MODULUS TECHNOLOGY
Engineering Services
An AAE Technologies Group Company

**Modulus Technology Ltd**
Atlantic House, Marine Park, Gapton Hall Road
Great Yarmouth, NR31 0NB
United Kingdom

# MiniPod 103G, 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

**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.

## 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

## Technical Specification

**MODEL VARIANTS**

**Housing material:** White Acetyl. **Bracket**: A4 Stainless steel.
**Dimensions:** 218mm x Ø125mm

**Depth rating:** 1000m
**Weight:** 2.5kg

| Model Part Number | GNSS Receiver | AHRS | RF Range |
|---|---|---|---|
| BCN-103G | ☑ | ☐ | 800m |
| BCN-103GA | ☑ | ☑ | 800m |
| BCN-103A | ☐ | ☑ | 800m |

# 103G MiniPod Technical Specification

## SPECIFICATION

### 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, RTK, L-Band (Atlas) DGPS |

**Horizontal Accuracy (RMS 67%)** Dependent on corrections:

| | |
|---|---|
| RTK: | 8mm + 1ppm |
| SBAS (WAAS): | 0.3m |
| Unaided: | 1.2m |
| Atlas H10: | 0.04m |
| Atlas H30: | 0.15m |
| Atlas H100: | 0.50m |

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

**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<br>24v 160mA nominal |
| Communication: | RS232 (2 bi-directional ports)<br>RS485 (2 wire bi-directional) |
| 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, RTCM v3.2, CMR, CMR+ |
| IPPS | 5V, 1ms pulse width, 20mA optional |

## OPTIONS

- Wireless modem data receiver # RFR-101G
- Battery Pack # BPK-107GS, 3000m depth rated power pack.
- Integrated AHRS

  | | |
  |---|---|
  | Bearing resolution: | 0.1° displayed. Internally calculated to 0.01° |
  | Heading sensor accuracy: | 0.5° RMS standard; ±0.1° resolution/repeatability |
  | Pitch/Roll sensor accuracy: | ±0.10° RMS ±0.1° resolution/repeatability |





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Modulus Technology Ltd
Atlantic House, Marine Park
Gapton Hall Road
Great Yarmouth NR31 0NB
United Kingdom

T +44 (0)1493 416452
F +44 (0)1493 440720
E general@modulustechnology.com
W www.modulustechnology.com