

# ThingSpy

## BLE-WIFI IoT Gateway

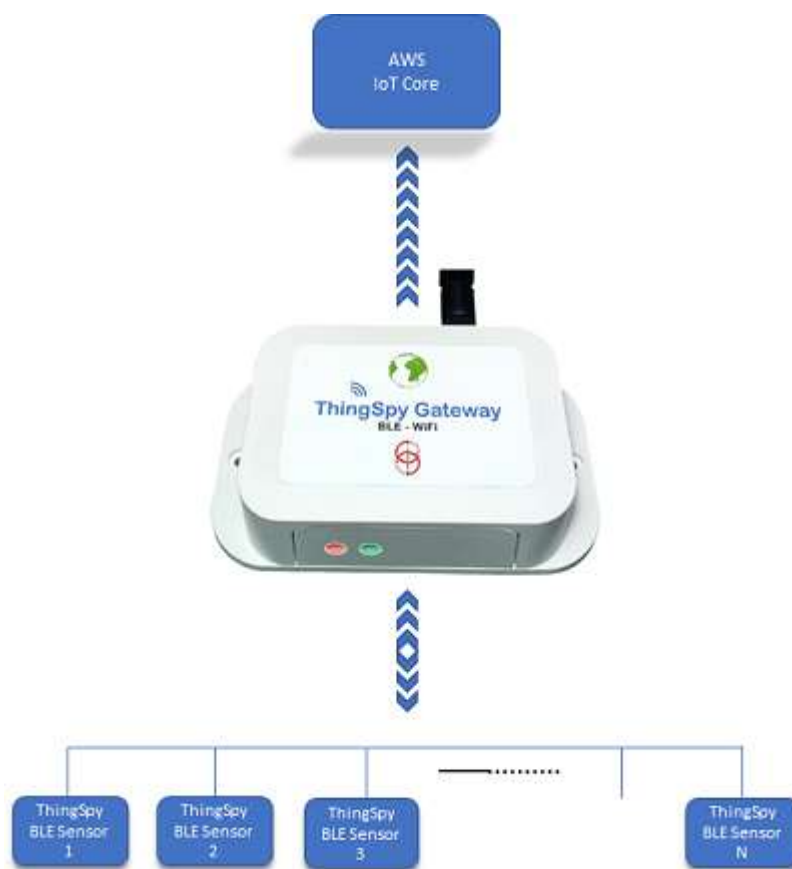


Thingspy Gateway is an IoT gateway device which uses various wireless protocol to monitor and track the assets in real-time. Thingspy gateway integrates a Bluetooth LE, Wi-Fi and an optional GNSS module which is ideally suited for different range of IoT applications. Another variant with LTE cellular

capable of NB-IoT interface is available which perfectly fits outdoor monitoring and tracking applications like fleet management and asset tracking.

Thingspy gateway support AWS IoT core integration which handles data retention and ML functionality designed by Senstornet. With multi-serial interface bus and analogue input channels, a variety of external sensors or co-processor communication can be implemented. When Thingspy gateway combined with Thingspy BLE sensors, monitoring of pressure, humidity, temperature, proximity, 3-axis acceleration of remote sensors is an absolute breeze.

## Use Case Example

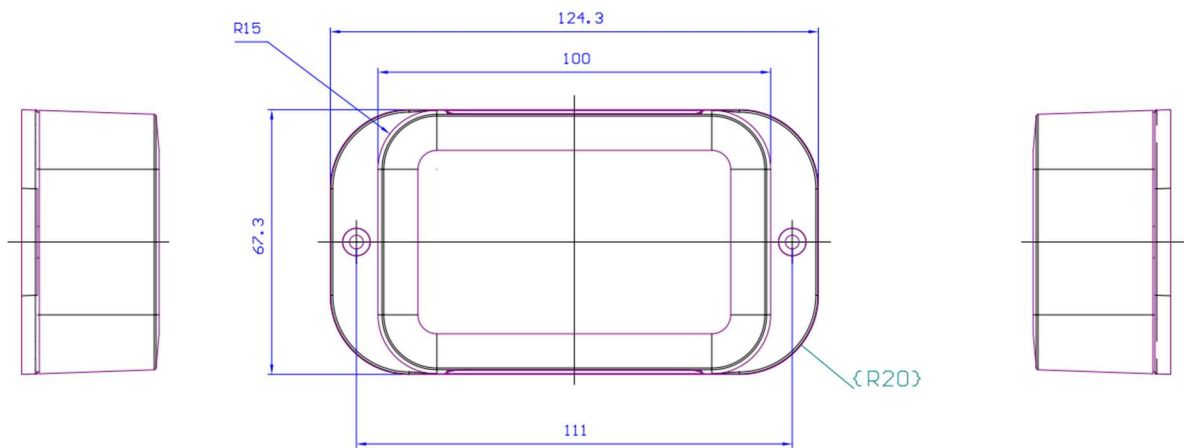


## Features

- Arm® Cortex®-M4 32-bit core with 120 MHz max operating frequency.
- Ultra-low power consumption.
- I2C, USART, CAN, SPI and analog input channels to connect with external sensors.
- PF Plastic enclosure casing made of flame-resistant ABS UL94V-0.
- Wall mounting flange bottom design.
- Neodymium magnet mounting (optional).

- AWS IoT core integration for remoter monitoring dashboard application.
- GNSS module with integrated patch antenna.
- Multi-GNSS engine for GPS, GLONASS, Galileo and QZSS.
- Powerful Bluetooth LE and Wi-Fi MCU modules with external antenna.

## Dimensions(mm)



## Specifications

### Hardware System

CPU	ARM Cortex-M4
Storage	4GB Micro SD card. Note1
File System	FAT32

### External Interface

Port	1 × I2C or 1x USART, 1x SPI, 1x CAN, 2x Analogue input, 2x Digital IO
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### Wi-Fi Interface

Antenna	External antenna
Standards	IEEE 802.11 b/g/n, 2.4 GHz
Mode	Station mode
Bit rate	802.11n up to 150 Mbps

### Bluetooth LE Interface

Role	Client
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Scan Type	Device name, MAC address
<b>GNSS interface (optional)</b>	
Antenna	Integrated patch antenna
Velocity Accuracy	< 0.1m/s @Room temperature, all satellites at -130 dBm.
TTF	Cold Start: < 15 s Warm Start: < 5 s Hot Start: < 2 s
Sensitivity	Acquisition: -148 dBm, Tracking: -166 dBm, Reacquisition: -161 dBm
<b>Others</b>	
LED Indicators	1 × GNSS/Wi-Fi, 1x System
<b>Power Supply</b>	
Power Input	External DC 5V 1A
DC Power Jack	5.5 mm
<b>Physical Characteristics</b>	
Casing	PF Plastic made of flame-resistant ABS UL94V-0. <a href="#">Note2</a>
Dimensions	124.3 x 67.3 x 35 mm (L x D x H)
Installation	Screw or Magnet type
<b>Control/Monitoring Application</b>	
Desktop Environment	Web Application
Smart Phone Environment	Android and iOS app
<b>Environmental</b>	
Storage Temperature	-40°C to 85°C
Operating Temperature	-40°C to 85°C
<b>Applications</b>	
BLE to MQTT Gateway	
Asset Tracking	
Fleet Management	
Industrial Automation	

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Smart Building

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Smart Agriculture

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Home Automation

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Energy Management

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Note(s)

- 1) Micro SD card size can be extended up to 16GB or 32GB. (Needs validation)
- 2) Casing material and IP can be upgraded based on business volume.