

# EPOCH™ 10 L1 GPS SYSTEM



## SPECIFICATION SHEET

### GENERAL

When connected to the Spectra Precision® Recon® data collector:

- CompactFlash card formatting
- Application file and data management
- Color touch-screen indicators for satellite tracking, data logging, and power

### STANDARD ACCESSORIES

#### Measurements

- Advanced GPS L1 technology
- Unfiltered, unsmoothed pseudorange measurement data for low noise, low multipath error, and high dynamic response
- Very low noise L1 measurements with 1 mm precision at 1 Hz
- 12 Channels L1 C/A Code, L1 Full Cycle Carrier, WAAS/EGNOS<sup>1</sup>
- WAAS/EGNOS differential positioning accuracy typically < 3 m 3DRMS<sup>2</sup>

#### Static GPS surveying<sup>3</sup>

Horizontal . . . . . ± 5 mm + 0.5 ppm × (baseline length) RMS  
Vertical . . . . . ± 5 mm + 1 ppm × (baseline length) RMS

#### Kinematic surveying<sup>3</sup>

Horizontal . . . . . ± (10 mm + 1 ppm) × (baseline length) RMS  
Vertical . . . . . ± (20 mm + 1 ppm) × (baseline length) RMS

### CERTIFICATION

Class B Part 15 FCC certification, CE Mark approval, C-tick approval, and Canadian FCC.

### NOTICE TO OUR EUROPEAN UNION CUSTOMERS

For product recycling instructions and more information, please go to [www.spectraprecision.com/ev.shtml](http://www.spectraprecision.com/ev.shtml).

#### Recycling in Europe:

To recycle Spectra Precision WEEE (Waste Electrical and Electronic Equipment) products that run on electrical power, call +31 497 53 24 30, and ask for the "WEEE Associate". Or, mail a request for recycling instructions to: Spectra Precision, c/o Menlo Worldwide Logistics, Meerheide 45, 5521 DZ Eersel, NL.



### TECHNICAL SPECIFICATIONS

#### Physical

Dimensions (W×H×L) . . . . . 9.5 cm × 4.4 cm × 24.2 cm  
(3.7 in × 1.7 in × 9.5 in)  
Weight . . . . . with internal batteries: 0.62 kg (1.37 lb)  
Casing . . . . . lightweight, fully sealed toughened industrial plastic  
Sand and Dust . . . . . tested to IP6X standards  
Waterproof . . . . . tested to IPX7 standards  
Shock and vibration . . . . . tested and meets the following environmental standards:  
Shock . . . . . MIL-STD-810F to survive a 1 m (3.28 ft) drop onto concrete  
Vibration . . . . . MIL-STD-810-F on each axis

#### Environmental

Power . . . . . input 5.0 V DC  
Power consumption . . . . . 0.6 W receiver and antenna  
Battery . . . . . up to 8 hours data logging  
Battery weight . . . . . 0.20 kg (0.44 lb)  
Battery charger . . . . . internal with external AC power adapter  
Temperature  
Operating temperature<sup>4</sup> . . . . . -30 °C to +60 °C (-22 °F to +140 °F)  
Long-term storage . . . . . -40 °C to +70 °C (-40 °F to +158 °F)  
Humidity . . . . . 100%, condensing

#### Communications:

- 1 x external DC power port
- 1 x RS232 serial port
- Integrated USB for data download speeds in excess of 1 Mb/s
- External GPS antenna connector
- 2 x CompactFlash removable data storage ports

#### Data Logging

- More than 400 hours L1 logging at 15 seconds with 6 satellites with 64 MB Recon data collector memory
- 1 Hz positioning and data logging

### EPOCH L1 GPS ANTENNA

Dimensions . . . . . 16.2 cm (6.38") diameter, 6.2 cm (2.44") height  
Frequency . . . . . 1575.42 ± 10 MHz  
Antenna Gain . . . . . 42 dB min (Amp plus Antenna)  
Polarization . . . . . right-hand circular  
Voltage . . . . . 2.95 V DC to 11.5 V DC (max 18 V DC – not for continuous operation)  
Current . . . . . 60 mA max  
Connector . . . . . TNC Bulkhead  
Weight . . . . . 0.39 kg (0.86 lb)  
Temperature:  
Operating temperature . . . . . -50 °C to +85 °C (-122 °F to +185 °F)  
Storage temperature . . . . . -50 °C to +85 °C (-122 °F to +185 °F)  
Mounting . . . . . 5/8-11 thread

<sup>1</sup> WAAS/EGNOS capable GPS Receiver dependant on field software application.

<sup>2</sup> Depends on WAAS/EGNOS system performance.

<sup>3</sup> Accuracy may be subject to conditions such as multipath, obstructions, satellite geometry, and atmospheric parameters.

Always follow recommended survey practices. Kinematic surveying capable GPS receiver dependant on field software application. Baseline length is expressed in kilometers.

<sup>4</sup> Receiver operates normally to -30 °C (-22 °F) but some office-based functions such as USB download is not recommended at temperatures below freezing.

Specifications are subject to change without prior notice.

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