

# AgGPS 114 DGPS

## *Real-time DGPS Smart Antenna*

### Key Features and Benefits

- GPS and DGPS receivers and antennae in one tough, compact package
- Submeter accurate, real-time DGPS operation
- Easy magnetic mounting
- Control from either AgGPS 70 RDL or Windows 95/98 computer

The AgGPS® 114 DGPS Smart Antenna is intended for agricultural users requiring the highest level of convenience in an L-band differential GPS (DGPS) receiver. The unit integrates a high-performance GPS receiver and L-band satellite differential correction receiver with a combined GPS/L-band DGPS antenna in a single, compact, waterproof housing.

### The DGPS Receiver for System Integration

The AgGPS 114 outputs submeter-accurate DGPS positions using NMEA or TSIP data messages to precision agricultural equipment, such as yield monitors and field mapping computers. It is fully compatible with all components of the AgGPS Field Management System.

The AgGPS 114 receiver operates in real-time DGPS using a subscription from either the Omnistar or Racal-Landstar satellite DGPS correction service. Both of these services provide corrections that do not degrade with distance from a base station. In addition, the receiver can use an external source of differential correction in RTCM-104 format. The unit can be upgraded to receive the FAA WAAS and European EGNOS corrections when these services become operational.

The receiver operating parameters are controlled with either the AgGPS 70 Remote Display and Logger (RDL) or the Remote Display Interface (RDI) program running on a Windows 95/98 computer. The user can set all



*The AgGPS 114 DGPS Smart Antenna*

receiver operating parameters as well as configure and control swathing operations, including setting swath patterns, swath width, start points and end points.

### Accurate Field Guidance with the AgGPS Parallel Swathing Option

The AgGPS 114 receiver and the AgGPS Parallel Swathing Option (PSO) work together to provide accurate field guidance, pass after pass, and can eliminate the need for conventional foam markers. The AgGPS 114 receiver controls the display on the AgGPS PSO lightbar, providing guidance over the field, and minimizing overlap and skip. It also enables operation beyond normal daylight hours so that jobs can be finished in a single day.

### As-Applied Mapping with the AgGPS 170

Using the AgGPS 114 receiver with the AgGPS 170 Field Computer

enables you to control and log the actual application rate of the fertilizer or crop protection material. The AgGPS 170 Field Computer uses an agricultural prescription map to control the application rate. As the material is being applied, the AgGPS 170 Field Computer records both the GPS position and the applied rate in a data file. Meanwhile, the daylight-readable color display shows the vehicle's drive path.

The user also can create permanent vehicle drive paths, reducing the effects of soil compaction caused by uncontrolled vehicle traffic over the field. These permanent vehicle drive paths can be used, for example, to minimize damage to underground drip tape of a drip irrigation system.

Trimble

# AgGPS 114

## Real-time DGPS Smart Antenna

### STANDARD FEATURES

- Completely self-contained in a tough plastic housing
- 12-channel DGPS receiver
- Positioning based on high-performance GPS engine design
- Internal L-band satellite differential receiver
- World-wide operation with both Omnistar and Racal subscriptions
- External RTCM correction input
- Sub-meter differential accuracy
- Two programmable RS-232 serial ports
- CAN bus J1939 compatible
- 1-PPS output
- Outputs GPS position in either NMEA or TSIP data messages
- Configuration software
- Magnetic mount
- Remote Display Interface (RDI) software for Windows 95/98
- WAAS/EGNOS upgradable
- AgGPS 170 Field Computer compatible
- AgGPS 70 Remote Display and Logger compatible

### OPTIONS

- 10-Hz positioning
- Everest multipath reduction
- Parallel Swathing Option

### PHYSICAL CHARACTERISTICS

#### AgGPS 114 Receiver

Weight:	22 oz. (0.52 kg)
Power:	3.1 W, 9 to 32 volts
Operating Temp:	-30°C to +60°C (-22F to +140F)
Storage Temp:	-40°C to +80°C (-40F to +176F)
Humidity:	100% condensing
Casing:	UV-resistant Plastic 6 in. D X 5 in. H (152 mm D X 127 mm H)
Compliance:	FCC Class B, CE, EP 455

### PERFORMANCE CHARACTERISTICS

#### GPS Receiver

General:	12 channel L1 code phase receiver
Update Rate:	1 Hz Standard; 10 Hz Optional
Position Accuracy:	sub-meter differential
Time to First Fix:	<30 sec, typical
NMEA Messages:	GGA, GLL, GRS, GST, VTG, RMC, GSA, GSV, XTE, ZDA, ALM, MSS
Communication ports:	2 ea. RS-232, 1 ea. J1939 (CAN 2.0B)

### RECOMMENDED AgGPS 114 SYSTEM CONFIGURATIONS

1. AgGPS 114 used with customer supplied Precision Agriculture Equipment: Order 38200-00
2. AgGPS 114 with AgGPS 70 RDL for adding logging and user display I/O: Order 38200-00 and 39600-00
3. AgGPS 114 with AgGPS PSO Plus for guidance and logging: Order 38200-00, 34623-40
4. AgGPS 114 with AgGPS 170 Field Computer with Guidance: Order 38200-00, 38381-00, and 34623-00

### ORDERING INFORMATION

38200-00	AgGPS 114 receiver complete
33176-10	10 Hz positioning upgrade for AgGPS114
33176-40	Everest Multi-path reduction for AgGPS 114

### ORDERING INFORMATION FOR OTHER AgGPS COMPONENTS/SYSTEMS

34623-20	AgGPS PSO for AgGPS 114 and AgGPS 70 (new model) Includes AgGPS 21 LightBar and cable 39350 for direct connection to AgGPS 114 and AgGPS 70. This model is intended for users who wish to add guidance to the AgGPS 114 with the AgGPS 70 RDL.
34623-40	AgGPS PSO Plus The AgGPS 114 PSO Plus includes the AgGPS 21 LightBar, the AgGPS 70 RDL, and cable 39350. This option is configured for the AgGPS 114. Order 34623-30 for the AgGPS PSO Plus for the AgGPS 124/132 users who wish to add guidance and logging.
38381-00	AgGPS 170 Field Computer
39600-00	AgGPS 70 Remote Display and Logger

Specifications and descriptions are subject to change without notice



Trimble Navigation Limited  
Corporate Headquarters  
645 North Mary Avenue  
Sunnyvale, CA 94086  
+1-408-481-8940  
+1-408-481-7744 Fax  
www.trimble.com

Trimble Navigation  
Singapore PTE Limited  
79 Anson Road  
#05-02  
Singapore 079906  
+65-325-5668  
+65-225-9989 Fax

Trimble Navigation Europe Limited  
Trimble House  
Meridian Office Park  
Osborne Way  
Hook, Hampshire RG27 9HX U.K.  
+44-1256-746-200  
+44-1256-760-148 Fax

Trimble Navigation  
Australia Pty Limited  
Level 1/123 Gotha Street  
Brisbane, QLD 4006  
+61-7-3216-0044  
+61-7-3216-0088 Fax

