during the production process. The status data is therefore not effectively integrated. Ebyte's industrial routers can effectively link the physical infrastructure and information infrastructure involved in the production process, so it can effectively integrate various actual status data.

#### ① 4G to wired network



#### ② 4G to Wi-Fi



### ■ Application industries



#### Engineering projects

Data is quickly connected to the Internet



#### Remote mountainous areas

Long-distance wireless upload to remote server



#### Tourist attractions

Push attraction information to improve tourist experience



#### Exhibitions

Improve work efficiency  
Fast networking  
Realize mobile office



### Industrial 4G wireless router

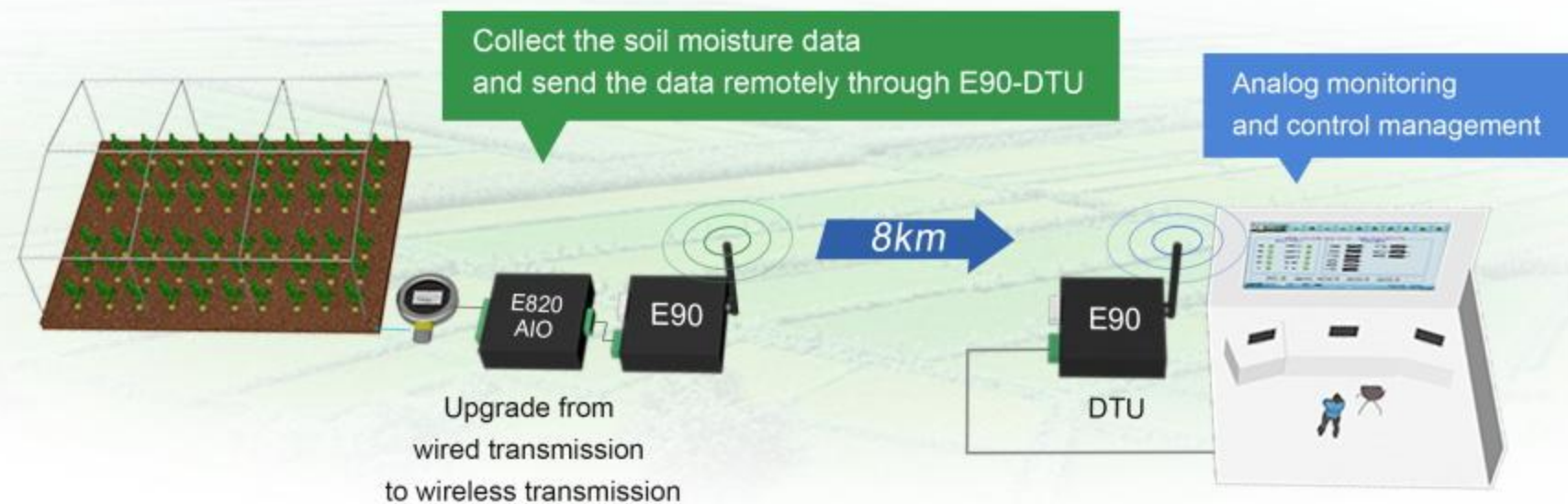
- 4G wireless router
- QOS flow control management
- WPS one-click Internet
- Commercial-grade high-performance embedded structure
- Support SMS AT command remote management
- Practical design with multiple network ports



## Wireless data transmission gateway

### Smart agricultural data collection solution

Smart agriculture is the use of sensors, controllers and software to monitor and control the agricultural environment and production process through mobile phones or computers. Ebyte's wireless data transmission gateway can transmit field data to the network data center in real time, and establish a professional system based on a big data platform, making traditional agriculture more "smart".



