Albatross Control System®

At your fingertips

Albatross®
control system

from analog to NMEA 2000®

Alba - engine

Alba - multi

Alba - battery

Know your YACHT

Alba - engine

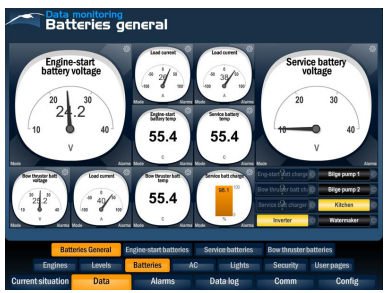
Alba - in

Alba - multi

Alba - out

Alba - battery

Alba - CPU



Albatross - interface

Control your YACHT

Alba - engine

Alba - multi

Alba - battery

Alba - in

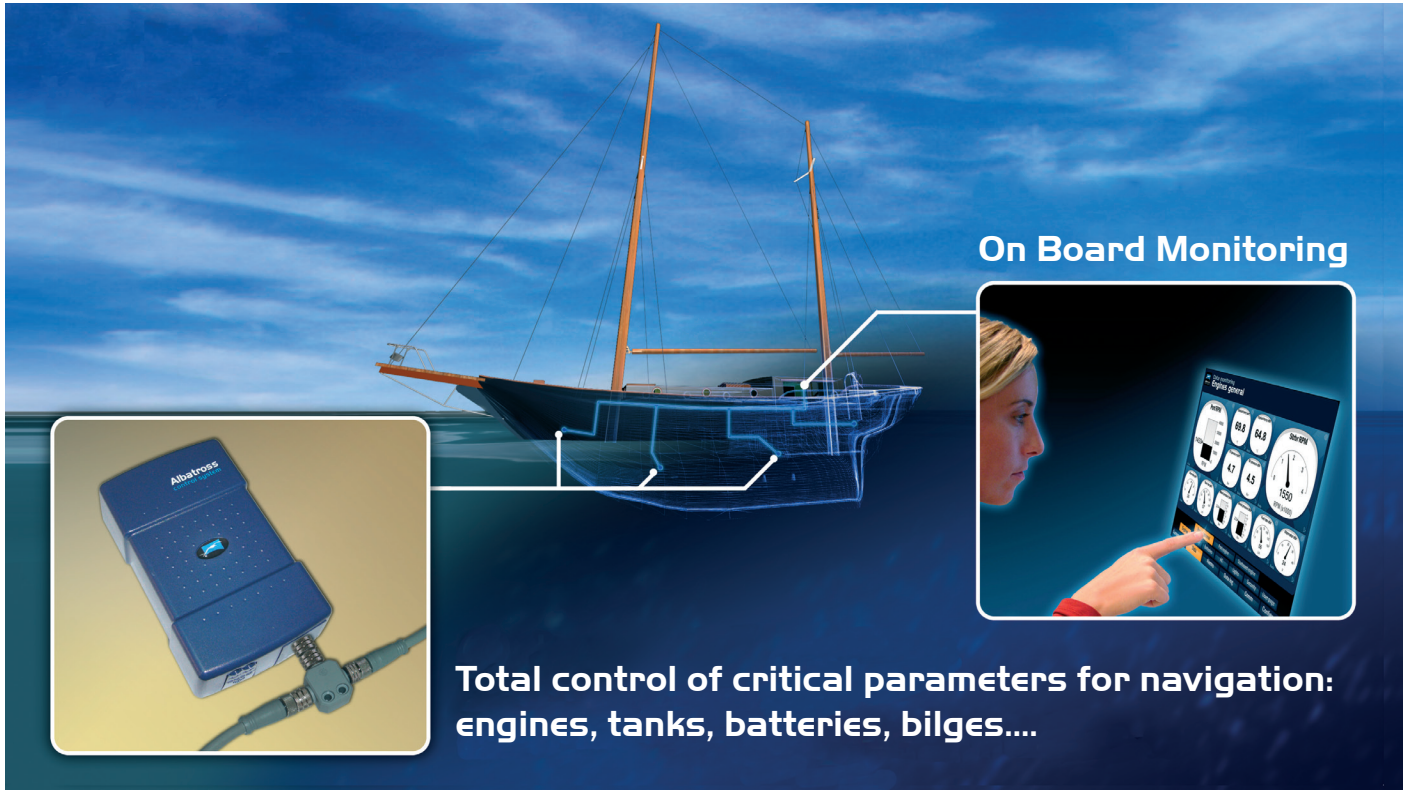
Alba - out

Alba - propeller

Alba - CPU

Albatross monitoring
and control system

NMEA2000® a new era



Why NMEA2000®

New multifuctional navigation displays allow users to represent information such as sounder/radar/plotter simultaneously as well as visualization of different parameters from motors, level sensors, temperature, etc. The capacity to process data together with the need of integrating different electronic equipment, as well as the same evolution towards multifunctional displays required a change in the marine industry, giving rise to the present NMEA2000®.

