



HIGH PRODUCTIVITY GPS SURVEYING FOR CONTROL AND TOPOGRAPHY

ProMark2

THE ASHTECH GPS ADVANTAGE

The Ashtech® ProMark2™ survey system from Thales Navigation Professional Products 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 the navigation and data collection capabilities of ProMark2 from Thales Navigation. After navigating to a point using the unit's internal map database and known coordinates or street address⁽¹⁾, transitioning to survey mode requires only a few simple keystrokes. ProMark2 features an LCD display and intuitive user interface for performing a range of GPS data collection.

With centimeter-accurate control and speed far beyond that of an optical instrument, the ProMark2 requires minimal user interaction once the 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



capabilities 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.

Satellite Tracking

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

Accuracy Specifications

Static Survey Performance¹ (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 factors¹

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
- Tribraich
- Tribraich 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

¹ Accuracies assume minimum of five 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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