



## 101G MiniPod, Submersible GNSS



The **Modulus Technology 101G MiniPod** is a lightweight ruggedised GNSS receiver, designed to survive 50m immersion, that transmits data back to a vessel or the shoreline.

The shock mounted robust dual L1 + L2 band GNSS receiver has both wired and wireless applications, including providing streamer head and tail positioning and source positioning for 3D UHR seismic operations.

The interconnect flexibility of the 101G MiniPod allows for RS232, RS485, 1PPS and wireless options to be configured by the user. It is externally powered by default with an external battery option. The 101G MiniPod can be fitted with an internal compass to provide accurate heading, pitch and roll of equipment.

### Key Features

- Robust GNSS receiver with integrated antenna
- Dual band L1 + L2 receiver
- Full constellation of positioning satellites
- Submersible, 50m rated
- Wide area corrections or external RTCM
- Internal and external shock mounts
- Worldwide RF remote wireless data options
- Atlas correction option
- External battery option
- Internal AHRS option

### Applications

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

## Technical Specification

### MODEL VARIANTS

**Housing material:** White Acetyl. **Bracket:** A4 Stainless steel.

**Dimensions:** 170mm x Ø115mm

**Depth rating:** 50m

**Weight:** 1.95kg

| Model Part Number | GNSS Receiver                       | AHRS                                | External RF Antenna                 | RF Range |
|-------------------|-------------------------------------|-------------------------------------|-------------------------------------|----------|
| BCN-101G          | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | 800m     |
| BCN-101GA         | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 800m     |
| BCN-101A          | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 800m     |
| BCN-101G-EXT      | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 2000m    |
| BCN-101GA-EXT     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 2000m    |



# 101G 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 or CMR, RTK, L-Band (Atlas) DGPS |

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

|              |            |  |
|--------------|------------|--|
| RTK:         | 8mm + 1ppm | <i>Accuracies dependent on multipath environment, number of satellites in view, geometry and ionospheric conditions.</i> |
| SBAS (WAAS): | 0.3m       |  |
| Unaided:     | 1.2m       |  |
| Atlas H10:   | 0.04m      |  |
| Atlas H30:   | 0.15m      |  |
| Atlas H100:  | 0.50m      |  |

### 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 150mA nominal   |
| Communication:           | RS232 (2 bi-directional ports)<br>RS485 (2 wire bi-directional)<br>RS485 (4-wire) |
| Position protocol:       | NMEA 0183 protocols supported, (GPGGA, GPRMC & GPGLL standard)                    |
| Refresh rate:            | 10Hz standard, 20Hz optional  |
| Correction I/O protocol: | Hemisphere GNSS proprietary, ROX Format, RTCM v2.3, RTCM v3.2, CMR, CMR+          |
| 1pps                     | 5V, 1ms pulse width, 20mA optional  |

## ACCESSORIES/OPTIONS

- Wireless modem data receiver (for up to 4 x 101G MiniPods): Part number RFR-101G
- Integrated AHRS for MiniPod BCN-101GA, BCN-101A or BCN-101GA-EXT;  
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
- External battery: Part number BPK-101G, 10 day operational life, non-rechargeable.  
Part number BPK-101GR, rechargeable  
With interconnect lead, part number, BPK-101G-4000, 3m standard.
- External RF antenna for MiniPod BCN-101G-EXT or BCN-101GA-EXT;  
Omni-directional: Part number BCN-101G-4003. Directional: Part number BCN-101G-4002



**MODULUS TECHNOLOGY**  
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Due to continual product improvement, specification information may be subject to change without notice.  
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