

## 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  
SBAS<sup>1</sup> . . . . . 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<sub>X</sub>

## GNSS ACCURACY (HRMS) AFTER CORRECTION<sup>2</sup>

Real-time H-Star<sup>2</sup> . . . . . 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 TIME<sup>3</sup>

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

## CELLULAR<sup>4</sup> & WIRELESS<sup>5</sup>

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/m<sup>2</sup>

## 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 applications<sup>6</sup>

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

<sup>2</sup> 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.

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

<sup>4</sup> 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.

<sup>5</sup> 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.

<sup>6</sup> NMEA output is an optional upgrade.

Specifications subject to change without notice.

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