The NMEA2000® represents the greatest advance of communication between systems and a new concept of interconnection on-board.

A simple cable network replaces the cable maze used in the interconnection of previous equipment.

NMEA2000® networks can interconnect navigation equipment, motors, electrical equipment, auto pilots, AIS systems and sensors, etc.

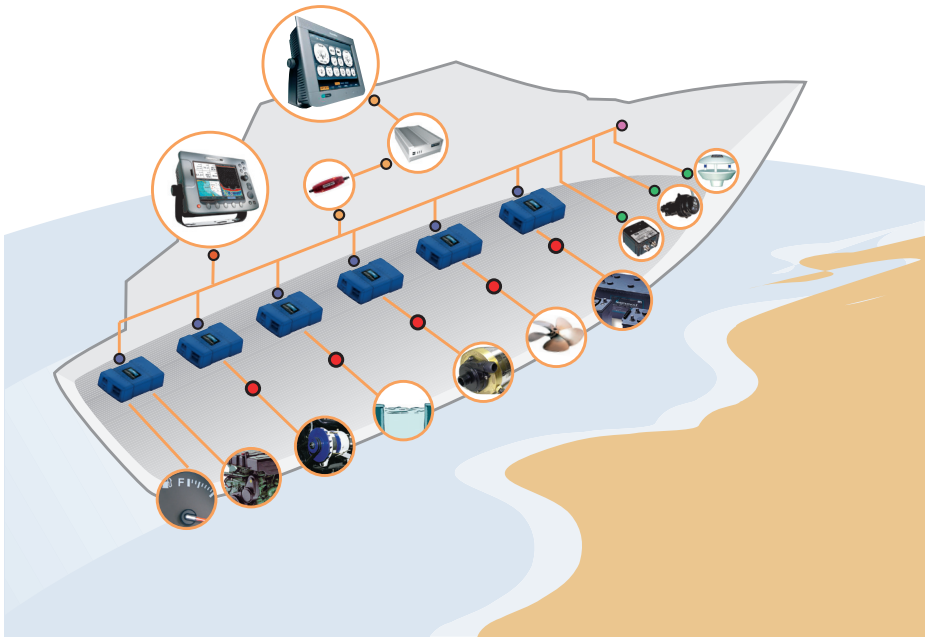
Data, commands, and status share the same bus, at speeds 26 times superiors than the NMEA0183 interphase. NMEA2000® is a network of data series working at 250kbits/second and uses the integrated circuits CAN (Controller Area Network). The CAN system was designed for the automobile industry and is used in multiple industrial applications.

Advantages of NMEA2000®:

The NMEA2000® network is designed to allow high speed serial data communications between electronic devices on board easily and securely. These can range from navigation instruments, engine monitoring systems, tank monitoring systems through to control of electrical devices such as lights and motors over a simple common data cabling system.

There are multiple advantages of NMEA2000® such as:

- Easy installation: A single cable enables distribution of data communication on board from engine control to GPS information transferring through the CAN bus.
- Reduction of costs: The compatibility and standardization of parts from the most important manufacturers of electronic equipment and sensors allow the industry to develop products with lower prices for equipment with proprietary systems coming from a single manufacturer.



