Crescent OEM Board

Versatile DGPS Receiver Module

Powered by Crescent

Create more advanced applications and sophisticated configurations with the Crescent® OEM Board's higher update rates, noise-reduced raw measurements, additional memory, and higher processor capability.

The 12-channel, L1 DGPS board features SBAS support, along with Hemisphere GPS' exclusive COAST™ and e-Dif® technologies, making it easy to get an accurate signal, anytime, anywhere. Accuracy and stability are excellent due to Crescent Receiver Technology's more accurate code phase measurements, multipath mitigation improvements, and fewer discrete receiver components.

Key Crescent OEM Board Advantages

- Extremely affordable DGPS solution with update rates of up to 20 Hz
- Fast start-up and reacquisition times allow you to get right to work
- High-precision, differential positioning accuracy of 60 cm, 95%
- Exclusive e-Dif option where other differential signals are not practical
- COAST technology maintains accurate solutions for 40 minutes or more after loss of differential signal
- Small form and low-power consumption design is ideal for easy integration
- Compatible with other differential sources including our L-Dif™ and RTK firmware applications

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GPS Sensor Specifications

Receiver Type:	L1, C/A code, with carrier phase smoothing
Channels:	12-channel, parallel tracking (10-channel when tracking SBAS)
SBAS Tracking:	2-channel, parallel tracking
Update Rate:	20 Hz maximum
Horizontal Accuracy:	<0.02 m 95% confidence (RTK [1,2,3]) <0.28 m 95% confidence (L-Dif [1,2,3]) <0.6 m 95% confidence (DGPS[1]) <2.5 m 95% confidence (autonomous, no SA[1])
Cold Start:	60 s (no almanac or RTC)
Warm Start:	45 s (valid almanac and RTC)
Hot Start:	20 s (valid almanac, RTC, and <2 hours since last fix)
Reacquisition:	<1 s
Maximum Speed:	1607 kph (999 mph)
Maximum Altitude:	18,288 m (60,000 ft)

Communications

Serial Ports:	3 full duplex 3.3 V CMOS, 1 USB
Baud Rates:	4800 - 115200
Correction I/O Protocol:	RTCM SC-104 v2.x (SBAS/Beacon), Proprietary format (L-Dif/RTK)
Data I/O Protocol:	NMEA 0183, SLX binary
Timing Output:	1 PPS (HCMOS, active high, rising edge sync, 10 kΩ, 10 pF load)
Event Marker Input:	HCMOS, active low, falling edge sync, 10k Ω

Environmental

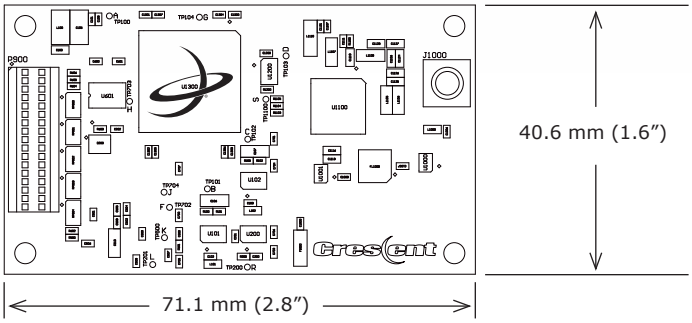
Operating Temperature:	-30°C to +70°C (-25°F to +165°F)
Storage Temperature:	-40°C to +85°C (-40°F to +185°F)
Humidity:	95% non-condensing
Shock and Vibration:	EP 455

Power

Input Voltage:	3.3 VDC +/- 3%
Power Consumption:	<1 W nominal
Current Consumption:	300 mA nominal
Antenna Voltage Input:	15 VDC maximum
Antenna Short Circuit Protection:	Yes
Antenna Gain Input Range:	10 to 40 dB
Antenna Input Impedance:	50 Ω

Mechanical

Dimensions:	71.1 L x 40.6 W x 12.0 H mm (2.8 L x 1.6 W x 0.5 H in)
Weight:	<20 g (<0.75 oz)
Status Indication (LED):	Power, GPS lock, differential lock, and DGPS position
Power/Data Connector:	34-pin male header, 0.05” pitch
Antenna Connector:	MCX, female, straight



[1] Depends on multipath environment, antenna selection, number of satellites in view, satellite geometry, and ionospheric activity
[2] Up to 5km baseline length
[3] Depends also on baseline length

Authorized Distributor:

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