

KEY FEATURES

220 channel GNSS receiver with real-time H-Star technology

Decimeter accuracy faster than ever before

Floodlight satellite shadow reduction technology

More positions and increased accuracy in tough environments

Sunlight readable display

4.2" polarized screen for unmatched clarity in bright sunlight

3.5G modem option

Integrated cellular for Internet connectivity in the field

5 megapixel autofocus camera

Capture high quality photographs and link directly to features

High capacity removable battery

More than 8 hours operation on a single charge and swap-and-go battery replacement in the field



DECIMETER ACCURACY, TRIMBLE PRODUCTIVITY, HANDHELD CONVENIENCE

The Trimble® GeoExplorer® 6000 series takes GNSS productivity to a whole new level. Bringing together the essential functionality for high-accuracy field work in one device, the GeoXH™ handheld delivers real-time decimeter (10 cm / 4 inch) accuracy positioning, high quality photo capture, and integrated Internet connectivity options.

Together with the latest field software enhancements and GNSS innovations—including Trimble Floodlight™ satellite shadow reduction technology—the GeoXH handheld establishes a new standard for GNSS system performance and handheld data capture.

Decimeter accuracy without the wait

For field workers recording the location of buried infrastructure, distinguishing between closely spaced assets, or relocating buried equipment, the GeoXH handheld delivers the accuracy and speed required to ensure that the work of recording new asset locations or navigating back to previously captured assets is fast and reliable.

The GeoXH handheld is equipped with a 220 channel GNSS receiver capable of tracking GPS and GLONASS satellites together with an integrated dual-frequency (L1/L2) GNSS antenna. In conjunction with Trimble field software, the GeoXH handheld uses Trimble H-Star™ technology to deliver decimeter accuracy in the field, eliminating the need for back-office processing and giving the confidence that the job is done right while still on site.

Floodlight satellite shadow reduction

Trees and buildings create satellite shadows, limiting the environments where reliable high-accuracy GNSS data collection can be performed. Using the innovative Trimble Floodlight satellite shadow reduction technology, the GeoXH handheld continues to deliver productive, usable positioning data in areas where legacy GNSS receiver systems cannot.

With Floodlight technology, the GeoXH receiver can compute positions even with very weak satellite signals. Floodlight technology increases the number of positions that are gathered in difficult locations, and boosts accuracy in those places where normally only low accuracy data is available. With the GeoXH handheld, field crews can now work with fewer disruptions, meaning better data, faster, at less cost.

Never-seen-before display performance

The GeoXH handheld includes a sunlight-optimized display designed specifically for outdoor operation. It maintains exceptional clarity in all outdoor conditions, including direct sunlight. Text is crisp and easy to read. Background maps and photos are rich and vibrant. At 4.2" (10.7 cm), the display is also big, so the touch panel is spacious and easy to control.

Work online, anywhere, cable-free

With the GeoXH handheld, wireless connectivity options including cellular, Wi-Fi and Bluetooth® technology ensure that field workers can remain in contact with the office and each other, even from remote locations.

An optional integrated 3.5G cellular modem allows continuous network and Internet access to real-time map data, web-based services, VRS™ corrections, and live update of field information.

Bluetooth technology also enables wireless connection to other external devices such as Bluetooth-enabled laser range finders, barcode scanners, or underground pipe locators.

High quality photo capture

A photograph is often the best way to capture information about an asset, event, or site. The GeoXH handheld includes a 5 megapixel autofocus camera with geo-tagging capability. The camera can be controlled by the TerraSync™ software and other third-party applications, so photo capture and linking of images to GIS features is seamless and simple to integrate with existing data capture workflows.

Designed for work

The GeoExplorer 6000 series was designed with a single goal in mind—delivering a high-accuracy handheld GNSS system that works faster, longer, and in more places than any other.

The Lithium-Ion battery provides up to 8 hours of GNSS operation on a single charge, and can be swapped on-the-go without shutting down the device—enabling near-continuous operation and minimizing field worker downtime.

The GeoXH handheld is powered by a super-fast OMAP 3503 series processor and 256 MB RAM. With 2 GB of internal storage and the capacity to add an additional 32 GB via SDHC card, the GeoXH handheld has the capacity and power needed to work with high resolution maps and the most complex datasets.

The fully ruggedized IP65 construction is designed to withstand the harshest environments. Wherever field workers go, they can take the GeoXH handheld with the confidence that the equipment can handle the toughest conditions.

These smart design features combine with unprecedented accuracy and productivity to deliver the ultimate high performance handheld field solution.

The GeoXH handheld. Designed for work.

GEOEXPLORER 6000 SERIES GEOXH HANDHELD

SYSTEM SUMMARY

- Dual-frequency GNSS receiver and antenna with Everest™ multipath rejection technology and Trimble Floodlight satellite shadow reduction technology
- Sunlight readable 4.2" polarized screen
- Optional integrated 3.5G cellular modem
- Integrated Wi-Fi and Bluetooth wireless technology
- 5 megapixel autofocus camera
- Windows Mobile® 6.5 (Professional edition)
- Rugged and water-resistant design

SIZE AND WEIGHT

Height 234 mm (9.2 in)
Width 99 mm (3.9 in)
Depth 56 mm (2.2 in)
Weight (inc. battery) 925 g (2.0 lb)

