# Presence2

## GALILEO PRS RECEIVER


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Rackmount Galileo PRS Receiver for Secure Position, Speed and Time Distribution

The Galileo Public Regulated Service (PRS) is an encrypted navigation service for governmental authorised users and sensitive applications that require high continuity. This service is more resistant to spoofing and jamming.

The Galileo Public Regulated Service (PRS) receiver PRESENCE 2 is the r**eference solution of GMV** for secure and precise Galileo Position, Velocity and Time, and has been deployed in the SENDA Navigation System for the F-110 Frigates. This variant is tailored to stationary and mobile rackmount platforms that require a rugged enclosureneeds.

The Galileo receiver PRESENCE 2 is a **multiconstellation** (GPS, Galileo OS) receiver that enables **PRS encrypted signal processing** for accurate positioning and time. It features two operating mode, a **hybrid mode** with GPS L1, Galileo OS E1 and PRS E1/E6 bands, and **PRS-only mode** with E1/E6 frequency bands only.

The Galileo PRS receiver incorporates a Security Module (SM) that it is able to process the encrypted PRS signal so that **the navigation information is guaranteed to be spoofing-free**. User authentication and audit are performed through the connectors on the front panel using the appropriate credentials. The SM has been developed jointly by TECNOBIT and GMV, and is under certification process by the CCN. The SM is protected against tampering and is aligned with Common Criteria standards.

### FEATURES

- **Deployed in F-110** SENDA navigation system.
- Rugged **2U** enclosure for high shock and vibration environments.
- **Multiconstellation** and **multifrequency** GNSS solution in hybrid Mode.
- **Multifrequency (E1A/ E6A) full-band Galileo PRS** solution in PRS-only Mode.
- **LEDs** on the front panel for status monitoring.
- **Serial & Ethernet** Interfaces to support standard and proprietary PNT data formats.
- **1PPS** output adjusted for maximum accuracy.
- Removable **Crypto Ignition Key** for personal user authentication.
- Internal Battery for **Anti-tampering** and automatic zeroize.
- Dedicated connector for audit of Security Module
- **Key loading and zeroize.** Remote actioned zeroize optional.

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# TECHNICAL SPECIFICATIONS

| DATA SPECIFICATIONS | |
|---|---|
| **Output Data** | **Position:** 3D referred to WGS84.<br>**Speed:** Horizontal and vertical.<br>**Alerts:** GNSS denial, internal system monitoring.<br>**Navigation output data rate:** Up to 2 Hz.<br>**GNSS measurements:** Pseudorange, Doppler and Phase |
| **Mission Configuration** | **BITE:** Internal system and sensor monitoring for data coherence and failure detection.<br>**Constellation use:** User selectable set of GNSS constellations and use of OS or encrypted signals only.<br>**SM audit:** Crypto user accessible info about events recorded by the Security Module<br>**Anti-tamper** protection and Zeroizing.<br>**Cryptographic capabilities:** BBKME and OTAR |
| **INTERFACES** | |
| **HW Interfaces** | • 28 V DC power supply.<br>• 1 x Ethernet 10/100 I/O.<br>• 1 x RS-422 high speed bidirectional serial ports.<br>• 1 x SMA RF connector<br>• 1 x 1PPS output<br>• 1 x 10 MHz output |
| **Data Interfaces** | **NMEA:** GNSS data PVT and ZDA.<br>**Data:** Serial & Ethernet Interfaces to support standard and proprietary PNT data formats.<br>**Maintenance:** Ethernet interface easing the maintenance and service operation. |
| **PHYSICAL CHARACTERISTICS** | |
| **Size** | 500 x 430 x 88.5 mm. |
| **Weight** | < 11.5 Kg. |