MG6 4G

Bluetooth Stellar Gateway

Datasheet

PRODUCT OVERVIEW

MG6 gateway is a Bluetooth® LE smart indoor gateway with multiple networking options. It can upload data via WiFi/Ethernet/LTE and is suitable for a wide range of applications such as factories, office buildings and hospitals. The gateway covers a wide range of sensors and can be connects to the cloud platforms for real-time monitoring and control.

KEY FEATURES

* **Security**

  MG6 supports connecting to WPA/WPA2/WPA3 enterprise-level encrypted WiFi for a more secure network environment. Supports access to MQTT/HTTP/TCP public or private cloud servers via certificate authentication to improve the stability and reliability of data transmission.

* **Stability**

  MG6 is equipped with a network failover function, which can automatically switch over when the current network fails after completing the WiFi/Ethernet/LTE configuration, making it suitable for more complex environments.

* **Accurate**

  MG6 can set up RSSI filter, MAC address and other filters for Bluetooth scanning, and also supports duplicate data filtering for more accurate data.

* **Wide Range**

  In open areas, the MG6 has a 125Kbps Bluetooth scanning range of 400-600 meters and a 1Mbps Bluetooth scanning range of 150-300 meters.

* **Hige Concurrency**

  MG6 adopts high-performance nRF52 chip, which supports scanning Bluetooth broadcasts at two rates of 1Mbps, 2Mbps, 125kbps , and provides a scanning rate of 400 packets per second for each Bluetooth channel.

* **Energy-Efficient**

  Power consumption is only 2.4W during normal operation and 4.2W at peak, which makes the MG6 less hot and more stable.

* **Installation Flexibility**

  MG6 supports convenient and varied deployment methods such as screw fixing, tie-band binding, and adhesive backing.

MARKET APPLICATIONS

Smart Healthcare	Smart Factory	Smart Building	Smart Resort	Smart Warehouses
Health Monitoring	Virtual fence	Indoor navigation	People Counting	Stock taking
Outpatient navigation	Emergency help	Space optimization	Safety protection	Quick search
Equipment monitoring	Staff management	Visitor management	Anti-theft tracking	Process optimization
Maintenance Management	Trajectory tracking	Employee attendance	Pedestrian flow management	Environment detection
Optimize resource allocation	Raw material control	Fixed assets management	Positioning and navigation	Inventory management

PRODUCT SPECIFICATIONS

BASIC SPECIFICATIONS	
Model	MG6
Material	ABS+PC
Color	White
Size (L * W * H)	130 * 186 * 36 mm
Weight	338g
Power Supply	DC 12V/1A PoE （IEEE 802.3af）
Network Connection	WiFi/Ethernet/LTE Cat.1
LED	RGB * 1 Green & Blue LED * 5
Working Environment	Indoor
Working Temperature & humidity	-20~50℃ 5%~90%RH non-condensing
Installation	Ceiling / Wall mounting
Firmware Upgrade	OTA, LAN, FILE upgrade

