

GPS Receiver Comparison

	Trimble R1	Trimble R2	Trimble R10	Trimble	Juniper	Trimble	Trimble T10	Juniper	Juniper
				Catalyst	Geode	EM100 ⁱ		Mesa 2	Mesa 3
Post- Processed Accuracyii	50cm+1 ppm	10mm+1ppm- 50cm+ppm	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Real-Time DGPS Capableiii	SBAS or External Source	SBAS, External Source, or Omnistar®	SBAS, RTX, or External Source, or OmniStar	SBAS, RTX, or External Source	SBAS	SBAS, RTX, External Source	SBAS	SBAS	SBAS
Real-time Accuracy	<1m	1cm-<1m	8 mm+1ppm RMS	1cm + 1ppm - 1m	<60cmiv		2-5m	2-4miv	
EVEREST™ multipath rejection technology	YES	YES	NO	YES	NO	YES	NO	NO	NO
GLONASS tracking	YES	YES	YES	NO	YES	YES	YES	YES	YES
Galileo tracking	YES	YES	YES	Galileo	Optional	Yes	Yes	YES	YES
BeiDou tracking	YES	YES	YES	No	Optional	Yes	No	YES	YES
Floodlight Technology ^v	NO	NO	NO	NO	NO	NO	NO	NO	NO
H-Star™ Technology	NO	NO	NO	NO	NO	NO	NO	NO	NO
Trimble RTX Correction	ViewPoint	CenterPoint®, FieldPoint, RangePoint, & ViewPoint	CenterPoint	CenterPoint®, FieldPoint, RangePoint, & ViewPoint	NO	ViewPoint	NO	NO	NO
External Antenna	NO	NO	NO	DA1 Required	Optional	Optional	NO	NO	NO
NMEA Output	YES	Optional	YES	YES	YES	YES	YES	YES	YES

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	Trimble	Trimble	Trimble	Juniper	Juniper	Trimble	Trimble	Trimble
	Geo7X	Geo7x	Juno 5	Allegro 2 & 3	Archer 2 & 3	Nomad 5	TDC600	TDC150
	Centimeter							
Post- Processed Accuracyll	1cm + 1 ppm	10-50 cm + 1ppm	2-4m	N/A	N/A	N/A	N/A	N/A
Real-Time DGPS CapableIII	SBAS, RTX, External Source	SBAS, RTX, External Source	SBAS	SBAS	SBAS	SBAS, External Source	SBAS	SBAS or External Source
Real-time Accuracy	1cm + 1 ppm	10cm-1 m	2-4m	2 miv	1-2.5 m Archer2/ 2 m Archer 3iv	2-4m	<2 m	1-100cm
EVEREST™ multipath rejection technology	YES	Optional (H- Star)	NO	NO	NO	NO	NO	NO
GLONASS tracking	YES	YES	NO	YES	YES	YES	YES	YES
Galileo tracking	YES	YES	NO	YES	YES	NO	YES	YES
BeiDou Tracking	YES	YES	NO	YES	YES	YES	YES	YES
Floodlight TechnologyV	YES	YES	NO	NO	NO	NO	NO	NO
H-Star™ Technology	YES	Optional	NO	No	NO	NO	NO	NO
Trimble RTX Correction	CenterPoint®	FieldPoint, RangePoint™ (H-Star Option) and ViewPoint™	NO	NO	NO	NO	NO	CenterPoint, FieldPoint, RangePoint, and ViewPoint
External Antenna	YES, Zepryth Model 3	Optional	Optional	Optional Allegro 3	NO	Optional	Optional	Optional
NMEA Output	YES (10cm accuracy)	YES	YES	YES	YES	YES	YES	YES

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^{iv} Trimble specifies accuracy to RMS (Root Mean Square), meaning a 68% confidence interval. This indicates that 68 out of every 100 positions should meet the accuracy specifications. The Juniper accuracy specifications are using CEP (Circular Error Probability). CEP only specifies that 50% of collected positions will be within spec. Be aware of the difference when comparing accuracies.

^v Floodlight satellite shadow reduction technology allows receivers to 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.

ⁱ This module is currently compatible with the Trimble Nomad 5, T7, and T10.

ⁱⁱ The distance between the base station and the rover affects accuracy. There is a degradation of 1 part per million (1ppm) as the distance between the base station and rover increases. Therefore, one millimeter of degradation occurs for every kilometer between the base and rover. The following factors increase the availability of 10 cm accuracy after H-Star™ post-processing: use of optional external antennas, longer elapsed time tracking uninterrupted L1/L2 carrier phase data, tracking of more GPS or GLONASS satellites with L2 measurements, shorter distance to the base station(s), and use of more than one base station for post-processing. Non Trimble receivers output NMEA data only and cannot be post-processed with Trimble post-processing software.

^{III} SBAS (Satellite Based Augmentation System). Includes WAAS available in North America, EGNOS available in Europe, and MSAS available in Japan. External real-time correction sources include VRS or real-time connection to a local base station. Requires H-Star data to be collected for up to 2 minutes. Requires a minimum of 3 good quality dual frequency reference stations within 200 km, or one good quality reference station within 80 km. With one reference station, accuracy degrades by 1ppm beyond 80km. Code processing reduces accuracy to 50 cm.