GNSS-982PoE

The GNSS-982 PoE brings the latest positioning and interface technology to the field of hydrography, dredging and offshore. The versatile multichannel, multifrequency GNSS receiver provides an accurate position and heading solution and interfaces with our range of accurate tilt, motion and draught sensors. This modular set provides high accuracy positioning of both the cutting edge and seabed detection.
Proven Trimble technology is combined with extensive input/output possibilities. This makes it the ideal receiver for both dredge monitoring and survey positioning. The built-in switch and 2G/3G modem minimises auxiliary parts and enables remote support.

FIELDS OF APPLICATION

- Hydro survey
- Dredging
- Offshore construction
- Renewables

KEY FEATURES

- GPS/GLONASS
- VRS RTK correction over internet
- 50 Hz centimeter level position accuracy
- 50 Hz precise heading calculation
- L-BAND DGNSS receiver
- Ethernet switch onboard
- Power over Ethernet output for external sensors
- 2G/3G internal modem
- Ethernet configuration via web browser
- PPS out
- Optimal design for both survey and dredge operation

DEMONSTRATED PERFORMANCE

Reliable GNSS technology from Trimble moves the industry forward and redefines high-performance positioning:

- Onboard multipath mitigation
- Proven low-elevation tracking technology
- Dramatically improved RTK initialization times
- Kalman filter assistance in case of lost RTCM signal
- Future proof with Galileo ready hardware

MULTIFUNCTIONAL

The GNSS-982 PoE is foremost an excellent positioning device for both RTK and satellite augmented (Ominstar and Marinstar) positioning solutions. The on board 2G/3G modem for VRS correction services doubles as interface for data transfer and remote support. The Power over Ethernet can power and interface with a wide range of digital sensors. These include tilt, roll/pitch, pressure and flow meters. Further sensors are being developed and can be built to clients specifications. Serial interfaces are available for external radio and can be programmed to interface with trigger switches for event marking: as-built position or filling operations.

EASE OF INSTALLATION AND FLEXIBILITY

The GNSS-982 PoE is a concise unit that can integrate various signals with a minimal demand on cabling. This keeps the system tidy and clear. Trouble shooting spaghetti is history! A single Ethernet cable is sufficient for both power and data transmission between PC and receiver. No serial connection is required. Serial in- and output is however available through a dedicated connector. The web interface eliminates the necessity of a dedicated configuration program and supports the remote assistance for setting up the system.

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AUXILIARY SENSORS

PR-6060 / P-160

Digital POE powered Pitch & Roll / tilt inclinometer
Accuracy 0.02° (PR-6060), 0.05° (P-160)
Max Update rate 20Hz
Range PR-6060: pitch/roll -30°/+30°
Range P-160: tilt 0°-160° or -80° to +80°
1 PoE+ INPUT PORT: supplies Ethernet connectivity & power to the inclinometer
1 PoE+ OUTPUT PORT: supplies Ethernet connectivity & power to external devices
2 spare analog inputs (4-20mA) for example for a horizontal rotation angle sensor or pressure sensor indicating depth
Sensors are typically housed in robust subsea housings with 100m depth rating and able to withstand harsh environments.

TECHNICAL SPECIFICATIONS

- Advanced Trimble Maxwell Custom Survey GNSS technology with 440 channels and simultaneous satellite reception
- Positioning (220 Channel Maxwell 6 chip):
  - · GPS: Simultaneous L1 C/A, L2E, L2C, L5
  - · GLONASS: Simultaneous L1 C/A, L1 P, L2 C/A, L2 P
  - · SBAS: Simultaneous L1 C/A, L5
- Heading (second 220 Channel Maxwell 6 chip):
  - · GPS: Simultaneous L1 C/A, L2E, L2C
  - · GLONASS: Simultaneous L1 C/A, L1 P, L2 C/A, L2 P
- Power consumption: <10 W at 24 V stand alone, <33 W at 24 V with full connection of external sensor
- 10-30V DC power input
- 1 PoE+ INPUT PORT: supplies Ethernet & power to the GNSS receiver via the use of a standard PoE switch or power inverter.
- 1 PoE+ OUTPUT PORT: supplies Ethernet connectivity and power to external dedicated devices (Stema Systems digital Inclinometer/roll pitch sensor/ pressure sensor)
- Mobile 2G/3G modem: RTK corrections & internet connectivity f.i. remote support
- 1 PPS out
  5 Serial I/O ports (4 standard and 1 configurable RS232 to UDP / RS232 over Ethernet)
- Event marker input support
- Internal web page for configuration purposes and system monitoring
  Initialization time typically:<10 seconds, Initialization reliability: >99.9%

ACCURACY

Mode	*Position*	*Max Rate*
Single baseline RTK (<30m)	8 mm + 1 ppm Horizontal 15 mm + 1ppm Vertical	50 Hz
Fugro L-band service (GNSS)	0.10 m Horizontal (95%) 0.15 m Vertical (95%)	50 Hz
DGPS	0.25 m + 1 ppm Horizontal 0.50 m + 1 ppm Vertical	50 Hz
SBAS	<5 m 3DRMS	50 Hz

Baseline	*Heading*	*Max Rate*
2 m	<0.09°	50 Hz
10 m	<0.05°	50 Hz

ANTENNA OPTIONS

Type	*Specs*
Zephyr 2 standard, geodetic or rugged	GPS L1/L2/L5; GLONASS L1/L2/L3; Galileo E1,E2,E5,E6; SBAS+Omnistar/Marinestar
LV59	GPS L1/L2/L5; GLONASS L1/L2/L3; Galileo E1,E2,E5; SBAS+Omnistar/Marinestar