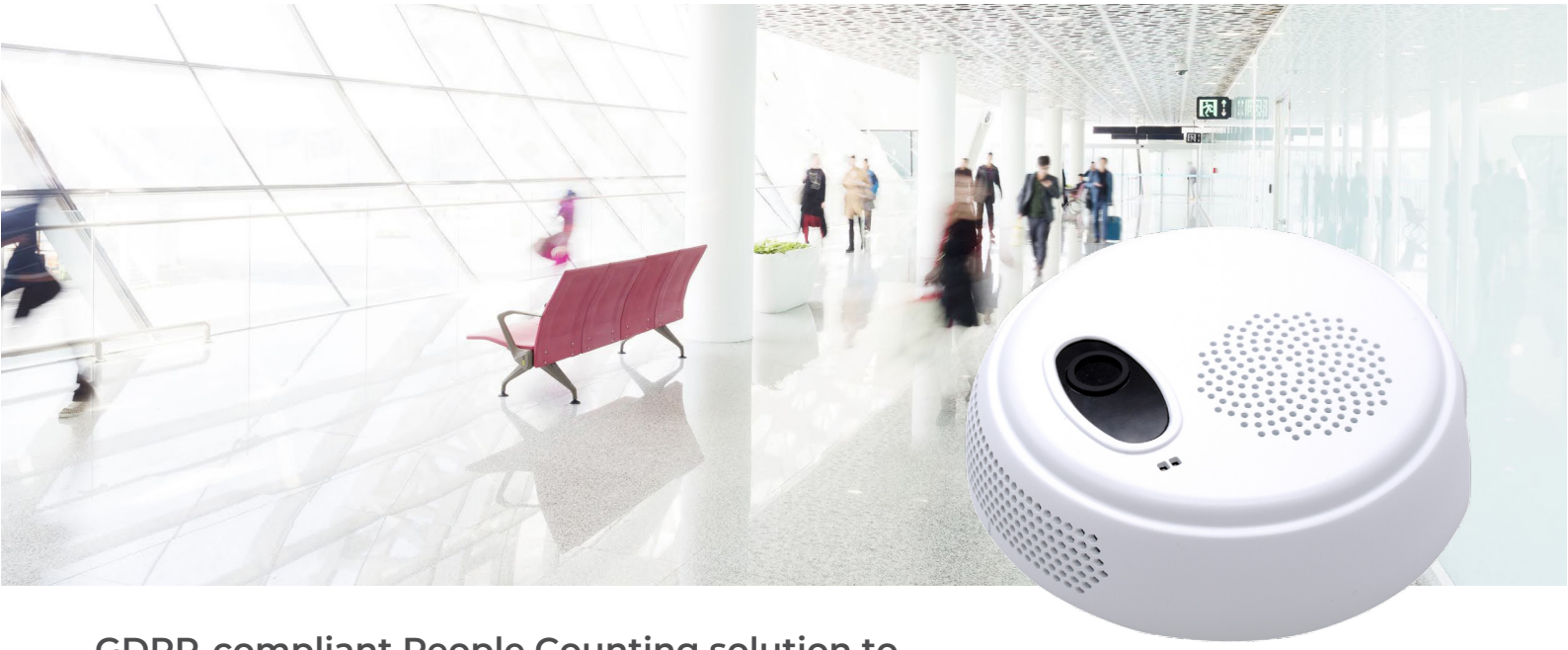
People Counting L-XL

PoE model and LoRa model

SPECIFICATION SHEET



GDPR-compliant People Counting solution to extract greater value from your retail operations, smart building or office

Terabee People 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 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.

Who is the Terabee People Counting L-XL for?

Terabee People Counting solutions are designed for deployment by Systems Integrators, Networking Solution Providers, and End Users with expertise in data networking. To successfully deploy the Terabee People Counting L-XL, please ensure you have access to the following expertise and tools:

— For the People Counting L-XL LoRa model: Integration of device into a private or public LoRaWAN architecture
— An understanding of how to configure and push data payloads to a server using MQTT or HTTP protocols
— Data visualization applications to view data sent from the device, or a subscription to the Terabee IoT platform

Key features

- GDPR compliant by design
- 3D depth people counting sensor
- 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 configuration via Device Management Services (PoE) or via LoRaWAN Downlink Commands (LoRa)
- Data transmission via LoRa or Ethernet
- Powerful people counting algorithm with 98% accuracy

