

Data Sheet:

EX4300 Series Gateways and Exciters

Ultrasound solution providing high precision room/sub-room accuracy

Description

The EX4300 Series solution provides a high definition ultrasound technology that works with Wi-Fi to provide high precision room or sub-room level accuracy in complex, indoor environments. The range of products integrates with a real-time location system (RTLS) platform. The EX4300 Series Ultrasound solution consists of Exciters, a Gateway (GW) and a tamper resistant Exciter cover. The units can be powered by either batteries or PoE (Power over Ethernet).

Functionality

The EX4300 Series Ultrasound solution components transmit ultrasound messages to enhance the positioning accuracy and update rate of the tags. The battery-powered devices use four standard D cell alkaline batteries and are completely wire free. Exciters can be flexibly placed and simply deployed.

Remote Management Coordination

Exciters can be operated as autonomous, standalone units or as coordinated units. For remote management and coordinated operation with other Exciters, the EX4300 Series Ultrasound solution uses 802.15.4 based communication.

RTLS Zones

Exciters can be used to create discrete zones. A single Exciter supports up to four RTLS zones and can be deployed to achieve room, bay or chair level accuracy. For use cases requiring high resolution, virtual walls are created, accurately dividing a room with high accuracy and reliability. Through a combination of Exciters placed throughout a facility, virtually an unlimited number of zones can be created in rooms and open larger areas.



Product Highlights

- **Extended range** – Coverage of large areas using only a few Gateway units.
- **Easy deployment** – Gateways and Exciters work easily together to meet customer's coverage requirements.
- **Familiar technology** – Powered by and communicate over IEEE 802.3af PoE; uses PoE-compliant network cables and RJ45 connectors. Battery powered devices are also available.
- **Unlimited number of zones can be created** – Enables complete coverage in rooms and larger areas.
- **Flexibly change existing coverage areas** – So you can adapt your system to new requirements.

Products and Numbers



EX4320
EX4340

EX4310
EX4330
EX4350

GTW4300

Exciters

Products – EX4310 / EX4320 (Ultrasound, Battery), EX4330 / EX4340 (Ultrasound, PoE)

Functionality – Used for corridor, room and bay level accuracy. Mounted on ceilings. Ultrasound zones are created by positioning the transducers in the directions of the zones.

The EX4310 and EX4330 are used for Corridor/Room level coverage. The EX4320 and EX4340 are used for Bay level coverage. The EX4310 and EX4320 are powered by batteries. The EX4330 / EX4340 are powered by PoE.

Gateway

Products – GTW4300 (GW, Wi-Fi, PoE)

Functionality – Gateway (GW) between Exciters and the server. Connects the IP network to a 802.15.4 wireless network. Used to control, monitor and coordinate the Exciters.

The GTW4300 also supports 802.11 (Wi-Fi) and can receive and forward tag messages to the server.

Exciter with Gateway Functionality

Products – EX4350 (Ultrasound, Wi-Fi, GW, PoE)

Functionality – Combines the ability to create Ultrasound and LF zones with GW functionality reducing the overall number of devices required. It is placed with same density as regular GWs to provide sufficient radio coverage.

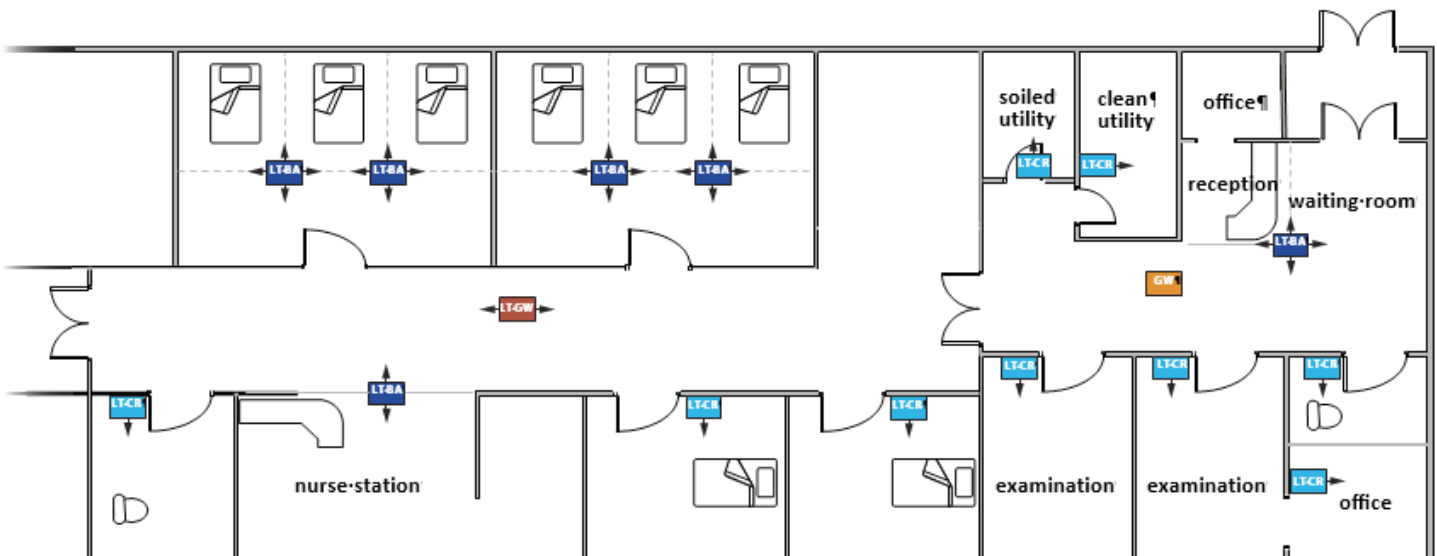
Expected Exciter Battery Lifetime

Typical room deployment – When one ultrasound transmitter is used, the expected battery lifetime of the Exciters is four years.

