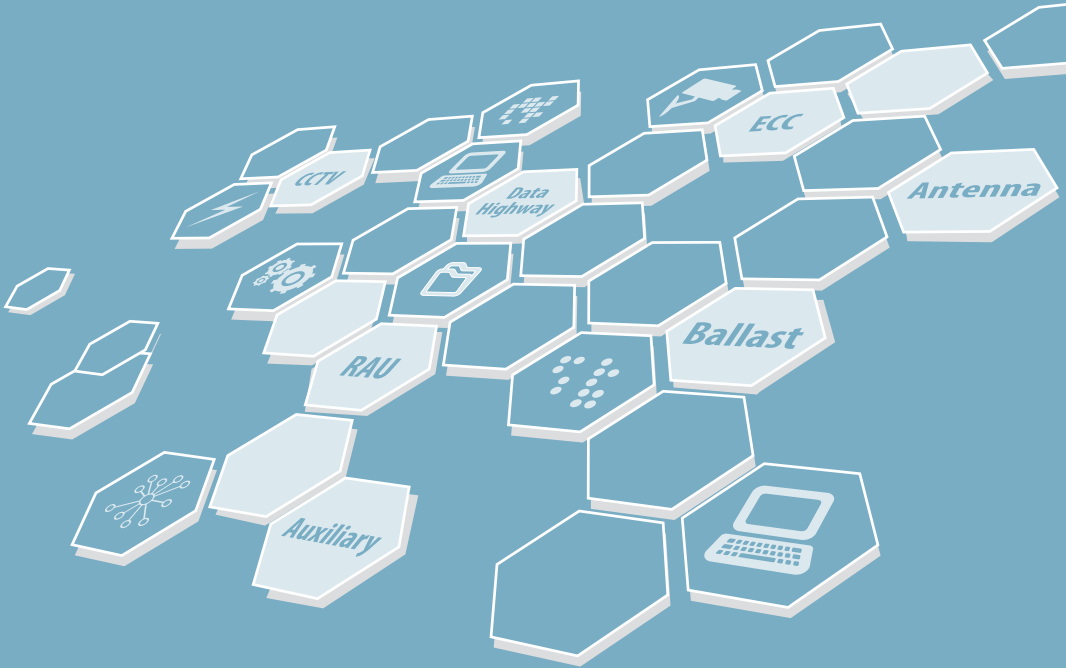




ALARM MONITORING SYSTEM/
INTEGRATED CONTROL & MONITORING SYSTEM

The Swan : the Cygnus

Flying gracefully through the Milky Way - the symbol for a smooth sailing
The Northern Cross - composed with distinctive stars including Deneb
- It shows a graceful swan that's flying across the long night.



