

BLADE TECHNOLOGY

# ProMark<sup>™</sup> 200

All-in-one Rover Solution for Network RTK

DUAL-FREQUENCY



# ProMark 200

ProMark 200 is the most cost-effective dual-frequency network RTK solution from Ashtech. Embedded BLADE technology provides outstanding, longrange RTK performance, fast initialization and centimeter-level accuracy. Together with the comprehensive Ashtech FAST Survey<sup>™</sup> field software, the ProMark 200 meets the demanding expectations from professional land surveyors.

Ashtech ProMark 200 RTK rover includes extended wireless network communications, large memory, fast processor, Windows Mobile 6.5 operating system; all in a lightweight and very rugged handheld form factor for maximum mobility. The mix of exceptional RTK performance and compact design makes the ProMark 200 an extremely powerful and appealing network RTK rover solution.

# **Advanced GNSS Solution**

- Ashtech BLADE technology for precise RTK
- All-in-view, dual-frequency rover
- Handheld real-time cm-level accuracy

# Designed For Efficient Network RTK

- Fast fix with short initialization time
- Built-in GSM/GPRS, WLAN, and Bluetooth wireless connectivity
- Lightweight and rugged handheld design for comfortable use

# Best Value For A High-End Survey Solution

- Minimal cost for maximum productivity
- Powerful and complete FAST Survey field software
- Versatile handheld for pre-surveys and GIS jobs



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# FAST Survey Field Software

Advanced FAST Survey field software meets the most demanding survey requirements. It includes topographic features typically associated with dual-frequency, and provides extensive data formats and local coordinate system support. Added options make it possible to interwork with a wide range of survey instruments and accessories to run complete survey jobs, including site calibration, stake out, and survey projects where total stations are used.

# **GNSS Solutions Office Software**

GNSS Solutions is a comprehensive software package that provides all the tools necessary to successfully process GNSS survey data. It includes advanced error detection and quality analysis tools to ensure accurate and reliable results. Loop closures, automatic repeat, observation analysis, and least-squares adjustments are integral components of the software. Raster and vector map formats can be imported to enable background maps to be combined with land survey projects and to prepare stake out missions in the office.



#### **GNSS Characteristics**

- 45 parallel all-in-view channels - GPS
  - GLONASS
  - L1 C/A, P(Y)-code, full wavelength carrier
  - L2 P(Y)-code, L2C, L2 full wavelength carrier
  - SBAS: WAAS/EGNOS/MSAS
- Fully independent code and phase measurements
- Advanced multipath mitigation
- Ashtech BLADE technology for optimal
- performance Up to 20 Hz real-time GPS, GLONASS, SBAS raw data (code and carrier) and position output
- Supported data formats: ATOM (Ashtech Optimized Messaging), RTCM-2.3, RTCM-3.1, CMR, CMR+, DBEN, LRK
- NMEA 0183 messages output
- RTK Network: VRS, FKP, MAC

#### Accuracy Specifications (HRMS) 123

- RTK: 10 mm + 1 ppm typical
- Static post-processing: 5 mm + 1 ppm typical
- Kinematic post-processing: 12 mm + 2 ppm typical
- DGPS: < 25 cm + 1 ppm typical
- SBAS: < 50 cm

#### **RTK Initialization (on-the-fly)**

- Initialization time
- < 1 min typical</p>

#### Range

Up to 40 km typical

### Reliability

Up to 99.9% typical

### Processor

- Marvell<sup>®</sup> PXA 320
- Frequency clock: 806 MHz

#### **Operating System**

- Microsoft Windows<sup>®</sup> Mobile 6.5
- Languages available: English, French, German, Greek, Italian, Japanese, Korean, Portuguese, Spanish, Simplified & Traditional Chinese<sup>4</sup>
- Software package includes:
  - GNSS Toolbox for GNSS control
  - Internet Explorer
  - E-mail client Microsoft Office Mobile
  - Transcriber (handwriting recognition)
  - ActiveSync

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#### Communication

#### 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)

#### **Physical Characteristics**

#### Size

Receiver: 190x90x43 mm (7.5x3.5x1.7 in)

### Weight

- Receiver only: 0.48 kg (1.06 lb)
- Receiver with battery: 0.62 kg (1.43 lb)

### **User Interface**

#### Keyboard

- Alphanumeric virtual keyboard
- 4-way navigation, OK, menu, escape, zoom in/out, contextual keys

#### Display

- Color TFT High resolution display sunlight readable with touch screen
- Size: 3.5" portrait

### Memory

- SDRAM: 256 MB
- User data storage: 1 GB NAND Flash (non volatile)
- SDHC memory card slot

### **Environmental Characteristics**

- Operating temperature: -20° to +60°C
- (-4 to 140°F)
- Storage temperature: -25° to +70°C
- . (-13 to 158°F)
- Humidity: 90%
- Waterproof .
- Vibration and Shock: ETS300 019, MIL-STD-810 method 514.5

## Free pole drop

### **Power Characteristics**

- Removable battery: Li-Ion, 6600mAh .
- Battery life: > 8 hrs @ 20 °C with GNSS on 5
- Charging time: 3 hours

#### . External power: 9-28 VDC

#### **Multimedia & Sensors**

- Camera 3M pixels .
- E-Compass
- G-Sensor
- Microphone & Speaker

Ashtech follows a policy of continuous product improvement: specifications and descriptions are thus subject to change without notice. Please contact Ashtech for the latest product information

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#### Software / Firmware Options

- **Firmware options**
- GLONASS
- Fast Output
- Software options
- ProMark Field software
- GNSS Solutions L1/L2 post-processing

#### Standard Accessories

- Integrated stylus
  - Docking station
  - Unit charging
  - RS232 Interface
  - USB Host and Device
- Additional battery charging slot

Antenna vertical extension

ASH-661, L1/L2 GNSS antenna

Kinematic initializer bar w/ quick release

<sup>(1)</sup> Accuracy and initialization specifications may be affected by atmospheric conditions, signal multipath, satellite geometry and

(2) Performance values assume a minimum of five satellites and

atmospheric conditions may degrade performance

<sup>(3)</sup> Steady state value for baselines < 50 km after sufficient convergence time.

(4) Loaded at the time of purchase—no further OS language

<sup>(5)</sup> No BT or WLAN are used, backlight at default setting (50%

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following the procedures recommended in the product manual. High multipath areas, high PDOP values and periods of sever

corrections availability and quality. Position accuracy specifications are for horizontal positioning. Vertical error is typically < 2 times

Automobile external GPS antenna

- Universal A/C adapter
- USB data cable Field bracket

Field soft bag

Carrying case

horizontal error.

modification is possible

brightness), varies with temperatur

(\*) Including all available options

**Optional Accessories** 

HI tape 

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