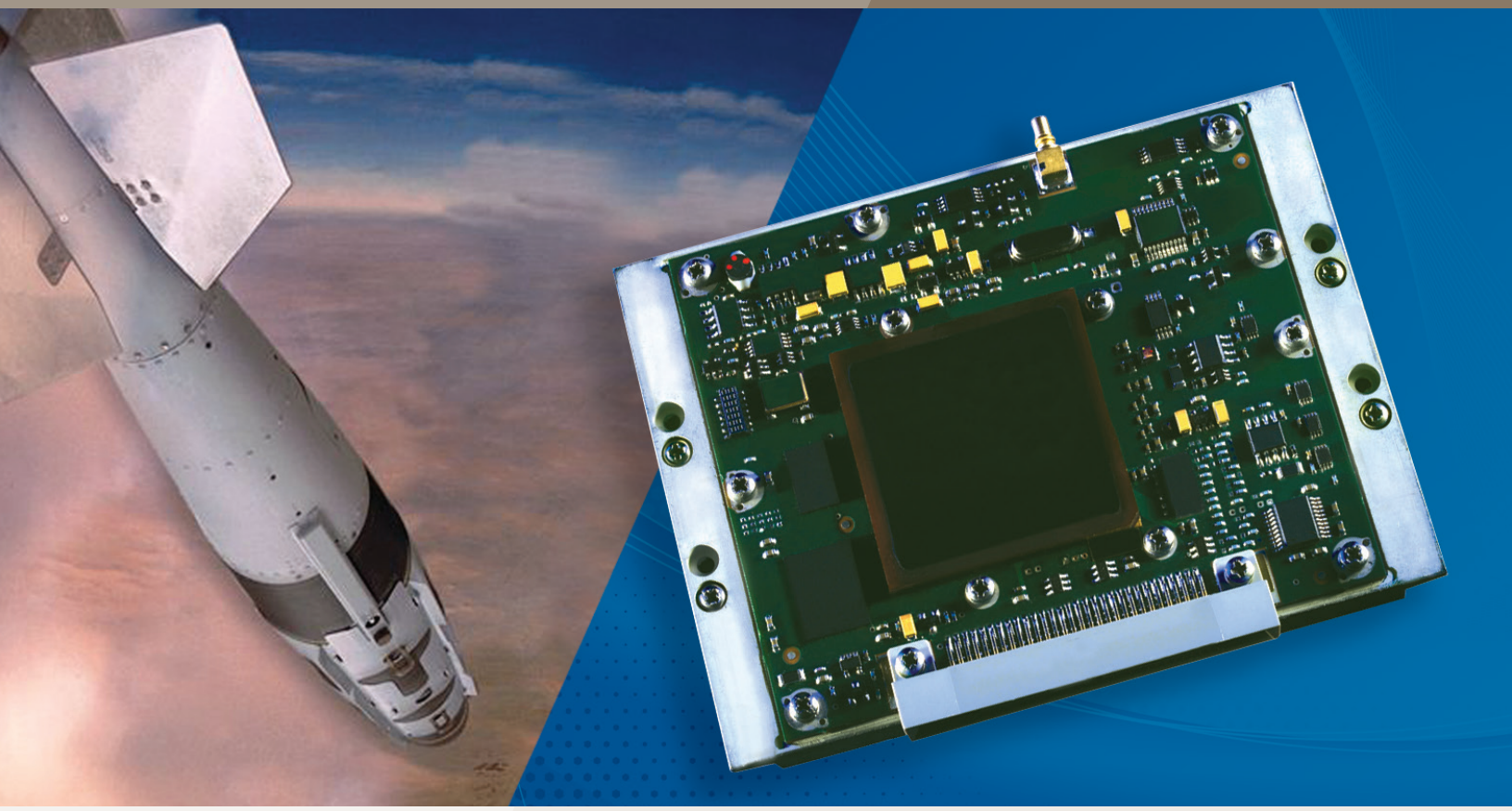
NavStrike™ - Munitions GPS Receiver



Precision controlled attack.

Launching weapons in the volatile environment of war requires rapid start-up and high accuracy for quick, confident decision making. These key elements translate to productive and safe mission completion. With that in mind, Rockwell Collins brings you NavStrike 3.3, the latest addition to the proven family of Rockwell Collins munitions receivers.

Derived from the field-proven 12-channel NavStrike and Joint Direct Attack Munitions (JDAM) receivers, Rockwell Collins' NavStrike offers high performance GPS for tightly coupled GPS/INS (Global Positioning System/Inertial Navigation System) integrations. Using the most advanced GPS technology available to your advantage, NavStrike provides: enhanced Direct-Y acquisition, 12/24*-channel all-in-view navigation*, high jamming immunity, fast initial acquisitions, carrier loop aiding*, fast cold start and extended range correlation*.

KEY FEATURES

- Fifth-generation SAASM-based design
- Dual- or single-frequency (L1/L2) tracking
- Enhanced Direct-Y code acquisition/ cold start
- 12/24*-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

KEY BENEFITS

- 12/24*-channel SAASM-based design
- High-rate aiding
- SA/AS capable**
- Panther ASIC (>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

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HIGH ACCURACY IN A COMPACT PACKAGE

NavStrike 3.3 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.

INTERFACES

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

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 w/o 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%

PHYSICAL CHARACTERISTICS

Power	<4.0 watts continuous <3.0 watts track
Weight	0.5 pounds maximum
Size/volume	3.5" W x 3.0" H x 0.75" D maximum
Temperature range	-54°C to +85°C (continuous) -62°C to +95°C (storage)
Shock	386 g operating

* Planned enhancement

** 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.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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Rockwell Collins delivers smart communication and aviation electronics solutions to customers worldwide. Backed by a global network of service and support, we stand committed to putting technology and practical innovation to work for you whenever and wherever you need us. In this way, working together, we build trust. Every day.

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