### Application industries

-  **Bridge monitoring**  
Wireless transmission  
online monitoring of real-time data
-  **Automated irrigation**  
Remote data collection  
saving management costs
-  **Forest fire monitoring**  
Centralized monitoring  
improve efficiency  
and quickly collect field data
-  **Industrial sensors**  
Real-time remote monitoring  
fast sensor data transmission



#### RF to Ethernet high-speed connection

Ethernet high-speed continuous transmission  
Ultra low power consumption  
TCP multiple connections  
Heartbeat package, registration package



#### LoRa to 4G data transmission gateway

4G high-speed big data transmission  
Automatic relay networking  
RF distance up to 10km  
Support two Socket links to send and receive



#### ZigBee gateway

ZigBee Ad Hoc Network  
Two sockets work at the same time  
4 Socket working methods  
Support Ebyte Cloud Transmission

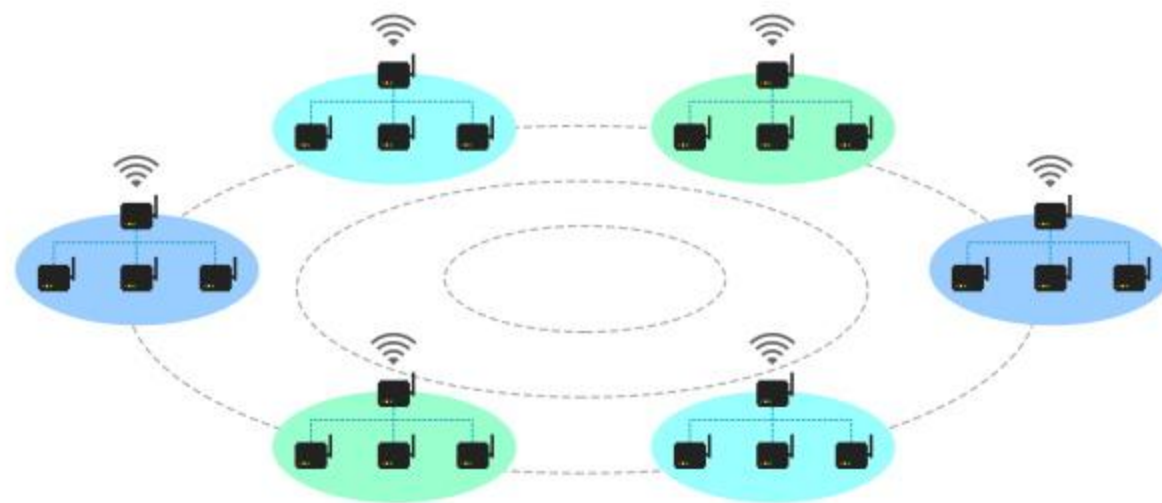


## RF Ad Hoc Network

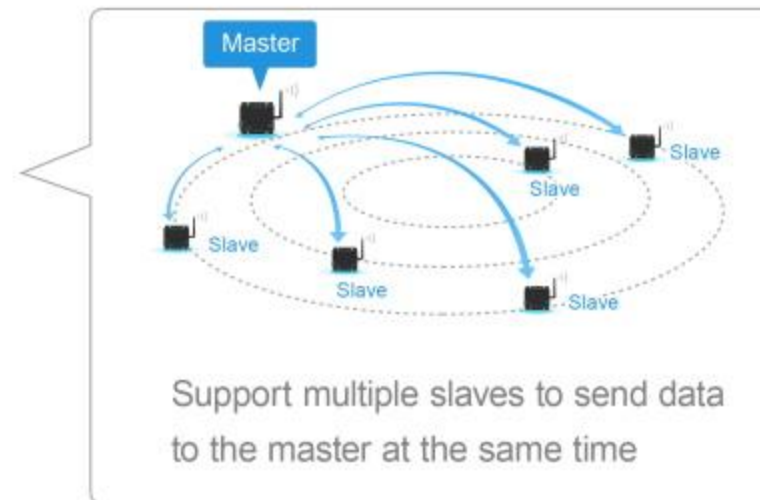


### Wireless radio frequency ad hoc network series

Ebyte's radio frequency ad hoc network equipment adopts advanced radio frequency modulation, which has long transmission distance and strong anti-interference ability; at the same time, it is equipped with an easy-to-operate ad hoc network system, which is easy to use and fast in networking, and can adapt to most wireless networks. Application scenarios.



