

AGE-1 ANTENNA



A rugged, self-contained GPS receiver and antenna designed for harsh tracking environments.

- INTEGRATED L-BAND FOR OMNISTAR AND CDGPS
- RT-20 POSITIONING
- RS-232 INTERFACE
- SUB-METER REAL-TIME ACCURACY
- ENSURES FLEXIBILITY AND EASE OF INTEGRATION
- REDUCE SYSTEM HARDWARE BY UTILIZING INTERNAL PROCESSOR AND MEMORY

It's time



Capability

The AGE-1 Antenna features 14 channels for L1 code and phase tracking, as well as 2 dedicated channels for Satellite-Based Augmentation System (SBAS) signals and 1 dedicated channel for L-Band signals. It provides measurement or position data at up to 20Hz, and can provide a 1PPS signal to within 20ns (typical).

Integration

The AGE-1 Antenna integrates a GPS receiver, L-Band receiver, and antenna in a single, rugged housing. This product is equipped with an RS-232 interface as well as support for either CAN or USB. The AGE-1 is designed to meet or exceed MIL-STD-810F specifications.

Corrections

The AGE-1 Antenna includes standard support for SBAS corrections provided by WAAS, EGNOS and MSAS. An integrated L-Band capability also allows for corrections from the Canadian DGPS (CDGPS) service, and subscription-based corrections for an OmniSTAR VBS solution. The AGE-1 Antenna is compatible with RTCM differential corrections.

Accessories

- Interface cable with dB9 and power connectors
- Magnetic Mount

Specifications

Performance¹

Channel Configuration

14 GPS L1
2 SBAS
1 L-band

Position Accuracy (RMS)

L1	1.8 m
WAAS	1.2 m
CDGPS ²	1.0 m
OmniSTAR VBS ²	0.7 m
DGPS	0.45 m
RT-20 ³	0.2 m

Measurement Precision

L1 C/A Code	6 cm RMS
L1 Carrier Phase	0.75 mm RMS

Data Rate⁴

Measurements	20 Hz
Position	20 Hz

Time to First Fix

Cold Start ⁵	50 s
Warm Start ⁶	40 s
Hot Start ⁷	30 s

Signal Reacquisition

L1	0.5 s (typical)
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Time Accuracy⁸ 20 ns rms

Velocity Accuracy 0.03 m/s rms

Dynamics

Velocity ⁹	514 m/s
Altitude ⁹	18,288 m

Physical & Electrical

Size 115 mm dia. x 90 mm ht.

Weight 575 g

Power

Input Voltage +9 to +24 VDC
Power Consumption 1.2 W (typical)

Communication Ports

- 2 RS-232 serial ports
- 1 CAN¹⁰ Bus or 1 USB 1.1 port
- 1 PPS

Input/Output Connectors

18-pin plastic bulkhead connector

Mounting

- 1"-14 UNS threads for center mounting
- 3 x 10-32 UNF screws for plate mounting

Environmental

Temperature

Operating -40°C to +75°C

Storage -55°C to +90°C

Waterproof/Immersion

MIL-STD-810F 512.4, Procedure I

Salt Spray MIL-STD-810F 509.4

Sand and Dust MIL-STD-810F 510.4

UV Light Protection ASTM G-151

Shock MIL-STD-810F 516.5

Vibration (Random)

MIL-STD-801F 514.5 C17

Vibration (Sine) SAE EP455

- 1 Typical values. Performance specifications subject to GPS system characteristics, US DOD operational degradation, ionospheric and tropospheric conditions, satellite geometry, baseline length, multipath effects and the presence of intentional or unintentional interference sources.
- 2 CDGPS Corrections may not be available in all areas. A subscription is required for OmniSTAR HP/XP/VBS service, which may not be available in all areas.
- 3 Expected accuracy after static convergence.
- 4 Slower data rates are expected for API customers. The maximum data rate is dependent on the size of the application.
- 5 Typical value. No almanac or ephemerides and no approximate position or time.
- 6 Typical value. Almanac saved and approximate position and time entered. No recent ephemerides.
- 7 Typical value. Almanac and recent ephemerides saved and approximate position and time entered.
- 8 Time accuracy does not include biases due to RF or antenna delay.
- 9 Export licensing restricts operation to a maximum of 18,288 meters and 514 meters per second.
- 10 AGE-1 is hardware-capable. Requires software support via API for CAN functionality.

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Specifications subject to change without notice

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