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SSAS-Pro

Alarm Monitoring System / Integrated Control & Monitoring System

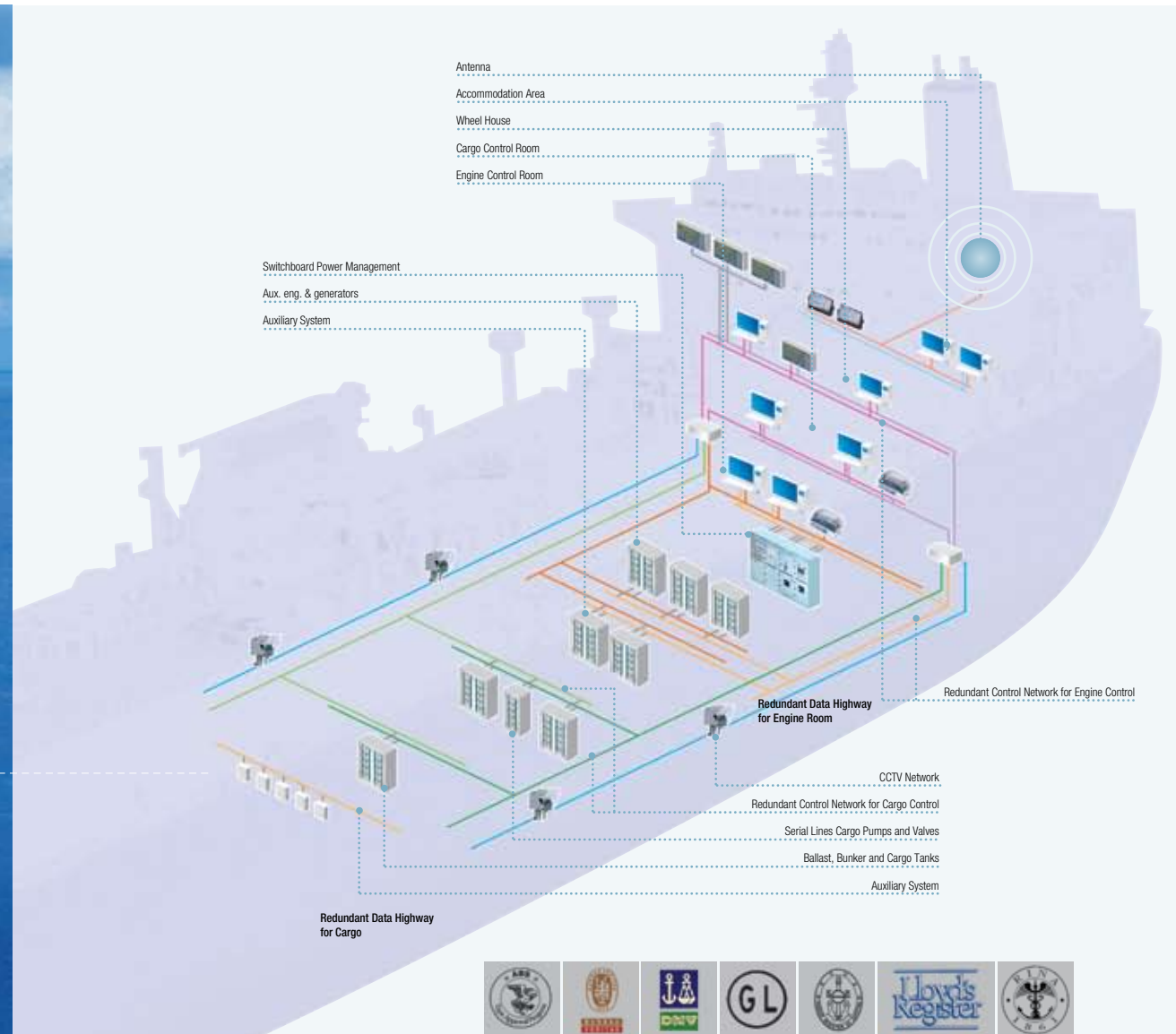
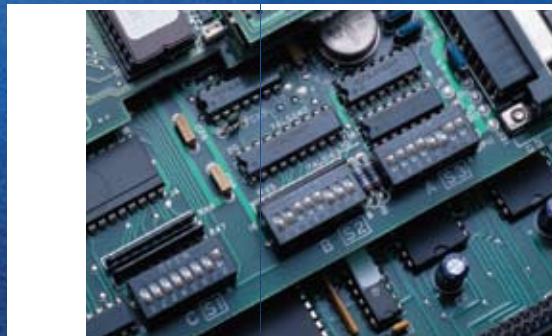
We will devote our human resources and technology to create superior products and services, thereby contributing to a better global society.



