SGR-1 Receiver

Guidance and Mapping Receiver

- Fast, Multi-constellation Signal Acquisition
- 32 Channel Universal Tracking Channels
- Up to 20Hz Position Update Rate
- L-band for OmniSTAR with VBS
- Simulated Radar Ground Speed Output
- Compact, Rugged and Low Cost

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TOPCON

Advanced Positioning Technology

Topcon introduces the SGR-1 satellite receiver with TruPass™ advanced positioning technology for higher, stable pass-to-pass accuracies in dynamic applications.

The SGR-1 features faster satellite acquisition and simultaneous processing of both GLONASS and GPS signals. The SGR-1 is a single board receiver with a position update rate of 10Hz, upgradeable to 20Hz. With 32 universal channels, the SGR-1 tracks different combinations of GPS L1 C/A, code and carrier, GLONASS L1 code and carrier, as well as SBAS including EGNOS and WAAS. The SGR-1 receives L-band OmniSTAR signals and delivers VBS mode measurements.

In addition to standard GNSS features (PPS output), the SGR-1 provides ground speed as simulated radar output for improved slow speed operations such as seeding and spraying. The compact rugged design provides water and dust protection to IP66 standards. The SGR-1 also provides both Serial and CAN communication capability.

Key Features

- Fast, multi-constellation signal acquisition
- 32 channels for universal L1 GPS/GLONASS/SBAS tracking
- Up to 20Hz measurement/position update rate
- Tri-color LED indicator
- L-band channel for OmniSTAR corrections with VBS
- Emulated radar out for ground speed simulation
- Compact, rugged and low cost

Topcon TotalCare

This online resource comes with real live people ready to help. Get expert training from Topcon University's large collection of online materials, and expert help directly from Topcon Technical Support.

Access software and firmware updates, current publications, and guidance from the experts at Topcon all right from your computer or mobile device.

Please visit the TotalCare website to learn more.
topcontotalcare.com

SPECIFICATIONS

PHYSICAL	
Dimensions	5.12" x 2.36", 130 x 60mm
Weight	1.41 lbs, 640g
Mounting	5/8-11 UNC female, or magnetic base for ferrous roof
Connector	12 pin extended DEUTSCH DTM
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C
POWER	
Voltage	+9 to +28 VDC
Power	2.5 W at 12VDC typical
ANTENNA	
Antenna	L1 GPS/GLONASS with L-band compatibility
RF Input Frequencies	1530 MHz – 1610 MHz
PPS Output	5 ns resolution, ≤30 ns pulse-to-pulse precision, LVTTL, configurable polarity and period
Radar Output	Variable frequency, simulated ground speed output
Data Input/Output	RS-232, 2 ports up to 460.8 kbps w/o flow control CAN, 1 port, NMEA2000 compliant
SV Tracking Channels	32 GPS L1 C/A, GLONASS L1 C/A code and carrier, SBAS
Acquisition Time (TTFF)	Hot <10 sec, warm <35 sec, cold <60 sec, reacquisition <1 sec
DATA	
Data formats	NMEA 0183 versions 2.1, 2.2, 2.3 and 3.0 output proprietry (TPS) data format, NMEA2000 compliant RTCM SC104 versions 2.1, 2.2, 2.3 and 3.0 input/output geoid and magnetic variation models, grid coordinates
Data Rates	Raw measurements and position, up to 20 Hz
ACCURACY	
Position Standalone	Hor. 2m, vert. 3m
Position Code Differential	(DGPS with external correction) hor. 0.4m, vert. 0.6m
Position OmniSTAR VBS	Hor. 0.9m, vert.
Velocity	0.03 m/sec
Time	20 nsec RMS
Measurement Precision	L1 C/A code < 0.5m L1 Carrier Phase < 2mm

For more specification information:
topconOEMsolutions.com

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