

# MR-2



## MR-2 Modular GNSS Receiver

Whether needing a modular mobile RTK base station, a receiver for marine navigation, or a positioning device for mobile mapping, the MR-2 by Topcon is your versatile solution. It is built for harsh environments, offering IP67 dust and water protection as well as a superior level of vibration and shock tolerance (MIL spec). Flexible communication interfaces make it easy to integrate into a myriad of applications.

Tracking every available signal from all the current and planned constellations is made possible by Topcon's patented Universal Tracking Channel technology, thus ensuring that your investment is secure for today and into the future. Dual antenna input support enables precision heading determination (and inclination) using Topcon HD2 technology alongside high-precision real time kinematic positioning.

GNSS	
Channels	226 with Universal Tracking Channel Technology
Signals Tracked	GPS: L1 C/A, L1C, L1P(Y), L2P(Y), L2C, L5 GLONASS: L1 C/A, L1P, L2 C/A, L2P, L3C Galileo: E1, E5a, E5b, E5AltBoc BeiDou: B1, B2 SBAS Corrections: WAAS/EGNOS/MSAS QZSS: L1 C/A, L1C, L2C, L5C L-band: Yes (1525-1560 MHz)
Antenna Type	External dual antenna input for heading determination through Topcon HD2 technology
ACCURACY	
RTK	H: 5 mm+ 0.5 ppm (x baseline length) V: 10 mm + 0.8 ppm (x baseline length)
Static/Fast Static	H: 3 mm + 0.5 ppm (x baseline length) V: 5 mm + 0.8 ppm (x baseline length)
DGPS (RTCM)	H: 0.3 m, V: 0.5 m
SBAS	H: 0.8 m, V: 1.2 m
Heading	0.3°/D*
Inclination	0.5°/D*
Velocity	0.02 m/sec
Time	30 nsec
DATA AND MEMORY	
Internal Memory	Up to 8GB for each B125 board
Data Update/Output Rate	Up to 100 Hz (20 Hz standard, no interpolation)
Real Time Data Output	Proprietary TPS format, RTCM SC104 ver. 2.x, 3.0 and 3.1; CMR/CMR+; MSM; NMEA 0183 version 2.x, 3.0, and 3.01
Heading Determination	Yes
COMMUNICATIONS	
Antenna Connectors	2x TNC (Antenna power 4.75-5.10 VDC)
Ports	Deutsch DTM Series 12-pin Receptacle for power and communications, Serial (x3), CAN, and PPS on main connector Turck M12 8-Pin, and Breaks out to RJ45 and SAE power
ENVIRONMENTAL	
Temperature	Operating: -40°C to 75°C      Storage: -50°C to 85°C
Enclosure	Aluminum alloy
Waterproof Rating	IPX7 (1 meter submersion)
Dust Rating	IP6X (fully dust proof)
Humidity	100%, condensing
POWER	
Internal Voltage Range	9-36 VDC Reverse Polarity Protected
Power Consumption	10 W at 9-36 VDC
PHYSICAL	
Dimension (w x d x h)	172 x 166 x 49 mm
Weight	0.95 kg
LED Indicators	Power, Ethernet, Primary Antenna, Secondary Antenna

\* D = inter-antenna distance in meters

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