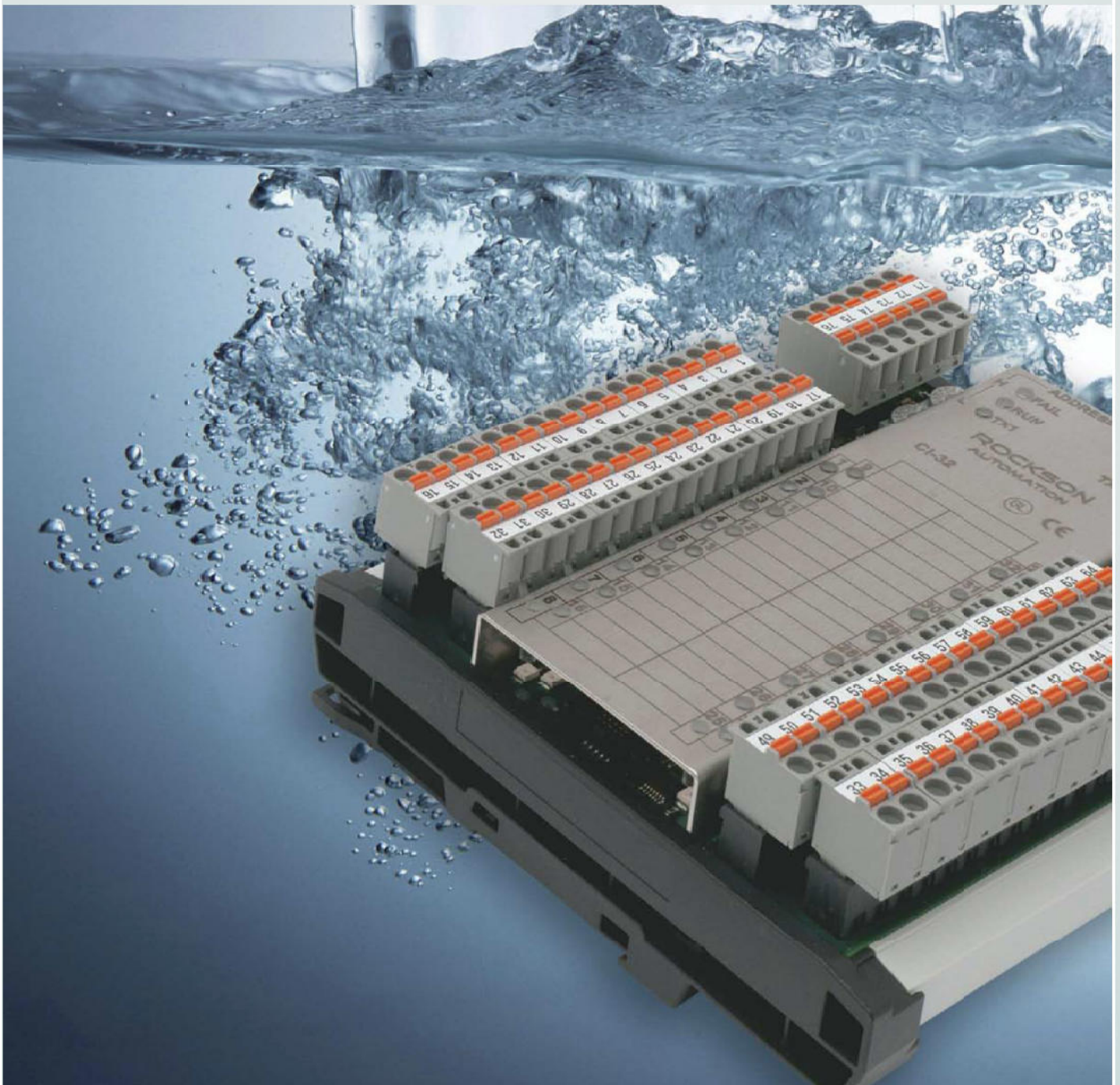


**ROCKSON AUTOMATION**

**Integrated Control and Monitoring System**

**EVOLUTION V5**



## At a Glance

### Main Features :

#### Application oriented user interface

- ✓ Available on windows & Linux platforms
- ✓ Using Java technology
- ✓ Visualization based on "scalable vector graphics"
- ✓ Auto-adapting to monitors resolution and format
- ✓ Capable for "touch" operation
- ✓ Multiple language selection
- ✓ Online project documentation
- ✓ Extensive visualization of historical data / reports
- ✓ UMS solution with eXtension Alarm clients and panels