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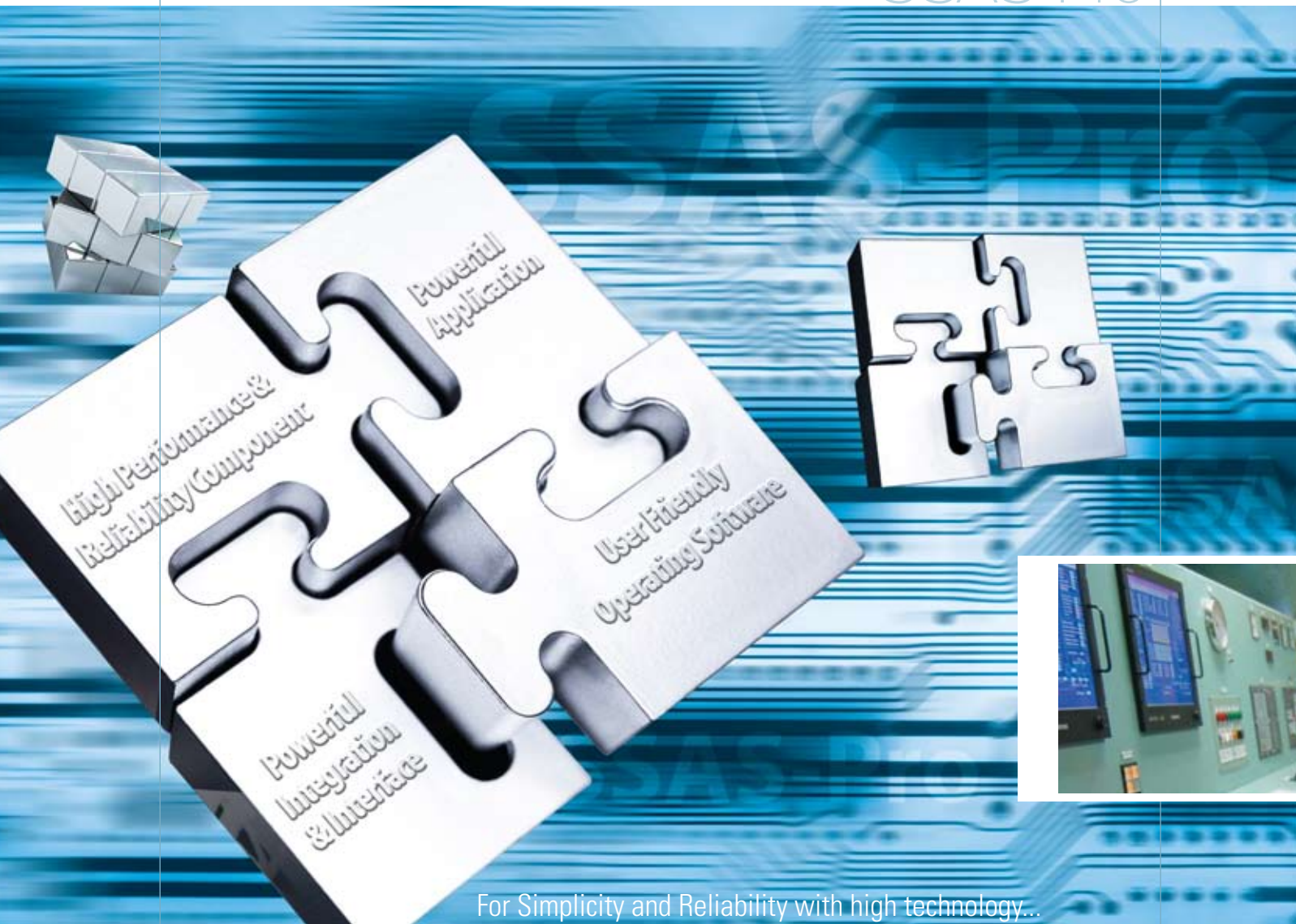
Envisioning Tomorrow's Technology Today
The Stars are always with you to guide your vessels...