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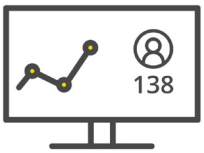
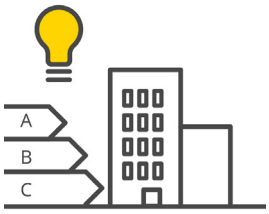
Applications



Smart offices

Occupancy monitoring

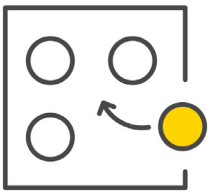
Space and facility optimization



Facility management

HVAC systems integration

Energy savings

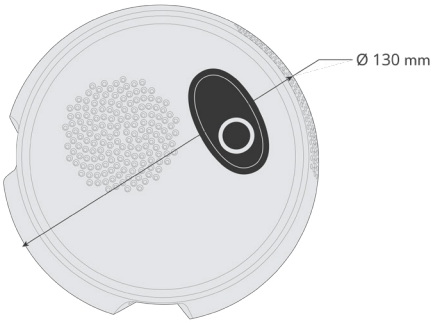


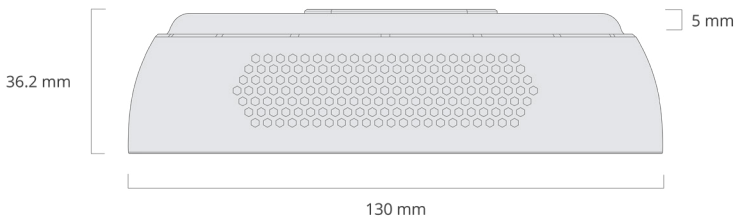
Staff presence optimization

People flow

Public spaces and retail

Dimensions





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Technical specifications

Product code	TB-PCL-XL	
Performance	**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)	
People Counting data communication	Real-time or at predefined time intervals	Predefined time intervals (minimum of 2 minutes)
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 (minimum 12.5 W)
LED indicators	Two LEDs	
Initialization time	Approximatively 1 minute	
Mechanics	**PoE model**	**LoRa model**
Dimensions	Ø 130.0 mm x 36.2 mm	
Weight	220 g	
Housing material	PU 8150	ABS PA-757
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 mounting plate, supplied	
Networking	**PoE model**	**LoRa model**
Communication interface	Gigabit Ethernet	WiFi 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		
Recommended cabling	Cat 6 or later	
Addressing	DHCP, Static IP	
Device hostname	terabee-<serial_number>	
Data protocols	HTTP/HTTPS, MQTT/MQTTS	
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
WiFi 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	
IoT Platform for data visualization	Yes, optional	Not available through LoRa, possible through Ethernet
Device Management Services	Yes, optional	Not available through LoRa, possible through Ethernet
Data hosting	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.

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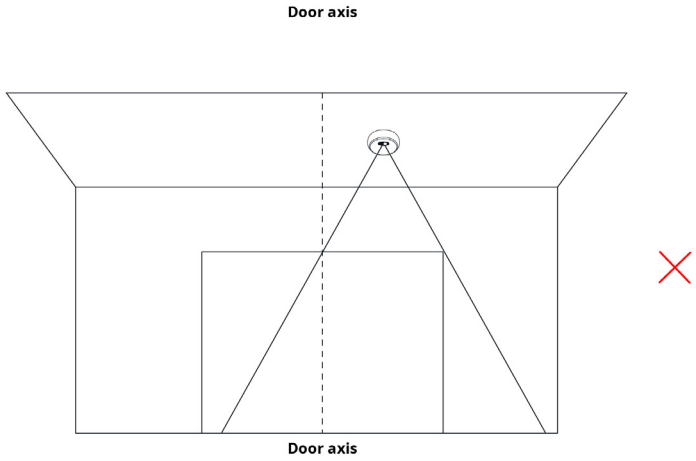
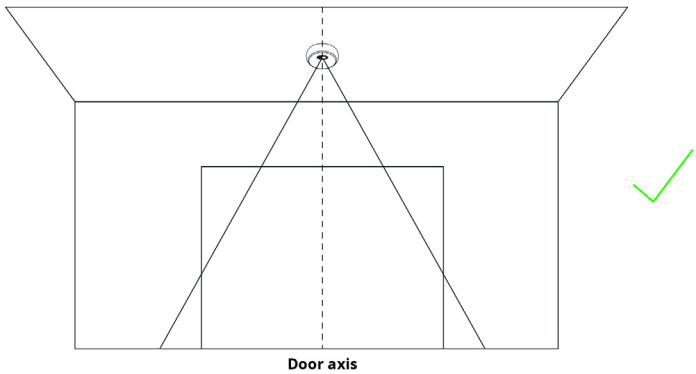
Single-device installation

