



Talius Gateway

Indoor Bluetooth Low Energy
(BLE) IoT gateway

Product

TAL_GW0 is an indoor Bluetooth Low Energy (BLE) IoT gateway developed by Talius for Bluetooth device data collection and transmission in the enterprise-level encryption way to the cloud servers quickly, ensuring data security and privacy, and assisting users with the device connection and management.

In the Talius ecosystem and platform, it can communicate bidirectionally with the beacons, asset tags, and various sensors by listening advertising information, checking, setting configuration, remote control, and upgrading.

Its embedded LEDs work as an indicator to remind users of its status. The TAL_GW0 gateway is designed to help users quickly implement high-value location-based services and help users boost their efficiency while lowering variable costs. It has a wide range of applications, including aged care, healthcare, warehouses, retailing, and manufacturing.

Key features:

Bidirectional Communication & Wide-coverage

The TAL_GW0 BLE gateway has the bidirectional communication function. It can make the configuration, control, light-on-off, upgrade, and change parameters in bulk and separately in the Talius ecosystem and platform. And with a high level of Bluetooth sensitivity and a professional antenna design, the it can cover up to 100 meters radius in a free space, helping the user to have a good coverage in deployment and installation.

Data filter:

The TAL_GW0 BLE gateway can collect and process 150 Bluetooth advertising data packets per-second, collecting and monitoring data from massive Bluetooth devices with a large coverage. It has multiple data filtering options, not only controls the data flow but also filters out the duplicates, to reduce redundant data. The TAL_GW0 can also filter the BLE devices according to the MAC address group, and special MAC address configured.

Strong Security & Compatibility:

The TAL_GW0 BLE gateway supports WPA/WPA2-EAP encryption to keep unauthorized people from accessing or changing settings. When data is transferred by MQTT protocol, the SSL/TLS security protocol, and CA certificates are optional for ensuring data security. The TAL_GW0 is compatible with different Bluetooth devices, beacons, supporting various data formats to meet the requirements of different development platforms.

Network Faulty Indication and Self-recovery:

The TAL_GW0 BLE gateway has the network self-examination and self-recovery function. When the network connection or cloud server access faulty happen, it will indicate the faulty by red LED flashing. When the Wifi or ethernet connection resumes, it can automatically recover the Wifi connection or ethernet connection by itself without any manual operation involved. it is guaranteed that the gateway works flawlessly and is maintenance-free.

Data Driven Care™

Making Sense Of The Sensors – The IoT Aggregation Platform Built For Health

Telephone: 1-300-889-838 • talius.com.au • Unit 1 & 2, 212 Curtin Avenue West, Eagle Farm, QLD 4009

Talius Group Limited (ABN: 62 111 823 762)

Remote control and upgrading:

The TAL_GW0 BLE gateway can be locally access in LAN for both Wifi or ethernet connection, also access from WAN or cloud server for device control, configuration setting, status monitoring or device operation. In Talius ecosystem and platform, the TAL_GW0 firmware can be easily upgraded locally and remotely.

Easy Access and Management:

The TAL_GW0 BLE gateway can be access through the WiFi connection by supporting both STA and AP at the same time. And its configuration, management and setup can be easily implemented with the Talius operation tool, or directly web access. Users can also subscribe to related MQTT topics and receive status reports instantaneously, making the operation and monitoring easily.

Multi power supply and insect-proof:

The TAL_GW0 BLE gateway supports DC 5V, PoE and USB power input. The different power input can be connected at the same time, and the redundant power input can work as a power supply backup to provide a reliable and stable working environment. The insect-proof design can help to reduce the possibility that the insects, bugs, worms enter the gateway and cause damage.

MARKET APPLICATIONS:

Smart Aged Care
Smart Healthcare
Indoor positioning
Warehouse management
Property tracking

Compliance: RoHS, FCC, RCM, AS/NZS 62368.1



General:

- 1.2A @ DC 5.0V input, micro-USB
- 10/100 Ethernet, POE (802.3af)
- Remote Firmware upgradable
- Multiple data transportation protocols
- Local server: TCP / UDP / HTTP
- Remote server / Cloud: HTTP/MQTT/ with SSL and TLS certification
- Operating temperature: 0°C to 55°C

WiFi:

- Wifi module based on the Espressif ESP32 32-bit MCU
- RF 2.4 GHz with 150 Mbps PHY data rate, 802.11b/g/n WiFi
- One USB-C host connector for DC 5V power input. The other USB-A for DC 5V output
- 512kB SRAM
- 16M bytes SPI NOR Flash
- RGB LEDs for status indication
- FreeRTOS for embedded devices

