

Hochgenaue Trimble R12 [RTK GNSS](#) Umfragenempfänger

Merkmale

* Trimble Propoint™ GNSS -Technologie

Das bahnbrechende Signalmanagement mit Nutzung der neuesten Entwicklungen in der GNSS -Signalinfrastruktur und der Trimble -Empfängerhardware verbessert die Leistung bei herausfordernden GNSS -Bedingungen*.

* Trimble SurePoint™ -Technologie

Genauige Positionserfassung mit eBubble und Kompass-basierter Neigungskorrektur

* Trimble Centerpoint® RTX -Kompensationstechnologie bietet weltweit RTK -Niveau -Genauigkeit, ohne dass Basisstationen oder VRS -Netzwerke erforderlich sind

* Trimble 360 -Technologie

672 Kanäle unterstützen alle verfügbaren und zukünftigen GNSS -Signale, um einen erhöhten Schutz vor Störungen und gefälschten Signalen

* Trimble XFill® -Technologie

Durch kontinuierliche RTK -Abdeckung können Sie weiterhin an drahtlosen und Handy -schwarzen Stellen arbeiten

Produktbeschreibung



PERFORMANCE SPECIFICATIONS

GNSS MEASUREMENTS

Constellation agnostic, flexible signal tracking and improved positioning ² in challenging environments with Trimble ProPoint GNSS technology	
Increased measurement productivity and traceability with Trimble SurePoint eBubble tilt compensation	
Advanced Trimble Custom Survey GNSS chips with 672 channels	
Reduced downtime due to loss of radio signal or cellular connectivity with Trimble xFill technology	
Signals tracked simultaneously	GPS: L1C, L1C/A, L2C, L2E, L5 GLONASS: L1C/A, L1P, L2C/A, L2P, L3 SBAS (WAAS, EGNOS, GAGAN, MSAS): L1C/A, L5 Galileo: E1, E5A, E5B, E5 AltBOC, E6 ² BeiDou: B1, B1C, B2, B2A, B3 QZSS: L1C/A, L1S, L1C, L2C, L5, L6 NavIC (IRNSS): L5 L-band: CenterPoint RTX
Iridium filtering above 1616 MHz allows antenna to be used up to 20 m away from Iridium transmitter	
Japanese LTE filtering below 1510 MHz allows antenna to be used up to 100 m away from Japanese LTE cell tower	
Digital Signal Processor (DSP) techniques to detect and recover from spoofed GNSS signals	
Advanced Receiver Autonomous Integrity Monitoring (RAIM) algorithm to detect and reject problem satellite measurements to improve position quality	
Improved protection from erroneous ephemeris data	
Positioning Rates	1 Hz, 2 Hz, 5 Hz, 10 Hz, and 20 Hz

POSITIONING PERFORMANCE³

CODE DIFFERENTIAL GNSS POSITIONING

Horizontal	0.25 m + 1 ppm RMS
Vertical	0.50 m + 1 ppm RMS
SBAS ⁴	typically <5 m 3DRMS

STATIC GNSS SURVEYING

High-Precision Static

Horizontal	3 mm + 0.1 ppm RMS
Vertical	3.5 mm + 0.4 ppm RMS

Static and Fast Static

Horizontal	3 mm + 0.5 ppm RMS
Vertical	5 mm + 0.5 ppm RMS

REAL TIME KINEMATIC SURVEYING

Single Baseline <30 km

Horizontal	8 mm + 1 ppm RMS
Vertical	15 mm + 1 ppm RMS

Network RTK⁵

Horizontal	8 mm + 0.5 ppm RMS
Vertical	15 mm + 0.5 ppm RMS
RTK start-up time for specified precisions ⁶	2 to 8 seconds

TRIMBLE RTX™ TECHNOLOGY (SATELLITE AND CELLULAR/INTERNET (IP))

