

Buoy Control



Berthing of Tanker Vessel to CALM Buoy

Product Definition

Offshore safety relies on robust and reliable communication. Using unlicensed frequency bands, Frames integrated telemetry solutions provide a highly available, secure and efficient communication channel between all offshore nodes and the central control room. The Frames system can handle all your key data, including process measurements, control signals, alarms, events, voice and video streams.

Product Description

At Frames, we focus on engineering and realizing integrated solutions that deliver superior performance. To support your operations in remote locations, we offer a robust and reliable communication network that allows you to monitor and control equipment, even in the most demanding conditions.

Process monitoring and control

To best meet performance and safety goals, tracking key process variables such as pressure, temperature and flow rate is necessary. This includes maintaining full control of all valves and pumps for loading and offloading. A Frames Telemetry System enables you to visualize and access all process and utility data, alarms, trips, and event messages from any location using a wireless link and an intuitive human machine interface (HMI) available on a workstation, laptop or tablet.

Interfacing local equipment

A Frames Telemetry Node operating at any location provides a simple and effective interface with all of the operator's on-site equipment, including specialist machinery supplied by Frames or third parties. Inter-node communication then ensures easy data sharing across the network, including the onshore control room. Using Frames Integrated Telemetry Solutions, data acquired from equipment at each location is easily made available at every other location for instant processing and precise system control.

Safe berthing and navigation

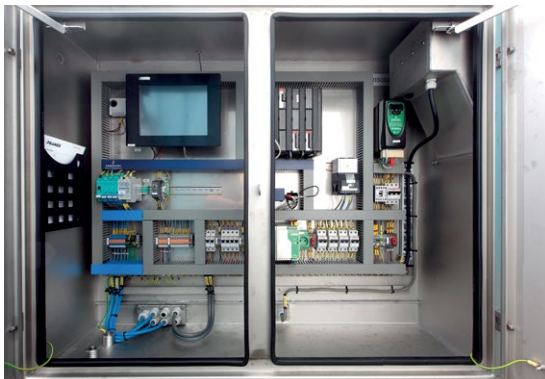
By placing a Frames Portable Solution on berthing vessels, pilots and crew gain direct access to mission-critical process data from the buoy, while the onshore control room receives a continuous feed of data on the position of both the buoy and the berthing vessel.

Data trending and sequence of events

Monitoring, analysis and storage data provide operators with powerful tools for improving performance, especially when coupled with a sequence of events. The Frames Integrated System provides critical insight into performance parameters, enabling our clients to meet and exceed their key performance goals.

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Process Description

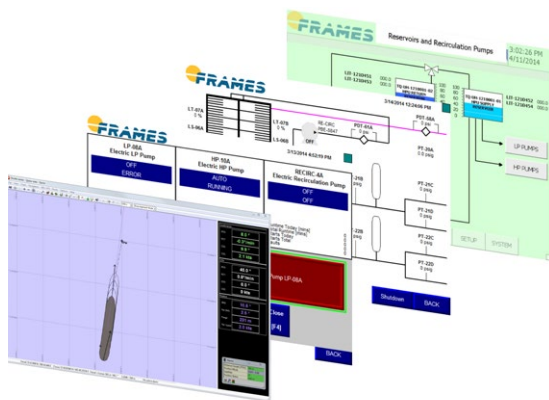


RTU Enclosure

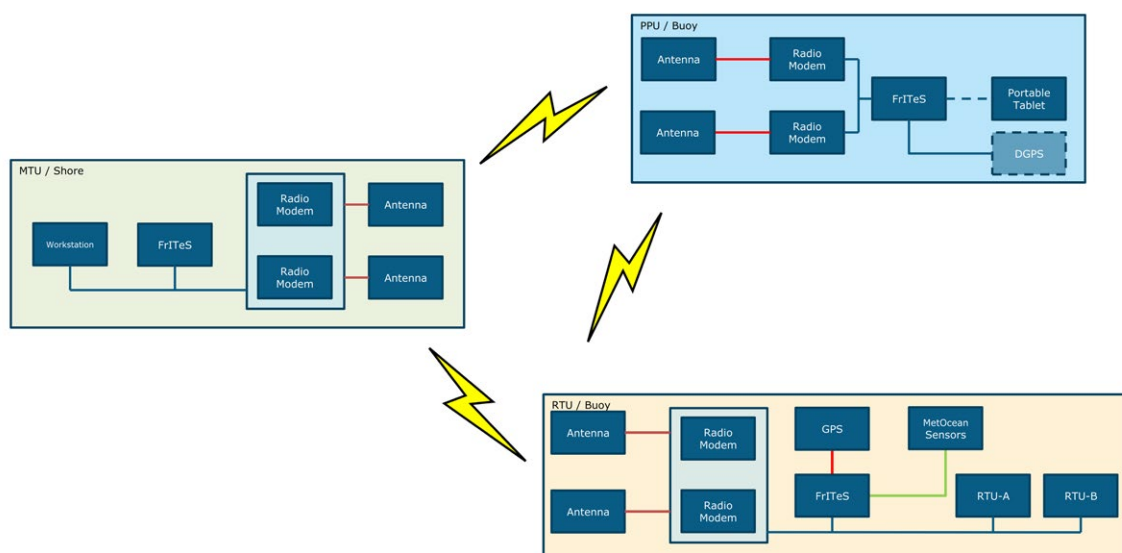
Frames Integrated Telemetry Solutions are custom built to remotely operate, control, and monitor key offshore processes, including buoy operations, tanker berthing and offloading. These offshore processes are usually operated remotely from the vessel and the onshore facility. The system also functions as a berthing and navigation aid and sends specific data to the onshore control room for monitoring, analysis and storage.

Frames solutions integrate all system nodes over a wireless radio telemetry link that ensures all relevant system information is available at all nodes through a single request and data transmission sequence.

Designed as a robust network of nodes, the Frames system provides continuous communication during offshore operations. This includes using the tanker vessel as a relay station when it shadows the line-of-sight between the buoy and the shore.



Human Machine Interfaces



Buoy Control

Project Management

At Frames, we understand that success depends on sharp project management. We are driven to support your business, with our dedicated project team always available for one-on-one contact, providing you with the best possible service.

From concept through to design, production, testing and delivery, our project team will know your operating environment, and will use the latest technology to precisely meet your needs.

We are solution-oriented, understand your industry and always use strict document control and professional planning to exercise tight process control and meet all delivery deadlines. Our global office network, international supply chain and partnerships with leading vendors mean we are always able to supply the best possible systems and meet all of the local requirements and regulations.

Technical Details

- **Worldwide license-free operation**
- **Range of up to 20km between nodes**
- **Low-speed robust mode for critical data**
- **Options for high-speed 50 Mbps communication**
- **Support the major industry protocols (NMEA/Modbus/Fieldbus/TCP)**
- **Encrypted communication**
- **“Plug & play” installation**
- **Up to SIL-3 for buoy PLCs**
- **Sequence of Events & Data Trending**
- **Portable packages**

Added Value Frames

- **Single, integrated solution for telemetry, control and offshore safety**
- **Compatible with industry-leading communication protocols and devices**
- **Full, expert support during integration tests, commissioning and site acceptance**
- **Development of HMI/SCADA packages and supplier-independent solution for PLC, HMI & SCADA**
- **Fully customized solutions for your unique operating environment**
- **24/7 worldwide service and after-sales support**

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Frames Family Tree

