
LoRaWAN®
IoT Solutions from Home to Industry

Enhanced your product value with BSI LoRaWAN Technology

At BSI, we are at the forefront of technological innovation, and we're excited to announce that we are embracing the IoT revolution. We've integrated cutting-edge, low-power, and highly efficient wireless LoRaWAN technology into our product lineup. This advancement allows us to expand our range of offerings, catering to an array of customer needs with unparalleled connectivity and reliability.

Our commitment to staying ahead of the curve drives us to continually evolve, ensuring that our products are not just innovative but also future-ready. With LoRaWAN, we're taking a giant leap towards delivering solutions that seamlessly integrate into the ever-expanding IoT landscape.

Why LoRaWAN? It's simple. This technology enables us to create products that are not only energy-efficient but also boast extended range and exceptional performance. Whether it's enhancing security measures in schools, streamlining operations in airports, or fortifying high-security and military facilities, our LoRaWAN-powered solutions redefine what's possible.

By leveraging the power of LoRaWAN, we're transforming the way buildings function and communicate. Imagine a future where every aspect of your building's security and hardware is seamlessly connected, providing real-time insights and control at your fingertips.

At BSI, our relentless pursuit of excellence and customer satisfaction is evident in every product we create. Join us on this transformative journey into the IoT era, where connectivity meets efficiency, and possibilities are limitless.

Experience the future today with BSI – where innovation meets reliability, and your needs are our priority.

2012 Concours Lepine

2012 Archidex

Smart Door Locks

Enhanced-Tech Access Control to **Lodging System**

IoT Cloud-Based System

LoRaWAN Access Control

Access Control Solution

- Look up the history logs from Web.
- Authorize, or change users' access from Web.
- Remote unlocking by waking up touch keypad on site.
- Door sensor, and lock sensor options available.
- Data can be synchronized and stored by the Cloud or Server.
- The data can also be synchronized manually from the lock.
- One gateway can configure 8 to 16 locks.
- Power status of lock shows from the Web.

Access powered by LoRaWAN

- PIN Code, RFID Card.

Touch Keypad

- Responsive touch keypad.
- LED backlit for convenient operation at night.

Emergency Power Supply

- When batteries are completely dead, use a type C cable to temporarily power up the lock.

Low Battery Warning

- If the batteries are running low, the door lock informs you through keypad with a digit for entry times left, also beep and blink * 3 times .

GW1000 Indoor Gateway

GW1000 is a light indoor gateway, mainly used on small scale LoRa networking applications as a supplement device for signal blind area. Equipped with SX1308 chip, it complies with LoRaWAN. Receiving data from 8 channels at the same time, it has data packed into Ethernet data protocol packets, transmits data to LoRaWAN network server in real time. Meanwhile, it can accept the single task from the network server, convert Ethernet data into radio frequency data and send them to corresponding end-devices. It provides technical solutions for the bidirectional transmission of the Internet of Things.

LoRa Parameter

Working Frequency	CN470-510/EU863-870/US902-928/ AS923/AU915-928/KR920-923
Transmitted Power	up to 20dBm
Receive Sensitivity	-141dBm
Channels	8 uplinks, 1 downlink

Electrical/Physical Parameter

Communication Interface	WAN, 4G
Input	DC12V
Temperature Range	-10°C to 50°C
Working Humidity	5% to 95%
Antenna	LoRa, WiFi, , 4G.
Dimension	180x115x30mm

R8 ANSI Mortise

(Card access only)

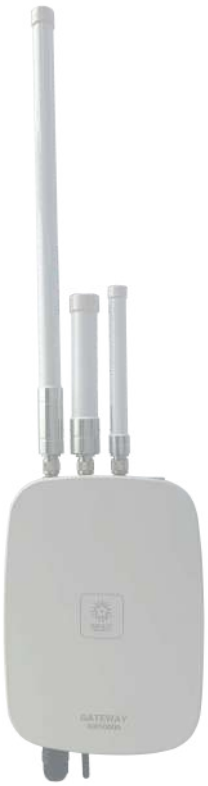
R8-ZERO ANSI Mortise

R8-ZERO EN Mortise

R8-ZERO Cylindrical

R3-DB Deadbolt

Gateways



GW5000A Industrial-Grade Outdoor Gateway

- EU, US, AND Asia frequency support
- EU, US,and Asia frequency support
- LoRaWAN compliant
- CE/FCC certified
- IP67

