GEOEXPLORER 6000 SERIES
GEOXR NETWORK ROVER

KEY FEATURES

Advanced Network Rover solution

Centimeter accuracy in a handheld form factor

Optimized for Trimble Access field software

Sunlight readable color display with **unmatched clarity in bright sunlight**

Capture high quality photographs and **link directly to measured points**

The rugged Trimble® GeoXR™ Network Rover is a purpose-built complete solution designed to make both high-accuracy surveying and handheld point measurement easier, more efficient, and more flexible.

TRIMBLE PRODUCTIVITY, HANDHELD CONVENIENCE

The Trimble GeoXR Network Rover adds a new aspect to GNSS surveying productivity by combining the functionality for high-accuracy field work with the flexibility and convenience of handheld positioning in one device.

The Trimble GeoXR can be used mounted on a survey rod with an external antenna for survey-grade accuracy and when connected to Trimble VRS™ technology, it serves as an advanced and highly productive network rover. Then snapped off the rod and seamlessly switched to the integrated antenna, it becomes a solution for handheld point measurement with easy access to features such as the integrated camera.

The Trimble GeoExplorer GeoXR handheld, integrated with Trimble Access™ software, establishes a new standard in advanced network rover solutions.

OPTIMIZED FOR TRIMBLE ACCESS

Trimble Access field software features the power, functionality, and modularity surveyors need today. It is designed to support everyday work – topographic surveys, staking, control, and more – through a familiar easy-to-use interface.

The Trimble GeoXR 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 in (10.7 cm), the display provides a spacious touch panel that is easy to control. Surveyors can work directly from the active map and integrate photos into their workflow using the large color touch screen.

The integrated cellular modem of the Trimble GeoXR allows continuous network and Internet access for web-based services, Trimble VRS corrections, and live, secure synchronization of field and office files through Trimble AccessSync.

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

CENTIMETER ACCURACY IN YOUR HAND

On the rod or in your hand, the Trimble GeoXR handheld delivers the accuracy and speed required to ensure that the work of recording survey points or staking-out is fast and reliable.

The Trimble GeoXR 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 addition to being a complete network rover solution, when outside the network, the system can be used to collect GNSS data for postprocessing in Trimble Business Center software.

HIGH QUALITY PHOTO CAPTURE

A photograph is often the best way to capture information about an asset, event, or site. The Trimble GeoXR handheld includes a 5 megapixel autofocus camera with geo-tagging capability. The camera is controlled by the Trimble Access software, so photo capture and linking of images to survey data is seamless and simple to integrate with existing workflows.

Easily record the qualitative information that survey data alone can miss, such as site conditions or work progress. The benefits of including images as part of your workflow are almost limitless—from easy data handover to in-field quality assurance.

DESIGNED FOR HIGH EFFICIENCY WORK

The Trimble GeoXR was designed with a single goal in mind—delivering a high-accuracy network rover that works faster, longer, and in more places than any other.

The Lithium-Ion battery provides up to 9.5 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 fully ruggedized IP65 construction is designed to withstand the harshest environments. Wherever field workers go, they can take the Trimble GeoXR handheld with the confidence that the equipment can handle the toughest conditions.

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

The Trimble GeoXR, together with Trimble VRS technology, Trimble Access software and services, and Trimble Business Center is your optimal total Network Rover solution.

Trimble

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SYSTEM CONFIGURATION

System Summary

- Dual-frequency GNSS receiver and antenna with Trimble R-Track™ technology
- Sunlight readable 4.2" polarized display
- 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

Shipment and Standard Accessories

- Trimble GeoXR handheld with Microsoft Windows Mobile 6.5
- Rechargeable battery (x2)
- Range pole bracket
- Hand strap
- Screen Protectors (x15)
- Antenna port dust cover
- Quick Start Guide
- External GNSS antenna with 1.5 m antenna cable
- International AC charger (x2)
- USB Data Cable (mini USB)
- Stylus pen (x2) and stylus tether
- Device label pack
- Transport case

Optional Accessories

- 12 V vehicle charging cable
- Replacement door kit (SD, USB, SIM)
- GNSS Antenna Cable (TNC to SMB), 1.5 m and 5.0 m
- Soft pouch

All standard accessories are also available to order separately.

Trimble Field Software Solutions

- The Trimble GeoXR handheld runs the Trimble Access field software.

