

# Astra A-PNT™ – When GPS is not available and the mission is critical

Astra A-PNT is the first packaged solution consisting of a software-defined outdoor receiver that is engineered to enhance connectivity resilience. By processing positioning, navigation and timing (PNT) signals from GNSS and multiple alternate sources and frequency bands, Astra ensures connectivity and situational performance without disruption.



The Astra receiver monitors the quality and fidelity of the GNSS signal, identifies the best source of PNT, and produces an output signal compatible with the standard GPS L1 interface.

Battlefield-tested and available now, OneWeb Technologies' Astra provides users the PNT resilience necessary to operate in GNSS-challenged environments.

## ASTRA IS IDEAL FOR:

### Intelligence Gathering

Avoids operational failures and continues high-bandwidth information sharing when in proximity to GPS jammers and in remote and challenging positions.

### PACE Communications Planning

Ensures SATCOM terminal continuity for military forces as part of their Primary, Alternate, Contingency, Emergency (PACE) plan.

### Supporting Combat Operations

Enables military forces to stay connected in GNSS-challenged environments and pass orders effectively.

### Critical Connectivity

Astra is there to enable connectivity when battlefield commanders must communicate across all echelons.



- GPS
- GALILEO
- GLONASS
- ASTRA BROADCAST SERVICE

## HOW IT WORKS

Astra 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  $\pm 0.15$  m/s at  $\leq 30$  m/s (only on GNSS)
- LPI/LPD: Passive - receive only
- Ability to remotely remove device in the event of compromise
- RF Input Specifications (with the appropriate antenna)
- GPS & Galileo L1, L2 and L5 frequency bands
- GLONASS G1 frequency band
- Astra 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

### About Eutelsat America Corp. and OneWeb Technologies

Eutelsat America Corp. and OneWeb Technologies Inc are a commercial satellite communications (SATCOM) services provider, offering resilient fixed and mobile solutions to the U.S. government and its allies.

We operate in combination as a wholly owned independent U.S. proxy company and subsidiary of Eutelsat Group. Eutelsat America Corp. and OneWeb Technologies Inc provide consultative and customer-first solutions with access to a low Earth orbit (LEO) constellation of 600+ satellites and a global fleet of 35 geostationary (GEO) satellites. The company has a long-standing record of meeting the mission requirements of U.S. government customers through our technical achievement, operational excellence and service commitment.



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