

# IDRA

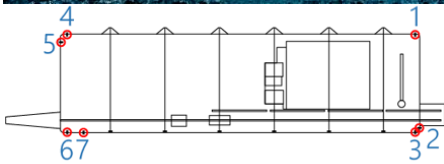
Platform



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# IDRA

## Platform



- Monitor tension, payout and speed
- Single or multi-sensor systems
- Plug n' play modular architecture
- Designed for rugged and harsh environments
- Salt-water proof design
- Real-time diagnostics and alarm management
- Advanced calibration and signal processing features
- Internal data-logger with automatic sample-time optimization
- External Data Analysis software
- Multilanguage software
- CE & UL Certified

IDRA is the next-generation rugged, multi-channel, plug n' play, winch line control, wireline monitoring and tensiometer instrumentation platform.

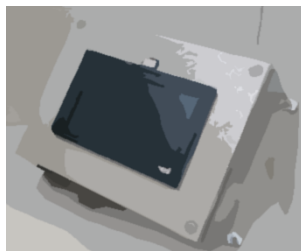
Designed in Switzerland by Microtecnica Engineering and manufactured in Italy by ASMI, IDRA can be used in demanding commercial and oceanographic applications ranging from polar to tropical.

The product is optimized to control and monitor speed, payout, and tension - both cable and chain - in single/multi winch systems used for equipment deployment, barge positioning, fixed-place mooring, drawbridge controls, and wherever accurate and reliable line control is required.

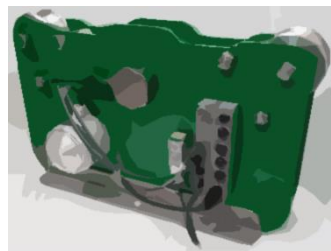
IDRA is flexible and smart! Every physical component is plug n' play and can be replaced at runtime with limited costs and minor intervention times. All hardware & software components can be fully customized to satisfy customer's needs.



CONTROL STATIONS



REMOTE STATIONS



RUNNING LINE TENSIONERS

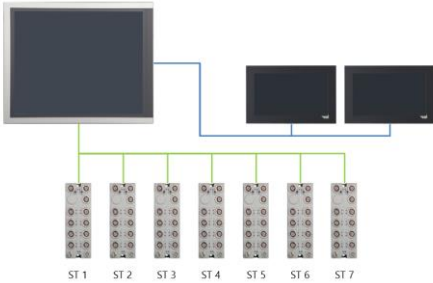


SOFTWARE



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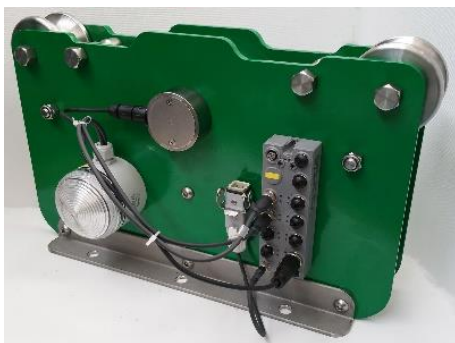