Network Topology

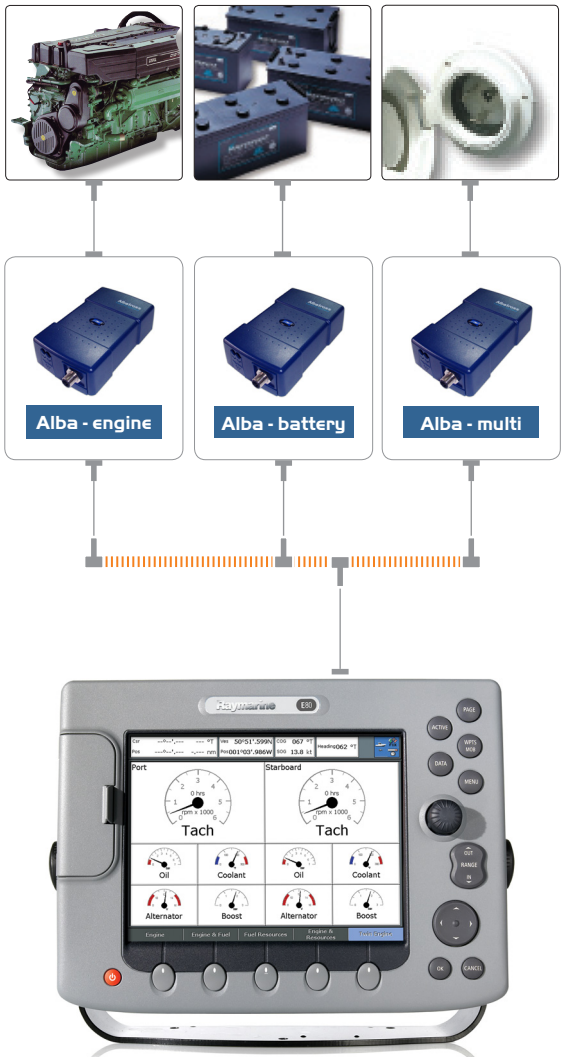
The network is based on a single backbone or trunk cable, terminated at each end, with multiple drop connectors each feeding an attached device. These devices can be senders or transducers placing data onto the trunk or display or control heads that utilise the data. The trunk has a single power feed which is connected to the ship's power and provides power to all the attached devices. When an attached device needs to draw more than the trunk can supply, then it may have it's own higher power supply feed in addition to that provided by the trunk.

Power Requirements - The network requires a power input of 9 - 16 volts DC which is normally provided by connecting the network to the vessels 12 volt battery. In 24 volt vessels a 24 - 12 volt converter will be required. The network is connected to the power source by means of a Mini or Micro Powertap connection.

Converters

Albatross converters: from analog to NMEA2000®

Unlike other monitoring systems that use proprietary technologies, Albatross Control System® relies on the NMEA2000® bus standard. This technology is being adopted by most electronic display manufacturers (Raymarine, Lowrance, Simrad, Garmin, Furuno ...) as the standard communication interface for marine electronic devices. That allows Albatross Control System® modules data to be shown NMEA2000® display you connect with.

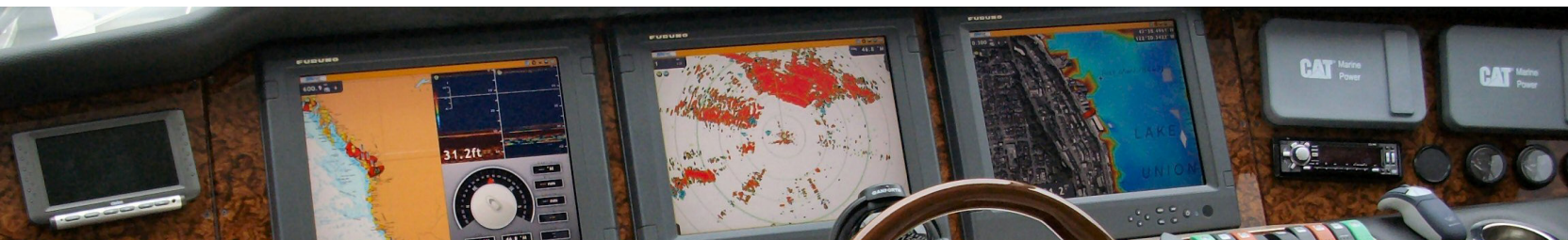


ALBATROSS CONVERTERS connect your NMEA2000® compatible display or Alba-CPU to the devices you want to monitor; no matter you need to control fuel tanks, the RPM of the engines of the state of the bilge. To read all that measurements the Albatross converters use analog sensors. Albatross includes in its portfolio a large variety of sensors (temperature, pressure, level, etc…).

Our most popular module, the **ALBA-ENGINE** monitors RPM, oil and turbo pressure, fuel pressure and oil temperature, and alternate tension converting the communication measurement to NMEA2000® protocol. All of that on your Raymarine / Garmin / Furuno / Lowrance / Simrad existing display (compatible with NMEA2000®).

