

NavGuard® 100 SAASM GPS Receiver with Anti-Jam

Capabilities and Features



*NavGuard® 100**** is the smallest 4-channel Anti-Jam SAASM receiver designed for extreme size, weight and power (SWAP) constrained military GPS applications requiring SAASM and high anti-jam performance. At less than two cubic inch (42mm diameter form factor) and using a fraction of the power required by other GPS and anti-jam systems, *NavGuard® 100* makes totally secure GPS PNT possible for the most SWAP-constrained military applications. *NavGuard® 100* also features an application processor for customer applications, such as GN&C, DI/UTC and ES.

High level Features

- Mayflower micro-SAASM Receiver with Anti-Jam*
- 4 Antenna RF Inputs (Passive)
- 12 tracking channels - all in view design
- Next Generation Security Architecture
- Selectable L1 or L2 (C/A and P(Y))
- Gun hardened to 20,000 G's**
- High dynamics applications: spinning projectiles and mortars
- User Application Processor for Guidance, Navigation & Control (GN&C), IMU Deep Integration/Ultra Tight Coupling (DI/UTC), and Electronic Support (ES)

Performance Metrics

- <8 second direct-Y acquisition (at 300 Hz spinning)
- Position Error: < 3m (1 sigma SEP)
- Velocity Accuracy: < 0.1 m/s (1 sigma)
- PVT output: up to 10 Hz
- Up to 40 dB of jamming suppression against multiple jammers

NavGuard® 100 Technical Specifications Summary

- External Interface:
 - 25 pin Host Connector
 - Receiver: UART (ICD-GPS-153 protocol), DS-101, 1/10 PPS Out, 10 PPS In
 - AE: UART
 - User Application Processor: UART
- GPS Key Loading: DS-101
- Operating Voltage: 3.3 V +/- 10%
- Temperature

Operating:	-40°C to +85°C
Storage	-55°C to +125°C
- Built-In Test (BIT): 95% coverage
- Codes/Frequencies: L1/L2 selectable, C/A and P(Y)

SWAP Metrics

- Size: 1.65 inch (42 mm) diameter, 0.87 inch height
- Weight: 55 grams
- Power: 1.4 W Typical (Receiver - continuous mode)
< 4.8 W (Receiver with AJ active)

NavGuard® is a registered trademark of Mayflower Communications Company, Inc.

* *NavGuard® 100* is a two board stack: *NavGuard-AE® 100* and *NavGuard-Rx® 100*

** Suitable for SWAP constrained precision guidance projectiles and mortars

*** The *NavGuard-Rx® 100* has been granted Security Approval by the GPS Directorate