GW5000A is a complete LoRaWAN compliant gateway, which can provide low power, mobile and safe local bidirectional communication service for IoT devices. With our IoT technology and the industrial-grade gateway GW5000A, users can then have their own IoT control system to achieve customized smart services, which will be widely applied in the fields of intelligent transportation, energy management, smart city, industry 4.0, smart home.

LoRa Parameter

Working Frequency	EU868, US915, AS923
Transmitted Power	up to 27dBm
Receive Sensivity	-143dBm
Channels	8/1 multi/high-data rate

Eletrical/Physical Parameter

Communication Interface	LAN, WAN, WiFi, LTE module
Input	POE power supply
Temperature Range	-30°C to 80°C
Working Humidity	10% to 90%
Antenna	LoRa, WiFi, GPS, 4G
Dimension	288x215x59mm

GW1000 Indoor Gateway

GW1000 is a light indoor gateway, mainly used on small scale LoRa networking applications as a supplement device for signal blind area. Equipped with SX1308 chip, it complies with LoRaWAN. Receiving data from 8 channels at the same time, it has data packed into Ethernet data protocol packets, transmits data to LoRaWAN network server in real time. Meanwhile, it can accept the single task from the network server, convert Ethernet data into radio frequency data and send them to corresponding end-devices. It provides technical solutions for the bidirectional transmission of the Internet of Things.

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Transmitted Power	up to 20dBm
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Channels	8 uplinks, 1 downlink

Electrical/Physical Parameter

Communication Interface	WAN, 4G
Input	DC12V
Temperature Range	-10°C to 50°C
Working Humidity	5% to 95%
Antenna	LoRa, WiFi, , 4G.
Dimension	180x115x30mm

M2 Indoor Gateway

M2 is a multi-function indoor gateway, which supports LoRaWAN, BLE5.0, cat1, PoE (RJ45 interface), WiFi data transmission. It can satisfy small scale LoRa networking applications as a supplement device for signal blind area. It is flexible for use, convenient installation, simple deploy. It adapts to high quality signal communication, high anti-interference, high sensibility, low power consumption, multiple input ports and diverse network applications, to provide users low cost with high reliability of indoor IoT solutions. M2 gateway is not only can be operated alone for smart fire alarm, smart home, smart building, indoor parking, smart warehouse. It can also be used with outdoor gateways as a supplement of LoRa signal blind area to cover a greater area of network, which is applied to smart city, smart transportation, smart community, smart industrial park.

LoRa Parameter

Working Frequency	CN470-517, and others.
Transmitted Power	up to 22dBm, adjustable
Receive Sensivity	-141dBm@SF12
Cbmmunication Rate	292bps to 5.4kbps, SF7 to SF12

Eletrical/Physical Parameter

Communication Interface	WAN, WiFi
Input	POE power supply
Temperature Range	-20°C to 60°C
Antenna	LoRa, WiFi, BLE
Dimension	dia. 112mm, height 35mm

M200C LoRaWAN Module

The module features with small size, multiple interface, high Rx sensitivity, low-power consumption, long transmission distance. It can be widely applied to IoT industry. Customers can easily and quickly do development based on this module.

Working Frequancy	CN470-510MHz, EU863-870MHz US902-928MHz, and other sub-GHz ISM
Protocol	LoRaWAN.
Communication Interface	SPI, UART, ADC, GPIO, IZC
Input Voltage	3.3V
Working Temperature	-40°C to 85°C
Sleep Status	3.0uA
Receive Status	6.3mA
Transmit Status	120mA
Rx Sensitivity	SF=12, BW=125KHz, Rx sensitivity=-138dBm
RF Power	20dBm
Dimension	14x15.6mm

Sensor Devices

AN-106 LoRa Tester

AN-106 can realize professional coverage analysis and assessment,and can solve the problems encoun-tered in the site deployment or during testing of LoRa network.You can use it to do statistics of the packet loss rate of wireless communication data between statistics and gateways.

