# SPECTRA PRECISION®

## EPOCH® 25 L1/L2 GPS SYSTEM

SPECSHEET

### GENERAL

**When connected to the data collector:**

- Color touch-screen indicators for satellite tracking, data logging
- Application programs, job, and data management
- CompactFlash card removable memory

### TECHNICAL SPECIFICATIONS

**Static and FastStatic GPS surveying[2]**

Horizontal . . . . . ±5 mm +0.5 ppm RMS
Vertical . . . . . .±5 mm +1 ppm RMS

**Real-Time* / Postprocessed Kinematic surveying[2]**

Horizontal . . . . . ±10 mm + 1 ppm RMS
Vertical . . . . . ±20 mm + 1 ppm RMS
Initialization . . . . . Automatic OTF (on-the-fly) while moving
Initialization time . . . . . .Typically <30 seconds
Start-up . . . . . <90 seconds from power on to positioning
<30 seconds with recent ephemeris

**Code differential GPS positioning[2]**

WAAS/EGNOS differential positioning accuracy[1] . .Typically <5 m 3DRMS[3]

**Measurements**

- Highly accurate GPS L1/L2 technology
- Unfiltered, unsmoothed pseudorange measurement data for low noise, low multipath error, low time domain correlation and high dynamic response
- Very low noise L1 and L2 carrier phase measurements with 1 mm precision in a 1 Hz bandwidth
- Low elevation satellite tracking technology
- 24 channels L1 C/A Code, L1/L2 Full Cycle Carrier, WAAS/EGNOS[1]
- NMEA-0183: AVR, GSV, HDT, VGK, VHD, ROT, GGK, GGA, GSA, ZDA, VTG, GST, PJT, and PJK
- 5 Hz position rate

**Physical**

Dimensions (W×H x D)
GPS receiver . . . . 14.5 cm × 8.1 cm × 14.5 cm (5.7 in x 3.2 in x 5.7 in)
EPOCH L1/L2 Antenna . . . . . 16.1 cm diameter x 5.8 cm high
(6.35 in diameter x 2.3 in high)
Weight
Base. . . . . 0.93 kg (2.0 lb)
Rover . . . . . 1.18 kg (2.6 lb) with internal battery,
internal radio*, UHF antenna*
EPOCH L1/L2 Antenna . . . . . 0.55 kg (1.20 lb)
Ports
I/O . . . . . DE-9, RS232
GPS Antenna. . . . . TNC
Data Link antenna . . . . . BNC (Rover only)*

*1 WAAS/EGNOS capable GPS Receiver dependant on field software application.*
*2 Accuracy and reliability may be subject to anomalies such as multipath, obstructions, satellite geometry, and*
*atmospheric conditions. Always follow recommended survey practices.*
*3 Depends on WAAS/EGNOS system performance.*
*4 External Bluetooth Module rated to –40 °C.*

** Not applicable to Static only receiver.*

*Specifications are subject to change without prior notice.*

### ENVIRONMENTAL

Operating temperature[4]. . . . . –20 °C to +60 °C (–4 °F to +140 °F)
Storage temperature . . . . . –40 °C to 75 °C (–40 °F to 167 °F)
Humidity . . . . . 100%, condensing
Water/Dust . . . . . IEC 144/855420 IP67, water tight and dust proof
Shock and vibration: . . . . . Tested and meets the following environmental standards:
Shock . . . . . Operating: Designed to survive a 2 m (6.6 ft) pole drop onto concrete
Vibration. . . . . MIL-STD-810F, Method 514.5, Procedure II, Category 5

### ELECTRICAL

- Power 0 to 20 V DC external power input with over-voltage protection on Port 1and Port 2 (DE-9)
- Rechargeable, 7.4 V, 3.6 Ah Lithium-Polymer internal battery
- Power consumption is <2.5 W, in RTK mode with internal radio
  Average operating times on internal battery:
  – RTK: 8 hours
  – Static/PPK: >10 hours

### COMMUNICATIONS*

**Base:**

- Pacific Crest HPB positioning data link
- OTA 9600 bps Transparent GMSK
- RTCM 2.1, 2.2, 2.3, 3.0, CMR, CMR+

**Rover:**

- Integrated receive-only UHF data link
- RTCM 2.X, 3.X, CMR+

### NOTICE TO OUR EUROPEAN UNION CUSTOMERS

For product recycling instructions and more information, please go to http://www.spectraprecision.com/weee_rohs.aspx

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.

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PN 022487-11B (01/09)

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