SEEMP SET

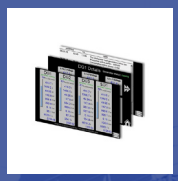
# PRODUCT LINE

## SHIP ENERGY EFFICIENCY MANAGEMENT PLAN

### ETNP-10
**Propulsion Control Assistance System**

### EVT
**Vessel Tracker**

### EFCM
**Fuel Consumption Monitor**



### EPM
**Electric Power Monitor**

### EMIS
**Enamor Motion and Inclination Sensor**

### ESOS 2.0
**Ship Efficiency Optimisation System**

enamor®
HIGH LEVEL ENGINEERING

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# SHIP EFFICIENCY OPTIMISATION SYSTEM ESOS 2.0

BEST WAY TO SUPPORT SHIP-OWNERS IN MANAGING THE ENERGY EFFICIENCY OF THEIR VESSELS IS THE IMPLEMENTATION OF SHIP ENERGY EFFICIENCY MANAGEMENT PLAN (SEEMP).

- **Better management and implementation of the best practices to improve the efficiency of ship.**
- **Review the procedures and energy use on board of each vessel.**
- **Identify any gaps or potential areas of improvement in energy efficiency.**
- **Internationally recognized tools available: Energy Efficiency Operational Indicator (EEOI).**


Ship Efficiency Optimisation System ESOS 2.0 is based on modern industrial display with touch screen and industrial computer with ESOS 2.0 application, which was designed by Enamor's qualified engineers. NMEA0183 standard signals sent by the ETNP-10 system (data from ETNP-10 are retransmitted), EFCM system, GPS, Echo Sounder, Log, Weather Station, Loading Computer and Rudder indicator are transmitted to ESOS 2.0 computer through NMEA Multiplexers. After processing, the signals are saved to the internal database.

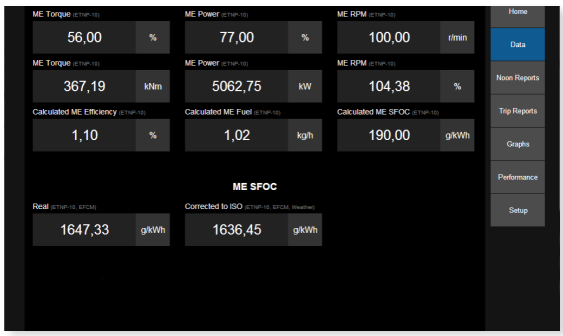
## FUNCTIONALITY

**ESOS 2.0** is a step to develop an effective management plan, which should identify the various aspects:

- speed optimization, route determination, periodic maintenance of hull, maintenance of machinery;
- access to data from ship via satellite communication and Internet is useful for parties concerned (companies chartering) and traffic management services;
- intuitive and clear user interface is essential to ensure effective implementation and usage of the management plan;
- reduction of fuel consumption can be observed directly onboard and also in owner's office.

## TECHNICAL SPECIFICATION

- Main Unit Power Supply: 230 VAC
- Power Consumption 500W
- 24VDC UPS with battery backup integrated
- PC industrial computer based on 3rd generation Intel® Core™ i7
- 12" Industrial color display with touchscreen
- Up to 12 NMEA data source via SNMEA6 Multiplexers
- Data storage in database on HDD
- Elements to be mounted with shock absorbers in console
- Easy and clear ESOS 2.0 system user interface





### Additional Information

ESOS 2.0 allows to observe current values of the parameters, to analyze data in graphs, to make EEOI reports (Noon Report and Trip Report), to correct automatic readings values during reports creation and to analyze ship Key Performance Indicators status.