CenterPoint RTX⁷

Horizontal	2 cm RMS
Vertical	5 cm RMS
RTX convergence time for specified precisions - Worldwide	< 15 min
RTX QuickStart convergence time for specified precisions	< 1 min
RTX convergence time for specified precisions in select regions (Trimble RTX Fast Regions)	< 1 min

TRIMBLE XFILL⁸

Horizontal	RTK ⁹ + 10 mm/minute RMS
Vertical	RTK ⁹ + 20 mm/minute RMS

HARDWARE		
PHYSICAL		
Dimensions (W×H)	11.9 cm x 13.6 cm (4.6 in x 5.4 in)	
Weight	1.12 kg (2.49 lb) with internal battery, internal radio with UHF antenna, 3.95 kg (8.71 lb) items above plus range pole, Trimble TSC7 controller & bracket	
Temperature ¹⁰		
	Operating	–40 °C to +65 °C (–40 °F to +149 °F)
	Storage	–40 °C to +75 °C (–40 °F to +167 °F)
Humidity	100%, condensing	
Ingress protection	IP67 dustproof, protected from temporary immersion to depth of 1 m (3.28 ft)	
Shock and vibration (Tested and meets the following environmental standards)		
	Shock	Non-operating: Designed to survive a 2 m (6.6 ft) pole drop onto concrete. Operating: to 40 G, 10 msec, sawtooth
	Vibration	MIL-STD-810F, FIG.514.5C-1
ELECTRICAL		
	Power 11 to 24 V DC external power input with over-voltage protection on Port 1 and Port 2 (7-pin Lemo)	
	Rechargeable, removable 7.4 V, 3.7 Ah Lithium-ion smart battery with LED status indicators	
	Power consumption is 4.2 W in RTK rover mode with internal radio ¹¹	
Operating times on internal battery ¹²		
	450 MHz receive only option	6.5 hours
	450 MHz receive/transmit option (0.5 W)	6.0 hours
	450 MHz receive/transmit option (2.0 W)	5.5 hours
	Cellular receive option	6.5 hours
COMMUNICATIONS AND DATA STORAGE		
Serial	3-wire serial (7-pin Lemo)	
USB v2.0	Supports data download and high speed communications	
Radio modem	Fully Integrated, sealed 450 MHz wide band receiver/transmitter with frequency range of 403 MHz to 473 MHz, support of Trimble, Pacific Crest, and SATEL radio protocols:	
	Transmit power	2 W
	Range	3–5 km typical / 10 km optimal ¹³
Cellular ¹⁴	Integrated, 3.5 G modem, HSDPA 7.2 Mbps (download), GPRS multi-slot class 12, EDGE multi-slot class 12, Penta-band UMTS/HSDPA (WCDMA/FDD) 800/850/900/1900/2100 MHz, Quad-band EGSM 850/900/1800/1900 MHz, GSM CSD, 3GPP LTE	
Bluetooth	Fully integrated, fully sealed 2.4 GHz communications port (Bluetooth) ¹⁵	
Wi-Fi	802.11 b,g, access point and client mode, WPA/WPA2/WEP64/WEP128 encryption	
I/O ports	Serial, USB, TCP/IP, IBSS/NTRIP, Bluetooth	
Data storage	6 GB internal memory	
Data format	CMR+, CMRx, RTCM 2.1, RTCM 2.3, RTCM 3.0, RTCM 3.1, RTCM 3.2 input and output 24 NMEA outputs, GSOF, RT17 and RT27 outputs, 1 PPS output	
WEBUI		
	Offers simple configuration, operation, status, and data transfer	
	Accessible via Wi-Fi, Serial, USB, and Bluetooth	
SUPPORTED CONTROLLERS & FIELD SOFTWARE		
	Trimble TSC7, Trimble T10, Trimble T7, Android and iOS devices running supported apps	
	Trimble Access 2019.10 or later	
CERTIFICATIONS		
	FCC Part 15 (Class B device), 24, 32; CE Mark; RCM; PTCRB; BT SIG	

Wenn Sie an diesem Produkt interessiert sind, können Sie sich gerne an uns wenden.