Sensor	Built-in GPS
Working Frequency	EU868, US915, AS923
Protocol	LoRaWAN
RF Tx Power	17dBm
RF Rx Sensitivity	-140dBm
Working Temperature	-20°C to 70°C
Working Humidity	10% to 90%
Battery	Built-in rechargeable lithium battery
Battery Capacity	3.7V/3500mAh
Transmit Status	150mA
IP Rating	IP65
Dimension	190x86x30mm

AN-201A Sensor Box

AN-201A Sensor Box is a wireless data gathering device, it has been integrated with multiple communication ports for a variety of sensors. Its high-gain omni-directional external antenna expands the communication distance. Suitable for workshop, warehouse, agricultural greenhouse, docking within scenarios such as rooms, hydrological monitoring sensors, e.g.: hydraulic pressure sensors, liquid level sensor, liquid flow sensor, water sensor, temperature sensor, humidity sensor, light sensor, PM2.5, angle sensor, wind speed sensor, etc. Typical applications scenario: Industrial monitoring, building automation, smart agriculture.

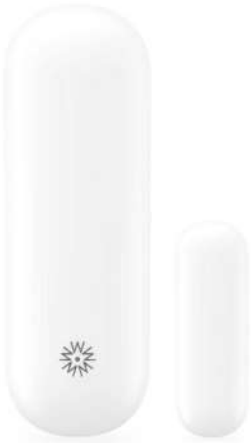
Sensor	Built-in GPS
Working Frequency	EU868, US915, AS923
Protocol	LoRaWAN
RF Tx Power	17dBm
RF Rx Sensitivity	-140dBm
Working Temperature	-20°C to 70°C
Working Humidity	10% to 90%
Battery	Built-in rechargeable lithium battery
Battery Capacity	3.7V/3500mAh
Transmit Status	150mA
IP Rating	IP65
Dimension	190x86x30mm

AN-202A Water Pressure Transmitter

AN-202A The pressure range can be customized (10KPa...100MPa), cable length can be customized. With LoRa spread spectrum communication technology, external outer-directional antenna design can better transmit and receive wireless signals and improve the communication distance of wireless transmission. It can be used indoors and outdoors, Fluid pressure detection and control in petroleum, chemical industry, electric power, hydrology, environmental protection and etc.

Working Frequency	CN470-510MHz, EU863-870MHz US902-928MHz, AS923MHz, AU915-928MHz, RU864-870MHz IN865-867MHz
Range	0-10KPa, 0-100MPa
Data Transmit	300bps to 5.4kbps
Battery Capacity	3.6V/1900AH
Working Temperature	0°C to 80°C
Working Humidity	10% to 95% (without condensing)
Sleep Status	≦10uA
Working Current	≦130mA
Tx Status	19dBm
Rx Sensibility	SF=12, -140dBm
Input Voltage	3.3VDC
IP Rating	IP65
Dimension	112x30mm (head part)

AN-305A Door Window Contact Sensor



AN-305A informs your system if something is open or closed. Typically installed on door, windows or drawers throughout the house. For example, you can get an alert if a window open when you go to bed, or if you leave home without closing the back door.

Working Frequency	CN470-510MHz, EU863-870MHz, US920MHz
Data Transferred Rate	300bps to 5.4kbps
Battery	3.0V/1500mAh (CR123A)
Working Temperature	-10°C to 50°C
Working Humidity	10% to 95%
Standby Current	125mA
Tx Status	Max. 20dBm
Tx Power	≦16mA
Rx Status	-141dBm
Rx Sensitivity	3.0VDC
Voltage	IP64
IP Rating	88x30x21mm (main kit) 15x44x12mm (secondary kit)
Dimension	

AN-122-A03 LoRa GPS Tracker

AN-202A has been integrated with GPS, G-sensor, anti-dismantle switch sensor and power switch module. GPS positioning data will be acquired when the device moves. It has functions of anti-dismantle and alarm sound. It is in small size, with long battery life, low power consumption that makes it has has return to deployment. Widely used in the supervision of asset tracking, livestock supervision, commodity supervision, Shared bicycles and other fields.

