



Eclipse P326 and P327 OEM Modules

Experience Multi-Frequency, Multi-GNSS Athena™ RTK and on-board Atlas® L-Band

key features

- Uses GPS, GLONASS, and BeiDou; Galileo and QZSS ready
- Long-range RTK baselines up to 50 km with fast acquisition times
- Compatible with many RTK sources including Hemisphere GNSS' ROX Format, RTCM, CMR, CMR+
- Mechanically and electrically (pin-for-pin) compatible with many Hemisphere and other manufacturers' modules
- Atlas L-band corrections providing position accuracy down to 2 cm RMS, positioning sustainability with Tracer technology, and convergence time as low as 10 minutes
- Athena GNSS engine providing best-in-class RTK performance



Experience Multi-Frequency, Multi-GNSS Athena™ RTK engine and Atlas® L-Band

Position with RTK accuracy and Atlas L-Band corrections using multiple satellite systems. Hemisphere GNSS' new Eclipse™ P326 and P327 OEM modules use GPS, GLONASS and BeiDou and are Galileo and QZSS ready. Track more signals for unparalleled positioning performance even in challenging environments. Maintain your position performance during correction signal outages with our newly development Tracer technology.

Scalable Solutions

Position with RTK accuracy and Atlas L-Band corrections using multiple satellite systems. Hemisphere GNSS' new Eclipse P326 and P327 OEM modules use GPS, GLONASS and BeiDou and are Galileo and QZSS ready. Track more signals for unparalleled positioning performance even in challenging environments. Maintain your position performance during correction signal outages with our newly development Tracer technology.

Ease of Migration

Leverage the compact size and easy integration in your design. The 34 pin P326 module is a drop-in upgrade for many Hemisphere products. P327 is a drop-in upgrade for existing designs using standard 20 pin modules from other manufacturers.



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GPS Sensor Specifications

Receiver Type:	GNSS multi-frequency RTK with carrier phase	
Signals Received:	GPS L1CA, L1P, L1C, L2P, L2C, L5 GLONASS G1, G2, P1, P2 BeiDou B1, B2 (B3 separate variant without L5) GALILEO E1BC, E5a, E5b QZSS L1CA, L2C, L5, L1C	
Channels:	372	
GPS Sensitivity:	-142 dBm	
SBAS Tracking:	3-channel, parallel tracking	
Update Rate:	1 Hz standard, 10 or 20 Hz optional	
Horizontal Accuracy:		
RMS (67%):	Horizontal	Vertical
RTK: ¹	8 mm + 1 ppm	15 mm + 2 ppm
SBAS (WAAS): ²	0.3 m	0.6 m
Autonomous, no SA: ²	1.2 m	2.4 m
Timing (1PPS) Accuracy:	20 ns	
Cold Start:	< 60 s typical (no almanac or RTC)	
Warm Start:	< 30 s typical (almanac and RTC)	
Hot Start:	< 10 s typical (almanac, RTC and position)	
Maximum Speed:	1,850 kph (999 kts)	
Maximum Altitude:	18,288 m (60,000 ft)	
Differential Options:	SBAS, Autonomous, External RTCM, RTK, L-band (Atlas) DGPS	

L-Band Sensor Specifications

Receiver Type:	Single Channel
Channels:	1525 to 1560 MHz
Sensitivity:	-140 dBm
Channel Spacing:	5.0 kHz
Satellite Selection:	Manual and Automatic
Reacquisition Time:	15 seconds (typical)

Communications

Serial Ports:	4 full-duplex 3.3 V CMOS (3 main serial ports, 1 differential-only port), 1 USB Host, 1 USB Device, 2 CAN
Interface Level:	3.3V CMOS
Baud Rates:	4800 - 115200
Correction I/O Protocol:	Hemisphere GNSS proprietary, ROX Format, RTCM v2.3, RTCM v3.2, CMR, CMR+
Data I/O Protocol:	NMEA 0183, Crescent binary ³
Timing Output:	1PPS, CMOS, active high, rising edge sync, 10 kΩ, 10 pF load
Event Marker Input:	CMOS, active low, falling edge sync, 10 kΩ, 10 pF load

Power

Input Voltage:	3.3 VDC +/- 5%
Power Consumption:	1.9 W GPS L1/L2 GLONASS G1/G2 2.33 W all signals no L-Band 2.9 W with L-Band
Current Consumption:	770 mA nominal dual frequency GPS + GLONASS + BeiDou 15 VDC maximum
Antenna Voltage:	
Antenna Short Circuit Protection:	Yes
Antenna Gain Input Range:	10 to 40 dB
Antenna Input Impedance:	50 Ω

Environmental

Operating Temperature:	-40°C to +85°C (-40°F to +185°F)
Storage Temperature:	-40°C to +85°C (-40°F to +185°F)
Humidity:	95% non-condensing (when installed in an enclosure)
Shock and Vibration:	Shock: Mechanical Shock: EP455 Section 5.14.1 Operational (when mounted in an enclosure with screw mounting holes utilized) Vibration: EP455 Section 5.15.1 Random

Mechanical

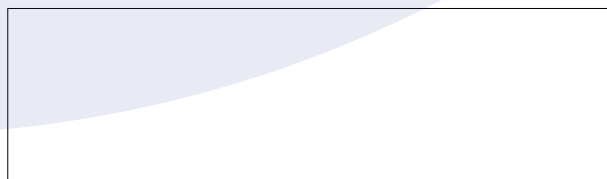
Dimensions:	P326: 71 L x 41 W x 13 H (mm) P327: 72 L x 41 W x 13 H (mm)
Weight:	22 g (< 0.78 oz)
Status Indications (LED):	Power, GPS lock, Differential lock, DGPS position
Power/Data Connector:	P326: 34-pin male header, 0.05" (1.27 mm) pitch P327: 20-pin male header, 0.08" (2 mm) pitch
Antenna Connectors:	MCX, female, straight

¹ Depends on multipath environment, number of satellites in view, satellite geometry baseline length (for local services) and ionospheric activity

² Depends on multipath environment, number of satellites in view, satellite geometry and ionospheric activity

³ Hemisphere GNSS proprietary

Authorized Distributor:



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