For that, it adapts standard American (10-180 ohms) & European (30-240 ohms) resistive sensors to NMEA2000® network (as well as non-standard resistive sensors). Furthermore, it VDO sensors (yes, those ones you may have already installed) to NMEA2000® as it can work in parallel with already installed analogue gauges or connected directly to sensors (in motors without a control panel).

ALBA-MULTI can monitor up to 4 indepent input for fluid level, pressure, temperature, all of them always through resistive sensors. Besides, it adapts the European standard resistive sensors from 10 to 180 ohms to the NMEA2000® network. Also it adapts non-standard resistive sensors, or even VDO technology sensors (0-5 V.) to the NMEA2000® standard: it can be calibrated in either resistive or voltage modes.
You can do the same with most of your marine devices that deserve to be monitored : Alba-battery, Alba-AC, Alba-volume, Alba-propeller…



Albatross On-Board Software: Monitoring your yacht

An adequate state and control of critical parameters for navigation and life on board are essential aspects to assure a pleasant experience at sea. Boaters will be able to access general and advanced information from NMEA2000® devices to facilitate navigation and improve maintenance on board.

Albatross On-Board Software allows the user total control of boat parameters providing an additional guarantee of security and boating technology.

Albatross concentrates all the important information on a single device to get total control at your fingerprints: fuel levels, oil wells, water tanks, temperature and pressure, RPM, alternator tension, navigation parameters… tension and temperature of battery groups, frequency of the generator, barometer, wind speed, alarm sensors, and accessories…

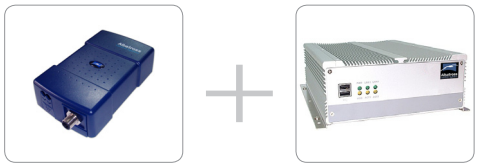
Of course, the Albatross On-Board Software is compatible with all standard NMEA2000® devices in the market without the use of exclusive proprietary technology by a single manufacturer.

The Albatross On-Board Software brings you the technology of the most exclusive glass-cockpit solutions, at just a fraction of the cost. The Albatross On Board system gathers the information of all the NMEA2000® devices installed on the boat, shows it with the most modern interface, stores a data log of its values, and allows the owner to configure automatic alarms to ensure the safety of the boat. One of its added values is the possibility of visualize any manufacturer's NMEA2000® device, becoming an intelligent investment based on an open standard.
Fully configurable screens with a true client-server arquitecture.

The Albatross Control System® software is deployed in pre-configured pack depending of the tasks you want to perform with the system:

- For basic monitoring services you can purchase ALBA-OB I pack, that can be improved with additional packs that add advances features. The basic pack is needed to work the Albatross On Board Software. It supports the visualization of basic parameters.
- The Alba-OB II pack implements all that advanced features, being the best choice for high-class monitoring installations.

PAST



PRESENT

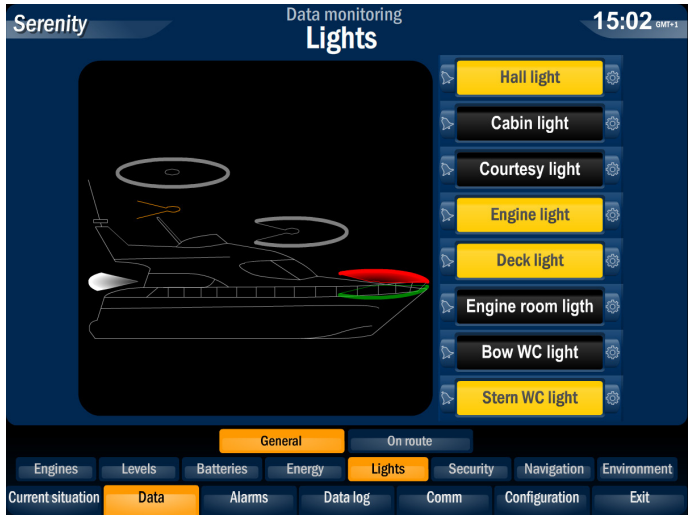
Albatross Monitoring and Control System

Software

Albatross On-Board Software: Control your yacht

Total control at your fingertips

Albatross Control System® allows the possibility to control remotely a large variety of devices by connecting them to the input/output Albatross modules.
The simple yet fully configurable Albatross Control On Board interface will provide you the possibility to activate, deactivate or even program an automatic change of the state of a device in the conditions you desire. All controlled from your screen.



A complete and universal on-board resource levels monitoring solution

Albatross Control System® can monitor and control all the lighting installation of the vessel.