#### Communication methods

- ✓ Open network architecture according to IEC standards
- ✓ Reliable fieldbus with optimized Modbus protocol
- ✓ Network redundancy
- ✓ Multiple client – multiple process server architecture
- ✓ Independent eXtension Alarm system communication
- ✓ Remote access via secure communication gateway

#### Robust system components

- ✓ Process server, designed for maritime use
- ✓ Reduced number of different I/O modules
- ✓ Integrated earth fault monitoring
- ✓ Workstations with any screen size, resolution and format

### Applications :

#### Alarm & Monitoring

- ✓ Functions for UMS operation
- ✓ Basic monitoring functions
- ✓ Exhaust gas mean value supervision
- ✓ Extension alarm system incl. engineer call / alarm
- ✓ Historical reports and alarm statistics
- ✓ Level gauging, volume calculation, trim correction
- ✓ Draught measurement

#### Auxiliary systems control

- ✓ Single / standby pump control
- ✓ Compressor control
- ✓ Fan control
- ✓ Sequential restart after black-out
- ✓ Valve control
- ✓ Automatic functions for :
  - ✓ Bilge
  - ✓ Ballast transfer & exchange
  - ✓ Fuel transfer and filling
- ✓ Fuel consumption and performance monitoring
- ✓ Process regulation (PID)

#### Liquid cargo management

- ✓ Ullage reading
- ✓ Volume calculation incl. trim/list correction
- ✓ 95%/98% tank overfill protection
- ✓ Liquid temperature and inert gas pressure reading
- ✓ HPU control
- ✓ Liquid cargo historical reports

#### Power Management

- ✓ Fully integrated, industrial standard
- ✓ Safety system for diesel engine protection
- ✓ Generator protection
- ✓ Load sharing
- ✓ Power management
- ✓ Customized solutions

#### Interfaces

- ✓ Voyage Data Recorder
- ✓ Loading calculator
- ✓ Engine control and safety systems
- ✓ Master Clock
- ✓ Energy management systems
- ✓ Performance monitor

