applied acoustics
underwater technology

Applied Acoustic Engineering Ltd
Marine House, Marine Park,
Gapton Hall Road, Great Yarmouth
NR31 0NB, United Kingdom

T +44 (0)1493 440355
E general@appliedacoustics.com
W appliedacoustics.com

103G MiniPod, GNSS Receiver

Key features

- Robust GNSS receiver with integrated L1 + L2 antenna
- Submersible, 1000m rated
- Dual Band, multi constellation GNSS receiver
- Wide area corrections or external RTCM
- Internal and external shock mounts c/w mounting bracket
- Atlas correction option
- Worldwide RF remote wireless data options

Applications

- GNSS surface positioning for deep water rated platforms AUV, ROV
- Subsea excavation vehicles (jetting & trenching), and surface positioning of towed sensors such as magnetometers, operating in shallow waters
- Seismic streamer head and tail positioning
- Seismic source positioning

103G MiniPod Overview

The 103G MiniPod is a lightweight ruggedised GNSS receiver that is designed to survive 1000m immersion.

The shock mounted robust dual L1 + L2 band GNSS receiver has both wired and wireless applications, including providing positioning references for deep water rated platforms and vehicles.

The interconnect flexibility of the MiniPod allows for RS232, RS485, 1pps and wireless options to be configured. It is externally powered with battery pack options available.

Technical Specification

MODEL VARIANTS

Housing material	White Acetal
Bracket	A4 Stainless steel
Dimensions	218mm x Ø125mm
Depth rating	1000m
Weight	2.5kg

Model Part Number	GNSS Receiver	AHRS	RF Range
BCN-103G	Yes	No	800m
BCN-103GA	Yes	Yes	800m
BCN-103A	No	Yes	800m

CONFIGURATION

Receiver type	GNSS Multi-frequency L1 & L2, RTK with carrier phase
GNSS compatibility	GPS, GLONASS, BeiDou, QZSS & GALILEO
Channels	372
SBAS tracking	3 channel parallel tracking
Differential options	SBAS, Autonomous, External RTCM (V3.2), RTK, L-Band (Atlas) DGPS

ACCURACY (DEPENDENT ON CORRECTIONS)

RMS 67%	Horizontal	Vertical
RTK	8mm + 1 ppm	15mm + 2ppm
SBAS (WAAS)	0.3m	0.6m
Unaided	1.2m	2.4m
Atlas H10	0.04m	
Atlas H30	0.15m	
Atlas H100	0.50m	

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

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Due to continual product improvement specification information may be subject to change without notice.
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WARM UP TIME (TYPICAL)

From cold	<60s (No almanac or real time clock)
Warm start	<30s (Almanac & RTC, no position)
Hot start	<10s

CONNECTIVITY

Connector	8 pin MCBH connector (male)
Power	18-36VDC 24v 160mA nominal
Communication	RS232 (2 bi-directional ports) RS485 (2 wire bi-directional) RS485 (4-wire)
Position protocol	NMEA 0183 protocols supported
Refresh rate	1Hz standard, 10Hz, 20Hz optional
Correction I/O protocol	Hemisphere GNSS proprietary, ROX Format, RTCM v2.3 (wired only), RTCM v3.2 (wireless), CMR, CMR+
1pps	3.3V, 1ms pulse width, 20mA optional

ACCESSORIES/OPTIONS

- Wireless modem data receiver # RFR-101G
- RTK Base and Rover activation for GNSS receiver. Allows full RTK fixed position quality. RTK float can be achieved as standard without additional option
- Battery Pack # BPK-107GS, 3000m depth rated power pack.
- Integrated AHRS

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