AstraPNT™ – When GPS is not available and the mission is critical

AstraPNT™ enables more resilient communications, even when GPS or other GNSS signals are unavailable or compromised. The system features a software defined receiver designed to detect spoofing and jamming while ensuring resilient positioning, navigation and timing (PNT). AstraPNT supports reliable connectivity and situational performance with minimal disruption.

AstraPNT continuously monitors GNSS signal quality and fidelity, selects the most reliable PNT source, and outputs a signal fully compatible with the standard GPS L1 interface.

Battlefield-tested and available now, AstraPNT from Eutelsat Network Solutions provides users the PNT resilience necessary to operate in GNSS-challenged environments.

eutelsat NETWORK SOLUTIONS

IDEAL FOR:

Intelligence Gathering	**PACE Communications Planning**	**Supporting Combat Operations**	**Critical Connectivity**
Mitigates operational failures and enables high-bandwidth information sharing when in proximity to GPS jammers and in remote and challenging positions.	Enhances SATCOM terminal continuity for military forces as part of their Primary, Alternate, Contingency, Emergency (PACE) plan.	Enables military forces to stay connected in GNSS-challenged environments and pass orders effectively.	Enables more resilient connectivity when battlefield commanders must communicate across all echelons.

GPS
GALILEO
GLONASS
PNT BROADCAST SERVICE

HOW IT WORKS

Monitors the quality and fidelity of GNSS and alternate signals and identifies the best source of PNT

Designed to perform

PERFORMANCE

- Stability within +/- 7 ppb in the GPS locked state
- +/- 200ns timing precision on alternate source
- ~50m location precision (improves over time down to ~25m)
- 4-hour holdover (when no source signal is available)
- Velocity accuracy of ±0.15 m/s at ≤ 30 m/s (only on GNSS)
- LPI/LPD: Passive - receive only
- RF Input Specifications (with the appropriate antenna)
- GPS & Galileo L1, L2 and L5 frequency bands
- GLONASS G1 frequency band
- A-PNT Broadcast Service

OPERATION

- Detects spoofing and jamming; logic to auto-switch source
- Auto source: Selects GNSS as default PNT source, STL backup, holdover tertiary
- Manual Source: User defines priority order of source (GNSS/STL)
- Force position: Uses source of Position regardless of source of Timing
- External: Receives NMEA via serial port; uses in the list of options
- Smooth transition (no loss of timing) when switching across PNT sources

FEATURES

- Configuration via USB-Type A
- Operational status via LEDs, with blackout ability
- Serial ports open (RS232 and RS422) allow a daisy chain with external NMEA-183 sources (inertial, gyro, etc.)
- Provides output of 1PPS to synchronize external devices

AstraPNT Receiver

About Eutelsat Network Solutions

Operating as an independent U.S. proxy company and subsidiary of Eutelsat we are driven by the mission to deliver complete global network connectivity solutions and exceptional support for the U.S. government, the U.S. military and allied forces, with the majority of our team having proudly served in the armed forces.

Harnessing powerful satellite communications and advanced technologies, we serve as trusted advisors who provide flexible, customer-first connectivity solutions. Our network-agnostic approach ensures dependable, customizable, enterprise-grade connectivity and exceptional support — ensuring performance in even the most contested environments.

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Revised Sep 2026