SPECTRA PRECISION®

PROMARK™ 800 GNSS RECEIVER

SPECSHEET

GENERAL

- 120 channels for multi-constellation GNSS support
- RTK rover/base, postprocessing
- RTK networks: VRS, FKP, MAC
- Limited RTK in standard (baseline 3 km)
- RTC bridge
- NTRIP protocol

TECHNICAL SPECIFICATIONS

Postprocessed GNSS surveying[1, 2]

Static, Rapid Static	
Horizontal	5 mm + 0.5 ppm RMS
Vertical	10 mm + 0.5 ppm RMS
Long Static[3]	
Horizontal	3 mm + 0.5 ppm RMS
Vertical	6 mm + 0.5 ppm RMS
Kinematic	
Horizontal	10 mm + 1.0 ppm RMS
Vertical	20 mm + 1.0 ppm RMS

Real-Time GNSS surveying (RMS)[1, 2]

Real-Time Kinematic Position (fine mode)	
Horizontal	±10 mm + 1.0 ppm RMS
Vertical	±20 mm + 1.0 ppm RMS
Instant-RTK® Initialization	Independent of GPS availability when other GNSS signals are available[1]
Initialization time	Typically 2-second initialization for baselines <20 km
Initialization reliability	99.9% reliability
RTK Initialization range	40 km
SBAS (WAAS/EGNOS/MSAS)	
Horizontal	<50 cm RMS
Vertical	<1 m RMS
Real-Time DGPS position	
Horizontal	25 cm + 1 ppm RMS in typical conditions[2]
Vertical	50 cm + 1 ppm RMS in typical conditions[2]

Measurements

- New z-BLADE technology for optimal GNSS performance
  - New Ashtech GNSS centric algorithm: Fully independent GNSS satellites tracking and processing[4]
  - Fully independent code and phase measurements
  - Quick signal detection engines for fast acquisition and re-acquisition of GNSS signals
  - Advanced multi-path mitigation
- Satellite signals tracked simultaneously:
  - GPS L1 C/A L1/L2 P-code, L2 C, L5, L1/L2/L5 full wavelength carrier
  - GLONASS L1 C/A and L2 C/A, L1/L2 full wavelength carrier
  - GALILEO E1 and E5 (including GIOVE-A/GIOVE-B test satellites[5])
  - SBAS: code and carrier (WAAS/EGNOS/MSAS)

PHYSICAL

Dimensions (WxHxD)	22.8x8.4x18.8 cm (9x3.3x7.4 in)
Weight (with battery)	1.4 kg (3.1 lb)
User interface	Graphical LED display
I/O interface	RS232, RS422, USB, Bluetooth, PPS

ENVIRONMENTAL

Operating temperature	–30° to +55°C (–22° to +131°F)
Storage temperature	–40° to +70°C (–40° to +158°F)
Dust/water	IP67
Humidity	100% condensing
Shock	2 m pole drop

ELECTRICAL

- Rechargeable, 7.4 V 4600 mAh Li-Ion internal battery
- Average operating time on internal battery: 8 hours (GSM and UHF off)
- Power 6 V DC to 28 V DC external power input with over-voltage protection on port PWR (3 pin)

COMMUNICATIONS AND DATA STORAGE

- 128 MB internal memory (expandable through USB)
- Up to 400 hours of 15 sec. raw GNSS data from 18 satellites
- Up to 20 Hz real-time raw data (code and carrier) and position output
- Recording Interval: 0.05–999 seconds
- Internal optional communication modules
  - Pacific Crest UHF
  - U-Link Rx
  - GSM/GPRS/EDGE/3.5G quad-band
- External optional UHF transmitters
  - Pacific Crest UHF
  - U-Link TRx

CORRECTION FORMATS

- Supported data formats: ATOM (Ashtech Optimized Messaging), RTCM 2.3–3.1, CMR, CMR+, DBEN, LRK
- NMEA-0183 messages output

1 Accuracy and TTFF specifications may be affected by atmospheric conditions, signal multipath, satellite geometry and corrections availability and quality.
2 Performance values assume minimum of five satellites, following the procedures recommended in the product manual. High multi-path areas, high PDOP values and periods of severe atmospheric conditions may degrade performance.
3 Long baselines, long occupations, precise ephemeris used.
4 Each GNSS constellation is processed independently, and combined for optimal performance.
5 Galileo Commercial Authorization: Receiver technology having Galileo capability to operate in the Galileo frequency bands and using information from the Galileo system for future operational satellites is restricted in the publicly available Galileo open Service Signal-In-Space Interface Control document (GAL OS SIS ICD) and is not currently authorized for commercial use. Receiver technology that tracks the GIOVE-A and GIOVE-B test satellites uses information that is unrestricted in the public domain in the GIOVE A + B Navigation Signals-In-Space Interface Control document. Receiver technology having developmental GIOVE-A and B capability is intended for signal evaluation and test purposes.

Specifications are subject to change without prior notice.

SPECTRA PRECISION
10355 Westmoor Drive, Suite #100
Westminster, CO 80021
USA
+1-720-587-4700 Phone
888-477-7516 (Toll Free in USA)
www.spectraprecision.com

www.spectraprecision.com
sales@spectraprecision.com
support@spectraprecision.com

PN 022487-175 (10/11)

SPECTRA PRECISION AUTHORIZED DISTRIBUTION PARTNER