



MR-1 Modular GNSS Receiver

The MR-1 is built for harsh environments, offering IP67 dust and water resistance as well as a superior level of vibration and shock tolerance (SAE J1455 and MIL-STD 202G and 810F). Topcon's mature communication interface allows quick integration of Topcon's premium GNSS performance to deliver world class positioning and navigation support to your applications.

Advanced Technology, Simple Integration

The MR-1 delivers proven Topcon G3 and VISOR™ technology in a compact and easy to integrate package. The MR-1 incorporates Universal Tracking Channel Technology and is capable of tracking GPS, GLONASS and SBAS satellite systems that are currently operational and available. Dual antenna input support enables precision heading determination (and inclination) using Topcon's VISOR™ technology.

GNSS	
Channels	72 with Universal Tracking Channel Technology
Signals Tracked	GPS: L1, L2, L2C GLONASS: L1, L2 SBAS WAAS/MSAS/EGNOS
Antenna Type	External dual antenna input for heading determination through Topcon VISOR™ technology
Accuracy	
RTK	H: 10 mm + 1.0 ppm (x baseline length) V: 15 mm + 1.0 ppm (x baseline length)
Static	H: 3 mm + 0.5 ppm (x baseline length) V: 4 mm + 1.0 ppm (x baseline length)
DGPS (RTCM)	H: 0.4 m, V: 0.6 m (CEP)
SBAS	H: 1.0 m, V: 1.5 m (CEP)
Heading	0.1°/L*
Inclination	0.1°/L*
Velocity	0.02 m/sec (CEP)
Time	25 nsec (CEP)
Data and Memory	
Internal Memory	None
Data Update/Output Rate	1 - 100 Hz Scalable
Real Time Data Output	Proprietary TPS format, RTCM SC104 ver 2.x, 3.0 and 3.1, CMR/CMR+ (public version), NMEA 0183 version 2.x, 3.0 and 3.01 and BINEX
Heading Determination	Yes
Communications	
Ports	DEUTSCHE DTM Series 12 Pin Receptacle for Power and Communications
Antenna Connectors	2 x TNC (VDC at 0-70 mA)
Environmental	
Temperature	Operating: -40°C to 75°C Storage: -50°C to 85°C
Enclosure	Magnesium Alloy
Dust / Water Rating	IP67
Humidity	SAE J1455 Sec 4.2
Power	
Input Voltage Range	9-36 VDC Reverse Polarity Protected
Power Consumption	4.0 W max at 24 VDC
Physical	
Dimension (w x h x l)	115 x 35 x 155 mm
Weight	0.4 kg
Status Indicators	Power LED

* L = antenna separation in meters



For more information:
topconpositioning.com/mr-1

Specifications subject to change without notice.
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