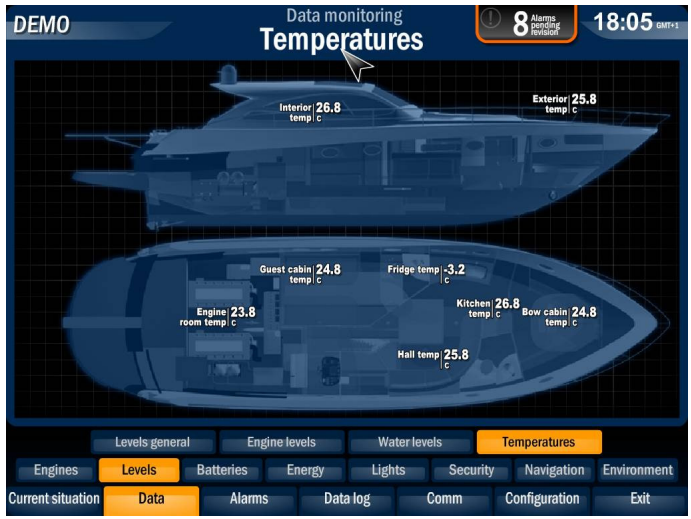
Using the Alba-Lighting module, you can also detect and alert the failure of any of the navigation light bulbs, so you can avoid potencially dangerous situations.

- Navigation lights
- Interior lights
- Exterior lights

The Alba-Out modules can switch the state of the navigation lights of your boat and show to you the current state on the Albatross On Board solution.
…Why don't the hall lights light up automatically when you enter the room?
…What if you could switch on your boat lights with a wireless command before stepping the deck?

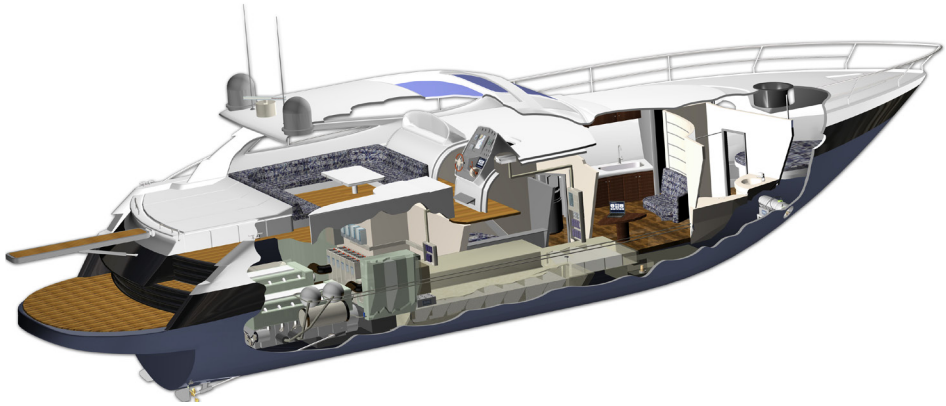
Albatross Control System® is a flexible and modular technology that allows specially tailored solutions for each need, from the most simple and affordable digital engine monitoring tool to a complete and advanced solution for glass cockpit, domotics/ boat-automation and security systems.

Its modular architecture permits the integration in a large variety of systems.