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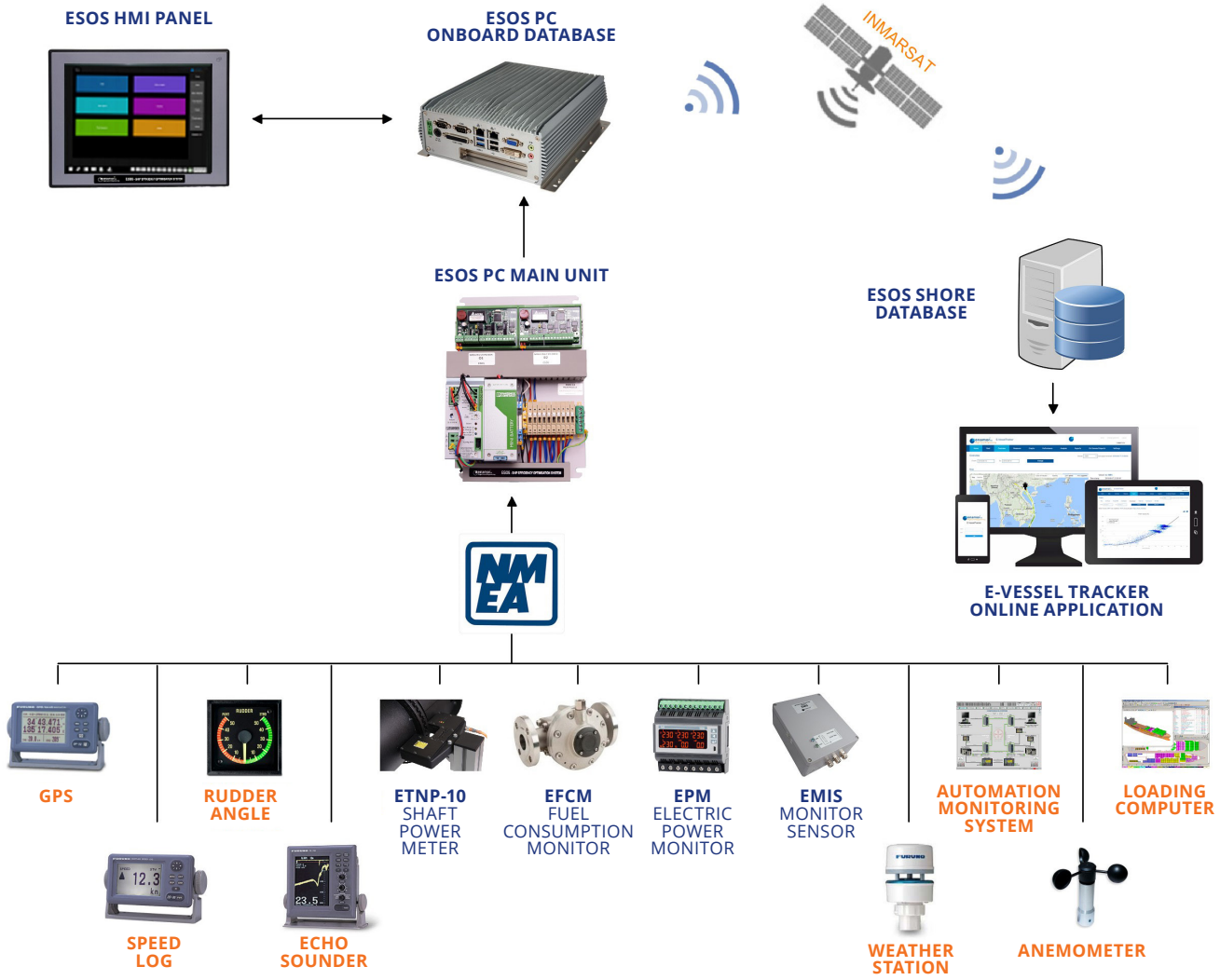
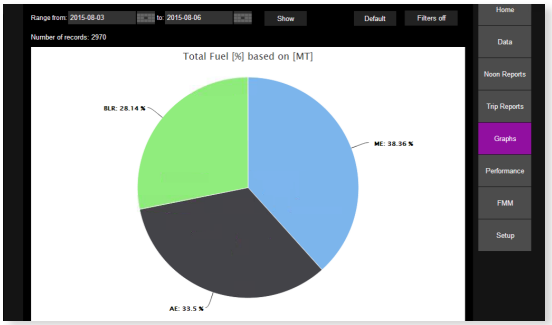
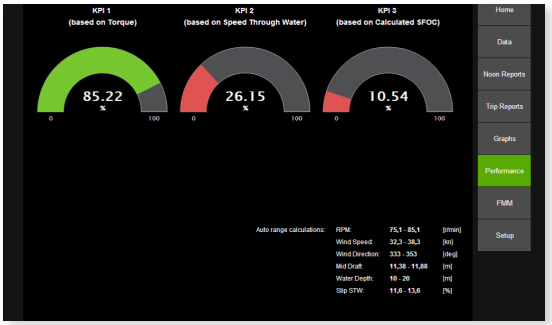



## Additional Information

NMEA0183 standard signals sent by the ETNP-10, EFCM, EPM Systems and GPS, Echo Sounder, Log, Weather Station, Loading Computer, Rudder angle indicator are transmitted to ESOS 2.0 computer. After processing, the signals are saved to the internal database. The data are averaged and written to the database every 60 seconds and are sending, in the form of zipped files, using SkyFile, Amos Connect or other applications to the E-VesselTracker (www.e-vesseltracker.com) web solution.

**ESOS 2.0 can be integrated in SEEMP-Set for the purpose of ship overall performance optimisation.**





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