applied acoustics
underwater technology

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201/203G MiniPod

Key features

- Marinestar L-Band correction service
- Robust GNSS receiver with integrated antenna
- Multi band L1 + L2 +L5 receiver
- RTK Moving Base and Rover Operation
- Multi constellation GNSS receiver
- External Sensor Integration
- Submersible, 50m/ 1000m rated
- Wide area corrections or external RTCM
- Assembly shock rated to 75G for field endurance in harsh conditions
- Worldwide RF remote wireless data options

Applications

- Seismic streamer head and tail positioning
- Seismic source positioning
- Offshore construction
- Ideal for subsea excavation vehicles (jetting & trenching), and surface positioning of towed sensors such as magnetometers, operating in shallow waters
- USV/ AUV surface positioning

201G MiniPod Overview

The 201G MiniPod is a lightweight, ruggedised Tri-band GNSS receiver with configuration options. These allow for a RTK base, RTK rover and RTK moving base solutions to be used with more than one MiniPod in operation. Additional external sensor information can be added to the wireless protocol.

203G MiniPod Overview

The 203G MiniPod is a lightweight, ruggedised Tri-band GNSS receiver with configuration options. These allow for a RTK base, RTK rover and RTK moving base solutions to be used with more than one MiniPod in operation. Additional external sensor information can be added to the wireless protocol.

Technical Specification

MODEL VARIANTS

	201G	203G
Housing material	White Acetyl	White Acetyl
Dimensions	Ø115mm x 170mm	Ø125mm x 218mm
Weight	1.95kg	2.5kg
Vibration properties	75G shock rated	75G shock rated
	BS EN 60068-2-27: 2009: Shock BS EN 60068-2-6: 2008: Sinusoidal Vibration	BS EN 60068-2-27: 2009: Shock BS EN 60068-2-6: 2008: Sinusoidal Vibration

ELECTRICAL SPECIFICATION

Electrical properties	Supply 12VDC-36VDC
Power	2.4W

Model Part Number	GNSS Receiver	Connectivity	External RF Antenna*	RF Standard Range
BCN-201G	Single Antenna	MC-BH-8-M 1x configurable RS485-4W / RS485-2W / RS232 | 2 x RS232** (Shared Ground with PWR)	Optional (IP67 only antenna)	800m directional
BCN-203G		MC-BH-8-M 1x configurable RS485-4W / RS485-2W / RS232 | 2 x RS232** (Shared Ground with PWR)		
BCN-201G+		MC-BH-16-M 1x configurable RS485-4W / RS485-2W / RS232 | 3 x RS232** (Individual Grounds) | 1 x 5V PPS (configurable output rate)		
BCN-203G+		MC-BH-16-M 1x configurable RS485-4W / RS485-2W / RS232 | 3 x RS232** (Individual Grounds) | 1 x 5V PPS (configurable output rate)		

* External antenna options will have no internal antenna fitted inside.

** 1x RS232 omitted when configured for RS485

Specification

GNSS SIGNALS

544 hardware channels for simultaneous tracking of most visible signals:

- GPS: L1 C/A, L2C, L2 P(Y), L5
- GLONASS: L1 C/A, L2C/A, L3, L2P
- BeiDou: B1I, B1C, B2a, B2I, B3I
- Galileo: E1, E5a, E5b
- QZSS: L1 C/A, L2C, L5, L1 C/B
- Integrated L-Band Receiver
- SBAS: EGNOS, WAAS, GAGAN, MSAS, SDCM

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WARM UP TIME (TYPICAL)

From cold	<45s (No almanac or real time clock)
Warm start	<20s (Almanac & RTC, no position)
Re-acquisition	Avg 0.1s

POSITION ACCURACY (DEPENDENT ON CORRECTIONS)

Accuracies dependent on multipath environment, number of satellites in view, geometry and ionospheric conditions.

	Horizontal	Vertical
Standalone	1.9m	1.2m
SBAS	0.8m	0.6m
DGNSS	0.7m	0.4m

RTK PERFORMANCE

Horizontal accuracy	0.6cm + 0.5ppm
Vertical accuracy	1cm + 1ppm
Initialisation	7s

Septentrio's patented GNSS+ technologies

- AIM+ unique anti-jamming and monitoring system against narrow and wideband interference with spectrum analyser
- IONO+ advanced scintillation mitigation
- APME+ a posteriori multipath estimator for code and phase multipath mitigation
- LOCK+ superior tracking robustness under heavy mechanical shocks or vibrations
- RAIM+ (Receiver Autonomous Integrity Monitoring)

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Due to continual product improvement specification information may be subject to change without notice.
201/203G MiniPod/ November 2024
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