



# Hub

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## Reference Manual

TBGW100-915  
TBGW100-868

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## 1. Description

The Tabs Hub is a complete LoRaWAN compliant gateway combined with a high performance 802.11ac dual band Wi-Fi Router. The combination of long range, low power connectivity with LoRa and availability of Wi-Fi infrastructure creates the most effective and economical way to deploy LPWAN networks and guarantee indoor coverage. The gateway is designed for high volume indoor usage in homes and buildings. The Wi-Fi router can be configured as a standard Wi-Fi access point or as a Wi-Fi extender to expand existing Wi-Fi network coverage.

Due to the high level of integration, no expensive external antennas, cables, or components are required, simplifying end-customer installation. The gateways can easily be configured to connect to different network server cores and are available in 915MHz and 868MHz versions. The gateway is fully certified for Wi-Fi and LoRaWAN usage in North America and Europe.

## 2. Technical Specifications

### 2.1 LorRaWAN

Chipset	SX1308
Channels	8 multi-data rate and 1 high speed
Receive Sensitivity	-140dBm (EU) and -135dBm (US)
Transmit Power	Up to +27dBm

### 2.2 Wi-Fi

Modes	IEEE 802.11 a, b, g, n, ac
Frequency Bands	2.4 GHz and 5 GHz concurrently
Antenna Configuration	2x2
Receive Sensitivity	-94dBm
Transmit Power	Up to 19dBm
Max Data Rate	867 Mbps
Security	WPA and WPA2 personal

### 2.3 Wired Network

WAN Port	100 baseT, 10 BaseT
LAN Port	2 x 100baseT, 10 BaseT
Cabling	MDI/MDIX

### 2.4 Routing

Network Security	Firewall and Content Filtering
Network Integration	Wi-Fi extender
LoRaWAN	Track Central Station Packet Forwarder
Ancillary functions	NTP Server, DHCP Server

### 2.5 User Interface

Activity Indicators	Wi-Fi, Ethernet, and LoRaWAN
Push Buttons	WPS and Reset buttons
USB Ports	USB 2.0 capable of 500mA
Configuration	Web Interface, iOS, and Android

### 2.6 Power

Voltage	12vdc +/- 10%
Power	6 Watts maximum
Power Supply	External wall mount 100/240 Vac 50/60 Hz

### 2.7 Mechanical

Dimensions	145mm x 56mm x 171mm
Weight	347g
Temperature	0°C to 40°C
Enclosure Type	Ventilated Plastic

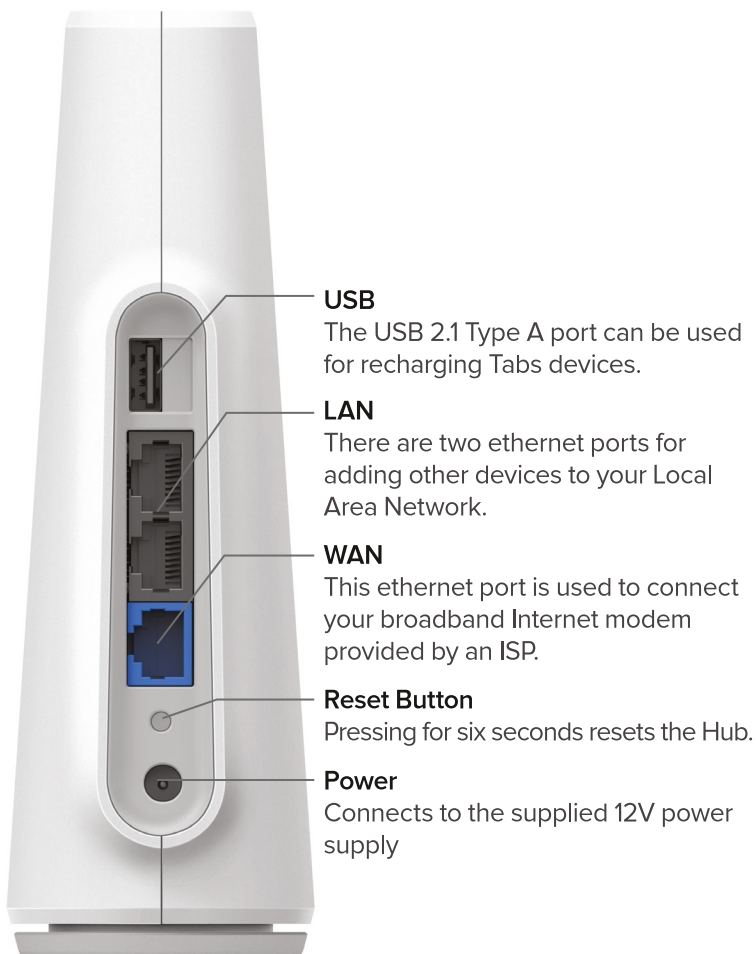
## 3. Setup and Usage

The Hub may be installed into an existing WLAN network as a repeater or create a new WLAN network while acting as a WiFi Access Point. In both scenarios the Hub is configured via TrackNet's Tab Application available for both iOS and Android. As a WiFi Access Point an ethernet connection is required to provide internet access. The two ethernet LAN ports provide bridging into the network in Repeater or Access Point mode.





Once an internet connection is made available the Hub will establish connections for both LoRaWAN traffic and management via the internet to TrackNet's TrackCentral services.

The four LEDs on the top of the Hub provide a easy to read summary of the status of the Hub.



### 3.1 Ports



### 3.2 Icons

-  **Wired Network**  
Indicates the state of the WAN and LAN ports
-  **Wi-Fi**  
Indicates the state of the Wi-Fi network
-  **Tabs Network**  
Indicates the state of the Tabs network
-  **Power**  
Indicates that the Hub is functioning normally

### 3.3 Status Lights

-  **Solid Green**  
Feature is operating correctly.
-  **Solid Orange**  
Feature is not operating correctly.

### 3.4 WPS Button

The large, round button on top of your hub enables Wi-Fi Protected Setup (WPS).