

# Trimble GPS Receiver Comparison

## With Trimble TerraSync Professional Field Software

Features	Trimble XB	Juniper Systems, Inc. Archer with XC Card	Trimble JunoST	Trimble Nomad	Trimble GeoXM	Trimble GeoXT	Trimble GeoXH	Trimble ProXT	Trimble ProXH	Trimble XH & Zephyr antenna	Trimble XRT
Post Processed Accuracy <sup>1</sup>	2-5m † 1ppm <sup>1</sup>	2-5m † 1ppm <sup>1</sup>	2-5m † 1ppm <sup>1</sup>	2-5m † 1ppm <sup>1</sup>	1-3m † 1ppm <sup>1</sup>	Submeter + 1ppm <sup>1</sup>	30cm ‡ 1ppm <sup>2</sup>	Submeter + 1ppm <sup>1</sup>	30cm ‡ 1ppm <sup>2</sup>	20cm ‡ 1ppm <sup>2</sup>	10 cm to Submeter <sup>6</sup>
Real Time DGPS Capable	SBAS <sup>7</sup>	NO	SBAS <sup>7</sup>	NO	SBAS <sup>7</sup> , External RTCM	SBAS <sup>7</sup> , External RTCM	SBAS <sup>7</sup> , External RTCM	SBAS <sup>7</sup> , External RTCM	SBAS <sup>7</sup> , External RTCM	SBAS <sup>7</sup> , External RTCM	VRS Omnistar External SBAS <sup>7</sup>
DGPS Accuracy	2-5m	N/A	2-5m	N/A	1-3m	Submeter	Submeter	Submeter	Submeter	Submeter	10 cm to Submeter <sup>6</sup>
Integrated Wireless	Blue- tooth	Bluetooth	Bluetooth 802.11b	Bluetooth 802.11b	Bluetooth 802.11b	Bluetooth 802.11b	Bluetooth 802.11b	Bluetooth	Bluetooth	Bluetooth	Bluetooth
EVEREST multipath rejection technology	NO	NO	NO	NO	NO	YES	YES	YES	YES	YES	YES
Navigation Features	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Data Collection of Features & Attributes	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
GIS Data Update	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
External Sensor Input	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Laser Offsets	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
In-Field Map	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Background Map	YES (including images)	YES (including images)	YES	YES (including images)	YES (including images)	YES (including images)	YES (including images)	YES (including images)	YES (including images)	YES (including images)	YES (including images)
GIS Conversion of Features	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
No. of Channels	12	12	12 L1 code only	12 L1 code only	12	12	12	12 L1 code & L2 carrier	12 L1 code & L2 carrier	12 L1 code & L2 carrier	72
Storage Space	NA <sup>3</sup>	256 M, 512 option + SD	128 M + SD	1 GB + CF/ SD	1 GB + SD	1 GB + SD	1 GB + SD	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>
External Antenna	NO	NO	Optional	NO	Optional	Optional	Optional	Optional	Optional	Standard	Zephyr included
Internal Antenna	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	NO
Price <sup>4</sup>	\$295 <sup>5</sup>	\$1,800- \$2,200	\$650	\$1,900- \$2,500	\$2,595	\$4,295	\$5,295	\$2,495 <sup>5</sup>	\$3,495 <sup>5</sup>	Add \$2,195	\$6,000 to \$7,500 <sup>5</sup>
3rd Party Data Collection Software Support	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO

<sup>1</sup> The distance between the base and the rover affects accuracy. There is a degradation of one to five parts per million (1ppm-5ppm) as the distance between the base station and rover increases. Therefore, one millimeter of degradation occurs for every kilometer between the base and rover. <sup>2</sup> 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. <sup>3</sup> Storage Space is dependent on the data collector used with the receiver. <sup>4</sup> Price does not include cost of Pathfinder Office (\$1,795, bundled with TerraSync Pro: \$2,695) or GPS Analyst software (\$1,995, bundled with TerraSync Pro: \$2,695). TerraSync Professional is \$1,195, TerraSync Standard for \$295 can be used instead. Standard version does not include Data Update, External Sensor support, Laser Offsets, or Background Map. <sup>5</sup> Price of XRT, XB, XC, XT or XH does not include cost of data collector. Trimble Recon (\$1,600) or Trimble Ranger (\$3,200) can be used, as well as Juniper Systems Archer (\$1,500), Allegro (\$2,800-\$3,200) or other CE device. Zephyr antenna can be used with GeoXH or ProXH systems for increased accuracy, add \$2,200 to the cost of those systems. <sup>6</sup> Decimeter accuracy can be achieved with H-Star data when the baseline length is less than 30 km. Both the base and the rover must be dual frequency and observing at least five common satellites (six during dual-satellite constellation operation). In less optimal conditions or at ranges between 30km and 80km, subfoot accuracy can be achieved. H-Star specified accuracy is typically achieved within 2 minutes. Real-time decimeter accuracy can be achieved with the HP subscription to Omnistar. Omnistar can take up to 60 minutes initialization time to achieve the specified accuracy. <sup>7</sup> SBAS (Satellite Based Augmentation System). Includes WAAS (Wide Area Augmentation System) available in North America only, EGNOS (European Geostationary Navigation Overlay System) available in Europe only, and MSAS, available in Japan.

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