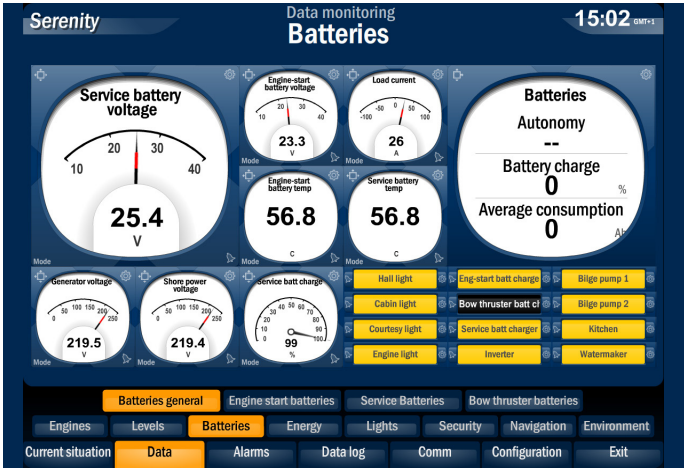


Albatross On-Board Software: Customizing your data

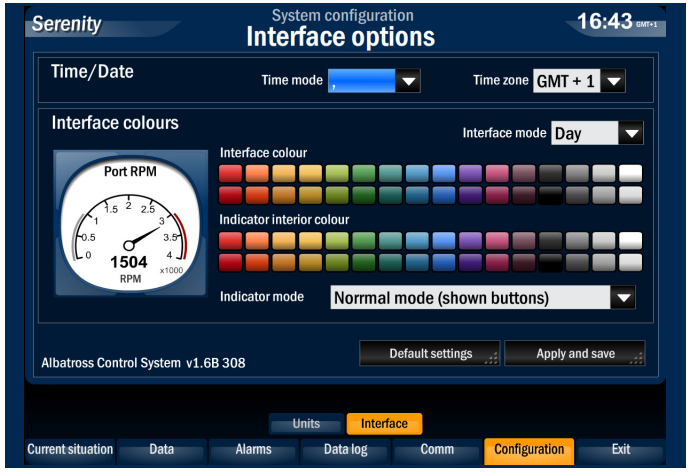
The Albatross On Board Software allows you to configure your own data screens, layout, type of indicators, units, alarms. It also supports multiple clients, connected with the Alba-CPU through Ethernet or Wi-Fi, so you can take your control bridge with you anywhere in the boat.



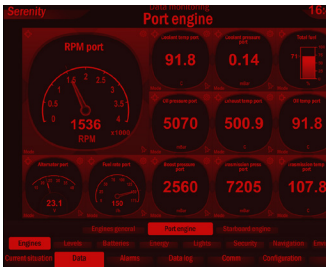
Monitoring data



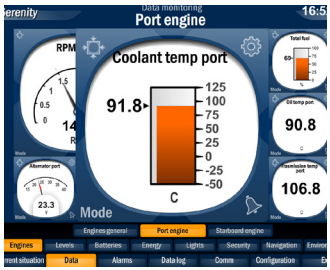
Total customization



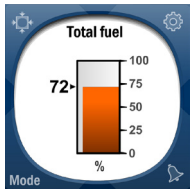
Night mode

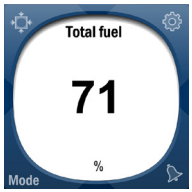


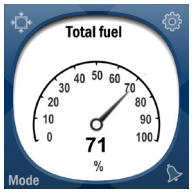
Zoom in



Different ways of visualisation







Displays

Albatross Marine Displays: See & Touch your monitor & controls

Albatross control system

Multiple inputs mean more possibilities

Security and surveillance monitor

The composite video allows any analogue video source to be represented, such as video surveillance CCTV systems or infrared cameras.

Extended display for on board PC

Its digital DVI input allows you to connect it to any modern computer without loss of quality, making it the ideal display solution for black-box navigation and embedded PC applications.

Main Interface for embedded solutions

Thanks to its USB touch capabilities, it is the ideal complement to represent data Albatross Control System, the most comprehensive and advanced monitoring system data NMEA 2000®.

Chartplotter image repeating

Albatross displays screens can be used as a repeater for any charplotter with analog VGA output, a better visualization that improves the comfort and safety on board.

Entertainment display (TV/DVD)

The S-Video input allows images generated by any DVD or multimedia player to be displayed, including analogue , digital or satellite TV receivers.

Chartplotter display repeating, black box navigation and monitoring systems, on board embedded computer applications, DVD and satellite TV signals, on board closed circuit television...
The future requirements of yachting demand a versatile and reliable display with very low power consumption and perfect visibility under direct sunlight.

Designed specifically to meet the needs of modern yacht owners and builders, the Albatross Marine Displays set a new standard for quality, performance and connectivity in on-board monitors

- Very High Bright panel, sunlight readable
- IP-65 waterproof
- Narrow bezel for improved integration in bridge
- LED backlight implies low consumption
- Touch screen enabled with USB interface
- High shock and vibration resistance
- Works with 8-36 VDC power supply
- VESA mount capable

Multiple inputs mean more possibilities, a smarter investment. Albatross displays screens can be used as a repeater for any charplotter with analog VGA output, a better visualization that improves the comfort and safety on board.

Albatross Control System® has a large portfolio of elements that can be combined to design a solution specially tailored for your needs. You can contact our sales team to receive more information about de Albatross Control System®. You can also visit our sales site www.emminet.com or www.albatrosscontrol.com to purchase the Albatross Control System® products.
There you will find all you may need: sensors, analog adaptors, digital adaptors, displays, software, USB Gateway, cables, connectors,…

EMMI network

www.albatrosscontrol.com