



# GPS Pathfinder ProXRT receiver

## KEY FEATURES

Real-time H-Star technology for decimeter or subfoot accuracy in the field

OmniSTAR HP, XP, or VBS technology for worldwide decimeter to submeter accuracy in the field

Optional support for GLONASS

Rugged receiver able to work in extreme temperatures with an internal all day battery

Choice of field device, field software, and setup style to suit your requirements



## FLEXIBLE GNSS RECEIVER WITH REAL-TIME DECIMETER ACCURACY

Whether you need to relocate buried pipes and cables, or accurately map underground assets and critical infrastructure, the Trimble® GPS Pathfinder® ProXRT receiver has it all. This real-time decimeter receiver adds another dimension to your field kit, giving you the confidence to know the job was done right while you're still on site. Combining H-Star™ technology, OmniSTAR support, and with the option of GLONASS support on top of dual-frequency GPS, the GPS Pathfinder ProXRT receiver is a truly versatile solution offering you the accuracy you need, worldwide.

### Decimeter accuracy with real-time H-Star

You need accuracy and you want it now. The GPS Pathfinder ProXRT receiver brings Trimble H-Star technology to the field in real time; just connect to a real-time correction source and you can collect decimeter (10 cm) or subfoot (30 cm) positions in the field. Simply use a wireless link to your local VRS™ network, or set up your own base station for the flexibility to work wherever you need to.

### Decimeter accuracy in real time with OmniSTAR HP

If a VRS network or a local base station is not available in your area, then real-time decimeter accuracy with OmniSTAR HP couldn't be easier. The OmniSTAR antenna is integrated so there's no need to carry any extra equipment—just purchase a subscription and wait for the over the air corrections. The GPS Pathfinder ProXRT receiver is also capable of using the OmniSTAR XP service (for 20 cm accuracy) and OmniSTAR VBS service (for instantaneous submeter accuracy).

### Optional GLONASS support

Installing the GLONASS option on your GPS Pathfinder ProXRT receiver increases the number of GNSS satellites that you observe when working in the field. GLONASS improves your ability to maintain lock on enough satellites to keep working when sky visibility becomes limited, letting you work for longer in tough environments. Tracking GLONASS satellites as well as GPS satellites can also improve productivity by reducing the time

required to achieve real-time decimeter or subfoot accuracy.

### Built for the field

The GPS Pathfinder ProXRT receiver is built for the tough field conditions where you work, and can operate even in extreme temperatures. The integrated lithium-ion battery is designed for all day use, so you can continue working for as long as you need.

### The choice is yours

You can choose the field computer and software to suit your workflow. The GPS Pathfinder ProXRT receiver is ready to use with a variety of field computers, including laptops, Tablet PCs and PDAs, and of course Trimble's own rugged field computers: the Trimble Nomad™ series, Trimble Recon®, or the Trimble Ranger™ handheld.

Choosing mapping software? Trimble TerraSync™ software or the Trimble GPScorrect™ extension for ESRI ArcPad software provides a complete solution from field to office and back. Or use the GPS Pathfinder Tools Software Development Kit (SDK) to build your own application that's totally customized to your needs.

And the GPS Pathfinder ProXRT receiver gives you the flexibility to choose the style of setup to suit your requirements. Choose a pole for added precision or a backpack for your convenience and added comfort.

### Real time. Real accurate. Real choice.

The GPS Pathfinder ProXRT receiver delivers a winning combination of decimeter accuracy with real-time positioning, truly taking GIS data collection to a new level. No matter where in the world you work, the GPS Pathfinder ProXRT receiver gives you a complete real-time decimeter solution.

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## STANDARD FEATURES

### GPS

- H-Star technology for decimeter and subfoot accuracy in either real time or postprocessed<sup>1</sup>
- "Worldwide" support for OmniSTAR HP (decimeter), XP (20 cm), and VBS (submeter) services<sup>2</sup>
- DGPS corrections by radio link, NTRIP, or VRS network through cell phone
- Integrated SBAS<sup>3</sup>
- Everest™ multipath rejection technology

### System

- Integrated all day battery
- Integrated Bluetooth® wireless technology for operation on a pole
- Rugged housing

### Standard accessories

- Zephyr™ model 2 antenna
- Antenna cable
- Power supply with international adaptor kit
- Null modem cable, DB9-Lemo cable, and multiport adaptor
- Hard carry case
- User Guide on CD

## OPTIONAL FEATURES

### Receiver options

- GLONASS support

### Optional software

- TerraSync software
- Trimble GPSCorrect extension for ESRI ArcPad software
- Custom applications built with the GPS Pathfinder Tools (SDK)
- GPS Pathfinder Office software
- Trimble GPS Analyst™ extension for ESRI ArcGIS Software

### Optional field computers

- Field computers running Windows Mobile® version 5.0 software, version 6 operating system, or Windows Mobile 2003 software for Pocket PCs such as:
  - Trimble Nomad series
  - Trimble Ranger handheld
  - Trimble Recon handheld
- Field computer running Windows® desktop operating system

