

# GPS Pathfinder Systems

*GPS systems for better data management and decision-making*

## Key features and benefits

- Fast map display
- Easy to use graphical interface
- High-performance DGPS receivers
- Better accuracy with postprocessing
- Rugged and field proven

Trimble's GPS Pathfinder® Systems are effective tools for data collection, update, and processing. This versatile family offers a variety of software, data collector, and GPS receiver options that are powerful, easy to use, and integrate seamlessly with industry-standard GIS databases. With a GPS Pathfinder System, you'll have the most accurate, current, and reliable data you need to make the best decisions.

## Productive field software

Timesaving field software is essential for productive GIS data collection and data maintenance.

With Trimble's field software options, you can quickly and easily collect point, line, and area features, along with customized attribute information. Our field software makes it easy to take existing data from your GIS into the field for verification and update. In the field, your productivity will be enhanced by better graphics. A fast map display allows you to display background data and imagery, to ensure you're working in the right location, with the right data. And flexible map symbology enables you to tailor your data display to match your GIS.

Trimble offers two field software solutions for collecting and maintaining quality data:

**TerraSync™** software operates on Trimble's rugged GIS TSCe™ field device, or any Windows field computer.

**Asset Surveyor®** software runs on Trimble's rugged, field-proven TSC1™ data collector.



*Trimble GPS Pathfinder Systems are rugged and field-proven*

## Accurate and reliable data

Trimble's GPS Pathfinder System receivers offer real-time differential GPS (DGPS) and postprocessing options. Real-time DGPS provides you with immediate results in the field—great for navigation, and relocation of existing assets. Postprocessing enables you to improve the reliability and accuracy of your data when you're back in the office.

The **GPS Pathfinder Power** receiver integrates GPS, real-time satellite differential, and Wide Area Augmentation System (WAAS) capabilities into a single, lightweight unit.

The **GPS Pathfinder Pro XR** system integrates GPS, real-time beacon, and WAAS capabilities.

The **GPS Pathfinder Pro XRS** system integrates GPS, real-time beacon, satellite differential, and WAAS capabilities.

## The best data for your GIS

The GPS Pathfinder Office software gives you the tools to manage your GPS projects from start to finish. With it, you can define your field data collection requirements and control the quality of your data. The result is more consistent, reliable, and accurate data for your GIS.

The GPS Pathfinder Systems family offers you a variety of software, data collector, and GPS receiver options. Choose the solution that meets your requirements, and realize the benefits of better decisions based on better data.

# Trimble

# GPS Pathfinder Systems

## *Versatile GIS data collection and maintenance*

### FEATURES AND OPTIONS

#### *GPS Pathfinder Systems Standard Features*

- GPS Pathfinder Office software
- Choice of GPS receiver
- Choice of field software
- Ergonomic backpack carrying system
- Rechargeable system batteries (provide 8 hours of field use)
- Battery charger and AC power supply

#### *Optional Receiver Accessories*

- Vehicle kit: includes cigarette lighter power adapter, quick release, 2 quick-release adapters, and magnetic mount
- GPS Pathfinder Centimeter Processing option

#### *Available Receivers and Standard Features*

- GPS Pathfinder Pro XRS receiver
- GPS Pathfinder Pro XR receiver
- GPS Pathfinder Power receiver
  
- 12-channel GPS receiver
- EVEREST™ multipath rejection technology
- WAAS differential correction capabilities

#### *Available Field Software*

- Asset Surveyor software for Trimble TSC1 data collector
- TerraSync software for Trimble GIS TSCe field device, and Windows field computers

### GPS PATHFINDER POWER RECEIVER/ANTENNA SPECIFICATIONS

- Integrated GPS/Satellite Differential receiver and antenna
- RTCM input

General:	12 channel, L1/CA code tracking with carrier phase filtered measurements.
Update rate:	1 Hz
Power:	3.1 Watts, 9 to 32 VDC
Accuracy (RMS) (Note A):	
MCORR400 differential correction:	Submeter + 1 ppm on a second-by-second basis (horizontal) Submeter + 2 ppm on a second-by-second basis (vertical)
Carrier phase processing:	30 cm + 5 ppm with 5 minutes tracking satellites 20 cm + 5 ppm with 10 minutes tracking satellites 10 cm + 5 ppm with 20 minutes tracking satellites 1 cm + 5 ppm with 45 minutes tracking satellites (with Centimeter Processing option)
RTCM satellite differential correction:	Better than 1 meter (Note B)
Time to first fix:	30 seconds (typical)
Size:	15.2 cm diameter x 12.7 cm high (6" x 5")
Weight:	0.625 kg (1.38 lbs)
Temperature:	-30°C to +60°C (-22°F to +140°F) (operating) -40°C to +80°C (-40°F to +176°F) (storage)
Humidity:	100% fully sealed
Casing:	Fully sealed, dustproof, waterproof, shock resistant

### GPS PATHFINDER PRO XR AND PRO XRS RECEIVER & ANTENNA SPECIFICATIONS

#### *GPS Pathfinder Pro XR*

- Integrated GPS/Beacon receiver
- Integrated GPS/Beacon antenna
- RTCM input/output
- 3 meter antenna cable
- Base datalogging mode

