BAE SYSTEMS

NavStrike™-M GPS Receiver

Precision strikes

Accuracy and control

Derived from the field-proven NavStrike™ SAASM receiver, BAE Systems' YMCA, or Y-Code/M-Code and Coarse Acquisition, NavStrike-M offers high-performance GPS for tightly coupled GPS/INS (Global Positioning System/Inertial Navigation System) integrations. NavStrike-M delivers mission success in a small, cost-effective package with high accuracy and reliability.

NavStrike-M provides 24-channel all-in-view navigation, high jamming immunity, fast Direct acquisitions using either P(Y) or M-Code, and rapid cold starts with no initialization data required. Experience NavStrike-M's accurate GPS navigation, either as a stand-alone system or integrated with an existing INS or Doppler reference system.

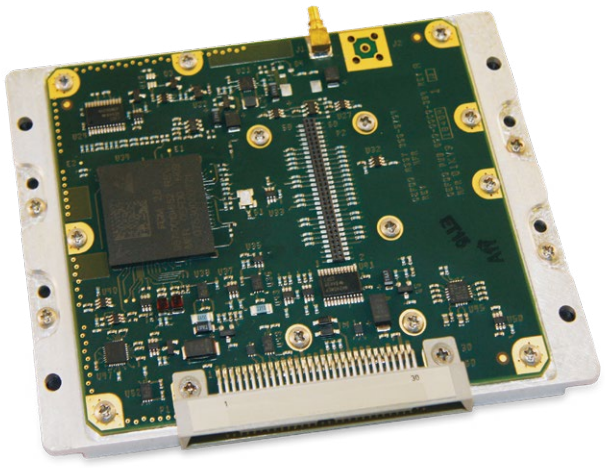
This embedded receiver module offers full Precise Positioning Service (PPS) accuracy. Simultaneous L1/L2 operation provides real-time ionospheric corrections for further accuracy enhancements.

U.S. Army photo

The primary communication interface is a high-speed RS-422 serial port. Modular design and field-programmable software eases maintenance, provides a growth path and reduces life-cycle costs. A backwards-compatible design with legacy NavStrike receivers eases integration.

Key features and benefits

- Dual or single-frequency (L1/L2) tracking
- Enhanced Direct-Y/M code acquisition/Cold start
- 24-channel all-in-view tracking/Navigation
- No need for active antenna electronics
- Field-reprogrammable software
- Designed for high-g vibration and shock
- High-speed serial interface
- Field clock recalibration for extended storage
- SA/AS capable*
- Store and Process (SnP) fast acquisition
- Simultaneous ionospheric corrections
- Carrier phase measurements
- Precise time transfers (timing pulse not needed)
- Antenna masking selection
- High anti-jamming immunity



High accuracy in a compact package

System characteristics

- Receiver L1 frequency, C/A and P(Y) or M-Code*
  L2 frequency, P(Y) or M-Code*
- Dynamics 10 g acceleration
- TTFF ≤ 11 sec - time uncert: ≤100 µs
  ≤ 22 sec - time error: ≤10 ms
- 78 s nominal cold start without initialization data
- Time accuracy <±35 nanoseconds RMS
- RMS Position accuracy <3 m CEP*
  <2 m typical
- Velocity accuracy <0.07 m/sec RMS typical
- Crypto key input Serial port, STE, DS101
- Fault coverage >95%

Physical characteristics

Power	<1 W nominal
Weight	0.5 lbs. maximum
Size/volume	3.5 in. W x 3.0 in. H x 0.75 in. D maximum
Temperature range	-54 C to +85 C (continuous)
Shock	386 g operating

Interfaces

- Serial data: RS-422, up to 921.6 Kbaud
- 1 PPS/TimeMark
- Single L1/L2 RF antenna port

* The NavStrike-M is security-approved for operational use by authorized U.S. GPS Precise Positioning Service (PPS) users and for export to authorized foreign countries via the Foreign Military Sales (FMS) process.

For more information contact:
BAE Systems

P. O. Box 868
Nashua, New Hampshire 03061-0868
W: baesystems.com/gps

Cleared for open publication on 11/20
Approved for public release: unlimited distribution.
Not export controlled per ES-NSS-093020-0021.