BAE SYSTEMS

NavStrike™ GPS Receiver

Precision strikes

Accurately controlled attacks

Achieving the required weapons effects on the modern battlefield requires rapid engagement and high accuracy. With that in mind, BAE Systems brings you the NavStrike™ GPS receiver, the most advanced Y-Code GPS receiver in the combat-proven family of BAE Systems' munitions receivers.

Derived from the field-proven, 12-channel NavStrike and Joint Direct Attack Munitions (JDAM) receivers, our NavStrike offers high-performance GPS for tightly coupled Global Positioning System/inertial Navigation System (GPS/INS) integrations.

Engineered using the vast BAE Systems experience in delivering precise and reliable weapons GPS capabilities to the battlefield, NavStrike provides: enhanced direct-Y acquisition, 24-channel all-in-view navigation, high jamming immunity, fast initial acquisitions, carrier loop aiding, fast cold start, and extended range correlation.

Key features and benefits

- 24-channel SAASM-based design
- High-rate aiding
- SA/AS capable*
- >6,000 correlators for fast acquisition
- All-in-view track and navigation
- High anti-jamming immunity
- High accuracy
- Antenna masking selection
- Precise time transfers (timing pulse not needed)
- Simultaneous ionospheric correction
- Carrier loop aiding
- Carrier phase measurement outputs
- Fifth-generation SAASM-based design
- Dual- or single-frequency (L1/L2) tracking
- Enhanced direct-Y code acquisition/ cold start
- 24-channel all-in-view tracking
- No need for active antenna electronics
- Field-reprogrammable software
- Designed for high-g vibration and shock
- High-speed serial interface
- SAASM extended functions, including black-key
- Field clock recalibration for extended storage

High accuracy in a compact package

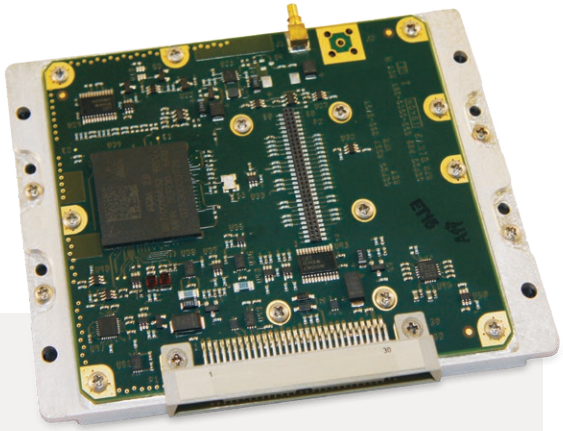
NavStrike combines a small, cost-effective package with high accuracy and reliability, all keys to your success in missile and munitions applications. Experience NavStrike's accurate GPS navigation, either as a stand-alone system or integrated with an existing INS or Doppler reference system.

Precise

This embedded receiver module offers full Precise Positioning Service (PPS) accuracy. Simultaneous L1/L2 operation provides real-time ionospheric corrections for further accuracy enhancements. Its primary communication interface is a high-speed RS-422 serial port.

Growth path

Modular design and field-programmable software ease maintenance, provide a growth path and reduce life-cycle cost. Delivery is assured by using common critical components, processes and manufacturing lines that deliver over 100,000 Selective Availability Anti-Spoofing Module (SAASM)-based GPS receivers per year.



Delivers precise GPS navigation

System characteristics

Receiver	L1 frequency, C/A and P or Y code* L2 frequency, P or Y code*
Dynamics	>10 g acceleration
TTFF	<8 sec - time uncert: ≤10 µs <25 sec - time uncert: ≤10 ms 77 s nominal cold start without initialization data
Time accuracy	<±30 nanoseconds RMS
Position accuracy	<3 meters CEP* <2 m typical Greater accuracy with 24 channels
Velocity accuracy	<0.07 m/sec RMS typical
Crypto key input	Serial port, KYK-13/KOI-18/CYZ-10*
Fault coverage	>95%

Interfaces

- Serial data: RS-422, up to 230 Kbaud
- 1 PPS/TimeMark/HaveQuick
- Single L1/L2 RF antenna port3

Physical characteristics

Power	<4.0 W continuous <3.0 W track
Weight	0.5 lbs maximum
Size/volume	3.5 W x 3.0 H x 0.75 D in. maximum
Temp. range	-54 C to +85 C (continuous) -62 C to +95 C (storage)
Shock	386 g operating

* Export of Precise Positioning Service (PPS) units is authorized for GPS Memorandum of Understanding countries only. PPS security modules must be obtained through Foreign Military Sales (FMS) procurement.

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