HBTS01

Bluetooth Presence Sensor | Directional Detection | Data Integration

Benefits

Intelligent: Enabling precise directional and head-count detection

Secure: Ensuring privacy protection without visual data

Flexible: Supporting Bluetooth commissioning and MQTT configuration

Applications

Offices

Retail stores

Public Space

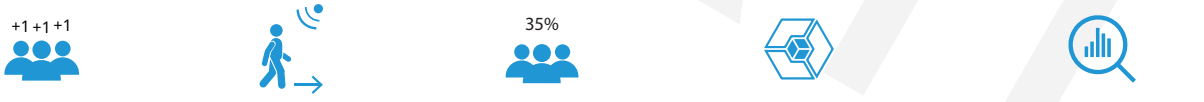
Check out the complete system solution on the webside:

https://www.hytronik.com

Product Description

HBTS01 is an advanced Bluetooth people-tracking sensor designed for intelligent building and space management. Featuring directional awareness, head counting, and heatmap generation, it precisely detects movement direction, counts occupants, and visualizes traffic flow to optimize space utilization. The device ensures privacy protection with camera-level sensing that captures no visual data, making it ideal for offices, shopping malls, and public facilities. With Bluetooth commissioning and MQTT configurability, users can perform simple and fast device setup, flexible parameter adjustments, and seamless data integration for area statistics. Supporting multiple configurable zones and real-time analytics .All configuration and commissioning can be quickly completed via the Koolmesh app.

Main Functions



Head Counting | Motion Tracking | Occupancy Rate | Space Management | Data Intelligence Analysis

Functions and Features

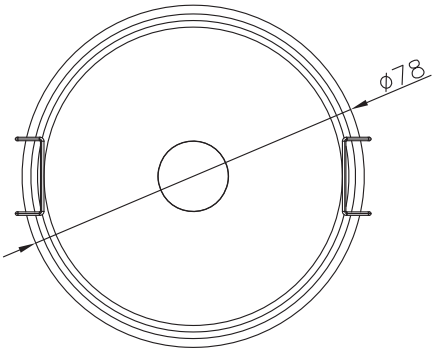
Koolmesh
(See bluetooth contol features below)

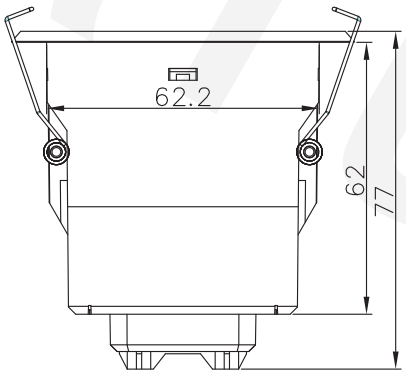
Technical Specifications

Output	Bluetooth Output
Operating voltage	220~240VAC 50/60Hz
Recommended Mounting Height:	2.5 m
Infrared resolution	20 × 15 pixels
Field of View (FOV)	140° x 100° (H x V)
Frame rate	7.5 Hz (typical)
Spectral detection range	8–12 μm (LWIR)
Thermal sensitivity (NETD):	< 80 mK NETD @ 7.5 Hz
Stand-by power	<1w
Operating temperature range	-0°C~35°C
IP rating	IP20

Picture Application Example

Dimension Drawing





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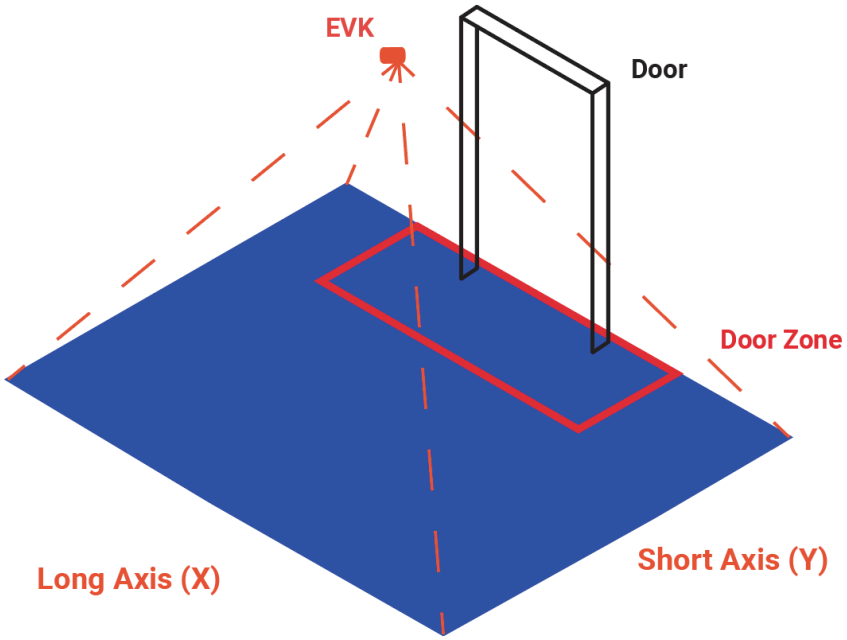
Detection Range

For door counting applications, the edge of the field of view should be just outside of the door. This improves counting performance and accuracy.



