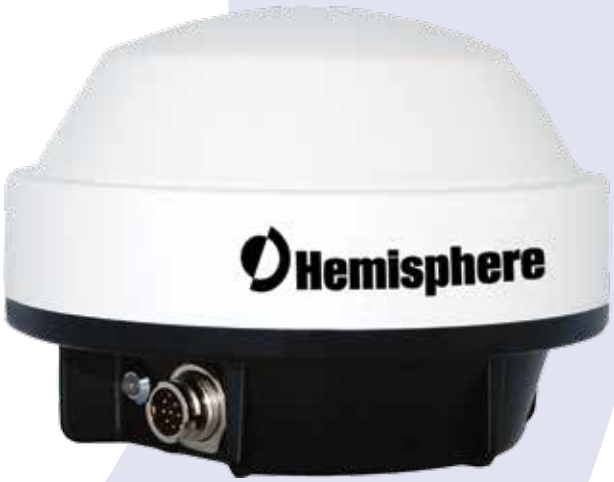
A325 GNSS Smart Antenna

Affordable, Portable Solution With Professional Accuracy

key features

- **Athena™ RTK capoable**
- **Long range RTK baselines of up to 50 km**
- **Very fast RTK fix and reacquisition times**
- **Strong multipath mitigation and interference rejection**
- **Wide operating voltage range, 7-36 V, high transient protection for any power source**
- **Supports NMEA 2000 over Controller Area Network (CAN) for ISO bus connections**



Work smarter, not harder. The A325 GNSS smart antenna offers an affordable, portable solution with professional level accuracy for agricultural, marine, GIS mapping, and other applications.

Focus on the job at hand with fast start-up and reacquisition times, and an easy-to-see status indicator for power, GNSS, and Bluetooth. The durable enclosure houses both antenna and receiver. It can be powered through various sources, making the A325 smart antenna ideal for a variety of applications. Dual-serial, CAN, and pulse output options make this GNSS receiver compatible with almost any interface.

Athena RTK
The A325 GNSS smart antenna supports Athena, our new core GNSS engine. Athena offers significant improvements in the areas of initialization time, robustness in very difficult operating environments, performance over long baselines, and performance under scintillation.

Hemisphere

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GNSS Receiver Specifications

Receiver Type:	GNSS L1 & L2 RTK with carrier phase
Signals Received:	GPS and GLONASS
Channels:	114
GPS Sensitivity:	-142 dBm
SBAS Tracking:	3-channel, parallel tracking
Update Rate:	10 Hz standard, 20 Hz optional
Timing (1PPS) Accuracy:	20 ns
Cold Start:	< 60 s typical (no almanac or RTC)
Warm Start:	< 20 s typical (almanac and RTC)
Hot Start:	< 5 s typical (almanac, RTC and position)
Maximum Speed:	1,850 kph (999 kts)
Maximum Altitude:	18,288 m (60,000 ft)

Positioning Accuracy

	RMS (67%)	2DRMS (95%)
RTK: [2, 3]	10 mm + 1 ppm	20 mm + 2 ppm
SBAS (WAAS): [2]	0.3 m	0.6 m
Autonomous, no SA: [2]	1.2 m	2.5 m

Communications

Serial Ports:	2 full-duplex RS-232, Bluetooth, CAN
Baud Rates:	4800 - 115200
Correction I/O Protocol:	Hemisphere GNSS proprietary, RTCM v2.3 (DGPS), RTCM v3 (RTK), CMR, CMR+[1]
Data I/O Protocol:	NMEA 0183, NMEA 2000, Hemisphere GPS binary, Bluetooth 2.0 (Class 2) 1PPS,
Timing Output:	CMOS, active high, falling edge sync, 10 kΩ, 10 pF load
Event Marker Input:	CMOS, active low, falling edge sync, 10 kΩ, 10 pF load

Power

Input Voltage:	7-36 VDC with reverse polarity
operation	
Power Consumption:	< 4.6 W nominal GPS (L1/L2), GLONASS (L1/L2)
Current Consumption:	0.34 mA nominal GPS (L1/L2), GLONASS (L1/L2)
Power Isolation:	No
Reverse Polarity	
Protection:	Yes
Antenna Voltage:	Internal antenna

Environmental

Operating Temperature:	-40°C to +70°C (-40°F to +158°F)
Storage Temperature:	-40°C to +85°C (-40°F to +185°F)
Humidity:	95% non-condensing
Shock and Vibration:	Vibration: EP455 Section 5.15.1 Random Mechanical Shock: EP455 Section 5.14.1 Operational
EMC:	CE (ISO 14982 Emissions and Immunity) FCC Part 15, Subpart B CISPR 22
Enclosure:	IP67

Mechanical

Dimensions:	10.4 H x 14.5 D cm (4.1 H x 5.7 D in)
Weight:	< 0.56 kg (< 1.23 lbs)
Status Indications (LED):	Power, GNSS lock, Bluetooth
Serial Port Extension:	Bluetooth communication
Power/Data Connector:	12-pin male (metal)
Antenna Mounting:	1-14 UNS-2A female, 5/8-11 UNC-2B adapter and mag-mount available

[1] Receive only, does not transmit this format
[2] Depends on multipath environment, number of satellites in view, satellite geometry, and ionospheric activity
[3] Depends also on baseline length

Note: The Eclipse receiver technology is not designed or modified to use the GPS Y-Code

Authorized Distributor:

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Hemisphere

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