The SSAS-Pro Products are next-generation control systems meeting all our customers' needs in the rapidly changing maritime environment. The outstanding performance of the SSAS-Pro products makes it widely applicable to all marine projects from AMS (Alarm Monitoring System) to ICMS (Integrated Control & Monitoring System) and PMS (Power Management System). The SSAS-Pro uses the most capable software, renowned for their performance and reliability. Our systems are fitted to various vessels such as oil and gas tanker, bulk carrier, passenger, container and Ro-Ro vessels, reefers and other special purpose vessels.

OPERATION

SSAS-Pro



For Simplicity and Reliability with high technology...

Alarm Monitoring System / Integrated Control & Monitoring System

Features

High Performance & Reliability Component

- 32bit embedded microprocessor with realtime O/S
- Surge and short circuit protected I/O cards

Powerful Application

- Power management system
- Pump & valve control
- Cargo & ballast control
- Auxiliary machinery control
- PID control

Powerful Integration & Interface

- Easy interface with other system on board

User Friendly Operating Software

- Microsoft Windows Environment (Windows 2000, XP, Vista)
- Freely to modify and specify the color, size and parameters of object

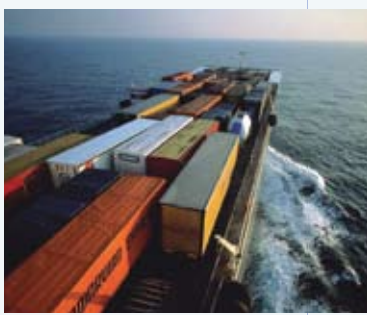
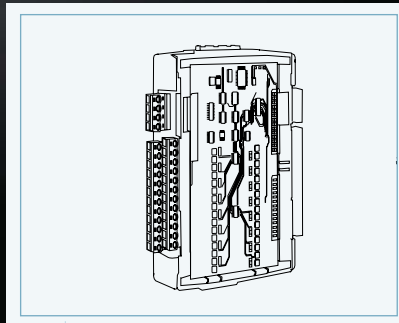
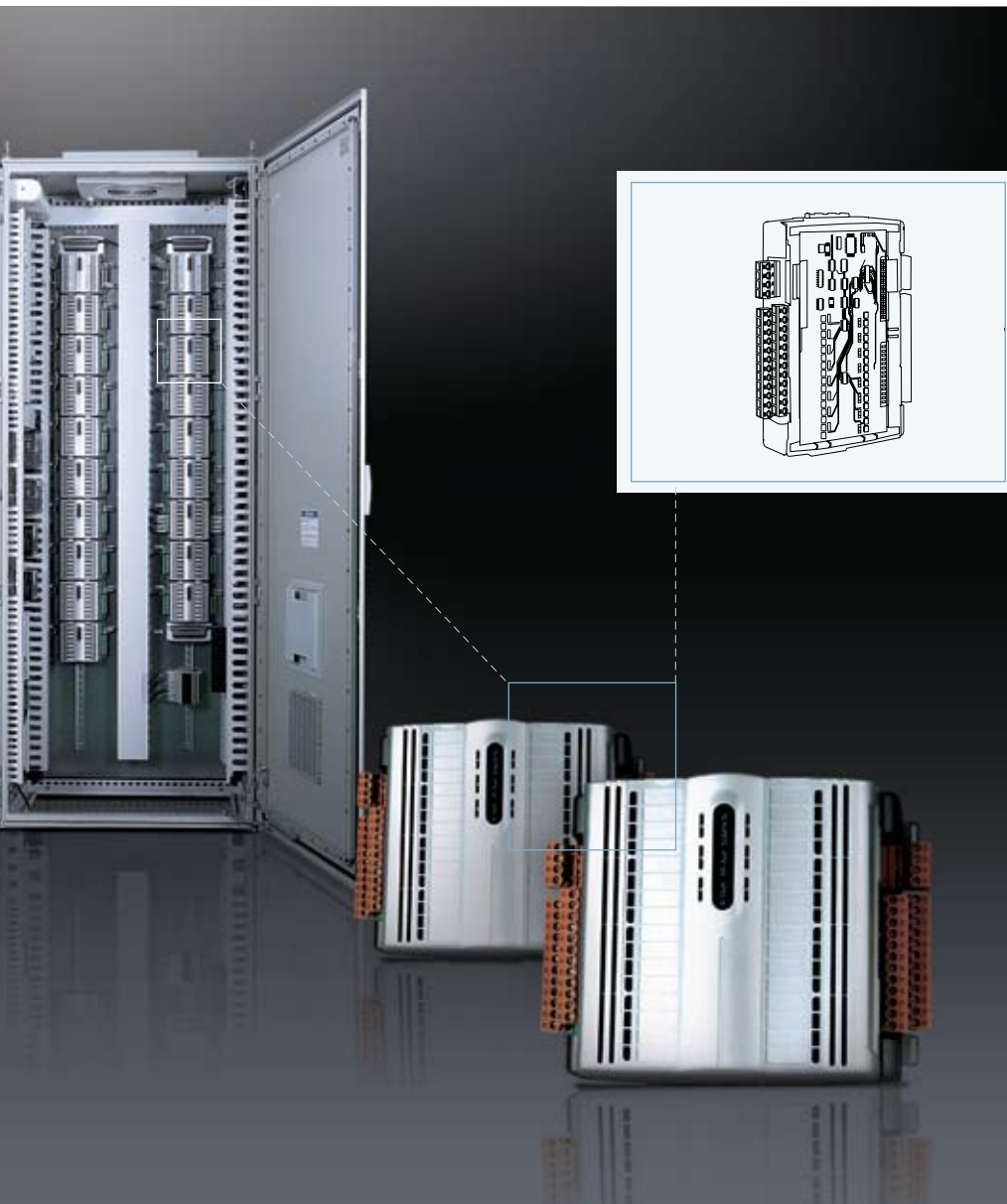
Benefits

