

Genesis

Self-powered, wireless **GNSS** smart antenna with sub-metre accuracy



Simple Operation

Genesis is wireless to 90m and starts at a push of a button. It also interfaces seamlessly with MMC's BOB Data Acquisition and Visualization Software.

Rugged Design

All anodized aluminum construction with powder coating. Also mounts anywhere on the vessel with our standard marine antenna mount, or magnetic mount.

Professional Accuracy

Genesis features a high-accuracy receiver that can provide better than 10cm accuracy for 95% of readings. It is compatible with the new ATLAS DGPS correction service, providing high-accuracy corrections anywhere from 75degN to 75degS with three tiers of service and subscription terms ranging from monthly to annual, providing flexibility unprecedented in the DGPS marketplace.

Future-Proof

Genesis is compatible with all current and future satellite constellations and satellite-based augmentations systems (SBAS).

Full Compatibility

Genesis utilizes GPS and GLONASS and can be upgraded to use BeiDou (COMPASS), giving the surveyor access to the full complement of currently-deployed satellite constellations, providing a greater chance of achieving signal lock in challenging survey environments like tree-canopied rivers and urban waterways.

Genesis Specifications

GNSS Receiver

Signals Received	GPS (U.S.A.) GLONASS (Russia) BeiDou (China) Galileo (Europe) QZSS (Japan)
Channels	372
SBAS Tracking	3-Channel, parallel
Satellite-Based Augmentation Systems (SBAS) Supported	WAAS (N. America) EGNOS (Europe) MSAS (Japan) GAGAN (India)
L-Band	315in (0.08m)
RTK	Not Supported
Radio Beacon	Not Supported
Sample Rate	10Hz, default (1Hz available; 20 Hz via upgrade)
Cold Start	< 60s typical (all unknown)
Hot Start	< 10s typical (all known)
Warm Start	< 30s typical (no ephemeris)
DGPS dropout correction	Up to 40min sub-metre accuracy with lost / blocked DGPS

Position Accuracy

RMS (67%) **2DRMS (95%)**

Autonomous, no SA	3.9ft (1.2m)	8ft (2.5m)
SBAS (WAAS)	1ft (0.3 m)	2ft (0.6m)
L-Band ^{2,3}	1.5in (0.04m)	3in (0.08m)
	6 in (0.15m)	1ft (0.3m)
	20in (0.5m)	39in (1m)

Communications

Ports	RS-232 via one physical port and one wireless port
Output	NMEA 0183 @ 19200 baud
Range (outdoor, line-of-sight)	164ft (50m)
Range (indoor)	66ft (20m)
Wireless	2.4 GHz

Environmental

Operating Temperature	-40F to 158F (-40°C to 70°C)
Storage Temperature	-40F to 185F (-40°C to 85°C)
Humidity	95% non-condensing
Enclosure	IP67

Mechanical

Height	7.1" (18cm)
Diameter	3.5" (9cm)
Weight	2lb, 11oz (1.2kg)
Shipping Weight (with case & all components)	10.5lb (4.8kg)
Mounting	1"-14 UNS 2A female, 3/4" max thread engagement. Rail mount for 7/8" (22mm) or 1" (25mm) rails included. Mag-mount also available.
Battery Life	6 hours

Marine Magnetics 

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