Terabee People 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	2.30 x 1.70
4.00 (max)	3.40 x 2.55





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Multi-device installation

Up to five Terabee People Counting L-XL devices can be installed together to cover wider entrances and passageways (through Ethernet cables for 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
3.50	2.25	2.50	4.85	7.10	9.35	11.60
3.60	2.40	2.60	5.15	7.55	9.95	12.35
3.70	2.55	2.75	5.45	8.00	10.55	13.10
3.80	2.70	2.90	5.75	8.45	11.15	13.85
3.90	3.85	3.05	6.05	8.90	11.75	14.60
3.40	2.10	3.20	4.60	6.70	8.80	10.90
4.00	3.00	3.40	6.40	9.40	12.40	15.40

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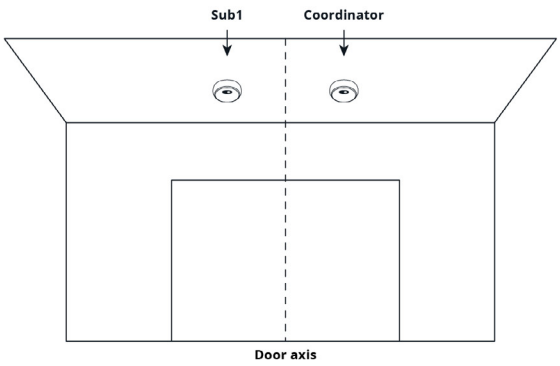
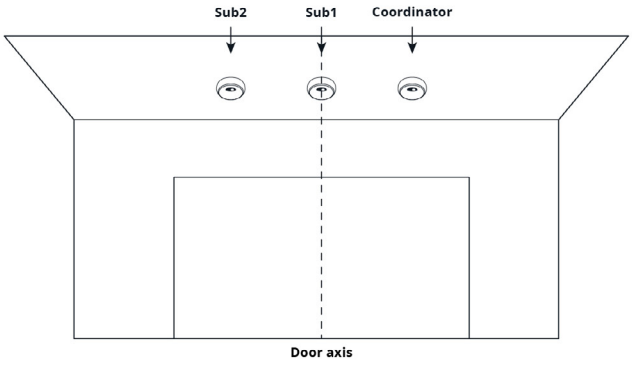
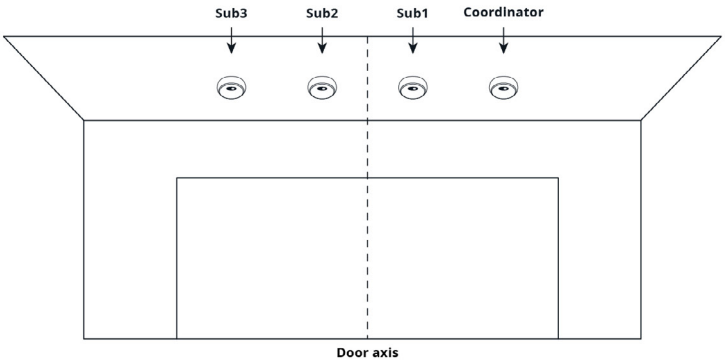
2 Devices



