



GDPR compliant people counting solution to extract greater value from your retail operations, smart building or office

Terabee People Flow Counting L-XL is designed for people counting in large entrances and corridors, using the latest Time-of-Flight technology for greater reliability. It is GDPR compliant by design, providing accurate people flow counting data by monitoring the number of people who enter or exit doorways or corridors. The solution encompasses an IoT hardware device with embedded counting software to enable powerful analytics services. Two product variations allow transmission of the data via Power over Ethernet or LoRaWAN.

Key features

- GDPR compliant by design
- Uses 3D depth people counting sensor (non-camera technology)
- Multi-device support for wide door counting
- Easy to install and configure via Web GUI
- Effective in low light conditions
- Two status LEDs for easy troubleshooting
- Remote or local firmware updates
- Remote device configuration via MQTT commands, via LoRa downlink commands or via Terabee Device management services (PoE model only)
- Data transmission via Ethernet or LoRaWAN
- Powerful people counting algorithm with 98% accuracy

Applications



Occupancy
monitoring

Smart offices

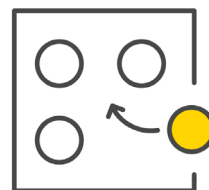
Space and facility
optimization



HVAC systems
integration

Energy savings

Facility
management

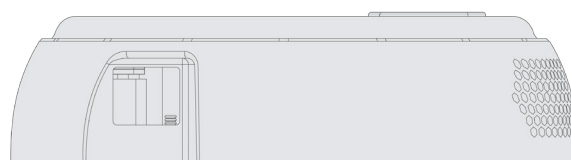
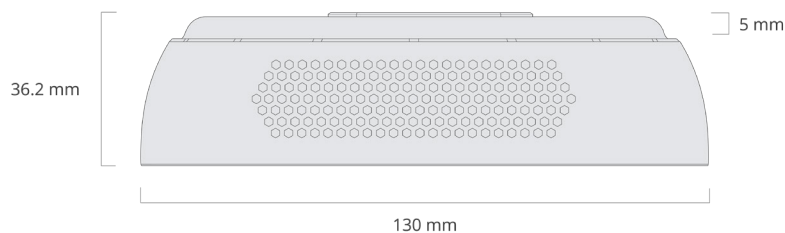
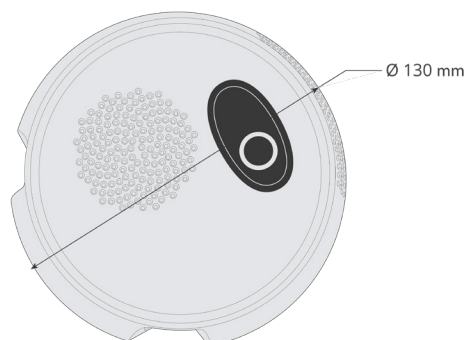


Staff presence
optimization

People flow

Public spaces
and retail

Dimensions



Technical specifications

Product code	TB-PCL-XL	
Performances	PoE model	LoRa model
Technology	Infrared Time-of-Flight depth sensor	
Field of View	74° x 57°	
Coverage area dimensions	1.50 x 1.10 m @ 2.40 m high with one device	
Multi-devices for wide passageways	Yes. Up to 5 devices	Yes. Up to 5 devices through Ethernet cables
Installation height range	From 2.4 m up to 4.0 m	
Use environment	Indoor	
Counting accuracy	98% ⁽¹⁾	
Frequency of data communication	Real-time or at predefined time intervals	Predefined time intervals (min. of 1 minute)
Electronics	PoE model	LoRa model
Power source	RJ45 (PoE IEEE 802.3af)	Micro-USB (minimum 5 V - 2.5 A)
Power consumption	10 W average	10 W average (min. recommended 12.5 W)
LED indicators	Two LEDs	
Initialization time	Approx. 1 min	
Mechanics	PoE model	LoRa model
Dimensions	Ø 130.0 mm x 36.2 mm	
Weight	220 g	
Housing material	PU 8150	ABS PA-557
Color	White and Black (extra colors on demand)	
Operating temperature	0° to 35°C	
Storage temperature	-20° to 60°C	
Installation	On-ceiling mounting with provided mounting plate Optional: Terabee Recess Mounting Kit XL	
Networking	PoE model	LoRa model
Communication interface	Gigabit Ethernet	Wi-Fi Access Point for configuration and local upgrade. LoRaWAN (1.0.3, Classe A) for data transmission. Gigabit Ethernet ⁽²⁾
Set up	Web GUI embedded on the device	
Ethernet communication	PoE model	LoRa model
Recommended cabling	Category 6 or later	
Addressing	DHCP, Static IP	
Device hostname	terabee-<serial_number>	
Data protocols	HTTP/HTTPS, MQTT/MQTTS	
Remote device configuration	MQTT commands	
Outbound traffic required on port	53, 80/443, 1883/8883, 1194	
Domain whitelisting	*.terabee.com	
LoRa communication	PoE model	LoRa model
Supported LoRaWan frequencies	N/A	EU 863-870 MHz, US 902-928 MHz
LoRaWAN activation methods	N/A	OTAA, ABP
Antenna specification	N/A	+0.8 dBi, VSWR ≤ 2
Remote device configuration	N/A	LoRa downlink commands
Wi-Fi Access Point communication	PoE model	LoRa model
Device hostname	N/A	terabee-<serial_number>
Services	PoE model	LoRa model
Extended warranty	1-Year and 2-Years	
Terabee IoT platform (for data visualization)	Yes, optional	Not through LoRa, possible through Ethernet
Terabee Device management services	Yes, optional	Not through LoRa, possible through Ethernet
Data hosting (when using Terabee IoT platform)	Cloud hosting (Datacenter in Amsterdam, Europe) Data storage for up to 2 years	
Conformity	PoE model	LoRa model
Reference standard	CE, FCC, RoHS	CE, FCC, RoHS, UKCA

