applied acoustics
underwater technology

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

# 103G MiniPod, GNSS Receiver


## Key features

- Robust GNSS receiver with integrated antenna
- Submersible, 1000 m 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

## 101G MiniPod Overview

The 103G MiniPod is a lightweight ruggedised GNSS receiver that is designed to survive 1000 m 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 Acetyl |
| Bracket | A4 Stainless steel |
| Dimensions | 218 mm x Ø125 mm |
| Depth rating | 1000 m |
| Weight | 2.5 kg |

| Model Part Number | GNSS Receiver | AHRS | RF Range |
|---|---|---|---|
| BCN-103G | Yes | No | 600 m |
| BCN-103GA | Yes | Yes | 600 m |
| BCN-103A | No | Yes | 600 m |

## 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** | 8 mm + 1 ppm | 15 mm + 2 ppm |
| **SBAS (WAAS)** | 0.3 m | 0.6 m |
| **Unaided** | 1.2 m | 2.4 m |
| **Atlas H10** | 0.04 m | |
| **Atlas H30** | 0.15 m | |
| **Atlas H100** | 0.50 m | |

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

## Warm Up Time (Typical)

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

## Connectivity

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