Trimble Water R2 GNSS

Versatility in the field. Flexibility for your workflow

Work the way you want with the Trimble R2 GNSS receiver

The Trimble R2 gives you the freedom to select the mobile device of your choice including iOS, Android, and Windows devices. Capable of achieving submeter to centimeter level positioning accuracy the Trimble R2 keeps you working productively in a wide range of water and waste-water utility applications, no matter what your workflow requirements are.

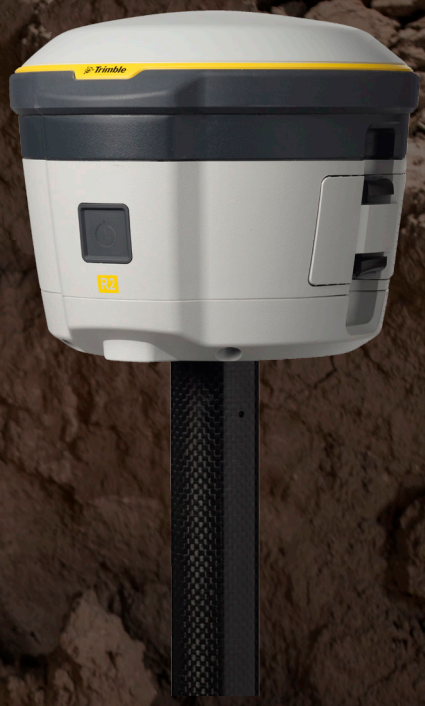
Whether you are capturing GIS field assets, locating buried assets such as pipes and valves, or carrying out precision 3D measurements, the versatile Trimble R2 is purpose-built for utility mapping professionals.

Together with Trimble Unity mobile GIS and workflow software, the R2 is simple to setup and easy-to-use. The Trimble R2 pairs with any Trimble handheld, or consumer smart device across a variety of operating systems and platforms to deliver reliable, high quality, real-time data every time.

A Simple, Rugged System for Everyday Needs
Built to withstand the rigors in the field, the rugged IP65-rated Trimble R2 receiver will work as hard as you do in tough outdoor conditions. Its one-button start up and compact, streamlined form factor make it fast to set up, and it can be operated either mounted on a pole, on a backpack or on a vehicle. The field-swappable battery means all day productivity with no interruptions, and so you stay focused on the job at hand.

Technology to Keep you Productive
The Trimble R2 is capable of tracking the full range of GNSS satellite constellations and augmentation systems, and it comes with an integrated Trimble Maxwell™ 6 chip and 220 channels to provide you with reliable accuracy and positioning performance. You can achieve higher accuracy in real-time with the flexibility to choose correction sources including traditional RTK and VRS networks, as well as Trimble RTX™ correction services delivered by both satellite and Internet.

Trimble has evolved its Floodlight™ satellite shadow reduction technology to ensure the R2 receiver is able to provide reliable, accurate data even in difficult GNSS environments. Equipped with this advanced GNSS technology, you can achieve remarkable improvements to position availability and accuracy when heavy overhead cover, such as tree canopy and buildings, obstructs satellite signals.



Compatible with

KEY FEATURES

Centimeter accurate positioning
A professional solution for water and waste-water workflows that require sub-meter to centimeter accurate positioning

Compatible with multiple devices
Easily collect data by pairing with devices such as smartphones, tablets or Trimble handhelds

Works with multiple sources
Supports multiple satellite constellations and correction sources for accurate data at any location

Data quality
Trimble Maxwell 6 chip with 220 channels and leading GNSS technology maximizes data quality

Trimble water

CONFIGURATION OPTION

Type:.....Bring Your Own Device external GNSS receiver

MEASUREMENTS

- Advanced Trimble Maxwell 6 custom GNSS chip
- High-precision correlator for L1/L2 pseudo-range measurements
- Unfiltered, unsmoothed pseudo-range data for low noise, low multipath error, low-time domain correlation, and high-dynamic response
- Carrier phase measurements with <1 mm precision in a 1 Hz bandwidth
- Trimble EVEREST™ multipath signal rejection
- Proven Trimble low elevation tracking technology
- 220-channel GNSS
- 4-channel SBAS (WAAS/EGNOS/MSAS/GAGAN)

POSITIONING PERFORMANCE[4]

SBAS (WAAS/EGNOS/MSAS/GAGAN)[1]

Horizontal accuracy: ..... ±0.50 m (1.6 ft)
Vertical accuracy: ..... ±0.85 m (2.8 ft)

RTX Positioning[3]

CenterPoint® RTX
Horizontal accuracy: .....4 cm
Vertical accuracy: .....9 cm
FieldPoint RTX™: ..... 10 cm Horizontal
RangePoint™ RTX: ..... 30 cm Horizontal
ViewPoint RTX™: ..... 50 cm Horizontal

RTK Positioning[2]

