Sensors and Gateways

TrackNet

Low power, long range solutions

TABS SENSOR
Healthy Home Sensor

DESCRIPTION
The Tabs healthy home sensor detects eCO_2, volatile organic compounds (VOC), temperature, and humidity. The EPA states that indoor air quality is typically worse than outdoor and estimates that 50 to 300 different VOCs may be detected in the air of homes, schools, offices, and commercial buildings at any given time that can have an adverse effect on health.

HIGHLIGHTS
- EU, US, and Asia frequency support
- LoRaWAN certified
- 0-70°C temp. range
- Ensures indoor air quality conditions

CATALOG NUMBER
HHS1 - US/915MHz
HHS2 - EU/868MHz
HHS3 - Asia/920MHz

Frequency	868MHz & 915MHz
RF TX power	+19dBm
Antenna Gain	-2.5 dBi
RF Sensitivity	-138dBm
Battery Type	½ AA Li-SOCl$_2$
Battery Lifetime*	4 years
Sleep Current*	12uA
Protocol	LoRaWAN
Temperature Range	0-70°C
Environmental Rating	Indoor
Dimensions	50x50x20mm
Weight	35g
VOC Detection Range	0 to 1180 ppb
CO$_2$ Detection Range	400 to 8190 ppm
Temperature Accuracy	+/- 1°C
Humidity Accuracy	+/- 5%

* Assuming transmission every 10min using SF7

TRACKNET GATEWAY
IDU Industrial Gateway

DESCRIPTION
The TrackNet Indoor Commercial Gateway is a complete LoRaWAN compliant gateway combined with a high performance 802.11ac dual band Wi-Fi Router and optional cellular backhaul. 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 commercial 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.

CATALOG NUMBER
IDU1 - US/915MHz
IDU2 - EU/868MHz
IDU3 - Asia/920MHz

LoRa	
Chipset	Semtech SX1308
Channels	16/2 multi/high-data rate
Receive Sensitivity	-140/-135 dBm (EU/US)
Transmit Power	up to +27 dBm

WiFi	
Modes	802.11 a, b, g, n, ac
Frequency Bands	2.4 GHz and 5 GHz
WAN/LAN Ports	1 WAN/2 LAN 100BaseT
USB Port	USB 2.0 (500 mA)
Security	WPA and WPA2 personal
Network Integration	Router

Cellular Backhaul	3G/4G
Dimensions	195x165x35mm
Weight	860g
Temperature Range	0-40˚ C

Industrial Tracker

DESCRIPTION

The multi-purpose tracker is designed for outdoor asset tracking and industrial applications. The design uses replaceable batteries and is designed for multi-year operation. The sensor also includes a three-axis accelerometer which is used to optimize different asset tracking applications for response time and battery lifetime. The sensors includes many unique GPS acquisition and geo-fencing features for optimal battery lifetime and response time. TrackNet provides the sensor, sensor software, and core network management to deliver fully optimized asset tracking solutions.

CATALOG NUMBER

IOT1 - US/915MHz
IOT2 - EU/868MHz
IOT3 - Asia/920MHz

Frequency	868MHz & 915MHz
RF TX power	+19dBm
Antenna Gain	0 dBi
RF Sensitivity	-138 dBm
Battery Type	½ AA Li-SOCl$_2$
Battery Lifetime	1.5 years
Avg. TX/day over Lifetime	5
Battery Capacity	2400 mAh
Protocol	LoRaWAN
Accelerometer	3-axis
GPS GNSS	GPS and Glonass
GPS Sensitivity	-167 dBm (tracking)
Temperature Range	-20-85° C
Environmental Rating	Outdoor
Dimensions	52x85x27mm
Weight	45g

Temperature & Humidity Sensor

DESCRIPTION

The Tabs temperature and humidity sensor is designed for in-home and in-building usage for consumer or facility management applications. The design is optimized for high volume manufacturing, optimal battery lifetime, and pleasing aesthetics for in-building placement.

CATALOG NUMBER

THS1 - US/915MHz
THS2 - EU/868MHz
THS3 - Asia/920MHz

HIGHLIGHTS

• EU, US, and Asia frequency support

• LoRaWAN certified

• 0-70°C temp. range

• 4 year battery operation

Frequency	868MHz & 915MHz
RF TX power	+19dBm
Antenna Gain	-2.5 dBi
RF Sensitivity	-138dBm
Battery Type	½ AA Li-SOCl$_2$
Battery Lifetime	4 years
Sleep Current	15uA
Protocol	LoRaWAN
Temperature Range	0-70° C
Environmental Rating	Indoor
Dimensions	50x50x20mm
Weight	35g
Temperature Accuracy	+/- 1°C
Humidity Accuracy	+/- 5%

*Assuming transmission every 10min using SF7

TABS SENSOR

Configurable Push Button

DESCRIPTION

The Tabs configurable push-button includes two buttons to support different use cases such as turning on and off lights or other devices, sending alerts for elderly or other call for help situations, or for consumer feedback. The push button can also be utilized to interface with other smart-home and building management systems through IFTTT to create more intelligent solutions for light control, security, and building automation.