Providing Advanced Design Guidance and Optimized System

- Avoid process mistake based on shipbuilding and system engineering experiences
- Harmonized interfacing with essential 3rd party control system
- Efficient operation, cost efficient maintenance and etc



SSAS-Pro is perfectly suited to the vessels requiring high level reliability and stability.



The System of SSAS-Pro

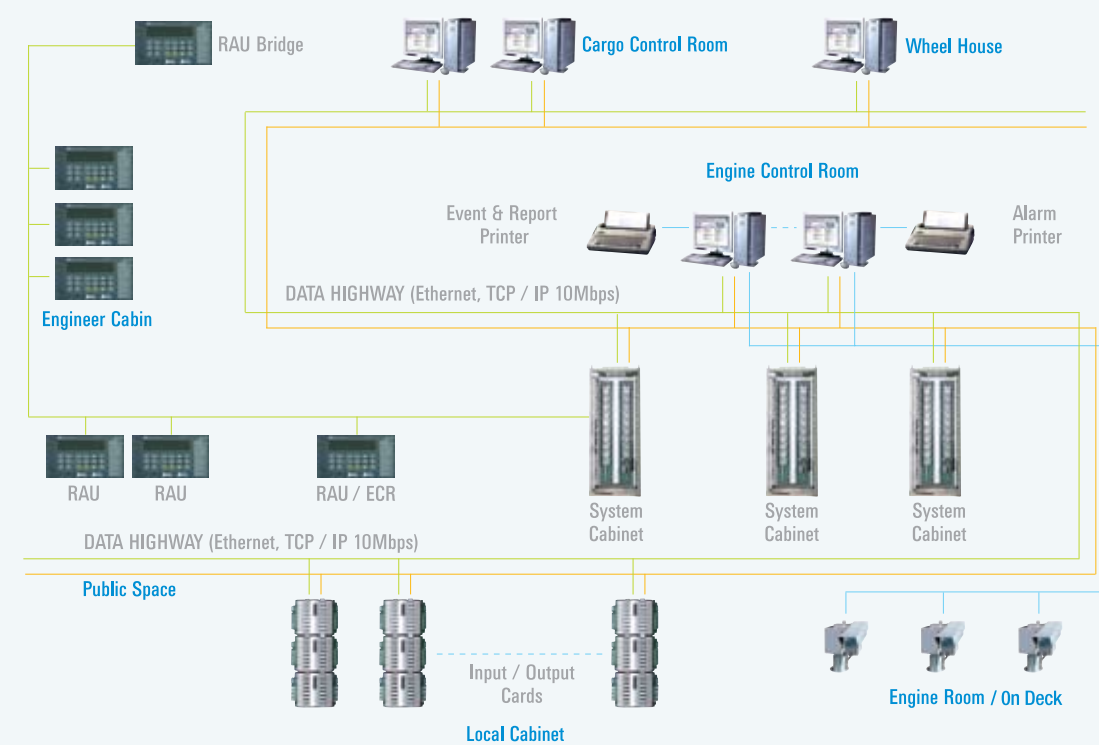
The outstanding performances of the SSAS-Pro make it widely applicable to all marine projects from simple Alarm Monitoring Systems to highly Integrated Control, Alarm and Monitoring Systems.