#### *GPS Pathfinder Pro XRS*

- Integrated GPS/Beacon/Satellite Differential receiver
- Integrated GPS/Beacon/Satellite Differential antenna
- RTCM input/output
- 3 meter antenna cable
- Base datalogging mode

### GPS Pathfinder Pro XR receiver

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General:	12 channel, L1/CA code tracking with carrier phase filtered measurements and multibit digitizer
Update rate:	1 Hz
Power:	6 Watts (maximum), 10 to 32 VDC
Accuracy (RMS) (Note A):	
MCORR400 differential correction:	50 cm + 1 ppm on a second-by-second basis (horizontal) Submeter + 2 ppm on a second-by-second basis (vertical)
Carrier phase processing:	30 cm + 5 ppm with 5 minutes tracking satellites 20 cm + 5 ppm with 10 minutes tracking satellites 10 cm + 5 ppm with 20 minutes tracking satellites 1 cm + 5 ppm with 45 minutes tracking satellites (with Centimeter Processing option)
RTCM beacon radio transmissions:	Better than 1 meter (Note B)
Time to first fix:	30 seconds (typical)
Size:	11.1 cm × 5.1 cm × 19.5 cm (4.4" × 2.0" × 7.7")
Weight:	0.76 kg (1.68 lbs)
Temperature:	-30°C to +65°C (-22°F to +149°F) (operating) -40°C to +85°C (-40°F to +185°F) (storage)
Humidity:	100% fully sealed
Casing:	Dustproof, splashproof, shock resistant; sealed to 5 psi

### GPS Pathfinder Pro XRS receiver

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Specifications for the Pro XRS receiver are the same as for the Pro XR receiver with the following exceptions:

Power:	7 Watts (maximum), 10 to 32 VDC
Accuracy (RMS) (Note A):	
RTCM satellite differential correction:	Better than 1 meter (Note B)

### GPS Pathfinder Pro XR antenna

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General:	Right-hand, circular polarized; omnidirectional; hemispherical coverage
Size:	15.5 cm diameter × 10.8 cm high (6.1" × 4.2")
Weight:	0.49 kg (1.08 lbs)
Temperature:	-30°C to +65°C (-22°F to +149°F) (operating) -40°C to +85°C (-40°F to +185°F) (storage)
Humidity:	100% fully sealed
Casing:	Dustproof, waterproof, shock resistant

### GPS Pathfinder Pro XRS antenna

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Specifications for the Pro XRS antenna are the same as for the Pro XR antenna with the following exceptions:

Size:	15.5 cm diameter × 14 cm high (6.1" × 5.5")
Weight:	0.55 kg (1.2 lbs)

### TRIMBLE GIS TSCe FIELD DEVICE SPECIFICATIONS

Screen:	320 x 240 color touch screen: 1/4 VGA reflective color TFT
Size:	25.8 cm x 13 cm x 5.2 cm (10.2" x 5.1" x 2.1")
Weight:	0.99 kg including internal battery
Temperature:	-20°C to +60°C (+14°F to +140°F) (operating) (Note C) -30°C to +60°C (-22°F to +140°F) (storage)
Environmental:	Meets IEC 68, EN61000, MIL-STD-810E standards for temperature, moisture and immersion, dust and sand, drop test, shock, vibration and altitude. IP 67 sealed against temporary immersion.
COM ports:	9-Pin serial port: RS232 (COM 1) 26-Pin MultiPort: (COM 2, Ethernet, USB client, power in/out, and audio in/out) Infrared: IrDA Type 1 (COM 3)
Memory:	128 MB (storage) 64 MB (RAM)
Batteries:	NiMH rechargeable pack, 3800 mAh gives continuous operation for over 30 hours recharges to 90% of capacity in 1 hour (Note D)

## TRIMBLE TSC1 DATA COLLECTOR SPECIFICATIONS

Screen:	240 x 200 extended temperature graphics STN LCD monochrome display
Size:	26.7 cm x 11.7 cm x 4.2 cm (10.5" x 4.6" x 1.65")
Weight:	0.85 kg including internal battery
Temperature:	-30°C to +65°C (-22°F to +149°F) (operating) -30°C to +80°C (-22°F to +176°F) (storage)
Environmental:	100% fully sealed against sand, dust and moisture, buoyant, waterproof against accidental immersion
COM ports:	Two RS232 7-pin lemo ports
Memory:	2 MB (storage), memory extension through user accessible Type II ATA PC card slot (Note E)
Batteries:	The internal Li-ion battery will last for at least 10 hours. In the field the TSC1 will draw power from the GPS receiver's power source when possible.

### (footnotes)

*Note A: At least 5 satellites, PDOP ≤ 6, signal to noise ratio ≥ 6, satellite elevation mask at 15 degrees*

*Note B: RTCM SC-104 standard format broadcast from a Trimble reference station.*

*Note C: Frontlight has an operation temperature of >0°C.*

*Note D: 30 hours of operation is achievable without using the frontlight.*

*Note E: Memory extension through user-accessible Type II PC card slot. 16 MB PCMCIA Data Cards are available (33050-16).*

*Trimble follows a policy of continuous product improvement. Specifications are therefore subject to change without prior notice.*

For further information, contact your nearest Trimble Authorized Distributor or Trimble Office. Please visit our web site at [www.trimble.com](http://www.trimble.com)



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