The rugged Trimble® Geo 7X handheld with Trimble Access™ software is a 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 Geo 7X combines the functionality of high-accuracy field work with the flexibility and convenience of handheld positioning in one device.

The Trimble Geo 7X 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. Take it off the rod and seamlessly switch to its integrated antenna for handheld point measurement with easy access to features such as its integrated camera.

Optimized with Trimble Access Software

Trimble Access field software features the power, functionality, and modularity that surveyors need today. It is designed to support everyday work – topographic surveys, staking, control, and more – through a familiar, easy-to-use interface that will ensure your instant productivity— and you’ll experience less of the typical downtime associated with learning new software.

Its integrated 3G cellular modem 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.

The Trimble Geo 7X comes with Microsoft® Windows® Embedded Handheld version 6.5 Professional operating system, making it easy to use standard office documents in the field.

Centimeter Accuracy in Your Hand

On the survey rod or in your hand, the Trimble Geo 7X delivers the accuracy and speed required to ensure that the work of recording survey points or staking-out is fast and reliable.

The Geo 7X supports signals from all existing and planned GNSS constellations and augmentation systems. 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. Trimble delivers business confidence with a sound GNSS investment for today and long into the future.

Eliminate Physical Barriers to Field Success

For times when occupying the position is simply not possible due to dangerous conditions or right-of-way challenges, utilize the detachable Geo 7X rangefinder accessory. Measurements integrate directly into Trimble data collection software— simply point and shoot to get the position—even where there are obstacles such as traffic or private land access limitations.

Photographs and Geotagging in the Field

Aiding in capturing information about an asset, event, or site, the Geo 7X includes a 5 megapixel autofocus camera with geotagging 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.

Designed for High Efficiency Work

The Trimble Geo 7X is fully rugged with an IP65 rating for dust and water, and MIL-STD-810F ratings for drops, shock, vibration, temperature, altitude and humidity.

The Trimble Geo 7X with Trimble Access software and services, together with Trimble VRS technology and Trimble Business Center software, is an optimal solution for surveyors facing a variety of work requirements.
**DATASHEET**

**CMR+, CMRx, RTCM 2.1, RTCM 2.3, RTCM 3.0, RTCM 3.1 Input via cellular modem**

**1 Hz data storage**

- **Integrated 3.5G cellular modem**

**PERfoRmAnCE sPECifiCAtions**

**Geo 7X handheld with Trimble Access software**

- **Advanced Trimble Maxwell™ 6 Custom Survey GNSS chip with 220 channels**
- **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 (GLONASS M only), L2P
  - SBAS (WAAS/EGNOS/MSAS): L1C/A

**Horizontal (internal GNSS antenna):**

- 0.25 m + 1 ppm RMS

**Vertical (external GNSS antenna):**

- 40 mm + 1.5 ppm RMS

**Horizontal (external GNSS antenna):**

- 10 mm + 0.5 ppm RMS

**Vertical (internal GNSS antenna):**

- 15 mm + 1 ppm RMS

**Baseline <30 km:**

- 10 mm + 1 ppm RMS

**Horizontal (external GNSS antenna):**

- 25 mm + 1.2 ppm RMS

**Horizontal (internal GNSS antenna):**

- 25 mm + 1 ppm RMS

**Initialization time:**

- Typically <8 seconds

**Initialization reliability:**

- Typically >99.9%

**Orientation sensors:**

- 3-axes gyro, magnetometer, accelerometer

**Heading accuracy:**

- ±1.5°

**Inclination accuracy:**

- ±0.5°

**Roll accuracy:**

- ±0.5°

**Distance sensor:**

- Laser rangefinder module

**Network RTK:**

- GPS 10 mm + 0.5 ppm RMS
- GLONASS 15 mm + 0.5 ppm RMS
- BDS 25 mm + 1 ppm RMS
- Galileo 40 mm + 1 ppm RMS

