



TR-G2

High Performance Compact OEM Board



Key Features

- Advanced Multipath Reduction
- Fast acquisition channels
- 216 Channel, all-in-view tracking
- High accuracy velocity measurement
- Almost unlimited altitude and velocity*
- CAN interface
- IRIG timecode output
- 256MB onboard storage

TR-G2 OEM board is based on our TRIUMPH Technology implemented in our TRIUMPH Chip. For the first time in the GNSS history we offer up to 100 Hz RTK. The TR-G2 board tracks GPS L1 and Galileo E1. The on-board power supply on TR-G2 OEM board accepts any voltage from +4.5 to +40 volts and delivers clean filtered voltage where needed. This eliminates the risk of power contamination (ripples) that can be created when clean power is generated elsewhere and delivered to the board via cables.

* For authorized users

TECHNICAL SPECIFICATIONS

Number of Channels	216	
GNSS Constellations	GPS	L1
	Galileo	E1
	BeiDou	B1
	QZSS	L1
	SBAS	KFK WAAS/EGNOS
Tracking Features	Advanced Multipath Reduction <ul style="list-style-type: none"> • Fast acquisition channels • High accuracy velocity measurement • Almost unlimited altitude and velocity (for authorized users) 	
Input/Output	RS232	One serial port (up to 460.8 Kbps)
	RS232/RS422	Two configurable serial ports (up to 460.8 Kbps)
	USB	One full speed device port (12 Mbps)
	Event Marker	One input
	1-PPS	One output synchronized to GPS or UTC
	Logic-Level GPIO	Two configurable ports
	RTCM SC104	versions 2.x and 3.x Input/Output
	NMEA 0183	versions 2.x and 3.0 Output
Data Features	Up to 100 Hz update rate for real time position and raw data (code and carrier) 10 cm code phase and 1 mm carrier phase precision Hardware Viterbi decoder Code Differential Rover Code Differential Base Geoid and Magnetic Variation models RAIM Different DATUMs support Output of grid coordinates	
Storage	Memory	Up to 256 MB of onboard non-removable for data storage (TBD)

PERFORMANCE SPECIFICATIONS

Time for First Fix	Cold Start	< 35 s
	Warm Start	< 5 s
	Reacquisition	< 1 s

POSITIONING SPECIFICATIONS

Position Accuracy	Autonomous	< 2 m
	DGPS	< 0.5 m
	RTK	Horizontal: 1 cm + 1 ppm Vertical: 1.5 cm + 1 ppm
	Static/Fast Static	Horizontal: 0.3 cm + 0.1 ppm Vertical: 0.35 cm + 0.4 ppm

PHYSICAL AND ELECTRICAL CHARACTERISTICS

Physical & Electrical	Connectors	40 pins for digital, MMCX for antenna
	Size	57 x 88 x 12 mm (2.24 x 3.46 x 0.47 in)
	Weight	21 g (0.04 lbs)

ENVIRONMENTAL CHARACTERISTICS

Environmental	Operating t°	-40° C to +80° C
	Storage t°	-40° C to +85° C
	Vibration	High shock and vibration resistance