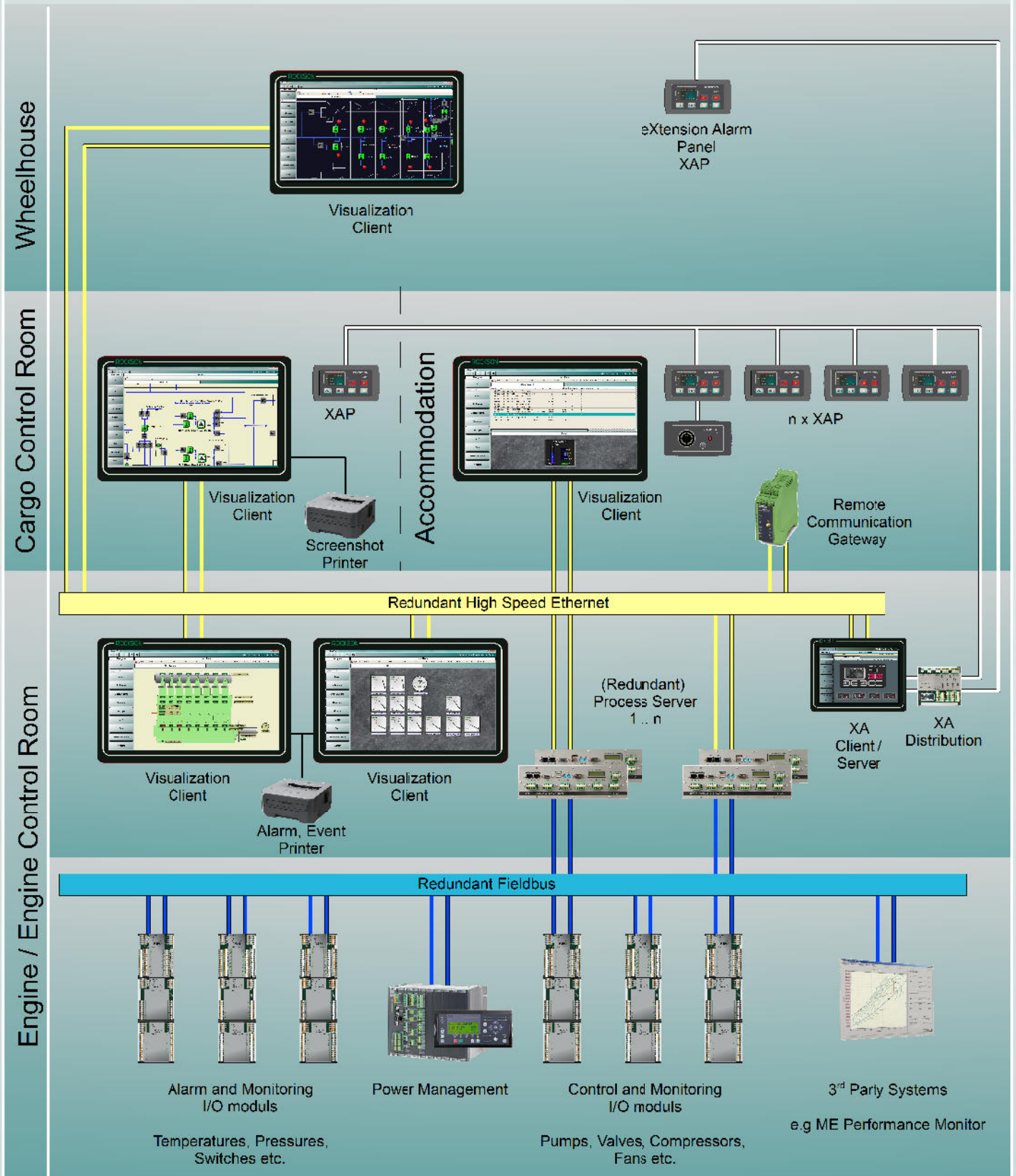


# ROCKSON AUTOMATION

## Integrated Control and Monitoring System

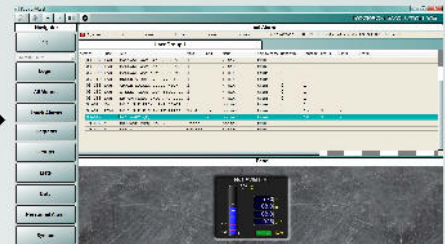
### ROCKSON EVOLUTION V5

#### System configuration in principle



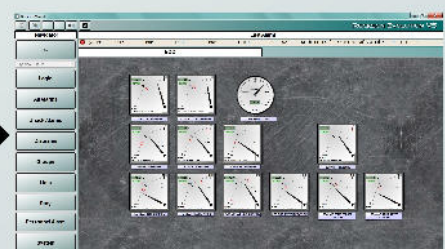
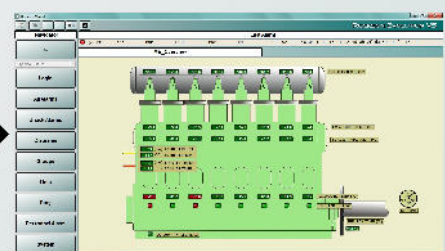
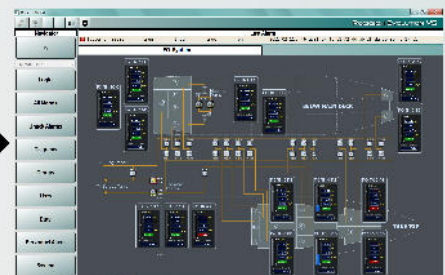
### Standard Lists Measuring Point Indication

