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AgGPS 332 Ultimate Choice Receiver with Antenna Options





What is the AgGPS 332 receiver?

The Trimble® AgGPS® 332 receiver is a high-performance GPS receiver with separate GPS antenna options, all rugged enough for any farm vehicle. It is the first GPS receiver that offers the full range of DGPS and high accuracy corrections, depending on your accuracy requirements, including;

- +/- 1 inch pass-to-pass and year-to-year repeatable accuracy using RTK
- +/- 2–4 inch pass-to-pass accuracy using OmniSTAR HP
- **New!** +/- 3–5 inch pass-to-pass accuracy using OmniSTAR XP*
- +/- 6–8 inch pass-to-pass accuracy using WAAS, EGNOS, Beacon, or OmniSTAR VBS

Why are there two antennas?

Having two antenna's gives you the most correction options for the best value. You can start with the lower cost DGPS antenna and upgrade to the higher accuracy antenna if your operation requires.

Antenna	Accuracy options
 High accuracy L1/L2 band antenna	<ul style="list-style-type: none"> • +/- 1-inch pass-to-pass and year-to-year repeatable accuracy using an RTK base station or RTK local network • +/- 2–4 inch pass-to-pass accuracy using OmniSTAR HP • NEW! 3–5 inch pass to pass accuracy using OmniSTAR XP • +/- 6–8 inch pass-to-pass accuracy using WAAS, EGNOS, or OmniSTAR VBS
 DGPS L1 band antenna	+/- 6–8 inch pass-to-pass accuracy using; <ul style="list-style-type: none"> • WAAS/EGNOS • Beacon • OmniSTAR VBS

* XP performance qualified by Trimble only in North America at release.

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What are the key benefits of using the AgGPS 332 receiver?

- Having complete flexibility of accuracy levels from +/- 1 inch year-to-year repeatability to +/- 6–8 inch pass-to-pass accuracy means that your GPS system can grow when your accuracy needs change. All accuracy level GPS systems reduce skip and overlap, which in turn, helps to reduce farm input costs.
- Having a choice of using the free public DGPS signals from SBAS services (WAAS/EGNOS) or Beacon, or the OmniSTAR VBS/HP/XP subscription based service, or even an RTK network system depending on which is best for your operation, and available in your area.
- A display and keypad gives the operator visual feedback for monitoring receiver status and the ability to change operational parameters of the receiver.

What are the differences between DGPS sources?

Key differences between satellite and beacon differential services include;

Signal range – usually wider with the satellite service

Accuracy – better accuracy is available with the satellite service (see table above)

Area of coverage – some users are closer to SBAS and beacon services, others are not and will need to use satellite services

Free or subscription based – Beacon, WAAS, EGNOS are free and the satellite service has an annual or per-use subscription

How do I obtain Beacon or SBAS signals?

Out of the box the AgGPS 332 receiver is set to receive beacon signals, you need to be within 300 miles of a beacon station to receive the signals. To receive an SBAS signal you simply need to select it from a menu option, and be within the view of the SBAS satellite.

What is the OmniSTAR service?

OmniSTAR is a subscription based wide-area DGPS service. OmniSTAR has GPS base stations worldwide that send corrected GPS positions to a stationary satellite. The OmniSTAR satellite then sends those signals to roving GPS receivers that have the OmniSTAR service enabled. The service is available in different accuracy levels, including the *new XP +/- 3–5 inch pass-to-pass accuracy*. For more information visit <http://omnistar.com>.

How do I obtain the OmniSTAR service?

To enable the AgGPS 332 receiver to obtain satellite differential correction, all that is required is a phone call to OmniSTAR (888.883.8476, US and Canada). They will activate the AgGPS 332 receiver with an over-the-air signal.

What is SBAS?

The Satellite Based Augmentation Systems, or SBAS are free differential GPS (DGPS) services. Wide Area Augmentation System known as WAAS, was developed by the U.S. Federal Aviation Association (FAA) to provide a reliable solution for commercial aircraft, and is available across the U.S. The European Space Agency's system known as EGNOS is based in Europe; other countries and regions are in test mode and will be on-line shortly so check in your area.

These systems have many GPS receivers that are set up on fixed locations known as 'base stations' that receive and correct GPS data, which is then sent to a geostationary satellite. The geostationary satellite then uplinks the corrected data to roving receivers that are WAAS or EGNOS enabled, such as the Trimble AgGPS 332 receiver. To receive signals from the geostationary satellites the roving receiver needs to be in range of the satellite. For more information visit; <http://GPS.faa.gov/programs/waas/waas.htm> or <http://www.esa.int/esana/>

What is the Beacon service?

The Beacon service is a DGPS system that has been installed worldwide. Beacon stations are GPS receivers in fixed locations (base stations). Free of charge they broadcast corrected GPS positions, which can be received by Beacon-enabled GPS rover receivers such as the AgGPS 332 receiver. Beacons generally have a range of 150-300 miles depending on topography, and quality of GPS receiver. For more information visit; <http://www.navcen.uscg.gov/dgps/default.htm>

Can the AgGPS 332 switch between different DGPS services?

The AgGPS 332 receiver can be configured to use a specific satellite signal (SBAS or Lband) or a specific beacon signal as the primary differential correction source. In the event of loss of the primary signal the receiver can be configured to switch automatically, after a user specified time-out, to other differential sources that are available.

What Trimble products integrate with the AgGPS 332 receiver?

The AgGPS EZ-Guide[®] Plus lightbar guidance system, the AgGPS EZ-Steer[™] assisted steering system, the AgGPS Autopilot[™] automated steering system, the AgGPS 170 Field Computer, AgGPS EZ-Map software, and many non-Trimble yield monitoring and mapping solutions that require GPS input.

What information can the AgGPS 332 receiver display?

The 2-line 16-character LCD display of the AgGPS 332 receiver shows the status information of the GPS receiver. This includes: position, altitude, speed, heading, PDOP, HDOP, VDOP, satellites used, position mode, differential status, satellites' signal strength, all status information of the beacon receiver including; signal strength, signal-to-noise ratio, beacon used, beacon status, bit error rate; all status information for the L-band satellite receiver, including: signal provider, signal frequency, signal strength, signal-to-noise ratio. In combination with the keyboard, the display is used to configure all receiver settings and the I/O selections, including the NMEA messages.

How does the AgGPS 332 receiver communicate with other precision agriculture devices?

The Trimble AgGPS 332 receiver outputs NMEA data so it may be easily integrated with a variety of precision agriculture applications; such as: harvest yield monitors. A [full list](#) is available on www.trimble.com.

What is NMEA?

NMEA compatible GPS receivers have the ability to output NMEA sentences. These sentences contain latitude, longitude, speed, heading, time and other related information and are used to communicate with other agricultural devices that need this type of information such as yield monitors, spray controllers, and planters. Some of the NMEA sentences most used by GPS receivers for agricultural applications are GLL, GGA, GSV, VTG, RMC, and ZDA.

What NMEA messages are sent by the AgGPS 332 receiver?

The AgGPS 332 receiver has NMEA output port parameters set to output the GGA, VTG, GSA, and RMC messages which are the most common NMEA messages required by yield monitors. Other NMEA messages that the AgGPS 332 receiver can be configured to output are GLL, ALM, ZDA, MSS, and GSV. In addition, the AgGPS 332 receiver may be configured to output data from 1200 baud to 38.4 baud.

Which yield monitors connect with the AgGPS 332 receiver?

The AgGPS receivers connect to many yield monitors manufactured by Ag Leader, CASE, Harvest master, John Deere, Micro-Trak, RDS, or any other requiring NMEA input.