



EMPOWERING YOUR FLEET
TO NAVIGATE EFFICIENTLY
AND SAFELY
SINCE 1945

NON PORTABLE PILOTING UNIT
Compliant with Panama
Canal Authority requirements

NaviMotion

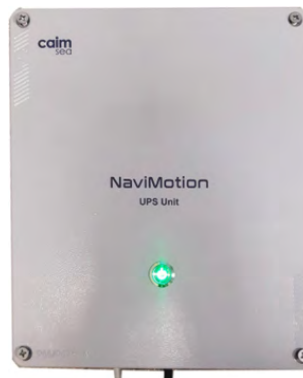
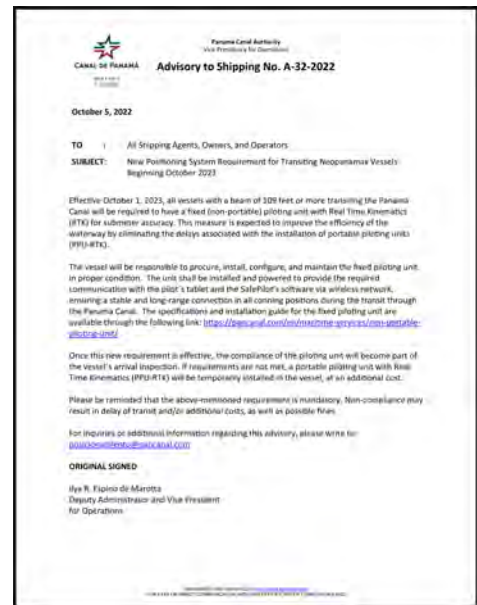


NaviMotion

PCA Advisory to Shipping No. A-32-2022 mandates that all vessels with a beam width of 109 feet or more must have a non-portable piloting unit installed.

This regulation will be effective starting on October 1, 2023.

Explore NaviMotion – CAIM's comprehensive solution tailored for you.



Approved



Precise



Compliant



NaviMotion

NaviMotion consists of two units: the main piloting processor and the UPS (Uninterruptible Power Supply) unit equipped with 'lead crystal' batteries. This design enables easy transport and provides up to 10 hours of power supply in the event of a blackout.

The product is approved by the Panama Canal Authority and is equipped with the Latest technology in high precision positioning and inertial systems.

As required, a label will be provided to the vessel, which will include an ID, SSID, password, or a QR code, all validated by the Panama Canal Authority. This will allow the Pilot to access the data supplied by NaviMotion via WiFi

In the box:

