

H-Star Technology

WHAT IS H-STAR TECHNOLOGY?

When GIS database requirements call for the highest levels of accuracy, Trimble® H-Star™ technology is the solution. Delivering decimeter (10 cm / 4 inch) 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 deliver the best possible GNSS 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 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 in the field, choose a GeoExplorer® 6000 series GeoXH™ handheld or a GPS Pathfinder® ProXRT receiver. Access corrections via the Internet for high-accuracy H-Star positions in real time using a cellular modem (e.g. either use a GeoXH 6000 series or Trimble Nomad® 900GXE handheld with integrated cellular modem, or use a TDL 3G cellular modem accessory). With high accuracy positions in real time, field crews can quickly locate hidden or buried infrastructure, and underground cables and pipes can be excavated safely.

FIELD SOFTWARE THAT BRINGS IT ALL TOGETHER

Trimble's advanced field software is at the heart of the H-Star technology solution. By managing GNSS data logging and providing simple at-a-glance status showing the exact accuracy achieved 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 VRS™ networks that are rapidly expanding around the globe, providing seamless real-time coverage to field users anywhere inside the network. H-Star technology can also take advantage of locally installed reference station infrastructure.

ADVANCED ANTENNA TECHNOLOGY

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

HOW DOES H-STAR TECHNOLOGY WORK?

Trimble H-Star technology combines advances in GNSS 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 real-time accuracy or the predicted accuracy that will be achieved after postprocessing. With H-Star technology, decimeter accuracy can typically be achieved within just two minutes of continuous data collection. If lock on satellites is maintained, subsequent features will reach required accuracy level within seconds.

Working in real time, Trimble H-Star systems receive GNSS corrections from a VRS network or a dual-frequency reference station to achieve on-the-spot accuracy. For cable-free convenience, use a GeoXH 6000 series 3.5G edition handheld or the TDL 3G cellular modem accessory to receive corrections wirelessly over the Internet.



WHICH TRIMBLE SOLUTIONS INCLUDE H-STAR TECHNOLOGY?



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 a given application, the ProXH receiver achieves 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 is the clear choice.



GeoXH 6000 series handheld

The GeoXH handheld from the GeoExplorer 6000 series integrates a dual-frequency GNSS receiver with a high performance field computer. Because it's a completely integrated handheld solution, the GeoXH handheld is ideal when working in and out of a vehicle—grab it and be ready to go. The GeoXH handheld uses H-Star technology to deliver decimeter real-time or postprocessed accuracy.



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 GNSS receiver, and optional GLONASS capability, the ProXRT receiver is a truly flexible positioning solution that delivers the ultimate in accuracy.

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