Trimble MPS566
Receiver

Precise positioning and heading

The Trimble® MPS566 Pilot System is a permanently installed piloting unit approved by the Panama Canal Authority. It provides real-time Global Navigation Satellite System (GNSS) based positions with centimeter precision for accurate position, speed, course, heading, rate of turn and Automatic Identification System (AIS) data. All data can be shared via Wi-Fi® to the Panama Pilot application, for ease of piloting and passage through the canal.

System benefits

- **Safe navigation** - real-time centimeter level accuracy delivers high accuracy positioning and heading for precise guidance, berthing and docking
- **Safe piloting** - positioning data is shared with the Panama Canal pilot's application, delivering easy-to-read system status
- **Independent AIS traffic monitoring** - delivers data to Independent Automatic Identification System (AIS) traffic monitoring for your vessel

System information

- Meets the current Panama Canal Authority specifications for NeoPanamax vessels transiting the Panama Canal
- Use with existing Pilot software, for easy piloting, built-in AIS delivers heightened situational awareness
- The MPS566 provides a front panel and keypad for easy quality control without the need for an external PC connection
- 4G LTE modem allows for remote monitoring and operation via Internet connectivity
- Five hour system battery provides uninterrupted operation during power outages on the vessel
- The GNSS receiver can also be used as an internet gateway for remote support and a backup source of RTK corrections (NTRIP)
- The Trimble GA830 Antenna is designed to be used in harsh marine conditions. It tracks GNSS signals from all constellations as well as L-Band satellite support for Trimble RTX® correction service

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GNSS RECEIVER SPECIFICATIONS

Constellations	GPS, QZSS, Galileo, Beidou, Glonass
Frequencies	Dual Frequency on all constellations.
Position accuracy	RTK 0.01m +/- 1ppm, SBAS: 1m, Optional Trimble RTX (0.02m H, 0,05m V), Marinestar
Heading accuracy	0.02°with 10m antenna separation
Speed accuracy	1 cm/sec
Rate of turn accuracy	0.1° / min

GNSS ANTENNAS

GNSS	2 Trimble GA830 Marine GNSS antennas
Tracking	All current GNSS constellations, L band MSS, SBAS and Marine MSK beacon
Marine features	Protection from Iridium transmission, low elevation tracking
Dimensions	14.9 cm diameter x 9.8 cm height
Operating temperature	-40° C to +70° C
Mounting	Female ⅝" 11 UNC thread, 3 x M3 threaded hole surface mount
Weight	0.82 Kg
IP Rating	IP69K
Vibration	MIL-STD-810E method 514.5
Shw	MIL-STD-810G method 516.6
Salt Fog	MIL-STD-810G method 500.5

ANTENNA CABLING

Type RG213	Losses over 30m: 2.5dB (VHF), 4.5dB (UHF), 13.5dB (GNSS)
Installation	Connectors to be crimped on vessel, crimping tool included

COMMUNICATIONS

Internal UHF receiver	No
NTRIP corrections	Backup RTK Base corrections (NTRIP) from ACP server on UDP port 2102
4G LTE modem	For direct Internet connection for corrections, remote monitoring - optional
Remote access	Use DynDNS and appropriate service
Wi-Fi	Client and access point capabilities. ID, SSID, Password validated by ACP. QR code for access to Wi-Fi located on the Pilot Plug Panel of the vessel
Bluetooth/Wi-Fi	2.4 GHz
NMEA outputs	ACP's list: GGA, GSA, GSV, VTG, HDT, ROT, VDM - all on UDP 17608

POWER MANAGEMENT

AC supply	90-240 VAC
AC plug type	Includes NEMA 5-15 type as per ACP requirements and EU, Australia and UK style plugs
UPS	9 hours. Nickel metal hydride batteries
Power consumption	8 Watts max

MECHANICAL

Dimensions	16 x 18 x 27 cms (HxWxL)
Weight	4.2 kg
MPS566 screen (OLED)	4 line, status and configuration control without computer
LED on electronics enclosure	Green LED = AC power on. Red LED = UPS on. No LED's on = no power
Connectors	USB, 26pin (RS232, Ethernet, Power), 2 TNC for antennas, UHF radio reverse polarity TNC, LEMO power, RS232
IP rating	IP67 (MPS566); IP51 (Electronics enclosure)

REGULATORY COMPLIANCE

FCC	FCC: Part 15 Subpart B (Class B Device)
Safety	UL IEC 62368-1, UL 2054, IEC 62311, EN 38.3
EN, IEC	EN 300 113, EN 300 328, EN 301 908, EN 303 413, EN 300 487, EN IEC 62368-1, Marine Equipment: IEC 60945:2002 section 8, protected
ROHS, WEEE	RoHS Directive 2011/65/EU, WEEE Directive 2012/19/EU
	More certification is available upon request

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