infiniDome
NAVIGATION RESILIENCY

# GPSdome-LightHouse

## The industry's most disruptive, future-proof, GNSS Anti Jamming Solution

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 real-time monitoring capabilities, LightHouse delivers robust protection against both current and emerging GNSS threats. Optimized for commercial ground, aerial, and maritime platforms, its compact and lightweight form factor enables easy integration providing high-end GNSS resilience without compromise.

**Designed for non-military platforms and applications.*

## Unique advantages

- **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

## 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<br>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

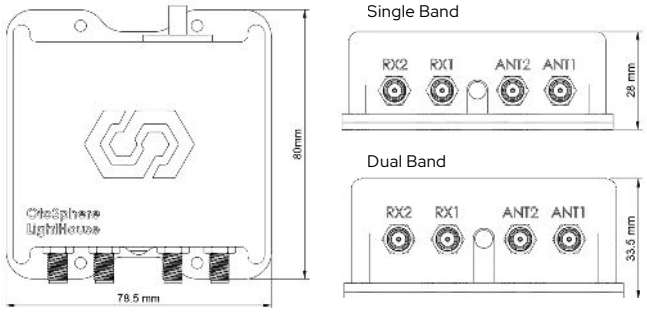
| | | |
|---|---|---|
| **Operating Temperature** | -40°C to 71°C<br>-40°F to 159.8°F | |
| **IP Rating** | **Enclosed** | IP65 |
| | **OEM** | NO |

## Safety & Compliance

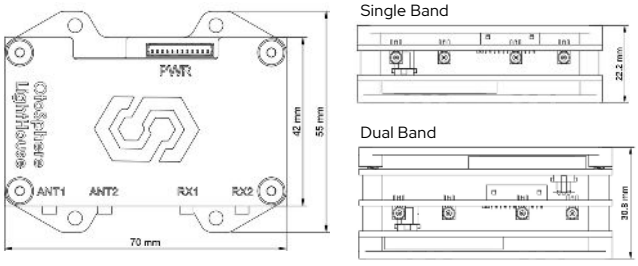
**FCC Compliant** | **CE Compliant** | **RoHS Compliant**

# Product Dimensions

Enclosed




OEM




## Ordering Information

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

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



**infiniDome, Ltd**
7 Ha'eshel St. Industrial Park (South), P.O. Box 3358, Caesarea 3079504, Israel
info@infinidome.com • www.infinidome.com