**Initialization time:**

- Typically <8 seconds

**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
- **Memory:** 4 GB user memory + SD slot (up to 32 GB)
- **CPU:** Texas Instruments DM3730 1 GHz + GPU
- **GPU:** 1 GB
- **Battery Capacity:** 11.1 V, 2.5 AH
- **Charge time:** 4 hours (typical)
- **Battery run-time per battery:** (internal / external GNSS antenna)
  - GPS, GLONASS, BDS, Galileo: 20 hours
  - BDS, Galileo: 8.5 / 7.5 hours
  - GNSS & VRS over Wi-Fi: 8.5 / 7.5 hours
- **Display:**
  - Size: 4.2 in (diagonal)
  - Resolution: 480x640
  - Luminance: 280 cd/m²

**Certifications**

- **Class B Part 15, 22, 24 FCC certification**
- **IC approval**
- **CE Mark approval**
- **A-Tick approval**
- **DoC, Importer certifications**
- **Radio Import permission**

**Specifications subject to change without notice.**

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**Trimble Geo 7X Handheld**

**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
- Microsoft® Windows® Embedded Handheld version 6.5 Professional
- Rugged and water-resistant design

**Shipments and Standard Accessories**

- Geo 7X handheld with Trimble Access software with Microsoft® Windows® Embedded Handheld version 6.5 Professional
- Rechargeable battery (x2)
- Range pole bracket
- Hand strap
- Screen Protectors (x15)
- Antenna port dust cover
- Quick Start Guide

**Optional Accessories**

- 12 V vehicle charging cable
- Replacement door kick (SD, USB, SIM)
- GNSS Antenna Cable (TNC to SMB), 1.5 m and 5.0 m
- Laser rangefinder module

**Trimble Field Software Solutions**

- Geo 7X handheld with Trimble Access software

**Performance Specifications**

**Measures**

- **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**
- **Validation**

**Code & Differential GNSS positioning1**

- **Horizontal:**
  - Single Baseline <30 km: 0.25 m + 1 ppm RMS
  - Baseline typically <5 m: 30 RMS
- **Vertical:**
  - 0.50 m + 1 ppm RMS

**Static and Fast Static GNSS surveying (external GNSS antenna)**

- **Horizontal:**
  - 3 mm + 0.5 ppm RMS
- **Vertical:**
  - 3.5 mm + 0.5 ppm RMS

**Real-Time Kinematic surveying2**

- **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

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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. Temperature: −40° C to 40° C. Internal batteries are rated to −20° C. Actual run time will vary with atmospheric conditions.
4. Accuracy and reliability may be subject to anomalies due to multipath, obstructions, satellite geometry, and atmospheric conditions. Always follow recommended survey practices.
5. Temperature: 4° to 140° F (−20° to 60° C)
6. Range precision: 0.01 m
7. Battery run-time per battery (internal / external GNSS antenna):
   - GPS, GLONASS, BDS, Galileo: 20 hours
   - BDS, Galileo: 8.5 / 7.5 hours
   - GNSS & VRS over Wi-Fi: 8.5 / 7.5 hours

**Data Sheet Information**

- **System Summary**
- **Shipments and Standard Accessories**
- **Optional Accessories**
- **Trimble Field Software Solutions**
- **Performance Specifications**
- **Real-Time Kinematic surveying**
- **Certifications**

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**Network RTK**

- Vertical (internal GNSS antenna): 10 mm + 0.5 ppm RMS
- Horizontal (internal GNSS antenna): 25 mm + 1 ppm RMS
- Vertical (external GNSS antenna): 40 mm + 1 ppm RMS

**Initialization time:**

- Typically <8 seconds

**Initialization reliability:**

- Typically >99.9%

**Orientation sensors:**

- 3-axes gyro, magnetometer, accelerometer

**Heading accuracy:**

- ±1.5°

**Inclination accuracy:**

- ±0.5°

**Roll accuracy:**

- ±0.5°

**Distance sensor:**

- Laser rangefinder module

**Communication protocols:**

- NMEA or Trimble proprietary

**Passive range:**

- Up to 120 m

**Reflective range:**

- Up to 200 m

**Accuracy3:**

- ±0.05 m

**Range precision:**

- 0.01 m

**Hardware**

**Physical**

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