

# PORT SENTINEL™

## FEATURES & BENEFITS:

- Real-time wind speed, wind direction, current speed, current direction, and water level information
- Solar Powered
- Choice of telemetry and sensor options
- Able to transmit data over AIS transponders



*The AXYS Port Sentinel™ is a self-contained and fully automated weather and water level station that can be deployed in key locations to facilitate vessel traffic management operations.*

## PORT SENTINEL™

*Meteorological and Oceanographic Data Collection and Transmission System for Vessel Traffic Management*

## Port Sentinel™

Environmental data play an important role in port operations. Access to timely and meaningful information can assist decision-makers faced with planning, operations, security, and safety.

The AXYS Port Sentinel™ is a self-contained and fully automated weather and water level station that can be deployed in key locations in a port or along its approaches to facilitate vessel traffic management operations. Typical sensor configurations provide wind speed, wind direction, current speed, current direction and water level (tide).

A unique feature of the AXYS Port Sentinel™ is its ability to transmit over AIS transponders, as mandated by the International Marine Organization (IMO).

The AXYS Port Sentinel™ system was designed to interface with all IMO type-approved AIS Class A transponders and to complement the available information with environmental data. This data can optionally be combined with data collected from AXYS meteocean buoy systems to provide a complete picture of the meteorological and oceanographic conditions as well as water levels.

Collected information can be broadcast in real time to vessel traffic management (VTMS) centers, pilots, port managers, ship operators and bridge crew. Available telemetry options include radio, satellite and cellular phone.

AXYS Technologies Inc. works closely with manufacturers of Electronic Chart Display Information Systems (ECDIS) to ensure that environmental information can be displayed using the most commonly distributed software packages.

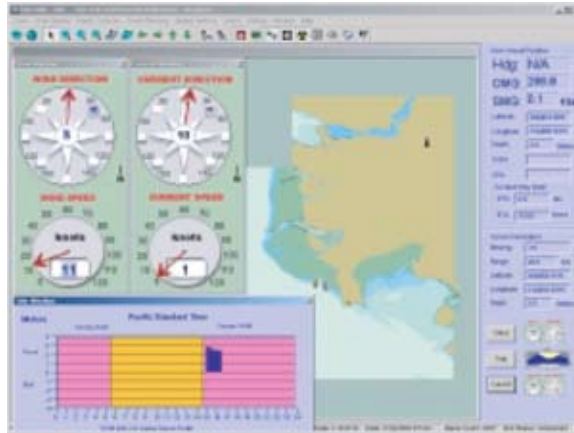
## Port Sentinel™ Controller Processor

The successful WatchMan 500™ architecture is a key building block of the payload system proven in Environment Canada's Weather Buoy Network.

The Watchman™ continuously monitors all sensors and outputs AIS-compatible message types at a user-specified interval.



*Rugged NEMA 4X Weather enclosures for all electronics*



*ECDIS Display courtesy of PACMAR/WMC*

## Specifications

### • Sensors Available

- Wind Speed
- Wind Direction
- Current Speed
- Current Direction
- Water Level (tides)
- Barometric Pressure
- Relative Humidity
- Air Temperature
- Sea Surface Temperature

### • Telemetry Options

- AIS
- VHF
- UHF
- CDMA / EVDO / GSM / GPRS / EDGE
- INMARSAT D+ or C
- Landline
- Iridium

### • Power System Options

- 12 VDC
- 120/240 VAC
- Solar Power

### • Operational Environment

- 40°C to +50°C
- Vibration and shock tested to MIL-STD 167-1
- 67-1 NEMA 4X waterproof enclosure
- EMC tested to MIL-STD 461 D, ENV and IEC Standards

### • Relevant Formats and Standards

- ITU-R M.1371
- BBM MSG 8 MET / HYDRO
- MSG 21 & MSG 6
- IEC 61162
- IEC 61993-2
- NMEA-0183
- User Defined
- WMO formats



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