Working Frequency	CN470MHz-510MHz, EU863MHz-870MHz, US902MHz-928MHz, AS920MHz-923MHz, AS923MHz-925MHz, AU915MHz-928MHz
Protocol	LoRaWAN, P to P
RF Tx Power	Max. 20dBm
RF Rx Sensitivity	5V/1000mA
Working Temperature	-30°C to 80°C
Working Humidity	10% to 90%
Battery	4.2V/2400mAh (built-in Li-SOCL2)
Sleep Status	≦20uA
Tx Status	150mA
IP Rating	IP65
Dimension	111x65x33.5 mm

AN-301 SOS Button

AN-301 is wiring free and easy for installation. When you are in an emergency situation, press the SOS button. The alarm signal is sent through wireless transmission to the monitoring platform. Security can be deployed in time. It can be used in schools, hospitals, banks, depots, stores, and other facilities.

Working Frequency	CN470MHz-510MHz, EU863MHz-870MHz, US902MHz-928MHz, AS920MHz-923MHz, AS923MHz-925MHz, AU915MHz-928MHz KR920-923MHz
Protocol Version	1.0.2 and 1.0.3
Tx Rate	3000bps - 5.4Kbps
Tx Power	19dBm
Tx Current	≦125mA
Rx Sensitivity	SF=12, -141dBm
Battery	3.6V/8000mAh (Li-SOCL2)
Standby Current	≦10uA
Working Temperature	-10°C to 50°C
Working Humidity	10% to 95% (without condensing)
Dimension	87x87x26 mm

AN-303 Temperature Humidity

AN-303 is a wireless temperature and humidity unit for data gathering and monitoring. It has a built-in temperature and humidity chip. It has small body size and high accuracy. With stable performance, low power consumption, it is suitable for data transmission in long distance. Based on long battery life, free wiring installation, AN-303 temperature and humidity sensor decreases the system cost greatly. Communication room, workshop line, drug warehouses, logistics warehouse, agricultural greenhouses, archives, museums, hvac control.

Working Frequency	CN470MHz-510MHz, EU863MHz-870MHz, US902MHz-928MHz, AS923MHz, KR920MHz-923MHz, AU915MHz-928MHz IN865-867MHz
Tx Power	Max. 17dBm
Tx Current	≦125mA
Rx Sensitivity	SF=12, -140dBm
Stanby Current	≦9uA
Battery	3.6V/8000mA (built-in Li-SOCL2)
Input Voltage	3.6VDC
Detecting Range	-30°C to 70°C
	0% to 99%RH (non-condensing)
IP Rating	IP30
Dimension	86x86x26mm

AN-304 PIR Motion Sensor

AN-304 is a wireless infrared detector that can automatically detect the movement of human body in the area. When an intruder passes through the monitoring area and moves dynamically, an alarm signal will be sent to the monitoring platform immediately. It is suitable for the safety prevention of residential area, villas, workshops, shopping malls, warehouses, office buildings and other places.

Working Frequency	CN470MHz-510MHz, EU863MHz-870MHz, US902MHz-928MHz, AS923MHz, KR920MHz-923MHz, AU915MHz-928MHz
Tx Power	Max. 19dBm
Tx Current	≦120mA
Rx Sensitivity	SF=12, -140dBm
Standby Current	≦15uA
Battery	Built-in Li-SOCL2
Data Transmission Rate	300bps to 5.4Kbps
Working Temperature	-10°C to 50°C
Working Humidity	5% to 95% (without condensing)
Detecting Range	8 to 10m
Detecting Angle	100°
Dimension	86x86x26 mm

AN-103 Temperature Humidity Sensor

AN-103 adopts dedicated digital module acquisition technology and temperature and humidity sensing technology to ensure high reliability and long-term stability of products. It has advantages of high quality, super fast response, strong anti-interference ability and high cost performance.