Horizontal accuracy: .....10 mm + 1 ppm RMS (0.033 ft + 1 ppm RMS)
Vertical accuracy: .....20 mm + 1 ppm RMS (0.065 ft + 1 ppm RMS)

Network RTK[2]

Horizontal accuracy: .....10 mm + 1 ppm RMS (0.033 ft + 1 ppm RMS)
Vertical accuracy:.....20 mm + 1 ppm RMS (0.065 ft + 1 ppm RMS)

BATTERY AND POWER

Internal:.....Field replaceable internal battery 7.4 V, 2800 mA-hr, Lithium-ion
External:..... Power input on the Mini-B USB connector, non-charging as per the USB standard 10 W USB adapter
Power consumption:.....4.95 W (VFD 100%), 3.7 W (VFD 12.5%) at 18 V, in rover mode

Operation time on internal battery
Rover: .....5 hours; varies with temperature

ENVIRONMENTAL

Temperature

Operating: .....–20 °C to +55 °C (–4 °F to +131 °F)
Storage: ..... –40 °C to +75 °C (–40 °F to +167 °F)
Humidity:.....100% condensing
Waterproof:..... IP65
Pole drop:....Designed to survive a 2 m (6.6 ft) drop onto all faces and corners onto concrete (25C)

Shock

Non-operating: ..... To 75 g, 6 ms, saw-tooth
Operating: .....To 40 g, 10 ms, saw-tooth 100 shock events at 2 Hz rate
Vibration: ..... MIL-STD-810G (Operating), Method 514.6, Procedure I, Category 4, Figure 514.6C-1 (Common Carrier, US Highway Truck Vibration Exposure) Total Grms levels applied are 1.95 g

MECHANICAL

User interface: ..... LED indicators for receiver status. On/Off key for one-button startup
Dimensions:.....14.0 cm (5.5 in) diameter x 11.4 cm (4.5 in) height
Weight:.....1.08 kg (2.38 lb) receiver only

INTERNAL ANTENNA

Frequency Range: L1/L2 (GPS, GLONASS, Galileo, BeiDou, QZSS), MSS (RTX), L1 SBAS

COMMUNICATIONS

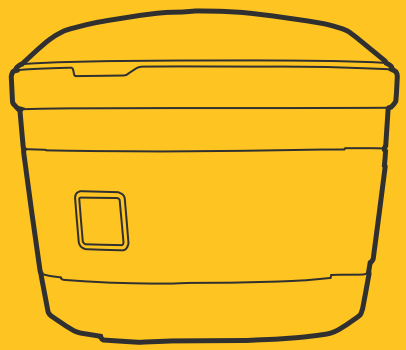
USB: .....1 USB 2.0 (Type B) device
Wi-Fi: ..... Simultaneous client and access point (AP) modes
Bluetooth wireless technology: ..... Fully-integrated, fully-sealed 2.4 GHz Bluetooth module[5]
Network protocols:.....HTTP (web browser GUI); NTP Server, TCP/IP or UDP; NTRIP v1 and v2

Supported data formats
Correction inputs:..... CMR, CMR+™, CMRx, RTCM 2.x, RTCM 3
Correction outputs: ..... None
Data outputs: NMEA, GSOF

COMPLIANCE

FCC Part 15 Subpart B (Class B Device) and Subpart C; CAN ICES-3(B)/NMB-3(B), RSS-Gen and RSS-210; R&TTE Directive: EN 301 489-1/-3/-5/-17, EN 300 440, EN 300 328, EN 300 330, EN 60950, EN 50371; ACMA Regulatory Compliance Mark (RCM); CE mark compliance: UN ST/SG/AC.10.11/Rev. 3, Amend. 1 (Lithium-ion Battery, charger not included), UN ST/SG/AC. 10/27/Add. 2 (Lithium-ion Battery, charger not included); C-Tick; WEEE and RoHS compliant.

1. Depends on SBAS system performance.
2. Accuracy and reliability may be subject to anomalies such as multipath, obstructions, satellite geometry, interference and atmospheric conditions. Always follow recommended practices.
3. CenterPoint RTX accuracy is typically achieved within 5 minutes in select regions, and within 30 minutes worldwide. FieldPoint RTX accuracy is typically achieved within 5 minutes in select regions, and within 15 minutes worldwide. RangePoint RTX and ViewPoint RTX accuracy is typically achieved within 5 minutes worldwide.
4. Receiver accuracy and convergence time varies based on GNSS constellation health, level of multipath, and proximity to obstructions such as large trees and buildings.
5. Bluetooth type approvals are country-specific. For more information, contact your local Trimble office or representative.



U.S.A : Trimble Navigation Limited
3501 Jamboree Road
Newport Beach, California 92660
+1 (949) 892-6120

R.o.W : Trimble Navigation Limited
NSC Campus, Mahon,
Cork Ireland
+353 21 230 9328

water@trimble.com
www.trimblewater.com

Trimble water