

# H-Star Technology

## WHAT IS H-STAR TECHNOLOGY?

When your GIS database requires the highest levels of accuracy, Trimble® H-Star™ technology is the solution. Delivering subfoot (<30 cm) to decimeter (10 cm) real-time or postprocessed accuracy, H-Star technology is engineered with the needs of GIS and mapping professionals in mind. H-Star technology brings together advanced hardware technology and smart software algorithms and workflows to achieve unprecedented levels of accuracy. The following sections explain how the elements of H-Star technology are optimized to give you the best possible performance.



### SUPERIOR GNSS TECHNOLOGY

For over 25 years Trimble has led the world in Global Navigation Satellite System (GNSS) research and development. With state-of-the-art GNSS technology onboard, Trimble's H-Star-capable hardware solutions include the latest advances in positioning technology, including field-proven techniques for multipath reduction and ionospheric error elimination.

### ACCURACY IN REAL-TIME

For the best H-Star results while you're in the field, choose a GeoExplorer® 2008 series GeoXH™ handheld or GPS Pathfinder® ProXRT receiver. For high-accuracy H-Star positions when you need them, use Bluetooth® wireless technology and a cell phone to access real-time corrections via the internet. With high accuracy positions in real time, your field crews can quickly locate hidden or buried infrastructure, and underground cables and pipes can be excavated safely.

### ADVANCED ANTENNA TECHNOLOGY

Trimble H-Star technology solutions incorporate state-of-the-art GPS antennas for superior performance. With engineers that are experts at antenna placement and shielding, Trimble ensures that a GPS receiver with H-Star technology delivers only cleanest and highest quality positioning data.

### FIELD SOFTWARE THAT BRINGS IT ALL TOGETHER

Trimble's advanced field software is at the heart of the H-Star technology solution. By managing your GPS data logging, and providing simple at-a-glance status that shows you exactly the accuracy you're getting in the field, or after postprocessing, Trimble software takes all the guess-work out of collecting data.

### SCALABLE INFRASTRUCTURE SOLUTIONS

To get the best possible accuracy with H-Star requires high quality reference station infrastructure. Trimble's leading-edge infrastructure solutions include Virtual Reference Station™ networks that are rapidly expanding around the globe, providing seamless real-time coverage to field users anywhere inside the network. H-Star technology also allows you to take advantage of the installed reference station infrastructure in your region.

## HOW DOES IT WORK?

Trimble H-Star technology combines advances in GPS receiver design and innovative field and office software to achieve superior accuracy. In the field, this translates to an efficient and easy-to-use system that allows data to be collected without the time, cost and complex workflows previously associated with high accuracy data collection.

H-Star data is recorded using Trimble software specifically designed for high-accuracy data collection. The software's status bar clearly shows the accuracy currently being achieved if you're working in real time, or the predicted accuracy that will be achieved after postprocessing. With H-Star technology, you can typically expect to achieve subfoot or decimeter accuracy within just two minutes of continuous data collection. If lock on satellites is maintained, subsequent features will reach your required accuracy level within seconds.

Working in real time, Trimble H-Star systems receive GPS corrections from a VRS network or a dual-frequency reference station to achieve on-the-spot accuracy. For cable-free convenience, use a Bluetooth-enabled cell phone to receive your corrections wirelessly over the Internet.

Choose the Trimble H-Star product that best suits the way you work.



## WHICH H-STAR TECHNOLOGY SOLUTION IS RIGHT FOR ME?



### GPS Pathfinder ProXH receiver

A GPS receiver, antenna, and all-day battery in one, the GPS Pathfinder ProXH™ receiver uses H-Star technology to deliver subfoot accuracy after postprocessing. When high accuracy is critical to your application, achieve 8 inch (20 cm) accuracy with an optional Tornado™ external antenna. For a high-accuracy solution that's compact, convenient, and affordable, the ProXH receiver can't be beaten.



### GeoXH handheld

The GeoXH handheld from the Trimble GeoExplorer 2008 series integrates a dual-frequency GPS receiver with a high performance field computer. Because it's all in your hand, the GeoXH handheld is ideal when you're in and out of a vehicle—grab it and you're ready to go. The GeoXH handheld uses H-Star technology to deliver subfoot real-time or postprocessed accuracy. For that extra edge, achieve decimeter accuracy with an optional Tornado external antenna.



### GPS Pathfinder ProXRT receiver

The GPS Pathfinder ProXRT receiver is a rugged GNSS receiver with an integrated all-day battery, designed to cope with tough field conditions. The ProXRT receiver uses H-Star technology to deliver decimeter real-time or postprocessed accuracy. With a powerful GPS receiver, and optional GLONASS capability, the ProXRT receiver is a truly flexible positioning solution that delivers the ultimate in accuracy.

© 2009, Trimble Navigation Limited. All rights reserved. Trimble, the Globe & Triangle logo, GeoExplorer, and GPS Pathfinder are trademarks of Trimble Navigation Limited, registered in the United States and in other countries. GeoXH, H-Star, ProXH, Tornado, and VRS are trademarks of Trimble Navigation Limited. The Bluetooth word mark and logos are owned by the Bluetooth SIG, Inc. and any use of such marks by Trimble Navigation Limited is under license. PN 022501-1488 (10/09)

### NORTH & SOUTH AMERICA

Trimble Navigation Limited  
10355 Westmoor Drive  
Suite #100  
Westminster, CO 80021  
USA  
+1-720-587-4574 Phone  
+1-720-587-4878 Fax

### EUROPE & AFRICA

Trimble GmbH  
Am Prime Parc 11  
65479 Raunheim  
GERMANY  
+49-6142-2100-0 Phone  
+49-6142-2100-550 Fax

### ASIA-PACIFIC & MIDDLE EAST

Trimble Navigation  
Singapore PTE Limited  
80 Marine Parade Road  
#22-06 Parkway Parade  
Singapore, 449269  
SINGAPORE  
+65-6348-2212 Phone  
+65-6348-2232 Fax

YOUR LOCAL TRIMBLE OFFICE OR REPRESENTATIVE



[www.trimble.com](http://www.trimble.com)  
[store.trimble.com](http://store.trimble.com)