- Standardized alarm visualization with
  - List of all active alarms with time stamp
  - List of unacknowledged alarms with time stamp
  - List of suppressed alarm
  - List of disabled alarms
  - Alarm/event indication
  - Trend and historical data
- MP selection with single indication, control functions and parameter facilities



### Mimics Customized process graphics

- Customized piping diagrams
- Manufacturer related engine graphics
- Customized realistic gauge panels
- Clear process data indication and control
- Secured access authorization and parameter facilities
- Based on scalable vector graphic technology
- Automatically adapting to different monitor sizes and format
- User definable zoom factor for each workstation
- Flexible background textures



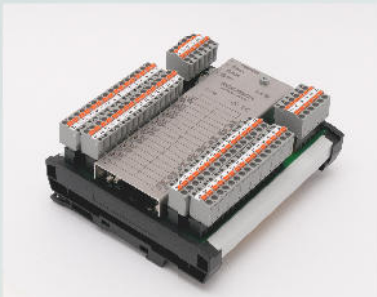


## ROCKSON EVOLUTION V5

### Process I/O modules / Process Server

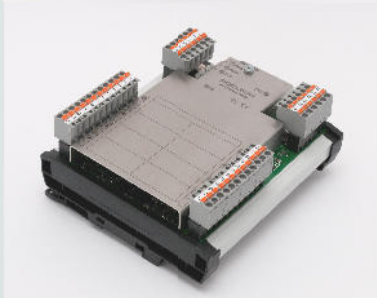
#### I/O modules common design characteristics

- 35mm DIN Rail module with rugged stainless steel cover
- Standardized mechanical outline
- Detachable terminal blocks per channel
- Galvanic isolated I/O design
- Redundant power supply
- Redundant isolated fieldbus RS485 / Modbus RTU
- Environment category GL(C), LR(ENV1,2,3)
- Easy replacing, set address and go



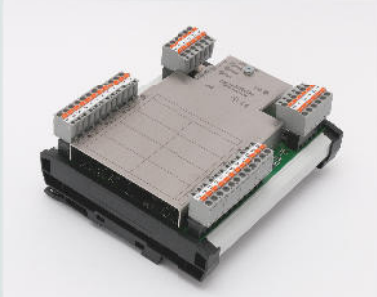
#### CI-32 Contact Input module, 32 channels

- 32 contact inputs (potential free)
- Designed to allow "common wire" applications
- Pulse counting and frequency measurement
- Determining period length
- Integrated earth-fault monitoring



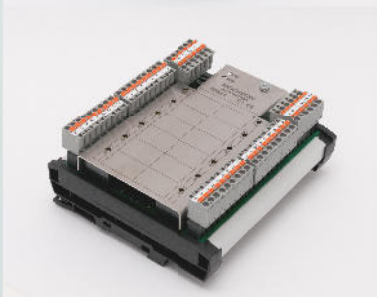
#### MI-8 Multiple Input module, 8 channels

- Excellent flexibility
- 8 multi purpose inputs for various signal types :
  - 4 – 20mA, 0 - 10V
  - RTD (PT100), T802, Thermocouple
  - Potentiometer
  - Potential free contacts with break and short circuit monitoring
  - NPN and PNP initiators
- Integrated earth fault monitor



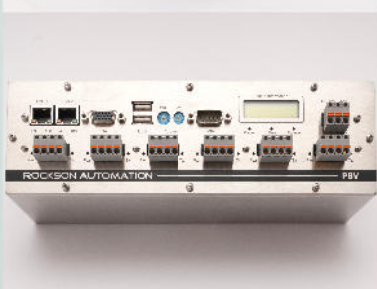
#### MO-8 Multiple Output module, 8 channels

- Excellent flexibility
- 8 double purpose output sources for different signal types
  - Current Output 0-25 mA or 4-20 mA
  - Voltage Output 0-10 V



#### ROX-12 Relay Output eXtension module, 12 ch.

- 12 single-pole double-throw contacts
- Heavy-duty contacts
- Large safety margin



#### PSV Process Server

- 35mm DIN Rail module with rugged stainless steel housing
- Fanless design
- Embedded Linux operating system
- Status indication by LED's and text display