Bed/Bay level deployment – When two or more transmitters are used, battery lifetime will be reduced.

Four-transmitter deployment – Expected battery lifetime of the Exciters is two years.

Typical Deployment			
Map Symbol	Description	Unit	Purpose
LT-BA	Location Transmitter Bay	EX4320/EX4340	Used to create bay or bed level zones
LT-CR	Location Transmitter Corridor and Room	EX4310/EX4330	Used to create corridor or room level zones
GW	Gateway	GTW4300	Used to control, manage and coordinate the Exciters
LT-GW	Location Transmitter - Gateway functionality	EX4350	Combines corridor/room coverage with GW functionality



Products

The EX4300 Series Ultrasound solution is available as follows:

Product	Description	Weight
GTW4300	GTW-4300 Gateway (PoE Powered). Required for Location Transmitter management and synchronization over 802.15.3 (Zigbee). Includes ceiling mounts.	13.5 oz. 386 g
EX4320	EX4320 QuadLT Bay-Level Ultrasound Exciter (Battery Operated). Employs directional speaker elements for Bay-level use. Supports 2 or 4 D size batteries, includes ceiling mounts.	13.4 oz. 381 g Without batteries
EX4310	EX4310 QuadLT Corridor/Room Ultrasound Exciter (Battery Operated). Employs standard speaker elements for Corridor/Room use. Supports 2 or 4 D size batteries, includes ceiling mounts.	13.4 oz. 381 g Without batteries
EX4340	EX4340 QuadLT Bay-Level Ultrasound Exciter (PoE Powered). Employs directional speaker elements for Bay-level use. Includes ceiling mounts.	14.7 oz. 418 g
EX4330	EX4330 QuadLT Corridor/Room Ultrasound Exciter (PoE Powered). Employs standard speaker elements for Corridor/Room use. Includes ceiling mounts.	14.7 oz. 418 g
EX4350	EX4350 ParalleX Gateway w/QuadLT Ultrasound Exciter (PoE Powered). Gateway w/ LT functionality. Employs standard speaker elements for Corridor/Room use. Includes ceiling mounts.	14.9 oz. 422 g



Data Sheet: EX4300 Series Ultrasound Solution

Product Specifications	
DIMENSIONS & WEIGHT	
Dimensions (LxWxH)	7.95 x 6.02 x 1.77 in. (202 x 153 x 45 mm)
POWERED BY BATTERY	
Battery type*	4 x D cell batteries
- USA and Canada	Any UL-listed D-LR20 batteries
- Other countries	Panasonic D-LR20 batteries only
Technology	
- Nominal voltage/capacity per battery	1.5 VDC / 17 Ah
- Nominal voltage/capacity per unit	3.1 VDC / 34 Ah
- Battery lifetime	1-8 years (config. dependant)
* Dispose of used batteries according to local regulations	
POWERED BY POWER OVER ETHERNET	
Supported standards	IEEE 802.3af
Input voltage	48 VDC (PoE)
Power consumption (max)	PoE IEEE 802.3af (15 W)
POWERED BY DC POWER SUPPLY (EX4330 and EX4340 ONLY)	
Input voltage	40-57 VDC
Power consumption (max)	3.0 W
ULTRASOUND COMMUNICATION	
Frequency range	From 35 to 45 kHz
Typical range (office environment)	33 feet (10 meters)
Max range	66 feet (20 meters)
LF COMMUNICATION	
Frequency range	From 123 to 127 kHz
Typical range (office environment)	13 feet (4 meters)
Max range	20 feet (6 meters)
WIRELESS NETWORK CONNECTION (802.15.4)	
Wireless network	IEEE 802.15.4
Frequency range	2.405 - 2.480 GHz ISM
Typical range (office environment)**	100 feet (30 meters)
Transmit power	+20 dBm (ITU region 2/3) / +13 dBm (ITU region 1)
WI-FI TAG MULTICAST RECEIVER (802.11)	
Wireless network	IEEE 802.11
Frequency range	2.412 - 2.462 GHz ISM
Typical range (office environment)**	54 feet (18 meters)
** Depending on environmental conditions	
ENVIRONMENTAL	
Operational temperature***	From +50 to +113 °F (From +10 to +45 °C)
Storage temperature***	From + 4 to +158 °F (From -20 to +70 °C)
Operating/storage relative humidity	17 to 90% (non-condensing)
Ingress protection	Splashproof
*** Temperature outside this range can impact battery and/or product lifespan.	
<i>All specifications are subject to change without notice.</i>	

By Your Side™ Lifetime Customer Care

At STANLEY Healthcare, we measure our success by yours. The By Your Side Customer Care commitment combines a range of services to ensure that every customer achieves success and realizes the full value of their investment.

STANLEY
Healthcare

STANLEY Healthcare
130 Turner Street, Waltham, MA 02453

Phone: +1-888-622-6992
Email: stanleyhealthcare@sbdinc.com