

### Main functions and characteristics

- The software of the master computer runs under Windows® 7 and Windows® 10
- Easy-to-customise graphical colour mimic display
- Indication of system information with gauges, bar graphics, measuring parameter list (defined by customer), actual alarm list, alarm history of one day and trend tables
- Printing the measurement parameter list (defined by the customer) also at a specific time or a specific part of it
- Printing of actual alarm list, alarm history of one day and alarms of history storing information
- Automatic storage of alarm history on hard disk every day
- Automatic or manual interlock of alarm function

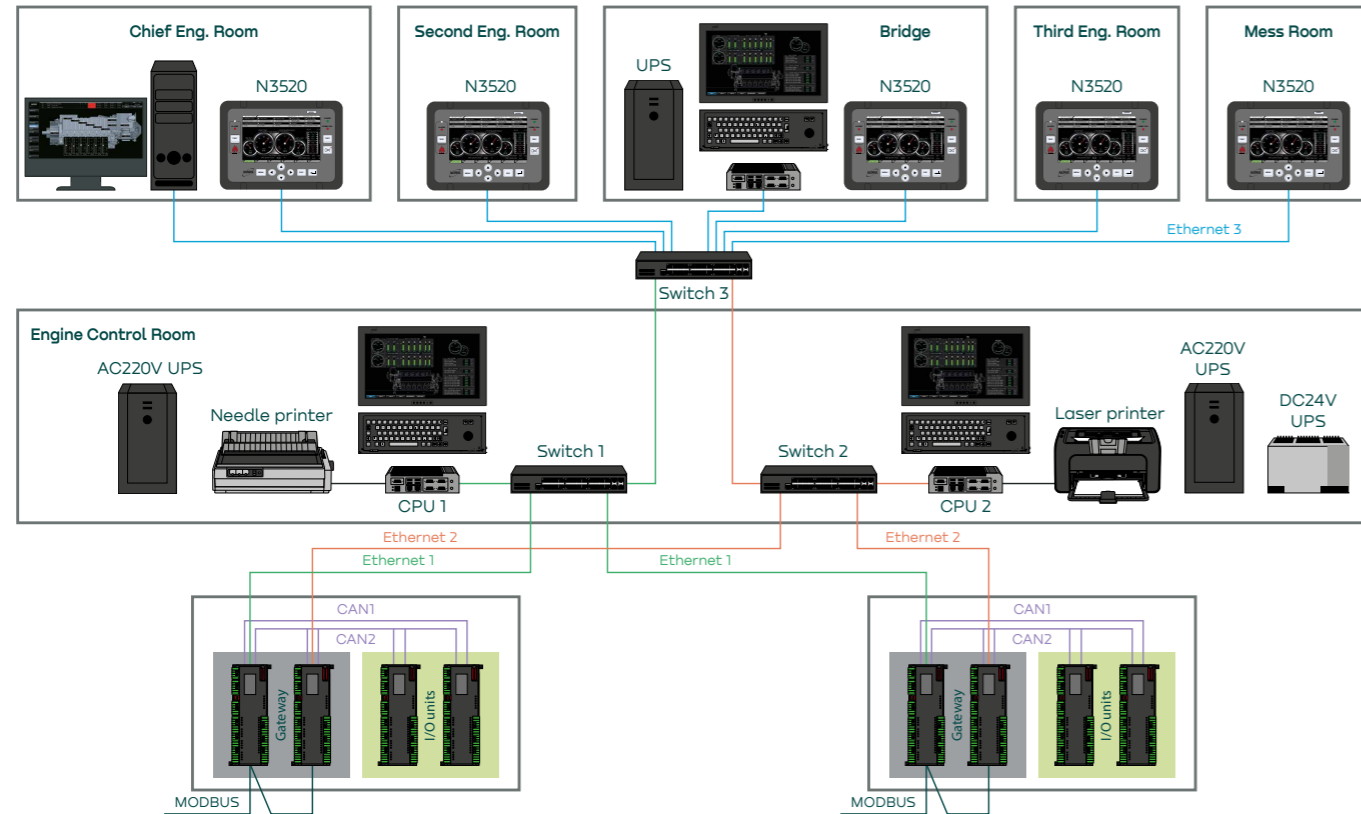


## System concept

The N3500 alarm, monitoring and control system is used to fulfill the tasks of

- Measurement and calculation
- Graphics display
- Alarm, recording, start and stop control of pump, control of valves etc.

The system is used for ship's engine room sets, ballast water and liquid level, etc. The PC of the system is an industrial computer based on Windows® and programmed by VC++. The system is efficient, with fast response and high reliability. The modules of the system are based on a special microcontroller.



## System configuration

The system has a modular structure which can be adjusted to a different number of hardware and configuration according to the type, size, configuration of the ship and different requirements of the customer.

The noriMos 3500 has an alarm extension system with which the alarm and the status of the monitored system can be transmitted to various locations on board, e.g. in the accommodation or in the mess.



Alarm extension client display N3520

## Specifications

Specifications (extract)	
Power supply	AC 220 V/DC 24 V (ripple factor $\leq \pm 5\%$ , voltage fluctuation $\leq \pm 20\%$ )
Operating temperature	+0 °C ~+55 °C
Measuring precision	$\pm 0.5\%$ (error of sensor and transmitter not included)
Compliance	Conditions such as inclination, swing, vibration, humidity, salt mist, oil mist and mildew are in compliance with the ship's requirements
Power consumption of components	Master computers 30 W/set; modules < 5 W/set LCD display 23" or according to customer's requirements 30 W/set Printer 150 W/set N3510 Integrated alarm and display unit (colour) 8 W/set N3520 Alarm and display unit (monochrome) 5 W/set
Communication	Between the master station and gateway adopts UDP communication Between gateways and module stations adopt CAN communication Each module is equipped with redundant CAN interface System is equipped with redundant gateways Fiber-optical communication can be used if the distance between master and gateway is far

## Scope of supply

- Master station (industrial computer)
- Operating panel
- Measuring module
- Gateway
- Binary I/O module
- Integrated I/O module (option)
- D/A convert output module (option)
- N3520 Extension alarm and display unit (option)
- Power unit
- Other components: display, printer, UPS



## Applicable sensors and transmitters

Applicable sensors and transmitters are usually ordered by the customer. The following sensors can be used.

### Resistance sensors and transmitters, thermocouples

Resistance	Pt100	Pt10	Pt1000	Gs50	Cu100		
Thermocouple	K	E	T	S	B	R	J

### Pressure, level, distance, current, voltage and power transmitter (sensors)

Resistance signal			
Current signal	4 - 20 mA	0 - 20 mA	0 - 10 mA
Voltage signal	0 - 5 V	1 - 5 V	0 - 10 V

### Speed and binary sensors

Binary sensors	Binary signal without voltage	Binary signal with DC voltage
Speed sensors	Pick-up sensor	Magnetic-electric sensor

