

Highly accurate real-time data reduces incidents and downtime in maritime trade

The Panama Canal is one of the busiest waterways in the world and a key link between the Atlantic and Pacific Oceans for maritime trade. The importance of the Panama Canal is immeasurable for the world economy and international trade, both from a navigational and commercial point of view. SATEL's technology can also be used in such a unique destination.



The length of the canal is approx. 80 kilometers, it cuts through the Isthmus of Panama, which effectively reduces the travel time of ships from the Atlantic to the Pacific by several weeks and travel distance by some 8000 miles.

In addition, ships can avoid the treacherous Southern Ocean at Cape Horn. Ships from all over the world transit through the Panama Canal daily. Between 13 000 and 14 000 ships use the Canal each year. In fact, Panama Canal serves more than 180 maritime routes, connecting 1 920 ports across 170 countries.

New positioning requirement for Neopanamax vessels to improve safety.

The Panama Canal Authority (ACP) announced a new positioning requirement for transiting Neopanamax vessels from October 2023 onwards. Neopanamax vessels, with a beam of 109 feet or more, transiting the Panama Canal must have a fixed installed (non-portable) piloting unit with Real Time Kinematics (RTK) for submeter accuracy on board.

This requirement aims to eliminate delays associated with the installation of portable piloting units (PPU-RTK) and improve the waterway's safety and efficiency. Vessel operators are responsible for procuring, installing, configuring, and maintaining the fixed piloting unit in proper condition.

Compliance with the piloting unit requirement will be part of the vessel's arrival inspection. If the vessel does not meet the requirement, a portable piloting unit with RTK (PPU-RTK) will be temporarily installed at an additional cost. Non-compliance may lead to transit delays, additional costs, and possible fines.

SATEL-TR4+ radio module can be used for GNSS corrections.

A non-portable unit is installed on the bridge of the vessel, and it has external antennas. It provides Global Navigation Satellite System (GNSS) based position with centimetre precision, movement in three dimensions, speed, course, heading, rate of turn and Automatic Identification System (AIS) targets data.

All data must be real-time and it is shared via WiFi to the tablet and application used by the Panama Canal personnel.

The unit receives GNSS corrections via Ultra High Frequency (UHF) and cellular data from the Panama Canal Differential Global Navigation Satellite System (DGNSS) base stations and servers.

By providing highly accurate real-time data, improved situational awareness, and effective communication, it enhances safety and efficiency whilst reducing incidents and downtime. All non-portable piloting units must be preapproved by the Panama Canal before the usage. Currently eight different companies are approved to deliver the non-portable piloting units.

We are proud to announce that SATEL-TR4+ radio module has already been chosen to be the UHF radio for the GNSS corrections by some of the approved piloting unit manufacturers. Small radio module has an impact to the world trade!



pancanal.com/en/
en.wikipedia.org/wiki/Panama_Canal

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