



GSR2650 LB

Dual Frequency GPS L-band System

The GSR2650 LB System

The GSR2650 LB is a unique GPS receiver/antenna combination that is designed for high-accuracy GIS-mapping and long-range or remote surveying applications. The system includes access to L-band technology that can achieve decimeter level accuracy autonomously with a subscription to OmniSTAR's High Precision (HP) service and meter-level accuracies with WAAS and OmniSTAR's Virtual Base Stations (VBS) service. Cost benefits include your ability to switch easily from GIS-mapping to high-accuracy surveying applications without the need for additional hardware. The GSR2650 LB is designed to help you complete your tasks whether you are working in the land surveying, GIS or agriculture market.

Benefits

- No base station required, reducing time and cost
- Decimeter level accuracies for GIS and remote surveying applications
- Upgradeable for high-accuracy RTK applications
- Compatible with proprietary GIS software, such as IMap
- WAAS and OmniSTAR HP and VBS capable



GSR2650 LB Specifications

Position Accuracy¹

Single Point	1.8 m CEP (5.9 ft)
L1	1.5 m CEP (4.9 ft)
L1/L2	
WAAS	
L1	1.2 m CEP (3.9 ft)
L1/L2	0.8 m CEP (2.6 ft)
OmniSTAR	
VBS	1.0 m CEP (3.3 ft)
HP	14 cm CEP (0.5 ft)
RTK2	1.0 cm + 1 ppm (h) 2.0 cm + 1 ppm (v) (0.4 in + 1 ppm (h), 0.8 in + 1 ppm (v))
Static, Rapid Static ³	0.5 cm + 1 ppm (h) 1.0 cm + 1 ppm (v) (0.2 in + 1 ppm (h), 0.4 in + 1 ppm (v))
Kinematic, Stop-and-Go ³	1.0 cm + 1 ppm (h) 2.0 cm + 1 ppm (v) (0.4 in + 1 ppm (h), 0.8 in + 1 ppm (v))

Velocity Accuracy¹ 0.03 m/s RMS

Channels 12 x L1 and 12 x L2 with full code and carrier

Time to First Fix

Cold Start	50 sec
Signal Reacquisition	0.5 sec L1 (typical); 6 sec L2 (typical)
Data Rates	20 Hz (position and measurement)

MERTIND LTDA.

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Fax: (591-3)3-33-6644
Celular: 773-97156

LA PAZ (SUCURSAL)
Av. Mariscal Santa Cruz
Edificio La Primera, Bloque "B"
Piso 7, Of. 5
Teléfono Of. (591-2)2-12-1444
Fax: (591-2)2-12-1443
Celular 715-28816

Dynamics

Acceleration	10 g
Velocity ⁴	515 m/s max
Height	18,288 m

Physical Characteristics

Receiver Weight	1.1 kg (2.43 lb)
Receiver Size (l x w x h)	18 cm x 15.4 cm x 7.1 cm (7.1 in x 6.1 in x 2.8 in)

Environmental

Operating Temperature	-40° C to +75° C (-40° F to +167° F)
Storage Temperature	-40° C to +90° C (-40° F to +194° F)
Humidity	Not to exceed 95% non-condensing

Power Requirements

Power Input	+7 to +15 Volts DC
Loggin	5 W typical (operating)
Batteries	2 x 2300 mAh SLA batteries
Operating Time	8 to 12 hours

External Ports 3 x RS-232 ports, 1 x power port

Standard Input/Output Formats NMEA-0183 out, RTCA, RTCM, CMR, PPS out, Mark In

1. Typical values. Performance specifications are subject to GPS system characteristics, U.S. DOD operational degradation, atmospheric conditions, number of satellites visible, satellite geometry (DOP), occupation time, baseline length, survey procedures, multipath effects and data quality.
 2. 1 Sigma (for baselines not exceeding 10 kilometers)
 3. 95% confidence level (for baselines not exceeding 10 kilometers)
 4. Export licensing restricts operation to 60,000 feet maximum and 1,000 nautical miles/hour maximum.
- Design and specifications are subject to change without notice

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