1x Fixed piloting Unit

1x UPS

2x GNSS Antenna

1 x UHF Antenna

1 x VHF Antenna

2x Wi-Fi Antenna

All cables included

NaviMotion

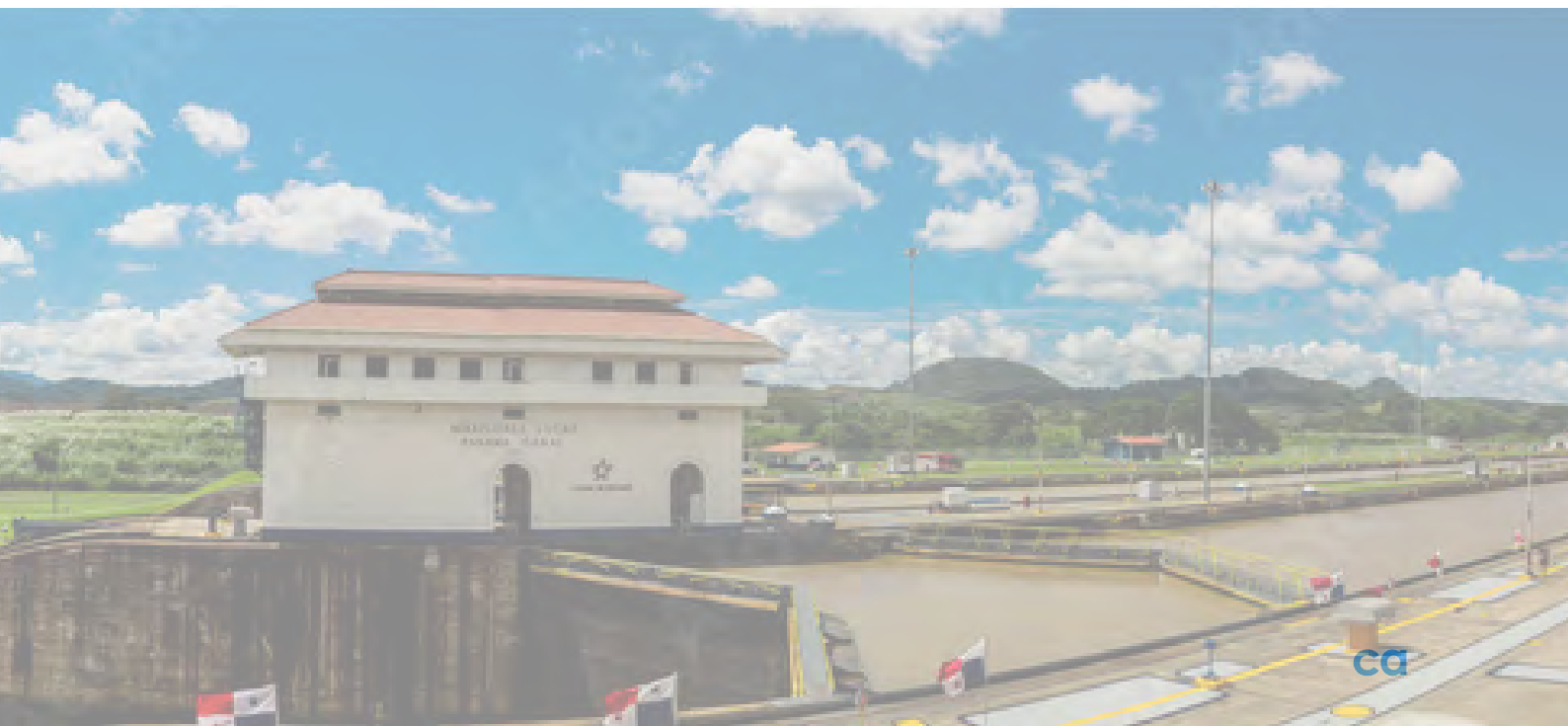
PANAMA CANAL AUTHORITY COMPLIANT

FIXED PILOTING UNIT

SSID NAVIMOTION

PASS *****

caim
sea



NaviMotion

NaviDock

NaviMotion is fully compatible with the Panama Pilot's Tablet via WLAN. CAIM also offers the option to supply NGMAT, a tablet designed to support the crew in conducting precise operations beyond Panama."



In addition, NGMAT serves as an emergency aid, enabling the vessel to navigate to the nearest port in the event of an ECDIS failure. The NaviDock software, which reads all sensors provided by NaviMotion and displays official ENC data, offers the most precise position available. This empowers the master to execute maneuvers with high-quality data. NGMAT is a rugged tablet with high brightness and water resistance rated at IP65..

Technical Specifications

GNSS Antenna Frequencies: GPS/QZSS-L1/L2/L5, QZSS-L6, GLONASS-G1/G2/G3, Galileo-E1/E5a/E5b/E6, BeiDou-B1/B2/B2a/B3, NavIC-L5 Gain: ≥ 37 dB Noise Figure: ≤ 1.8 dB typ. @ 25°C VSWR: $< 1.5:1$ typ. $1.8:1$ max. Operating Temperature: -45°C to 85°C Shock & Drop: MIL-STD-810G - Test method 516.6 - IP Rating: (housing) IP69K	Dual Antenna GNSS Receiver Tracked Systems: GPS / QZSS, Galileo, GLONASS, BeiDou Frequencies: L1C/A, L2C, L1OF, L2OF, E1B/C, E5b, B1I, B2I Interference Mitigation: Spoofing and Jamming detection Position Accuracy: RTK: 0.01m +/- 1ppm, SBAS: 1m Heading Accuracy@10m Antenna Separation: 0.02 degrees Speed Accuracy: 0.01m /sec Rate of Turn Accuracy: 0.1°/min
UHF Antenna VSWR @ 454.325MHz: < 1.5 Gain 2dbi Lightning protection	UHF DGNS Corrections Frequency: 454.325 MHz (configurable) Radio frequency (RF) Protocol: Trimtalk 450S (configurable) DGNS Corrections Protocol: RTCMv3
Network DGNS Corrections Protocol: Networked Transport of RTCM via Internet Protocol (NTRIP) UDP Port: 2102	AIS VHF Antenna VSWR @ 162MHz: < 1.5 Gain 2dbi Lightning protection
AIS Receiver Dual Frequency: 161.975 & 162.025MHz Receiver Sensitivity: < -110 dBm @ 20% packet error rate	Cables for VHF, UHF and GNSS Antennas Operating Temperature: -40°C to 80°C Total loss signal cables: Max. 17dB
Inertial Motion Unit (IMU) Gyro Bias Instability: 0.8°/h Gyro Angular Random Walk: 0.08°/√h Accelerometer Bias Instability: 0.02 m/s/√h Accelerometer Random Walk: 6μg 6 Degree OF Freedom	WiFi Access Point: IEEE 802.11 b/g/n with double band Number of clients: ≥ 4 Security: WPA2 Signal strength: > -70 dBm at all conning positions
Data Output NMEA output: GGA, VTG, HDT, ROT, GSA, GSV, ZDA, VDM UDP Port: 17608	Data Protocol Compatible with Trelleborg SafePilot Certification ID output: PTMSX message every 10 seconds Jamming and Spoofing status output: PTMSG message every 5 seconds
Dimensions Pilot Unit: 250w/90h/230d mm - weight 2kg UPS Battery Backup: 265w/125h/320d mm - weight 8kg	Power Supply: 90 - 240 VAC Battery Backup: ≥ 10 hours of operation with sealed SiO2 batteries, not restricted to IATA DGR

NaviMotion



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