TECHNICAL SPECIFICATIONS

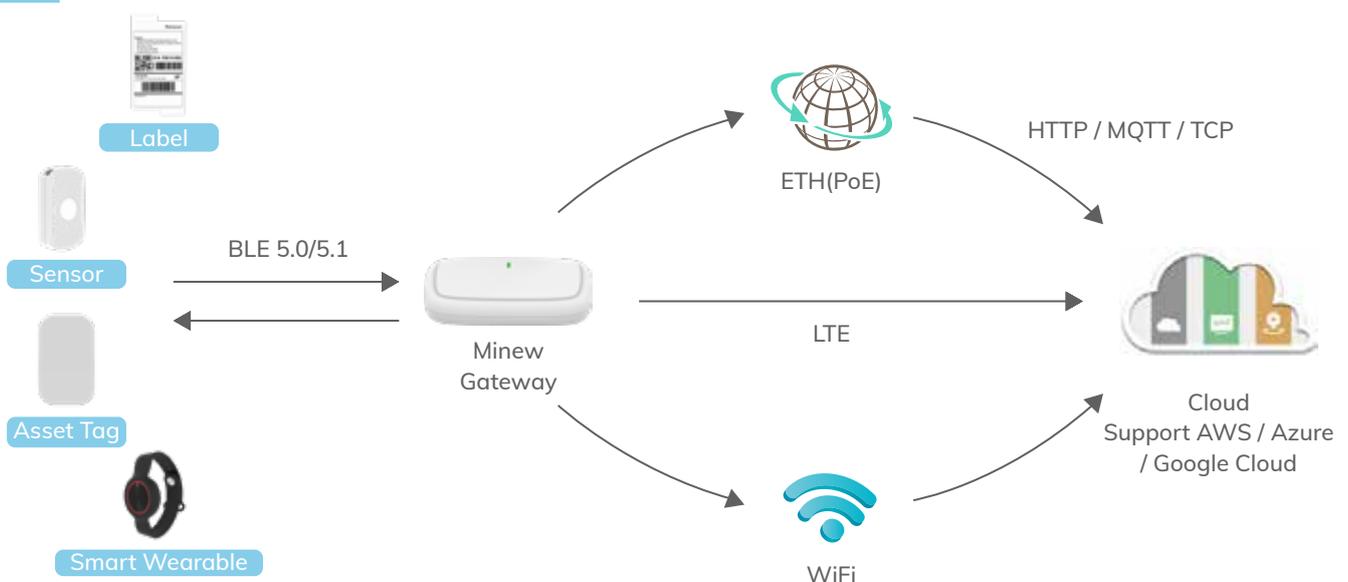| BLUETOOTH SPECIFICATIONS	
Bluetooth frequency	2.4-2.4835 GHz
Bluetooth modulation	GFSK
Bluetooth bandwidth	1Mbps, 2Mbps, 125kbps
Emitting power	+19dBm （max）
Receiving sensitivity	-96 dBm @1Mbps, 30.8 %PER -93 dBm @2Mbps, 30.8 %PER
Numbers of received broadcast packets	Every BLE module About 400 packets/ second
Scan coverage	125Kbps: 400-600 M 1Mbps: 150-300 M (open area)

WIFI SPECIFICATIONS

WiFi protocols	IEEE 802.11 b/g/n
WiFi frequencies	2.4-2.4835 GHz
Emitting power	802.11b:20dbm 802.11g:17dbm 802.11n:17dbm
Receiving sensitivity (typical)	802.11b:-89.5dbm，11Mbps PER＜8% 802.11g:-76dbm, 54Mbps PER＜10% 802.11n:-74.5dbm, MCS7 PER＜10%
Modulation mode	DBPSK, DQPSK, CCK and OFDM(BPSK/QPSK/16-QAM/64-QAM)
Network protocol	HTTP(SSL/TLS) / MQTT(SSL/TLS & Proxy)/TCP
Security	WPA-PSK/WPA2-PSK, WPA-PSK/WPA2-PSK Mixed Mode, WPA3-SAE, WPA2-PSK/WPA3-SAE Mixed Mode, WPA-EAP/WPA2-EAP/WPA3-EAP, WPA2-EAP/WPA3-EAP

LTE CAT1 SPECIFICATIONS

Band	CN(FDD):B1/3/5/8/9 (TDD):B34/38/39/40/41 EU (FDD):B1/3/5/7/8/20/28 NA(FDD):B2/4/5/12/13/14/66
Emitting power	23dbm
Receiving sensitivity (typical)	-93.3dbm

WORKING PRINCIPLE

① Deploy Bluetooth Tags, sensors, and MG6 gateways according to demands.

② Bind Bluetooth tag devices to assets and people that need to be located, deploy them in environments that can be scanned by MG6.

③ The MG6 gateway scans Bluetooth signals and collects data, and uploads to the corresponding server through different network protocols.

④ After the data is parsed on the server, users can process and analyze to attain functions such as environmental monitoring and asset management.

PRECAUTIONS

- After restoring the factory settings, the previous configuration will be lost, please operate with caution.
- To ensure accuracy while scanning, try to avoid corners, metal, glass shields, or other obstructions when install.
- Do not use the gateway in a humid area or outdoors. If the temperature exceeds the designed limit, the product may be damaged.
- Please avoid exposing the product to direct sunlight for an extended period which could lead to fading.
- To configure the gateway, please contact our sales team for the instruction manual.

QUALITY ASSURANCE

The factory has already obtained the certification of ISO9001 Quality System. Each product has been strictly tested (tests include transmission power, sensitivity, power consumption, stability, aging, etc.).
Warranty Period: 12 months from the date of shipping (battery and other accessories excluded).

DECLARATION

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