



## HIGH PRODUCTIVITY GPS SURVEYING FOR CONTROL AND TOPOGRAPHY

# ProMark2

### THE ASHTECH GPS ADVANTAGE

The ProMark2™ Surveying System delivers a unique combination of centimeter level survey accuracy and meter level navigation in one convenient system. Utilize integrated WAAS/EGNOS aided navigation to locate the survey point, collect GPS data with the receiver's on-board software then process the results with logical, user friendly PC software. Putting the power of GPS to work for your organization has never been easier and more affordable.

### FIND A POINT THEN SURVEY IT

Locating and surveying hard to find points is a snap with navigation and data collection capabilities of ProMark2. After navigating to a point using the unit's internal map database and known coordinates or street address<sup>(1)</sup>, transitioning to survey mode requires only a few simple keystrokes. ProMark2 features a LCD display and intuitive user interface for performing a range of GPS data collection.

Surveying centimeter accurate control, with speed far beyond that of an optical instrument, requires minimal user interaction once the ProMark2 unit and its precision antenna are set up over a point. The receiver software prompts the user for attribute information and indicates when sufficient data has been collected.

### NEW KINEMATIC CAPABILITY

Performing topographic surveys using ProMark2 with kinematic



dramatically increases the efficiency of feature collection. A compact, lightweight mobile system featuring ample batteries and memory to last all day, the ProMark2 can keep up with even the fastest field crew. Unlike optical surveying equipment, GPS has no line-of-sight limitations between points or limits on the number of rovers working from the same control point. ProMark2 is a powerful stand-alone surveying solution and can also be used along with optical instruments in cases where both are needed. ProMark2 is a valuable addition to any surveying project.

1. Street map coverage may vary

### Satellite Tracking

- 12 independent GPS and WAAS/EGNOS channels
- L1 C/A code and full wavelength carrier

### Accuracy Specifications

#### Static Survey Performance<sup>(1)</sup> (rms)

- Horizontal: 0.005 m + 1 ppm (0.016 ft + 1 ppm)
- Vertical: 0.010 m + 2 ppm (0.032 ft + 2 ppm)
- Azimuth: <1 arcsecond
- Observation Time:  
Ranges from 20 to 60 minutes depending on distance between ProMark2 receivers and other environmental factors<sup>(1)</sup>

#### Kinematic Survey Performance

- Horizontal: 0.012 m + 2.5 ppm (0.039 ft + 2.5 ppm)
- Vertical: 0.015 m + 2.5 ppm (0.049 ft + 2.5 ppm)
- Minimum Recommended Point Observation Time: 15 seconds
- Minimum Recommended Initializer Bar Occupation: 5 minutes

#### Real-Time Performance with WAAS (rms)

- Horizontal: <3 m (10 ft) w/ Ashtech ProAntenna  
5 m (16.5 ft) w/ internal antenna
- Observation Time: 1 second

### Physical Characteristics

#### Weight

- Receiver: 0.14 kg (0.32 lb)
- External Antenna: 0.45 kg (1.00 lb)
- Batteries: 0.05 kg (0.11 lb)

#### Size

- Receiver: 15.8 cm H x 5.1 cm W x 3.3 cm D (6.2 in H x 2.0 in W x 1.3 in D)
- External Antenna: 19 cm DIA x 9.6 cm H (7.5 in DIA x 3.8 in H)

### User-Interface

- Display: 5.6 cm H x 3.4 cm W (2.2 in H x 1.3 in W)
- Keyboard: 12 buttons
- Communications: 1 RS232 port for PC interface at 2400 –115,200 baud

### Electrical Characteristics

#### Power

- Battery Type: 2 AA-cell internal
- Battery Life: Up to 8 hours with alkaline batteries @ 25°C (77°F)
- External power port for extended operation time

### Environmental Characteristics

#### Receiver

- Operating Temp.: -10°C to 60°C (14°F to 140°F)
- Storage Temp.: -20°C to 70°C (-4°F to 158°F)
- Weather: MIL-STD 810E for wind-driven rain
- Shock: 1.5 meter (4.9 ft) drop to concrete

#### Ashtech ProAntenna

- Operating Temp.: -55°C to 85°C (-67°F to 185°F)
- Weather: Waterproof
- Shock: 2 m (6.6 ft) drop to concrete

### Datalogging Characteristics

#### Recording Interval

- 1 - 30 seconds

#### Internal Memory Capacity

- 8 MB
- Store up to 14 hours of 10-satellite data @ 2 second interval

### System Configurations

#### ProMark2 Standard Configuration

- Two ProMark2 receiver systems
- One Ashtech Solutions Post-processing Software

### ProMark2 Pro Configuration

- Three ProMark2 receiver systems
- One Ashtech Solutions Post-processing Software

### Standard System Accessories

- Ashtech ProAntenna w/cable
- Padded field bag
- HI measurement device
- Receiver field bracket
- System user's guides

### Optional System Accessories

- Receiver vehicle bracket
- Adjustable leg tripod
- Tribach
- Tribach adapter
- Fixed-height GPS tripod
- Range Pole

### Ashtech Solutions Software

Ashtech Solutions™ post-processing software provides simple and accurate ProMark2 data processing within a user-friendly Windows interface. Key software functions include:

- Survey mission planning
- Automatic vector processing
- Least-squares network adjustment
- Data analysis and quality control tools.
- Coordinate transformations
- Reporting
- Exporting

### Ashtech Solutions Hardware Requirements

- Windows 95 / 98 / ME / NT 4.0 or later / 2000 / ME / XP
- Pentium 133 or higher
- 32 MB RAM
- 90 MB disk space required for installation

<sup>(1)</sup> Accuracies assume minimum of 5 satellites, following the procedures recommended in the product manual. High-multipath areas, poor satellite geometry, and periods of high-activity atmospheric conditions will degrade accuracy. Post-processing with Ashtech Solutions Software (L1).

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Thales Navigation follows a policy of continuous product improvement; specifications and descriptions are thus subject to change without notice.

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