HIGHLIGHTS

- EU, US, and Asia frequency support
- LoRaWAN certified
- -20-70°C temp. range
- Two push buttons
- Option to embed GPS

CATALOG NUMBER

PBS1 - US/915MHz
PBS2 - EU/868MHz
PBS3 - Asia/920MHz

Frequency	868MHz & 915MHz
RF TX power	+19dBm
Antenna Gain	-2.5 dBi
RF Sensitivity	-138dBm
Battery Type	Rechargeable Li-Po
Battery Lifetime*	4 years
Battery Capacity	600 mAh
Protocol	LoRaWAN
Temperature Range	-20-70°C
Environmental Rating	Outdoor
Dimensions	64x67x16mm
Weight	40g

*Assuming 48 presses per day using SF7

TABS GATEWAY

Hub Mini

DESCRIPTION

The Tabs Hub Mini is designed to be a complete low-cost LoRaWAN compliant gateway utilizing a Wi-Fi client backhaul. The gateways are designed to be a wall-plug for power with a configurable snap in option for the regional power plug options. The gateway includes a USB-C charging port to encourage more prominent location of the gateway for better signal coverage. The Hub Mini can also be powered by USB making it ideal for mobile applications or to retrofit existing equipment.

CATALOG NUMBER

MHB1 - US/915MHz
MHB2 - EU/868MHz
MHB3 - Asia/920MHz

LoRa	
Chipset	Semtech SX1308
Channels	8/1 multi/high-data rate
Receive Sensitivity	-140/-135 dBm (EU/US)
Transmit Power	up to +27 dBm

WiFi	
Modes	802.11 b, g, n
Frequency Bands	2.4 GHz
WAN/LAN Ports	–/–
USB Port	USB Type-C (900 mA)
Security	WPA and WPA2 personal
Network Integration	WiFi Client

Dimensions	80x80x40mm
Weight	200g
Temperature Range	0-40˚ C

TABS GATEWAY

Hub

TABS SENSOR

PIR & Occupancy Sensor

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.

CATALOG NUMBER

HUB1 - US/915MHz
HUB2 - EU/868MHz
HUB3 - Asia/920Mhz

DESCRIPTION

The Tabs occupancy or motion sensor detects occupancy or motion in homes or buildings for security purposes. The sensor can also be utilized in facility management systems to optimize facility usage or cleaning for desks, conference rooms, bathrooms, etc.

CATALOG NUMBER

MOS1 - US/915MHz
MOS2 - EU/868MHz
MOS3 - Asia/920MHz

HIGHLIGHTS

- EU, US, and Asia frequency support
- LoRaWAN certified
- 0-70°C temp. range
- <7m detection distance

LoRa	
Chipset	Semtech SX1308
Channels	8/1 multi/high-data rate
Receive Sensitivity	-140/-135 dBm (EU/US)
Transmit Power	up to +27 dBm

WiFi	
Modes	802.11 a, b, g, n, ac
Frequency Bands	2.4 GHz and 5 GHz
WAN/LAN Ports	1 WAN/2 LAN 100BaseT
USB Port	USB 2.0 (500 mA)
Security	WPA and WPA2 personal
Network Integration	Router and Extender

Dimensions	145x170x56mm
Weight	350g
Temperature Range	0-40˚ C

Frequency	868MHz & 915MHz
RF TX power	+19dBm
Antenna Gain	-2.5 dBi
RF Sensitivity	-138dBm
Battery Type	½ AA Li-SOCl$_2$
Battery Lifetime	4 years
Sleep Current	12uA
Protocol	LoRaWAN
Temperature Range	0-70°C
Environmental Rating	Indoor
Dimensions	50x50x20mm
Weight	35g
Detection Angle	123° H x 93° V
Detection Distance	< 7 meters

*Assuming transmission every 20min using SF7

TABS SENSOR

Object Locator Tracker

DESCRIPTION

The Tabs multi-purpose tracker is designed for asset tracking, pet tracking, personal objects, and valuable assets. It has a built in button for sending alerts or notifications. The sensor also includes a three-axis accelerometer which is used to optimize different asset tracking applications for response time and battery lifetime.

CATALOG NUMBER

OLS1 - US/915MHz
OLS2 - EU/868MHz
OLS3 - Asia/920MHz

HIGHLIGHTS

- EU, US, and Asia frequency support
- LoRaWAN certified
- -20-70°C temp. range
- Small size
- Long battery lifetime

Frequency	868MHz & 915MHz
RF TX power	+19dBm
Antenna Gain	-2.5 dBi
RF Sensitivity	-138dBm
Battery Type	Rechargeable Li-Po
Battery Capacity	450mAh
Battery Lifetime	3 weeks of daily usage
Protocol	LoRaWAN
Temperature Range	-20-70°C
Environmental Rating	Outdoor
Dimensions	52x56x12mm
Weight	30g

TABS SENSOR

Door & Window Sensor

DESCRIPTION

The Tabs door and window sensor detects the opening and closing of doors, windows, garage doors, vaults, and entryways. The sensor can also be utilized in facility management systems to provide security alerts or to optimize facility usage such as cleaning.

CATALOG NUMBER

DWS1 - US/915MHz
DWS2 - EU/868MHz
DWS3 - Asia/920MHz

HIGHLIGHTS

- EU, US, and Asia frequency support
- LoRaWAN certified
- 0-70°C temp. range
- Magnetic proximity detection

Frequency	868MHz & 915MHz
RF TX power	+19dBm
Antenna Gain	-2.5 dBi
RF Sensitivity	-138dBm
Battery Type	½ AA Li-SOCl$_2$
Battery Lifetime*	7 years
Sleep Current*	12 uA
Protocol	LoRaWAN
Temperature Range	0-70° C
Environmental Rating	Indoor
Dimensions	50x50x20mm
Weight	35g
Detection Distance	< 5cm

* Updating every 10min using SF7