ProMark 120

- Outstanding GPS & GLONASS performance
- Extended productivity in obstructed conditions
- Unparalleled ease-of-use in the field
- Intuitive ProMark Field software
- Lightweight and rugged handheld design
- Versatile solution: postprocessing, RTK, GIS
- All-day-long operation with extended memory and battery

The Spectra Precision ProMark™ 120 GNSS system is the most versatile postprocessing solution, designed for easy and efficient land survey applications. The ProMark 120 solution includes a rugged GNSS receiver running the Windows® Embedded Handheld 6.5 operating system, ProMark Field software and an ASH-660 (L1 GPS/GLONASS) antenna.

Thanks to the embedded Z-Blade technology as well as GPS and GLONASS signals tracking, ProMark 120 provides high-precision measurements even in very demanding or obstructed environments. Its exceptional postprocessing performance and short occupation time deliver a very productive solution to field users.

The very intuitive ProMark Field software is designed for simple and trouble-free use providing all necessary tools without any unnecessary or complicated features. Lightweight, but rugged and waterproof handheld design, all-day-long autonomy, and large memory make ProMark 120 a perfect solution for easy and efficient surveying.

Designed as a scalable solution, ProMark 120 GNSS system can be easily upgraded to such capabilities as GLONASS, RTK or GPRS and be used not only in postprocessing but also in RTK or GIS applications. Built on the state-of the-art Windows Embedded Handheld 6.5 platform with embedded wireless

the-art Windows Embedded Handheld 6.5 platform with embedded wireless communications, ProMark 120 is a truly versatile and complete offering.

1 Accuracy and initialization specifications may be affected by atmospheric conditions, signal multipath, satellite geometry and corrections availability and quality. Position accuracy specifications are for horizontal positioning. Vertical error is typically < 2 times horizontal error.
2 Performance values assume a minimum of five satellites and following the procedures recommended in the product manual.High multipath areas, high PDOP values and periods of sever atmospheric conditions may degrade performance.
3 Steady state value for baselines < 50 km after sufficient convergence time.
4 Each GNSS constellation is processed independently, and combined for optimal performance.
5 No BT or WLAN are used, backlight at default setting (50% brightness), varies with temperature.

GNSS System

GENERAL

- 45 all-in-view channels
- L1 GPS & GLONASS solution
- Simple & easy-to-use ProMark Field software
- Extended operating time
- Integrated Bluetooth and GSM/GPRS technology

TECHNICAL SPECIFICATIONS

Static GNSS surveying[1, 2, 3]

Static, rapid static

Horizontal	5 mm + 0.5 ppm
Vertical	10 mm + 0.5 ppm

Kinematic

Horizontal	10 mm + 1 ppm
Vertical	20 mm + 1 ppm

Real-time GNSS surveying (RMS)[1, 2, 3]

Real-time kinematic position

Horizontal	10 mm + 1 ppm
Vertical	20 mm + 1 ppm

Initialization time

- < 3 min typical (GPS+GLONASS)
- < 5 min typical (GPS only)

Initialization reliability: up to 99.9%

RTK initialization range

- Up to 10 km typical (GPS+GLONASS)

PHYSICAL

Dimensions (W × H x D)
19.0 cm x 9.0 cm x 4.3 cm
(7.5 in x 3.5 in x 1.7 in)

Weight (with battery)
0.62 kg (1.43 lb)

User interface
Graphical LED display
Color TFT High resolution display sunlight readable with touch screen

Size
3.5" portrait

CPU
806 MHz Marvell PXA 320

ENVIRONMENTAL

Operating temperature
–20° to +60°C (–4° to +140°F)

Storage temperature
–25° to +70°C (–13° to +158°F)

Dust/Water
Proof

Shock
Free pole drop

ELECTRICAL

- Up to 7 km typical (GPS only)

SBAS (WAAS/EGNOS/MSAS/GAGAN)

Horizontal	<50 cm
Vertical	<1 m

Real-time DGPS position

Horizontal	30 cm + 1 ppm in typical conditions[2]
Vertical	60 cm + 1 ppm in typical conditions[2]

MEASUREMENTS

Z-Blade technology for optimal GNSS performance

- Fully independent code and phase measurements
- Advanced multi-path mitigation

Satellite signals tracked simultaneously

- GPS L1C/A, L1P
- GLONASS L1C/A
- SBAS (WAAS/EGNOS/MSAS/GAGAN)

- Rechargeable, 6600 mAh Li-Ion internal battery
- Average operating time on internal battery: >8 hours (GNSS on)5
- Power 9 V DC to 28 V DC external power input

COMMUNICATIONS AND DATA STORAGE

Cellular

- Built-in GPRS, EDGE class 12 modem
- Quad-band 850/900MHz, 1800/1900 MHz

Bluetooth

- Bluetooth 2.1 (class 2) with DER
- Profiles: SPP, DUN, FTP, OPP, HSP, A2DP

Other

- Wireless LAN 802.11b/g (SDIO slot)

Memory

- 256 MB internal SDRAM memory
- 2 GB internal NAND flash memory
- SDHC memory card slot

Correction formats

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