PERFORMANCE SPECIFICATIONS

Measurements

- Trimble R-Track technology
- Advanced Trimble Maxwell™ 6 Custom Survey GNSS chip with 220 channels
- High precision multiple correlator for GNSS pseudorange measurements
- Unfiltered, unsmoothed pseudorange measurements data for low noise, low multipath error, low time domain correlation and high dynamic response
- Very low noise GNSS carrier phase measurements with <1 mm precision in a 1 Hz bandwidth
- Signal-to-Noise ratios reported in dB-Hz
- Proven Trimble low elevation tracking technology
- Satellite signals tracked simultaneously:
  - GPS: L1C/A, L2C, L2E (Trimble method for tracking L2P)
  - GLONASS: L1C/A, L1P, L2C/A (GLONASS M only), L2P
  - SBAS[1] (WAAS/EGNOS/MSAS): L1C/A
- 1 Hz (positioning), 5 Hz (stakeout)
- 1 Hz data storage
- CMR+, CMRx, RTCM 2.1, RTCM 2.3, RTCM 3.0, RTCM 3.1 Input via cellular modem

Code differential GNSS positioning[2, 3]

Horizontal	0.25 m + 1 ppm RMS
Vertical	0.50 m + 1 ppm RMS
SBAS differential positioning accuracy[4]	typically <5 m 3DRMS

Static and FastStatic GNSS surveying (external GNSS antenna)[2]

Horizontal	3 mm + 0.5 ppm RMS
Vertical	3.5 mm + 0.5 ppm RMS

Real-Time Kinematic surveying[2, 3]

Single Baseline <30 km

Horizontal (external GNSS antenna)	10 mm + 1 ppm RMS
Vertical (external GNSS antenna)	15 mm + 1 ppm RMS
Horizontal (internal GNSS antenna)	25 mm + 1.2 ppm RMS
Vertical (internal GNSS antenna)	40 mm + 1.5 ppm RMS

Network RTK

Horizontal (external GNSS antenna)	10 mm + 0.5 ppm RMS
Vertical (external GNSS antenna)	15 mm + 0.5 ppm RMS
Horizontal (internal GNSS antenna)	25 mm + 1 ppm RMS
Vertical (internal GNSS antenna)	40 mm + 1 ppm RMS
Initialization time[5]	typically <8 seconds
Initialization reliability[6]	typically >99 9%

HARDWARE

Physical

Dimensions (WxHxD)	99 mm (3.9 in) x 234 mm (9.2 in) x 56 mm (2.2 in)
Weight	925 g (2.0 lb) with internal battery 2600 g (5.5 lb) entire RTK network rover including internal battery, external GNSS antenna, GNSS antenna cable, range pole and range pole bracket
Temperature[6]	
Operating	–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)
Relative humidity	95% non-condensing
Maximum operating altitude	3,658 m (12,000 ft)
Maximum storage altitude	5,000 m (16,400 ft)
Water and dust	IP65
Shock (non-operating)	1.2 m (4 ft) drop on plywood over concrete
Vibration	MIL-STD-810F, FIG.514.5C-1

Electrical

- Processor: TI OMAP 3503
- RAM: 256 MB
- FLASH: 2 GB
- External storage: SD/SDHC up to 32 GB
- Battery Type: Rechargeable, removable Li-Ion
  - Battery Capacity: 11.1 V, 2.5 AH
  - Charge time: 4 hours (typical)
- Battery run-time per battery (internal / external GNSS antenna)[7]
  - GNSS only: 9.5 / 8.0 hours
  - GNSS & VRS over Wi-Fi: 8.5 / 7.5 hours
  - GNSS & VRS over Cellular modem: 6.5 / 6.0 hours
  - Standby time (external GNSS antenna disconnected): 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
  - Video mode: Up to VGA resolution
  - Still image format: JPG
  - Video file format: WMV with audio
- Cellular & Wireless
  - 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
  - Resolution: 480x640
  - Size: 4.2 in (diagonal)
  - Luminance: 280 cd/m2

CERTIFICATIONS

Certification Class B Part 15, 22, 24 FCC certification (USA), IC approval (Canada), CE Mark approval, A-Tick approval (Australia, New Zealand), KC approval for handheld (Korea), ICASA approval (South Africa), GOST-R & DoC, Importer certifications, Cryptographic and Radop Import permissions (Russia).

The Trimble GeoXR handheld is PTCRB certified and can operate on supported networks that do not require carrier certification.

Bluetooth and Wi-Fi type approvals are country specific. The Trimble GeoXR handheld has Bluetooth and Wi-Fi approval in the U.S. and in most European countries.

RECYCLING INFORMATION

For product recycling instructions and more information, please go to www.trimble.com/environment/summary.html.

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 Accuracy and reliability may be subject to anomalies due to multipath, obstructions, satellite geometry, and atmospheric conditions. Always follow recommended survey practices.
3 Hand-held point measurement accuracy depends on user workflow. For best positioning results, the use of an external GNSS antenna and survey-grade range pole is recommended.
4 Depends on WAAS/EGNOS/MSAS system performance
5 May be affected by atmospheric conditions, signal multipath, obstructions and satellite geometry.
6 May be affected by atmospheric conditions, signal multipath, and satellite geometry. Initialization reliability is continuously monitored to ensure highest quality.
7 Receiver will operate normally to –40 °C, internal batteries are rated to –20 °C. Actual run time will vary with conditions of use.

Specifications subject to change without notice.

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