Sensor	Built-in temperature and humidity sensor
Working frequency	EU868, US915, AS923
Protocol	LoRaWAN and P2P
RF TX power	17dBm
RF Rx sensitivity	-140dBm
Working temperature	-30°Cto 80°C
Working humidity	10% to 90%
Battery type	Li-SOCI2
Battery capacity	3.6V/4000mAh
Sleep status	15uA
Transmit status	110mA
IP Rating	IP67
Dimension	108x80x36mm

WLC-NEMA-03 Lamp Control

WLC-NEMA-03 LoRaWAN Lamp Controller with is made for smart lighting for street lamp control system.With current and voltage measurement circuit inside, it collects the load status in real time. It has strong anti-interference ability and costs low power consumption, capable in long distance transmission. It has the advantages of small size, easy operation and maintenance, free wiring, reliable performance. It is an energy-saving design for smart lighting.

Working frequency	EU863-870MHz, US902-928MHz
Protocol	AU915-928MHz, AS923
RX power	Max. 19dBm, ajustable
RF Rx sensitivity	-141dBm, SF=12
Ambient Humidity	10% to 95%RH
Input/Outut	AC90-265V, 50Hz
IP Rating	IP65
Dimension	84x98mm

M401A Outdoor BLE GPS

M401A features low-power consumption, high sensitivity, convenient deploy. It is applied to multiple outdoor places for GPS, tourist area, exhibition, property asset, people, etc.

Working temperature	-40°Cto 80°C
Working humidity	-10% to 90% (non-consending)
Bluetooth	5.0
Operation Rate	2400 to 2483.5MHz
Transmit Rate	1Mbps
Battery	3.6V/4000mAh
IP Rating	IP67
Dimension	108x81x36mm

M401B Indoor BLE GPS

M401B features low-power consumption, high sensitivity, convenient deploy. It is applied to multiple outdoor places for GPS, tourist area, exhibition, property asset, people, etc.

Working temperature	-40°Cto 80°C
Working humidity	-10% to 90% (non-consending)
Bluetooth	5.0
Operation Rate	2400 to 2483.5MHz
Transmit Rate	1Mbps
Battery	3.0V/1500mAh
Dimension	58x55x21mm

CM100-BT Personnel Locator

CM100-BT supports BLE GPS technology, the built-in sensor can transmit the personnel's position to the management system. It also has a SOS feature for emergency condition. It is small, low-power consumption, applied to attendance management in business or educational premises, monitoring guests, environment patrol.

Working Temperature	-0 °Cto 50°C
Workinghumidity	10% to 95%
Working Range	5 to 10m
Tx Status	Max. 20dBm
Rx Sensitivity	SF=12, -141dBm
Battery	4.2V/900mAh
IP Rating	IP65
Dimension	87.4x55.2x8.7mm

AN101D Parking Sensor

AN101D is a surface-mounted type geomagnetic parking sensor with radar to detect the status (occupied or empty) of a parking space. When it detects that there is a car parked in or leaving the parking space, the status information of the parking space will be sent to a LoRa gateway, and gateway will transmit the information to LoRa network server, then LoRa network server will decode the LoRa data and interface with the smart parking platform to achieve real-time management of parking lots. Easy to install in ground, it is widely used in urban road-side parking space and other application scenarios.

Working Frequency	CN470MHz, EU868MHz US915MHz, AS923MHz AU915MHz, RU864-870MHz IN865-867MHz
Working Temperature	-40°C to 80°C
Rx Current	≦15mA
Standby Current	≦15uA
Battery	3.6V/1600mAh (built-in Li-SOCL2)
Dimension	dia. 195x29.5mm

LoRaWAN®

IoT Solutions in One Stop

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