### Optional accessories

- Backpack kit (backpack, 1 foot pole segment, quick release adapters)
- Pole kit (2 m carbon fibre range pole, pole mount kit, quick release adapters)
- Magnetic vehicle mount
- GeoBeacon™ receiver

## TECHNICAL SPECIFICATIONS

### Physical

#### GPS receiver and integrated battery

Size . . . . . 24 cm x 12 cm x 5 cm including connectors (9.4 in x 4.7 in x 1.9 in)  
Weight . . . . . 1.55 kg (3.42 lbs)  
Battery . . . . . 13 hours internal Li-Ion battery, rechargeable in unit

#### Antenna

Size . . . . . 16.5 cm diameter x 7.6 cm height (6.5 in x 3 in)  
Weight . . . . . 0.64 kg (1.4 lbs)

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## Environmental—GPS receiver

Temperature . . . . . -20 °C to +60 °C (-4 °F to +140 °F)  
Humidity . . . . . MIL-STD 810F, Method 507.4  
Waterproof . . . . . IP67 for submersion to depth of 1 m (3.28 ft)  
Shock and Vibration . . . . . Designed to survive a 1 m (3.28 ft) pole drop onto a hard surface  
Shock, operating . . . . . To 40 g, 10 ms, saw-tooth  
Shock, non-operating . . . . . To 75 g, 6 ms  
Vibration . . . . . Tested to Trimble ATV profile (4.5 gRMS)

## Environmental—antenna

Temperature . . . . . -40 °C to +70 °C (-4 °F to +158 °F)  
Humidity . . . . . 100% humidity proof, fully sealed  
Shock . . . . . MIL-STD-810-F to survive a 2 m (6.56 ft) drop onto concrete  
Vibration . . . . . MIL-STD-810-F on each axis

## Input/output

Serial . . . . . 2 Serial ports (DB9 and Lemo)  
Bluetooth . . . . . Fully-integrated, fully-sealed 2.4 GHz, 3 channel Bluetooth<sup>4</sup> module  
Interface . . . . . Power button and front panel display  
Protocols  
Data Output . . . . . Internal Trimble only (Note: NMEA output is not supported)  
Real-time corrections . . . . . RTCM 2.X, CMR, CMR+

## GNSS

Satellite systems . . . . . GPS, GLONASS (optional), OmniSTAR, SBAS  
Channels . . . . . 72-Channel L1/L2 GPS plus L1/L2 GLONASS (optional)  
Integrated real-time methods . . . . . H-Star, OmniSTAR, SBAS  
Update rate . . . . . 1 Hz  
Time to achieve for real-time H-Star . . . . . 10–25 sec (for baselines <30 km)

## Accuracy (HRMS) after correction<sup>5</sup>

Real-time positioning  
H-Star<sup>1</sup>  
Short baseline (within a VRS network or <30 km) . . . . . 10 cm  
Long baseline (30–80 km) . . . . . Subfoot (30 cm)  
OmniSTAR<sup>2</sup>  
HP . . . . . 10 cm  
XP . . . . . 20 cm  
VBS . . . . . Submeter  
Code corrections (SBAS or external correction source) . . . . . Submeter<sup>3</sup>  
Postprocessed positioning  
H-Star<sup>1</sup> postprocessed  
Short baseline (<30 km) . . . . . 10 cm  
Long baseline (30–80 km) . . . . . Subfoot (30 cm)  
Code postprocessed . . . . . Submeter

<sup>1</sup> Decimeter accuracy can be achieved with H-Star data when the baseline length is less than 30 km. Both the base and the rover must be dual frequency and observing at least five common satellites (six during dual-satellite constellation operation). In less optimal conditions or at ranges between 30km and 80km, subfoot accuracy can be achieved. H-Star specified accuracy is typically achieved within 2 minutes.

<sup>2</sup> OmniSTAR HP/XP typically require 20–40, and up to 60 minutes initialization time to achieve the specified accuracy.

<sup>3</sup> SBAS (Satellite Based Augmentation System). Includes WAAS (Wide Area Augmentation System) available in North America only, EGNOS (European Geostationary Navigation Overlay System) available in Europe only, and MSAS, available in Japan.

<sup>4</sup> Bluetooth type approvals are country specific. The GPS Pathfinder ProXRT receiver has Bluetooth approval in the U.S. and EU. For other countries consult your local Distributor.

<sup>5</sup> Horizontal Root Mean Squared accuracy. Requires data to be collected with minimum of 5 satellites, maximum PDOP of 6, minimum SNR of 39 dBHz, minimum elevation of 15 degrees, and reasonable multipath conditions. Ionospheric conditions, multipath signals or obstruction of the sky by buildings or heavy tree canopy may degrade precision by interfering with signal reception. Accuracy varies with proximity to base station by +1 ppm for postprocessing and real-time.

Specifications subject to change without notice.



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