## MODULAR ARCHITECTURE



## CONTROL & REMOTE STATIONS

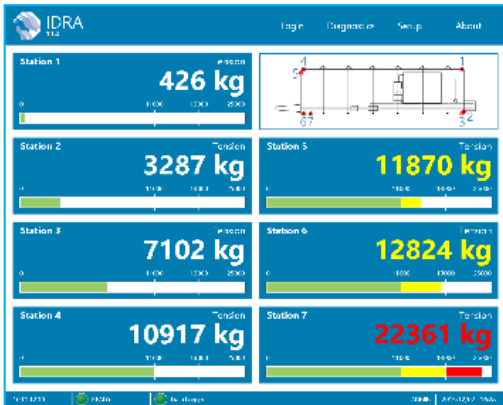


## RUNNING LINE TENSIO METERS

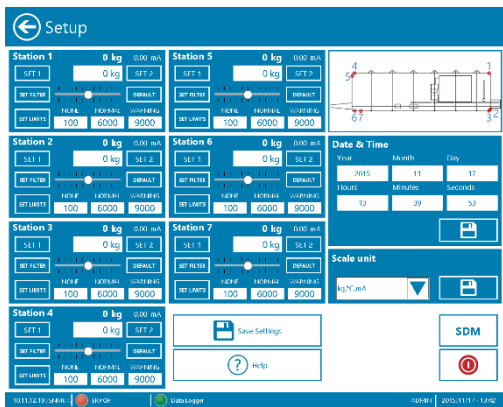
- IDRA's unique hi-performance real-time ethernet based fieldbus allows to connect up to **64 tensiometers** to a single control station
- Using our shielded cables supplied with pre-wired connectors, tensiometers can be placed up to **100 m** distant from the control station without any repeater
- In single-winch applications IDRA becomes **mobile**. It can be supplied with internal batteries and moved from a winch to another one
- Operator and supervision interfaces allows to monitor and fully configure the IDRA platform. They can be purchased depending on application needs. Different options are available:
  - **No display**: IDRA can operate using external notebooks / smartphones / tablets connected via ethernet-cable or via wireless
  - **Single display**: IDRA is monitored and controlled by a single display
  - **Multiple display**: IDRA can be monitored and configured via independent displays
- Different display sizes available: 5" up to 19" (resolutions: 640x480 up to 1280x1024 and more)
- Every panel can be supplied with or without single or multi touch capabilities
- Displays and cabinets are available with different protection level depending on installation site (**up to IP69K**)
- IDRA's running line tensiometers (RLT) are **rugged, compact and accurate**. They can be used to monitor wire ropes, EM, fiber optics and synthetic cable systems
- Each RLT can be equipped with **different sensors** depending on application needs: load-cells, proximity sensors, encoders, accelerometers, temperature sensors. Intrinsically safe sensors are available as options
- **RGB LED lights** blinking with different frequencies and colours quickly indicates rope's tension status
- Constructed in stainless steel, IDRA RLT modules are available for application ranging from **0-500 tons** and **wire rope diameters up to 5 inches**

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- **Clear, fast and flexible monitoring:** depending on application and screen sizes, RLT nodes are visible in a single or in multiple pages. HMI can be fully customized on customer's needs
- **Advanced configuration:** sensors parameters, filters calibration sets and measures limits are totally under customer's control. Simple configuration pages allows to check and modify each parameter from a single intervention point.
- **Advanced diagnostics & alarms management:** each hardware component and sensor is monitored in real-time. Any malfunctioning is quickly displayed allowing immediate identification of the problem's source



- **Multilanguage and multi-scale HMI**
- **Access and security functions:** a multi-level authentication system is available using on-screen passwords. NFC, barcodes and biometric authentication systems are available as options
- **On-board 2 to 16GB CFast disk** allows deep internal data logging and contains all hardware & software configurations. No adjustment operations are needed to start using IDRA
- **Built-in Help Documentation**
- **Remote services:** by connecting IDRA's control station to internet (via ethernet, Wifi or 3G/4G) it's possible to upgrade the software, receive remote assistance during installation or let us analyze and solve problems for you

## IDRA SOFTWARE



- **IDRALog Application:** a MS Windows application especially designed to analyze all data acquired by IDRA. By connecting your notebook to the system using an ethernet cable or via wireless (or even using remote services access) IDRALog automatically synchronizes all acquisition data on local PC's hard-drive and allows to analyze them day by day. It shows data charts for each RLT, calculates peaks and overloads and allows to export data in various formats (CSV, PDF, XLS, Images)

## IDRALOG APPLICATION



## Displays, controls and electronics data

|                  |   |
|------------------|---|
| Sizes            | from 5" to 19" (more than 19" can be evaluated)   |
| Resolutions      | from 640x480 to 1280x1024 (higher res can be evaluated on request)  |
| OnBoard memory   | CF or Cfast (from 1GB to 16GB)  |
| RealTime cyclics | IDRA system can synchronize up to 32 RLT devices deterministically in less than 2ms (64 RLT in less than 10ms)* |
| Power            | 24VDC   |

## RLT data

|                   |  |
|-------------------|--|
| Weight ranges     | up to 350 Kg   |
| Tension ranges    | up to 500 tons   |
| Rope diameters    | up to 5 inches   |
| Available sensors | tension, position, speed, temperature, vibrations, GPS (other sensors can be evaluated on request) |

## General data

|                 |  |
|-----------------|--|
| Operating Temp. | -25°C to +60°C on outdoor components<br>0°C to +55°C on indoor components  |
| Environmental   | Waterproof with high salt resistance on outdoor components   |
| Enclosures      | from IP66 to IP69K depending on configuration  |
| Certifications  | CE, UL/CSA, GOST-R<br>ATEX (on request)<br>Maritime: German Lloyd, Compass safe distance, Lloyds Registers (on IPC, PLC and electronics) |
| Power           | 9-36VDC or 80-240VAC<br>Power consumption depends on application configuration   |

\* Depends on installation environment and cable lengths



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