

SURVEYOR+ GPS SYSTEM

Carlson Surveyor+ GPS is easily added to Carlson Surveyor+ data collector for fully scalable system



SURVEYOR+ GPS

SYSTEM SPECIFICATIONS

ANTENNA

Dual Constellation For Enhanced Positioning

- The GPS-702-GG uses the L1 and L2 frequencies.
- Antenna offers combined GPS+ GLONASS signal reception.
- Customers can use the same antenna for GPS-only or dual constellation applications, resulting in increased flexibility and reduced equipment costs.
- Patented Pinwheel™ technology provides superior multipath rejection in a compact and lightweight antenna.

Stable Phase Center

- For added reliability, the antenna's phase center remains constant as the azimuth and elevation angle of satellites change with signal reception unaffected by the rotation of the antenna or satellite elevation.
- In addition, the phase center is in the same location for both the L1 and L2 signals.
- This, combined with minimal phase center variation between individual antennas, makes the GPS-702-GG ideal for baselines of any length.

Durable, RoHS Compliant Design

- In addition, the 702-GG meets the European Union's directive for Restriction of Hazardous Substances (RoHS).
- For extended life, the GPS-702-GG also features a waterproof housing and meets MIL-STD-202F for vibration and MIL-STD-810F for salt spray.



GPS PERFORMANCE¹

14 GPS L1, 14 GPS L2
12 GLONASS L1, 12 GLONASS L2
2 SBAS Channel Configuration

Horizontal Position Accuracy (RMS)		
Single Point L1	1.5 m	
Single Point L1/L2	1.2 m	
SBAS ²	0.6 m	
DGPS	0.4 m	
RT-2	1 cm + 1 ppm	
Measurement Precision (RMS)		
	GPS	GLO
L1 C/A Code	4 cm	15 cm
L1 Carrier Phase	0.5 mm	1.5 mm
L2 P(Y) Code	8 cm	8 cm
L2 Carrier Phase	1 mm	1.5 mm
Data Rate		
Measurements	5 Hz	
Position	5 Hz	
Time to First Fix		
Cold Start ³	60 s	
Hot Start ⁴	35 s	
Signal Reacquisition		
L1	0.5 s (typical)	
L2	1.0 s (typical)	
Velocity Accuracy		
	0.03 m/s RMS	

1. Typical values. Performance specifications subject to GPS system characteristics, US DOD operational degradation, ionospheric and tropospheric conditions, satellite geometry, baseline length, multipath effects and the presence of intentional or unintentional interference sources.

2. GPS only.

3. Typical value. No almanac or ephemerides and no approximate position or time.

4. Typical value. Almanac and recent ephemerides saved and approximate position and time entered.