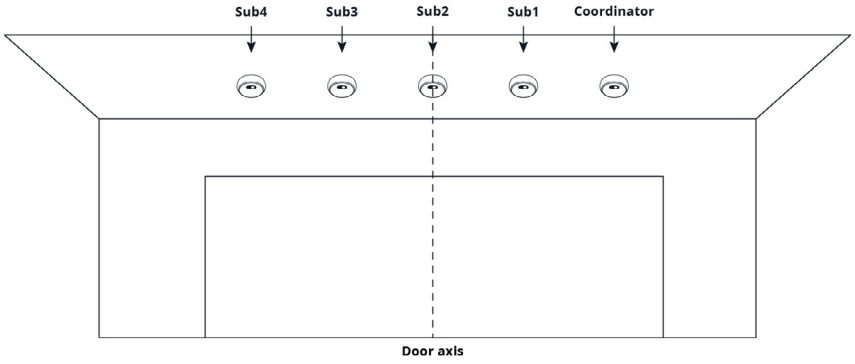
3 Devices



4 Devices



5 Devices



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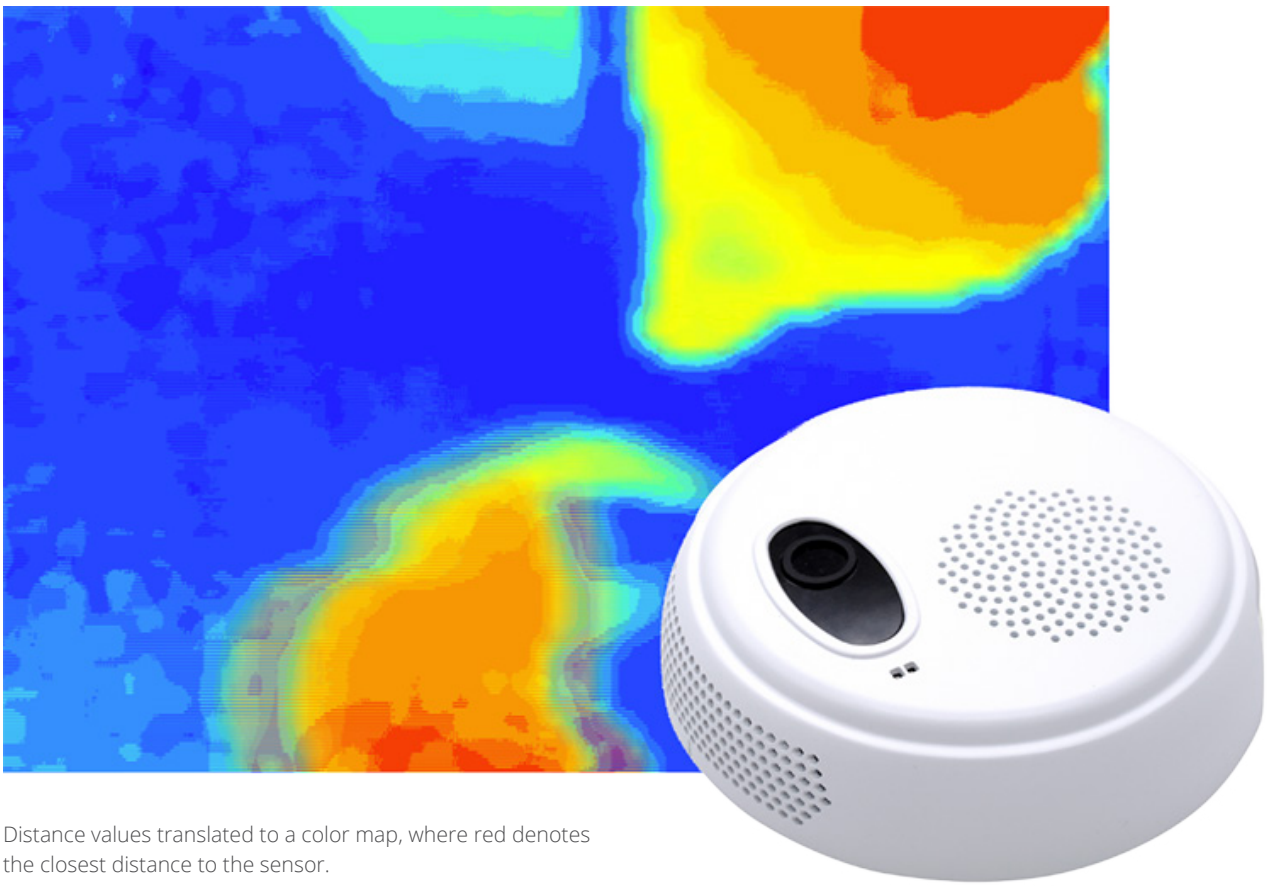
Time-of-Flight advantages

By using active Time-of-Flight technology to sense depth, the Terabee People 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.



Distance values translated to a color map, where red denotes the closest distance to the sensor.

Any questions? Contact us today!

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