BLE:

- BLE module based on the NordicRF52832 with ARM® Cortex®-M4 64MHz 32-bit processor
- Bluetooth 5. (Only Bluetooth Low Energy is used)
- BLE connection and BLE listening are supported simultaneously

Typical Application:

- iBeacon / Eddystone / other BLE tag receiver
- BLE sensor reader / receiver
- Asset tracking
- Access control management
- Advertisement promotion
- Indoor location and position
- Industrial automation

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Ports

Power	Feature Description
DC -in	5VDC center positive
USB-C	USB2.0 host and 5VDC input
RJ-45 PoE	10/100Mbps Ethernet, 802.3af Poe (48VDC)
USB-A	5VDC 1A output
Reset	Factory reset or close/open micro switch

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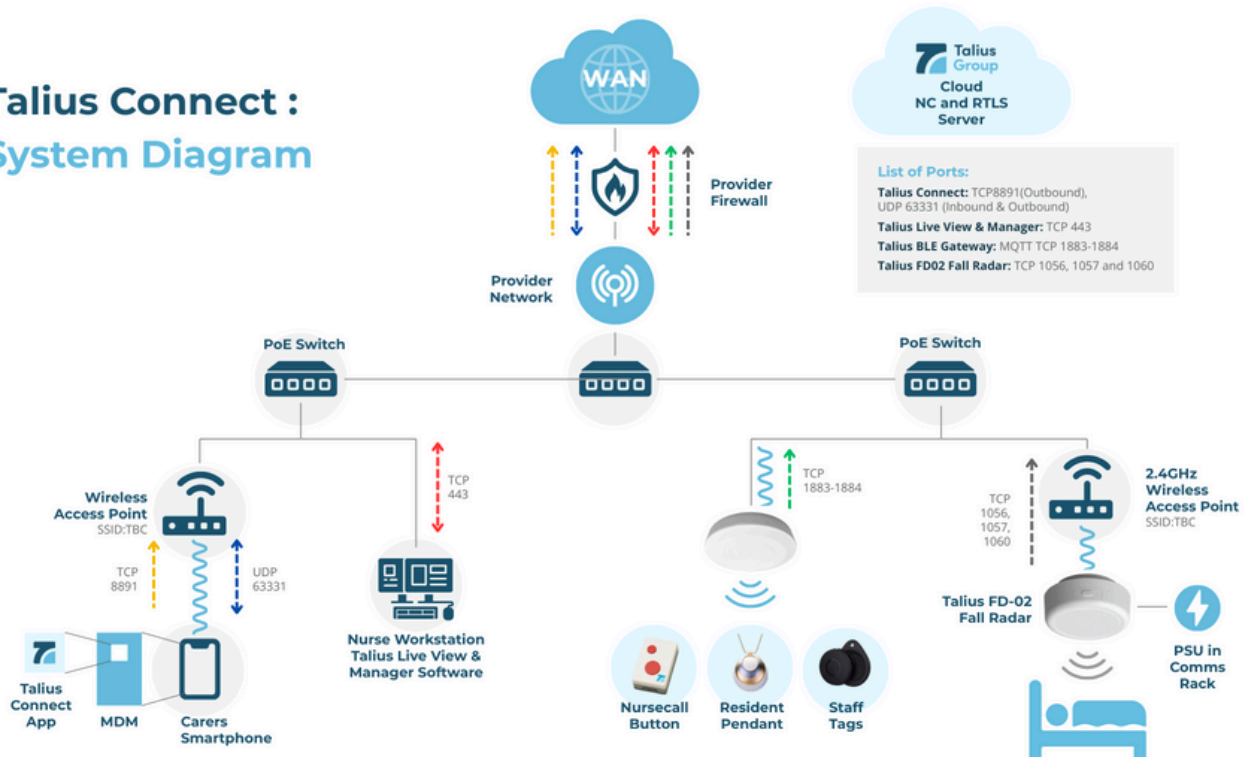
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Specifications

General Information		Environmental Operation	
Color	White	Operating temperature	0°C to 55°C
Size	180x180x40mm	Humidity	Max 95%, Noncondensing, relative humidity
Net Weight	240g	Power supply (Vcc)	DC 5.0 (+/- 5%) 1.2A operational 600mA

Talius Connect : System Diagram



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