- Alarm and monitoring system
- Pump & valve control
- PID control
- Power management system
- Cargo & ballast control system
- Management support

Simple Architecture

- Simplified and well organized network configuration
- Compact and uniformed hardware structure of CPU and I/O cards installed in DIN rail
- Easy installation in any place on board such as console, local control unit, and the third party equipment

Configuration



Ballast System

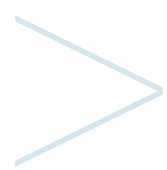


Power Management System



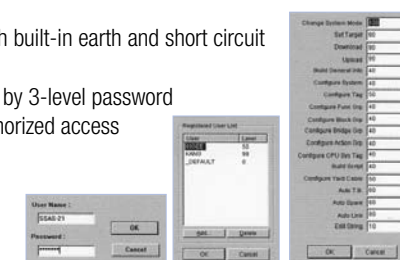
Anti-Heeling System

For your Integrated and Intelligent vessel



Reliability

- The SSAS-Pro is perfectly suited to the vessels requiring high reliability and stability
- High reliability with duplicated core systems in control, power, and communication
- Advanced stability with built-in earth and short circuit protection function
- Secure log-in method by 3-level password to protect from unauthorized access



Efficient Operation

- User friendly and familiar operating system - Microsoft Windows
- Easy expansion of the system on board with ethernet network
- Easy monitoring of each process with multi-screen and zoom in/out function
- Auto alarm pop up
- Online parameter modification
- Group display with online monitoring
- Customizing MIMIC & online training
- Text based user interface available



For Simplicity and Reliability with high technology...



• Easy Installation & Maintenance

- Easy installation with reduced cabling and easy expansion with compact design
- Simple replacement of faulty hardware without turning off the system for continuous operation and easy maintenance
- Wireless LAN available for system diagnosis in engine room area

• Other Features

- System integration of hardware and software resources of other systems on board
- Supply voltage 220VAC
- Easy interface with other systems on board
- Human machine interface with multi-functionality and high resolution

• General Features

Alarm Monitoring & Control System

- Engine room alarm monitoring system
- Aux. machinery control & monitoring
- User oriented graphic display (Value display, Trend display)
- Historical data logging
- On-Line diagnostics

Pump & Valve Control System

- Single pump
- Stand by pump
- Open / Shut valve
- Throttle valve

Power Management System

- Auto/Manual control of generator
- Load sharing
- Stand by start
- Load dependent Start/Stop
- Black out recovery

Ballast Control

- Remote valve & Pump control
- Anti-heeling control
- Draft & Level display
- Volume in cubic meter

