

OtoSphere LightHouse DATASHEET

OtoSphere-LightHouse is a robust, small-sized, add-on commercial module designed to ensure continuity of navigation and autonomous operations during GNSS interference conditions.

With advanced and upgradeable protection, detection, and monitoring capabilities, this system effectively safeguards against current and future threats to GNSS.

OtoSphere-LightHouse is tailored exclusively for the commercial market in ground, aerial, and maritime environments*.

No other solution that offers such protection is as small, light, affordable, or as easily installed as OtoSphere-LightHouse.

Key Features

- SW-defined, upgradeable anti jamming algorithms
- Fully retrofit and compatible with most GNSS receivers and active antennas
- Protected GNSS band (per customer order)
- Passes through (unprotected) two additional GNSS bands (per customer order)
- Average power consumption < 1W
- Peak power consumption: < 2.7W
- Cost, Size, Weight and Power optimized
- Ideal for time-sensitive applications with a minimal and constant group delay

*Designed to protect only non-encrypted GNSS signals (C/A)

*OtoSphere-LightHouse was designed for non-military platforms and applications

Small • Simple • Flexible • Retrofit



PRODUCT DIMENSIONS

Enclosed	OEM
80mmx79mmx28mm	42mmx70mmx16.2mm
100g	50g
4 x M3 screw (not supplied)	

Performance

Protected Frequency	One frequency band
Passthrough	2 GNSS Frequency Bands
Latency	100ns $\pm$ 15ns (fixed)
Compression Point	-23dBm
Path Gain	+/-3dB

LED Indicator

Constant Red	System Error
Flashing Red	System Initialization
Constant Green	System Operating no jamming detected
Alternating Between Orange and Green	System Operating (jamming detected)

Environmental*

Operating Temperature Range	-40°C to 71°C
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Waterproof Rating	IP65
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*OEM solution does not meet any IP rating

Safety & Compliance

FCC Compliant
CE Compliant
RoHS Compliant

RF Interfaces*

Antenna Connectors (A1/A2)	50Ω SMA 2.7VDC - 14VDC (Max Current 40 Milliamps per connector), designed for 15dB -40dB gain
Receiver Connector (RX)	50Ω SMA

Out2**	50Ω SMA Direct path to secondary receiver
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*OEM Solution uses MMCX connector

**To be used for heading calculations

Wire Connection Description

Power supply positive terminal (6vdc-32vdc)
Power supply negative terminal
Dry contact jamming indication – positive terminal
Dry contact jamming indication – negative terminal
UART RX
UART TX
UART GND

Product Dimensions Not Final

Ordering Information

OtoSphere-LightHouse — X — X — XX — X

Protected frequency:
1 – GPS L1

Enclosed/OEM
E – Enclosed
O – OEM

Passthrough frequency:
0 – null
1 – GALILEO E1
2 – GPS L2*
3 – GPS L5
4 – GLONASS G1

*Does not support M-Code and SAASM

Direct Path Second Receiver
1 – Yes
2 – No



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