⁽¹⁾ Counting accuracy is assessed on the total number of entry and exit counts in representative conditions. In very diverse environments, this value may change.

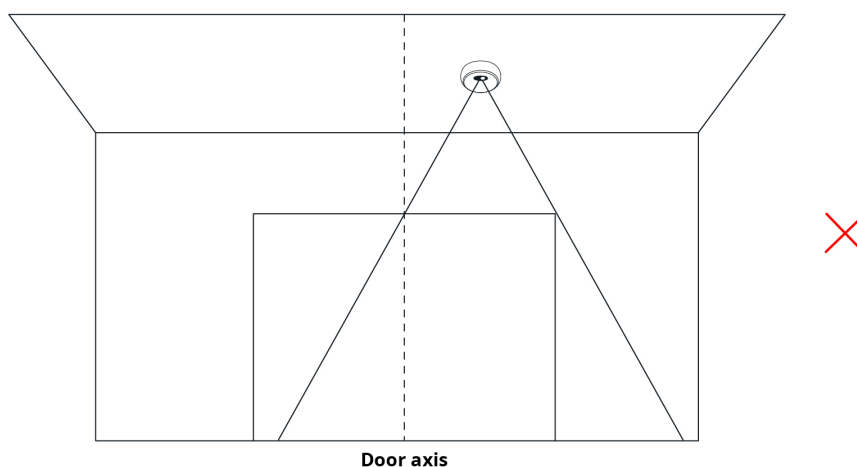
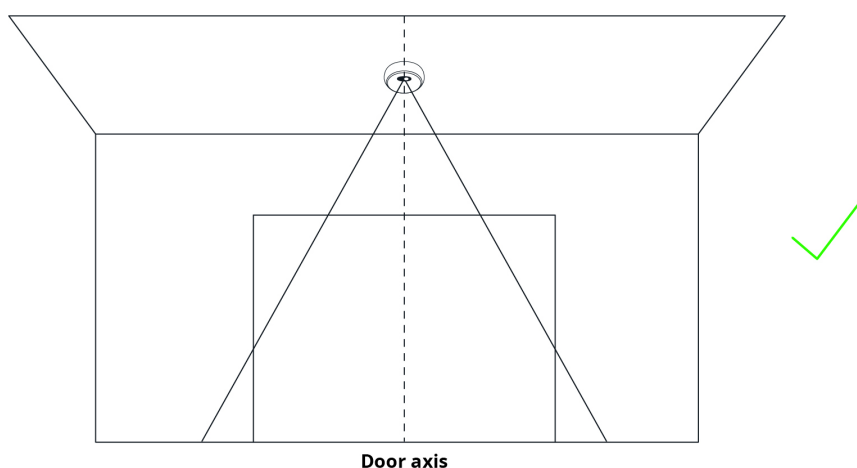
⁽²⁾ On-demand, multi-device configuration or connection to Terabee services.

Single-device installation

Terabee People Flow Counting L-XL installs like a household smoke alarm. It needs to be placed centrally above doors and corridors and 30 cm minimum from the nearest vertical wall.