Multiple networks can run simultaneously in the same area



### Application industries



#### Wireless alarm

Real-time alarm  
Faster response



#### Industrial remote control

Improve work efficiency  
Freely control



#### Smart home

Remote viewing  
Intelligent control  
Improve the quality of life



#### Building automation

Efficient management  
Reducing costs



#### Star Ad Hoc Network DTU

Star Network System  
Integrate coordinator and terminal  
long-distance and high-speed  
PC operation



#### One-master and multiple-slave

Star Network System  
4G high-speed big data transmission  
CSMA/CA carrier sense  
Ebyte Cloud breaks the distance limit



#### Star Ad Hoc Network Module

One-master, multiple-slave star network applications  
Support multiple slave data sending at the same time  
Strict data check and automatic retransmission mechanism  
RS232/RS485



## Remote I/O



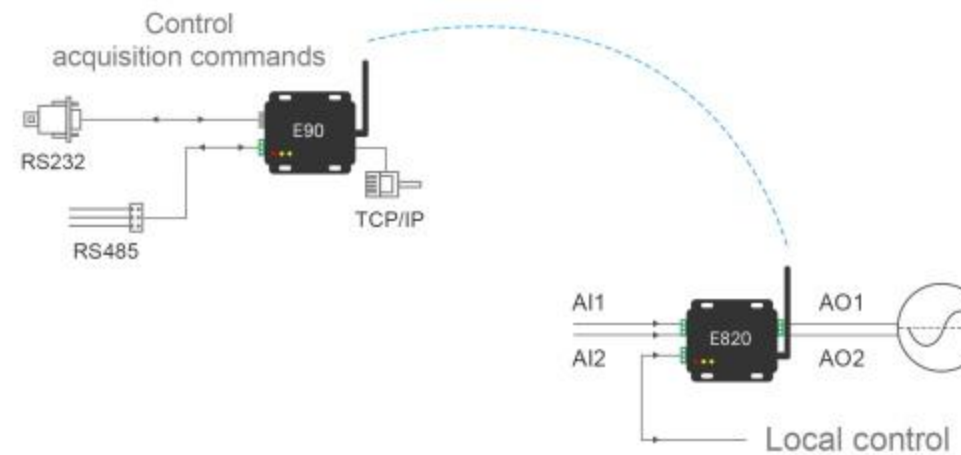
### Sewage treatment plant solutions

In response to the continuous development of the country's emerging strategic industries, in order to change the current status of low efficiency and extensive operation of sewage treatment, Ebyte has launched remote I/O control equipment. The device can perform real-time operation of remote I/O devices through radio frequency, Ethernet, GRPS, etc., which effectively accelerates the response speed of system management and greatly improves the operation and maintenance capabilities of sewage treatment enterprises.

#### ① Wireless follow (replace traditional wired)



#### ② Wireless acquisition control



### Application industries

-  **Industrial remote control**  
Improve work efficiency  
Freely control remote equipment
-  **Bridge monitoring**  
Wireless transmission  
online monitoring of real-time data
-  **Smart agriculture**  
Temperature and humidity  
data transmission
-  **Wireless sensors**  
No wiring, more convenient  
Adapt to more applications



#### Analog follow/control acquisition modem

Analog Wireless Data Transmission modem  
Support ModBus-RTU  
4-20mA  
Wireless transmission 8KM



#### Ethernet switch I/O controller

Ethernet Switch I/O Controller  
4-channel digital isolated input  
4-channel digital isolated output  
Ethernet transparent communication



#### 4G network remote I/O controller

GPRS network remote I/O controller  
4 AI+4 DI+4 channels relay output  
Support Socket, support TCP/UDP  
One key to restore factory settings