



Lantern Sensor

The Lantern Sensor is a small, mesh networking radio device used in personnel and asset location applications. Each sensor transmits a unique ID that is assigned to a specific person or asset. Developed and manufactured in Singapore, the Lantern Sensor is an integral component of the Lantern tracking solution. The sensors receive messages from the network of HarshPro™ or HazPro™ Routers around the site and send radio information back to the server through the mesh network, where it is processed with a proprietary algorithm.

The Lantern Sensor is designed to work reliably in rugged environments featuring an IP66 rated enclosure that can withstand harsh conditions, intrinsically safe electronics for safe operation in hazardous areas, and a wide operating temperature range. Lantern Sensors are ideal for distributed and remote sites, with battery power that can last up to three months continuously without being recharged. The sensors can also be remotely managed, monitored and configured via over-the-air firmware updates without the need for skilled personnel to be on site.



The Lantern Sensor is a wearable device designed to withstand harsh industrial conditions



Front

Back

Lantern Sensor Specifications¹

Size:	78mm(L) x 44.1mm(W) x 18.5mm(H)
Weight:	70 grams
Enclosure material:	ESD, Impact, and UV resistant polymer

Environmental

Charging temperature:	0°C to +40°C
Operating temperature:	-20°C to +60°C
Storage temperature:	-20°C to +60°C
Humidity:	0-100% RH

Battery

Battery:	Lithium Polymer (LiPo)
Battery life:	3 months ² (Tx power: 3 dBm, Active tracking)
Charging method ³ :	Wireless charging

¹ Specifications listed here may be subject to change

² Battery life dependent on multiple factors: tracking method, adjustable polling rate, & Tx power

³ Charging must be done in safe area



Radio

Frequency:	2.4Ghz ISM
Transmit power:	Up to 16 dBm
Tag to Link Range:	Up to 90 meters (unobstructed line of sight)
Antenna:	Internal
Encryption:	AES128

Positioning

Active position updates:	Yes
Passive position updates:	Yes
Programmable update rate:	Yes
Firmware over the air updates:	Yes

Regulatory⁴

Hazardous area protection method:	Intrinsic safety (Ex 'ia')
Equipment protection level:	Ga (zone 0), Da (Zone 20)
Hazardous area certifications:	Ex ia IIC T4 Ga Ex ia IIIC T135 Da
Country type approvals:	CE, RoHS3
Ingress protection:	IP66

⁴ Equipment pending certifications