The monitored floor area depends on the installation height:

Installation height (m)	Monitored area (m x m)
2.40 (min)	1.50 x 1.10
3.20 (avg.)	2.30 x 1.70
4.00 (max)	3.40 x 2.55

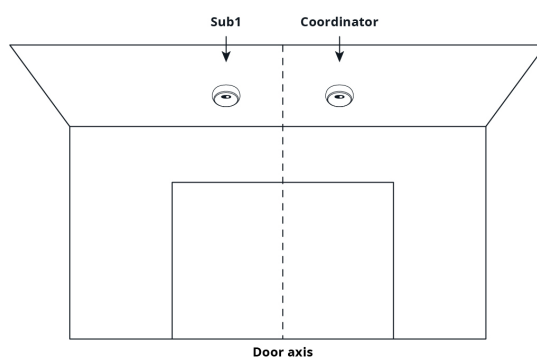


Multi-device installation

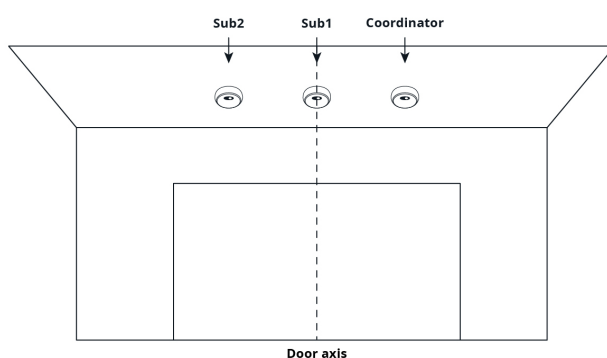
Up to five Terabee People Flow Counting L-XL devices can be installed together to cover wider entrances and passageways (through Ethernet cables for the LoRa model). One device acts as the coordinator and the others as subordinates.

Installation height (m)	Max distance between devices (m)	Door coverage				
		1 device	2 devices	3 devices	4 devices	5 devices
2.40	0.80	1.50	2.30	3.10	3.90	4.70
2.50	0.90	1.55	2.45	3.35	4.25	5.15
2.60	1.00	1.60	2.60	3.60	4.60	5.60
2.70	1.10	1.70	2.80	3.90	5.00	6.10
2.80	1.20	1.80	3.00	4.20	5.40	6.60
2.90	1.35	1.90	3.25	4.60	5.95	7.30
3.00	1.50	2.10	3.60	5.10	6.60	8.10
3.10	1.65	2.20	3.85	5.50	7.15	8.80
3.20	1.80	2.30	4.10	5.90	7.70	9.50
3.30	1.95	2.40	4.35	6.30	8.25	10.20
3.40	2.10	2.50	4.60	6.70	8.80	10.90
3.50	2.25	2.60	4.85	7.10	9.35	11.60
3.60	2.40	2.75	5.15	7.55	9.95	12.35
3.70	2.55	2.90	5.45	8.00	10.55	13.10
3.80	2.70	3.05	5.75	8.45	11.15	13.85
3.90	2.85	3.20	6.05	8.90	11.75	14.60
4.00	3.00	3.40	6.40	9.40	12.40	15.40

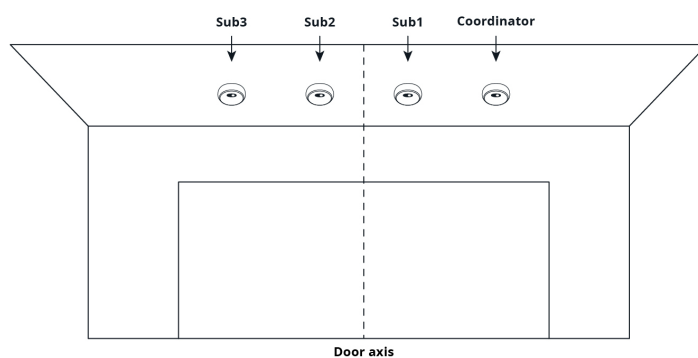
2 Devices



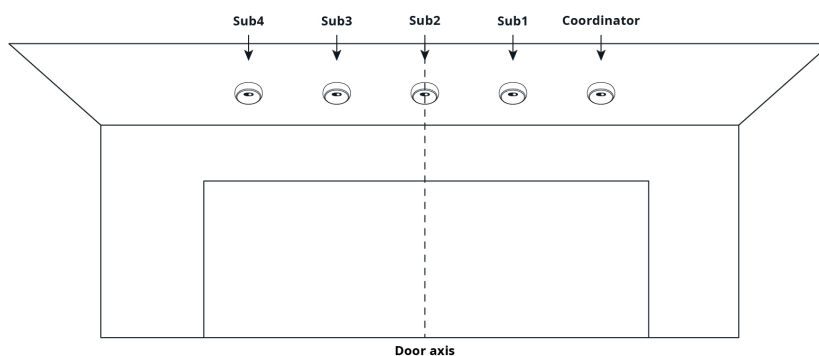
3 Devices



4 Devices



5 Devices



Time-of-Flight advantages

By using active Time-of-Flight technology to sense depth, the Terabee People Flow Counting L-XL collects non-intrusive depth image data, meaning that personal identity can never be captured. And, since the device does not require ambient light for optimal performance, it is suitable for applications in low light without losing accuracy.



Any questions? Contact us today!

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