



TRIMBLE MPS566 PILOT SYSTEM

Trimble is proud to be an approved provider of non-portable pilot systems for NeoPanamax vessels transiting the Panama Canal.

FAQ



Table of Contents

THE TRIMBLE MPS566 PILOT SYSTEM

1 System details

- What does the Trimble® MPS566 Pilot System consist of
- What software is included
- How is it integrated with other navigation and piloting systems
- How is the system powered
- Does it need internet connectivity
- Can the system be shared between vessels

2 Installation

- What are the installation dimensions
- Trimble GA830 GNSS Antenna installation
- System installation overview
- How is the system configured
- How does the Panama Canal Authority (ACP) certify the installation
- Is the AIS plug and receptacle for the pilot's laptop/computer at No. 1 conning position on the bridge necessary

3 General

- Can it provide real-time GNSS positions outside the Panama Canal
- How is the system secured
- Are there any ongoing charges such as Cloud storage or correction services
- Are there rental or subscription options

System details

What does the MPS566 Pilot System consist of

The kit includes:

- A Trimble® MPS566 Modular GNSS Heading Receiver (with 450MHz UHF)
 - RTK Rover with dual frequency GNSS and INS
- Two Trimble GA830 GNSS Antenna
- WTE Pilot Enclosure with AIS/UPS electronics
- WTE AIS/UHF antenna
- Optional WTE Antenna cabling kit with connectors and crimping tool. Alternatively the RG213 cables and connectors can be obtained from a local supplier
- Installation guide

What software is included

Software is not included, but the common pilot applications, including the software used by the Panama Canal pilots will operate with the system.

How is it integrated with other navigation and piloting systems

The MPS566 Modular GNSS heading receiver transmits standard National Marine Electronics Association (NMEA) messages over Wi-Fi® - suitable for pilot systems. The Wi-Fi SSID and password is available on the QR Code label on the pilot plug panel.

How is the system powered

The system is powered by connecting to 90-240 VAC in the wheelhouse. Common AC plugs are provided. In the event of AC power loss, the internal UPS powers the system for up to five hours.

Does it need Internet connectivity

No. However the Pilot's device might be connected to the Internet and NTRIP corrections can be streamed through to the MPS566 receiver as an alternative source of RTK corrections. The MPS566 receiver can support an LTE Sim card, if a direct Internet connection is required.

Can the system be shared between vessels

No. This is because the Panama Canal Authority (ACP) approval Certificate is related to a unique vessel.

Installation

What are the installation dimensions

The system hardware requires 180 mm W x 270 mm L and 160 mm H (7.1" W x 10.6" L x 6.3" H), in the wheelhouse.

Trimble GA830 GNSS antenna installation considerations

The GA830 GNSS antennas need to be installed on the compass deck clear of any radiated transmissions and ideally 10 meters (32.8 feet) apart, with a minimum separation of 4 meters (13 feet). Ideally antennas should be installed an equal distance to port and starboard from the vessel's centreline, or directly alongship. The AIS/UHF antenna is mounted on the compass deck.

System installation overview

The installation process, which can be undertaken by a skilled crew, takes between 5 and 10 hours depending on the accessibility of mounting and cable-run locations. In most cases the vessel's crew can install antennas with the included antenna mounts (some fabrication may be required), run the cables from the compass deck to the back of the wheelhouse, and then enter measure up data to the MPS566 receiver.

How is the system configured

The system is delivered pre-configured to operate with the Panama Canal infrastructure. The vessel's crew can enter the measure up offsets from the GNSS antennas to the GNSS receiver during installation to complete the configuration in preparation for the Panama Canal Authority certification. A [YouTube instruction video](#) is available for this process.

How does the Panama Canal Authority (ACP) certify the installation

During the first transit through the Panama Canal the ACP Pilot team will confirm the offsets and create the Certificate for your vessel which is retained by the Panama Canal Authority to be re-used for subsequent transits.

Is the AIS plug and receptacle for the pilot's laptop/computer at No. 1 conning position on the bridge necessary

The conventional AIS plug is not used for Panama Canal transits as the Pilot will use the Trimble MPS566 Pilot system.

General

Can it provide real-time GNSS positions outside the Panama Canal

Yes, the GNSS and AIS receive free GNSS corrections from various satellite-based augmentation system (SBAS) systems or free-to-air precise corrections in many seaports via UHF or NTRIP (via Internet). A Trimble RTX® Marine corrections subscription can be used to provide precise corrections globally.

How is the system secured?

There is Wifi and web UI password protection required.

Are there any ongoing charges such as Cloud storage or correction services

No. However if you require satellite based corrections such as Trimble RTX correction service for non Panama Canal operation then this is a subscription service. If you install a LTE Sim card for NTRIP corrections or remote access then the telecom supplier will charge for data.

Are there rental or subscription options

Since these are Permanent Pilot Units they are installed on a given ship and can't be rented.