GNSS

Receiver Trimble Maxwell™ 6 GNSS chipset
Channels 220 channels
Systems GPS, GLONASS, SBAS
GPS L1C/A, L2C, L2E
GLONASS L1C/A, L1P, L2C/A, L2P
SBAS¹ WAAS/EGNOS/MSAS
Update rate 1 Hz
Time to first fix 45 s (typical)
NMEA-0183 support Optional
RTCM support RTCM2.x/RTCM3.x
CMR support CMR/CMR+/CMR_x

GNSS ACCURACY (HRMS) AFTER CORRECTION²

Real-time H-Star² 10 cm + 1 ppm
Real-time code corrected
VRS or local base 75 cm + 1 ppm
SBAS (WAAS/MSAS/EGNOS) < 1 m
H-Star postprocessed 10 cm + 1 ppm
Code postprocessed 50 cm + 1 ppm
Carrier postprocessed
After 45 minutes 1 cm + 2 ppm

TEMPERATURE

Operation -20 °C to +50 °C (-4 °F to 122 °F)
Storage -30 °C to +70 °C (-22 °F to 158 °F)
Charging 0 °C to +45 °C (32 °F to 113 °F)

MECHANICAL SHOCK

Drop 1.2 m (4 ft) plywood over concrete
Vibration Method 514.5

ALTITUDE & HUMIDITY RATINGS

Relative humidity 95% non-condensing
Maximum operating altitude 3,658 m (12,000 ft)
Maximum storage altitude 5,000 m (16,400 ft)

INGRESS PROTECTION

Water/Dust IP65

BATTERY

Type Rechargeable, removable Li-Ion
Capacity 11.1V 2.5 AH
Charge time 4 hours (typical)

BATTERY RUN TIME³

GNSS only 10 hours
GNSS & VRS over BT 9.5 hours
GNSS & VRS over Wi-Fi 8.5 hours
GNSS & VRS over Cellular modem 5 hours
Standby time 50 days

BUTTONS & CONTROLS

- Power key
- Left & right application keys
- Camera key

CONNECTORS & INPUTS

- Internal microphone and speaker
- Mini USB connector
- DE-9 serial via optional USB to serial converter
- External power connector
- SIM socket
- SDHC card socket

CAMERA

Still mode Autofocus 5 MP
Still image format JPG
Video mode Up to VGA resolution
Video file format WMV with audio

CELLULAR⁴ & WIRELESS⁵

UMTS/HSDPA 850/900/2100 MHz
GPRS/EDGE 850/900/1800/1900 MHz
Wi-Fi 802.11 b/g
Bluetooth Version 2.1 + EDR

DISPLAY

Type Transflective LED-backlit LCD
Size 4.2" (diagonal)
Resolution 480x640
Luminance 280 cd/m²

HARDWARE

Processor TI OMAP 3503
RAM 256 MB
Flash 2 GB
External storage SD/SDHC up to 32 GB

LANGUAGES

- English (US), Spanish, French, German, Italian, Portuguese (Brazilian), Chinese (Simplified), Korean, Japanese, Russian

IN THE BOX

- GeoExplorer 6000 series handheld
- Pouch
- Hand strap
- USB data cable
- Rechargeable battery pack
- AC Power adaptor
- Screen protector kit
- Spare stylus & tether
- Documentation

OPTIONAL ACCESSORIES

- Tornado™ external GNSS antenna
- 1.5 m & 5 m external antenna cable
- Range pole kit for external antenna
- Backpack kit for external antenna
- Vehicle mount
- Hard carry case
- TDL 3G cellular modem
- GeoBeacon receiver
- Null modem cable
- USB to serial converter cable

SOFTWARE COMPATIBILITY

- TerraSync™ software
- Trimble GPSCorrect™ extension for Esri ArcPad software
- Trimble GPS Controller software
- GNSS Connector software
- GPS Pathfinder® Office software
- Trimble GPS Analyst™ extension for Esri ArcGIS Desktop software
- Third party NMEA-based applications⁶

¹ SBAS (Satellite Based Augmentation System). Includes WAAS available in North America only, EGNOS available in Europe only and MSAS available in Japan only.

² HRMS refers to Horizontal Root Mean Squared accuracy, 1-sigma (68%). Except in conditions where most GNSS signals are affected by trees, or buildings, or other objects. The following factors increase the availability of specified H-Star accuracy: availability of GPS & GLONASS data at the base station(s) used for corrections, longer elapsed time tracking uninterrupted L1/L2 carrier phase data, use of the optional external Tornado antenna, tracking of more satellites with L2 measurements, shorter distance to the base station(s), and use of more (than one) base stations for postprocessing. Specified H-Star accuracy can normally be achieved for baseline lengths of 100 km or less. H-Star accuracy is typically achieved within 2 minutes. 45 minute carrier postprocessed accuracy is limited to data collected within 10 km of the base station. Except when using VRS corrections, accuracy varies with proximity to base station by +1 ppm for code postprocessing and real-time. Carrier postprocessed accuracy varies with proximity to base station by +2 ppm.

³ Tested by Trimble with default system settings at 21°C ambient. Actual run time will vary with conditions of use.

⁴ 3.5G edition handhelds only. The GeoXH 3.5G edition handheld is PTCRB certified and can operate on supported networks that do not require carrier certification. Consult with your local reseller for more information.

⁵ Bluetooth and Wi-Fi type approvals are country specific. GeoExplorer 6000 series handhelds have Bluetooth and Wi-Fi approval in the U.S. and in most European countries. For further information please consult your local reseller.

⁶ NMEA output is an optional upgrade.

Specifications subject to change without notice.

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