Ceiling Height (Z) [m]	Distance from Door [m]	Long Axis (X) [m]	Short Axis (Y) [m]
2.5	1.0	6.0	4.0

Koolmesh - Operating guide

Bluetooth 5.0 SIG Mesh

Smartphone(ios) Smartphone (Android) iPad Web

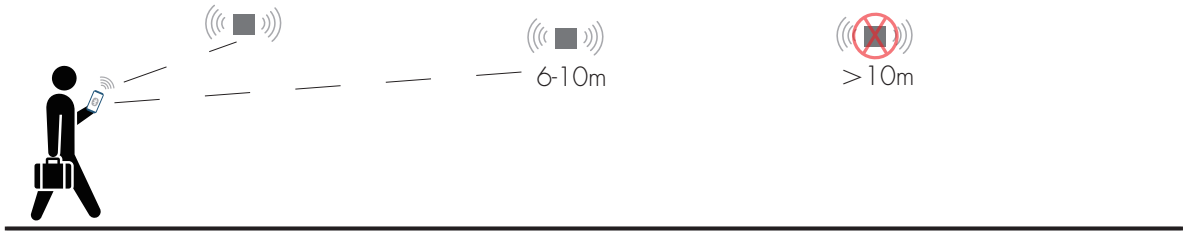
For additional information, including project and network, device, and scenes, please refer to: http://faq.koolmesh.com/faq/en/index.html

Shared Koolmesh App Features

- Quick setup mode & advanced setup mode
- Web platform for project deployment & data analysis
- Koolmesh Pro iPad for on-site configuration
- Floorplan feature to simplify project planning
- One-key device replacement
- Device social relations check
- Staircase function for quick setup
- Remote control via Hytronik gateway & touch screen HPAD-TSJASE1
- Heat map
- Grouping luminaires via mesh network
- Scenes
- Schedule
- Astro timer (sunrise and sunset)
- Power-on status (memory against power loss)
- Offline commissioning
- Bulk commissioning (copy and paste settings)
- Different permission levels via authority management
- Network sharing via QR code or keycode
- Interoperability with Hytronik Bluetooth product portfolio
- Internet-of-Things (IoT) featured
- Device firmware update over-the-air (OTA)
- Alert for excess lux / temperature / humidity via multi-meter HBLM01
- Seamless integration with BMS via Hytronik BMS gateway
- Test mesh network connection quality
- Compatible with Shelly energency metering
- Continuous development in progress...

Smart Phone to Device Range

1. The smart device with the installed App typically has a range of 10m, which may vary between devices.
2. During the commissioning process, the installer must be within range of the devices while searching for them to add to the network.
3. Once the devices are added to the network via the App, they will begin communicating within the wireless mesh.
4. After the network is complete, all devices can be accessed from the smart device within a 20m range of a single point.



Bluetooth Network Components

HBGW02

Bluetooth Mesh Gateway | Dual-band Wi-Fi | wall/flat surface mounting

www.hytronik.com/product/HBGW02

HBGW02/D

Bluetooth Mesh Gateway | Dual-band Wi-Fi | wall/flat surface mounting

www.hytronik.com/product/HBGW02/D

HBGW03/R

BACnet Gateway | DIN rail/wall/flat surface mounting | Remote access/monitoring

www.hytronik.com/product/HBGW02

HBLM01

Multi-meter | Bluetooth & NFC | Lux Measurements

www.hytronik.com/product/HBLM01

HPAD-TSJASE1

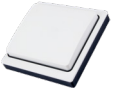
Bluetooth Touch Tablet | Gateway Integrated | Switch Boxes

www.hytronik.com/product/HPAD-TSJASE1

HBKS01/W

Bluetooth Kinetic Switch | One-gang | White Color

www.hytronik.com/product/HBKS01-W



HBKS01D/W

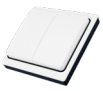
Bluetooth Kinetic Switch | Single Rocker | White Color

www.hytronik.com/product/HBKS01D-W

HBKS02/W

Bluetooth Kinetic Switch | Two-gang | White Color

www.hytronik.com/product/HBKS02-W



HBKS02D/W

Bluetooth Kinetic Switch | Double Rocker | White Color

www.hytronik.com/product/HBKS02D-W

HBKS03/W

Bluetooth Kinetic Switch| Three-gang | White Color

www.hytronik.com/product/HBKS03-W

Switch (EnOcean) - HBESO1/B

Bluetooth Kinetic Switch | Single Rocker | White Color

www.hytronik.com/product/HBES01/B

Switch (EnOcean) - HBESO1/W

Bluetooth Kinetic Switch| Three-gang | White Color

www.hytronik.com/product/HBES01/W

Important Notice

This product is in the development phase. All information provided in this datasheet is preliminary and subject to change without notice.