Bridge Watch Alarm System

- Monitoring of navigation alarm
- Watch alarm system
 - Automatic initiation
 - Harbor condition
 - Bridge attended
 - Bridge one man attended
- Officer calling system










Alarm summary window



Text based window

SPECIFICATIONS _SSAS-Pro

Hardware

ITEM	Specification	Picture
RSPC-X32	MPC860-32Bit Microprocessor Fault tolerant ethernet controller Optically isolated 4 serial communication channel (RS422/485)	
SPDI-24(16)	Digital / Pulse Input 24(16) channels Optically isolated Wire break detection function	
SPRDO-16	Digital Output 16 channels with Relay Optically isolated	
SPAI-16	Analog Input 16 channels 4 ~ 20mA, 0~5V, 0~10V Earth & short circuit detection function	
SPA0-8	Analog Output 8 channels 4 ~ 20mA, 0~5V, 0~10V Earth & short circuit detection function	
SPRI-16	-50 ~ 700°C Pt100 RTD Input 16 channels Earth & short circuit detection function	
SPIRU-16	Mixed I/O 16 channels digital Input/Output Analog Input/Output Pt100 RTD Input	

Operation Condition

Operating temperature : 0°C ~ +70°C / Maximum humidity : 95% (Non-condensed)
Storage temperature : -30°C ~ +80°C / Supply voltage : 24V DC

Software

Graphic User Interface (GITOS-Pro)

Gitos-Pro is fundamental and applicable graphical software. Gitos-Pro creates graphic displays that allow users freely to modify and specify the movement, size, color, and parameters of objects.



Database & Control (Builder-Pro)

Builder-Pro conforms to the IEC1131-3 standard. Builder-Pro makes it easy to create, modify, delete, and store engineering data such as control, alarm, trend and user defined function.



Accessories

Extension Alarm Panel (RAU : Remote Alarm Unit)

It is used to receive alarms, monitor and control the system in any on-board place such as cabin and other public spaces.

- LCD (40Ch. x 4Lines with LED back light)
- Network interface (10Mbps)
- Bright control of LCD, LED
- 16 alarm groups
- Relay contact for external buzzer
- Watch calling function
- Wireless network access point (option)



Display Unit

SSAS-Pro uses a color active matrix TFT LCD panel.

- Touch screen (optional)



CCTV System (Optional)

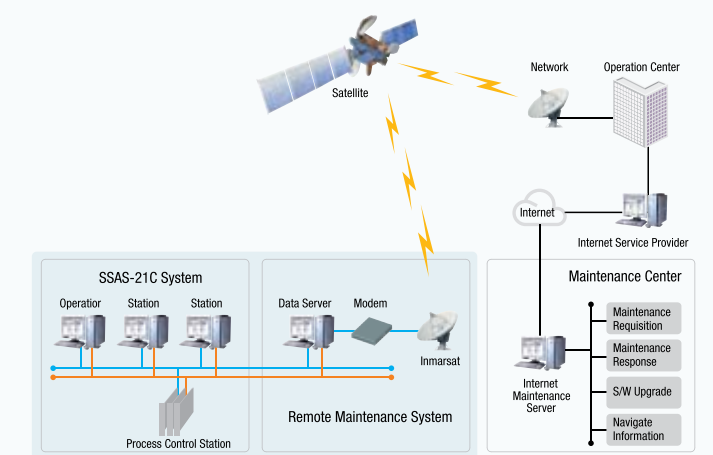
Pictures of engine room or other locations on board can be displayed on workstation with up to 10 screens simultaneously.



Network Function

SSAS-Pro provides total solution for remote diagnostics

- Easy interface with ship network system to utilize the system data
- Remote ship maintenance in inland office via satellite.
- Remote management of ship's navigational and operational data



Type Approved by

ABS, BV, DNV, GL, KR, LR and RINA

ISO 9001

Manufactured by
Quality management program

EMC Properties

According to IACS E10, IEC60945