

GPS100 *GPS Antenna/ Receiver*

Maretron's GPS100 provides reliable position fixes 10 times per second, accurate boat speed four times per second, and precision time once per second.

The GPS100 antenna/receiver is a plug-and-play device that is fully compliant and certified to the NMEA 2000® Standard.

It will directly connect to any NMEA 2000® network and communicate with navigational software, chart plotters, autopilots and dedicated instrument displays – such as Maretron's DSM250 and DSM200 graphical displays – and its compact, waterproof housing provides years of reliable performance.

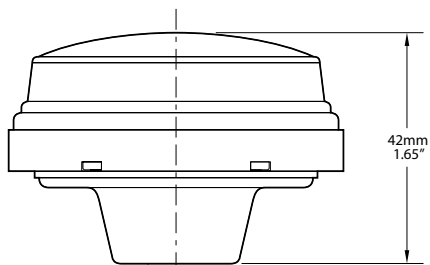


The GPS100 automatically decodes GPS correction signals from Satellite Based Augmentation Systems (SBAS) including the North American Wide Area Augmentation System (WAAS), the European Geostationary Navigation Overlay System (EGNOS), or the Asian Multifunctional Transport Satellite-based Augmentation System (MSAS) to provide better than 3m accuracy.

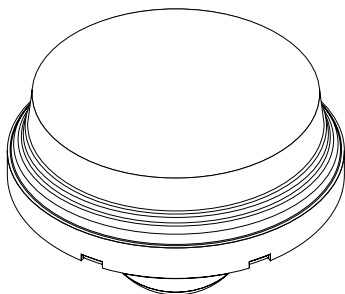
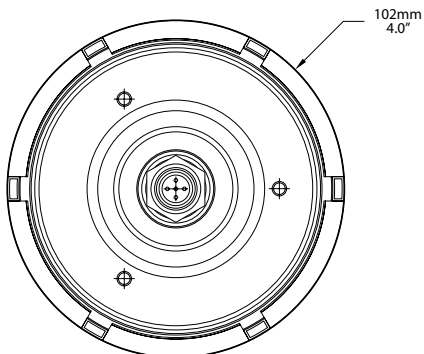
The GPS100 is easily mounted to any 1" standard marine mount with its standard 1"-14 male threads. It can also be mounted directly to a deck.

Products

PART NUMBER	DESCRIPTION
GPS100-01	GPS/WAAS Antenna/Receiver



1" - 14 - UNS-2B THREAD
(1" - 14 TPI STANDARD MARINE MOUNT)



DSM250/DSM200 Screen Shots

Specifications

Parameter	Value	Comment
Position Accuracy (Autonomous)	<10m	2D RMS (95% of Data Falls Within 10m)
Position Accuracy (WAAS)	< 3m	2D RMS (95% of Data Falls Within 3m)
Channels	12	Simultaneous Tracking of 12 Satellites
Position Update Rate	10 per Second	Position Fix Calculated Once per Second
Speed Update Rate	4 per Second	Speed Calculated Once per Second
Time Update Rate	1 per Second	
Hot Start	8 Seconds	Start Within Hours of Last Power Down
Warm Start	38 Seconds	Start Within Days of Last Power Down
Cold Start	45 Seconds	Start from Unknown Position
Datum	WGS84	
Satellite Based Augmentation System	WAAS	North America
	EGNOS	Europe
	MSAS	Asia
Battery Backup	Lithium (4-5) days	Holds Position for Hot/Warm Starts

Certifications

Standard	Comment
NMEA 2000® Standard	Level A
Maritime Navigation and Radio Communication Equipment & Systems	IEC 61162-3
Maritime Navigation and Radio Communication Equipment & Systems	IEC 60945
FCC and CE mark	Electromagnetic Compatibility

NMEA 2000® Parameter Group Numbers (PGNs)

Description	PGN #	PGN Name	Default Rate	
Periodic Data PGNs	126992	System Time	1 Time/Second	
	128259	Speed	Disabled	
	129025	Position, Rapid Update	10 Times/Second	
	129026	COG and SOG, Rapid Update	4 Times/Second	
	129029	GNSS Position Data	1 Time/Second	
	129539	GNSS DOPs	1 Time/Second	
	129540	GNSS Satellites in View	1 Time/Second	
	127258	Magnetic Variation	1 Time/Second	
	Response to Requested PGNs	126464	PGN List (Transmit and Receive)	N/A
		126996	Product Information	N/A
126998		Configuration Information	N/A	
129538		GNSS Control Status	N/A	
129541		GPS Almanac Data	N/A	
Protocol PGNs		059392	ISO Acknowledge	N/A
	059904	ISO Request	N/A	
	060416	ISO Transport Protocol, Connection Management	N/A	
	060160	ISO Transport Protocol, Data Transfer	N/A	
	060928	ISO Address Claim	N/A	
	065240	ISO Address Command	N/A	
	126208	NMEA Request/Command/Acknowledge	N/A	
	126720	Configuration	N/A	
Maretron Proprietary PGNs				

Mechanical Electrical

Parameter	Value	Comment
Operating Voltage	9 to 16 Volts	DC Voltage
Power Consumption	<150mA	Average Current Drain
Load Equivalence Number (LEN)	3	NMEA 2000® Spec. (1LEN = 50 mA)
Reverse Battery Protection	Yes	Indefinitely
Load Dump Protection	Yes	Energy Rated per SAE J1113

Parameter	Value	Comment
Size	4" dia. x 1.65" Tall (102mm Dia. X 42mm Tall)	Not Including Antenna Mount Base
Weight	6 Oz. (170 g)	Not Including Antenna Mount Base
Mounting	Deck or Pole (1"-14-UNS-2B)	1"-14 TPI Standard Marine Mount

Environmental

Parameter	Value
IEC 60945 Classification	Exposed
Degree of Protection	IP67
Operating Temperature	-25°C to 55°C
Storage Temperature	-40°C to 70°C
Relative Humidity	93%RH @40° per IEC60945-8.2
Vibration	2-13.2Hz @ ±1mm, 13.2-100Hz @ 7m/s² per IEC 60945-8.7
Rain and Spray	12.5mm Nozzle @ 100liters/min from 3m for 30min per IEC 60945-8.8
Solar Radiation	Ultraviolet B, A, Visible, and Infrared per IEC 60945-8.10
Corrosion (Salt Mist)	4 times 7days @ 40°C, 95%RH after 2 hour Salt Spray Per IEC 60945-8.12
Electromagnetic Emission	Conducted and Radiated Emission per IEC 60945-9
Electromagnetic Immunity	Conducted, Radiated, Supply, and ESD per IEC 60945-10
Safety Precautions	Dangerous Voltage, Electromagnetic Radio Frequency per IEC 60945-12

