OEM Version

infiniDome
NAVIGATION RESILIENCY

OtoSphere
LightHouse
DATASHEET

OtoSphere-LightHouse* is a compact, rugged, and cost-effective GNSS Anti-Jamming module designed to ensure continuous navigation and autonomous operation in environments affected by GNSS interference. Equipped with advanced field upgradeable Anti-jamming algorithms, and monitoring capabilities, the LightHouse provides robust protection against both current and emerging GNSS threats. LightHouse is optimized for commercial applications across ground, aerial, and maritime platforms.

Its compact, lightweight form factor and ease of integration make it an ideal solution for GNSS resilience, delivering high-end protection without compromise.

Designed for non-military platforms and applications.

Key Features

- **Software-defined**
  Upgradeable anti jamming algorithms

- **Wide receiver compatibility**
  Works with legacy and modern GNSS receivers

- **Configurable protection**
  1 or 2 protected GNSS bands

- **Passthrough support**
  Optional 1 or 2 unprotected GNSS bands

- **Low power**
  3W average consumption

- **Low latency**
  Group delay < 100ns

- **Optimized design**
  Compact, lightweight, and efficient

- **Jamming detection**
  Real-time jamming status, power levels

Small • Simple • Flexible • Retrofit

Product Dimensions

	Type	Weight	Size
Enclosed	**Single Band**	180g (6.35oz)	80x78.5x28 mm 3.15×3.09×1.10 in
	Dual Band	200g (7.05oz)	80x78.5x33.5 mm 3.15×3.09×1.32 in
OEM	**Single Band**	80g (2.82oz)	76x55x22.2 mm 2.99×2.17×0.87 in
	Dual Band	100g (3.53oz)	76x55x30.8 mm 2.99×2.17×1.21 in

Mounting: 4 x M3 screw (not supplied).

Performance

Protected Frequency*	Single Band L1/E1, L2, L5, G1 Optional Secondary Band: L1/E1, L2, L5, G1
Passthrough	Optional L1/E1, L2, L5, G1
Latency	> 100ns
Compression Point	-23dBm
Path Gain	+/-3dB

*Does not support M-Code and SAASM.

LED Indicator

Flashing Green	Standby mode, Bypass mode
Green	Stop mode (Service)
Flashing Green/Orange	System active, jamming detected
Flashing Orange	High power Jamming detected
Red	Error state

RF Interfaces

	Connector	Description
Antennas Input	A1,A2	50Ω SMA 2.7-14VDC, Max 40mA per connector, 15dB -40dB gain
Receiver Output	RX1	50Ω SMA
	RX2*	50Ω SMA

*Not protected - For secondary receiver/heading calculations.

Wire Connection Description

power Supply	6-32 VDC Avg ~ 3W**	Positive (+)	Red
		GND (-)	Black
Dry Contacts	Jamming indication Max 32V 50mA	Positive	Purple
		Negative	Green
UART*	Status and Maintenance	UART RX	Gray
		UART TX	Yellow
		VCC 5v+	White
		GND	Blue

* No Built-in GNSS receiver.
** For Single Band version.

Environmental

Operating Temperature	-40ºC to 71ºC −40ºF to 159.8ºF

IP Rating	**Enclosed**	IP65
	OEM	NO

Safety & Compliance

FCC Compliant	**CE Compliant**	**RoHS Compliant**

Product Dimensions

Enclosed

Single Band

RX2 RX1 ANT2 ANT1

Dual Band

RX2 RX1 ANT2 ANT1

OEM

PWR

ANT1 ANT2 RX1 RX2

Single Band

Dual Band
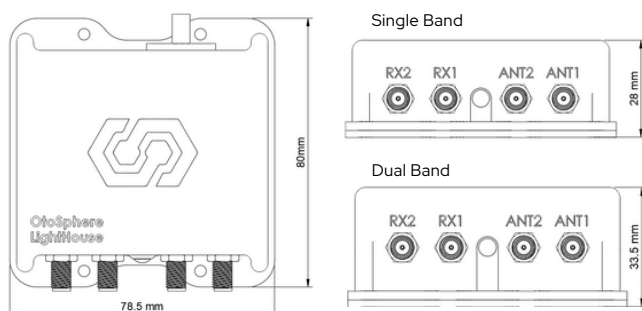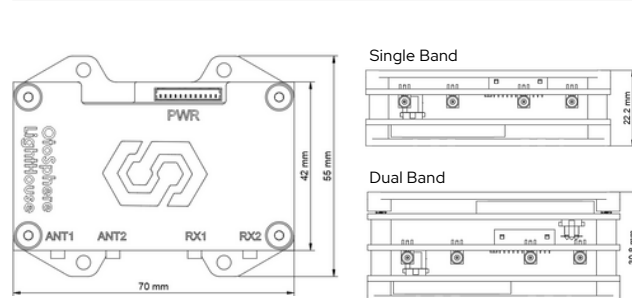
Ordering Information

OtoSphere-LightHouse — X – X – X X – X

Protected frequency	Type	Passthrough frequency*	Second Receiver**
1 – GPS L1/GALILEO E1 2 – GPS L2 3 – GPS L5 4 - GLONASS G1	E – Enclosed O – OEM	0 - null 1 – GPS L1/GALILEO E1 2 – GPS L2 3 – GPS L5 4 - GLONASS G1 *Does not support M-Code | SAASM	1 – Yes 2 – No ** Not Protected