

Qualified Display System based on TELEPERM XS

Computerized screen-based system for display and control

Framatome's Qualified Display System (QDS) provides a safety classified solution by giving real-time, user-friendly access to safety-related data from the TELEPERM XS platform—ensuring accurate monitoring and faster, informed decision-making.

Challenge

As a nuclear operator, you face increasing cybersecurity threats, limited long-term availability of industrial Human Machine Interface (HMI) systems, and the challenge of ensuring real-time, safety-classified data visualization.

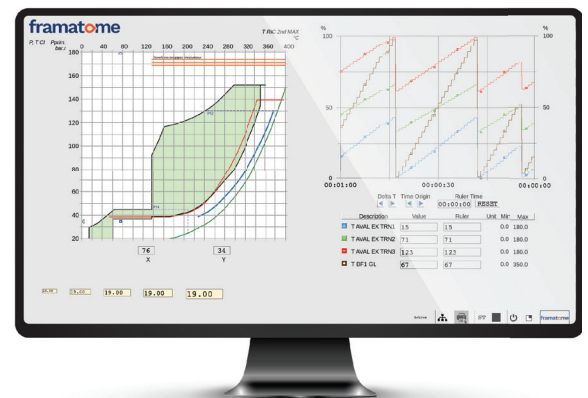
Furthermore, you need to be able to rely on long-term solutions that guarantee robustness, fault tolerance, and deterministic performance to maintain the highest safety standards all over the product life cycle.

Solution

The Framatome Qualified Display System (QDS) is a user-friendly interface, which provides a reliable and clear display of critical safety parameters for effective monitoring and enhanced situational awareness.

QDS is an I&C Framatome solution developed in-house and integrated in the safety-classified I&C platform TELEPERM XS. Thus, it provides a safety classified solution for nuclear applications aligned with international nuclear standards (IEC 61513, 60880...).

Further, based on its comprehensive long-term support and service solutions for your Instrumentation & Control (I&C) systems, Framatome not only manages obsolescence, but also ensures the long-term availability of the QDS solution through a robust supply chain.



Easy-to-use display with touchscreen

Customer benefits

- Complies with the highest cybersecurity standards since it is based on Framatome's safety I&C platform TELEPERM XS
- Simple integration with TELEPERM XS I&C systems based on TXS Core and TXS Compact
- Long-term availability and maintenance of the QDS solution based on Framatome supply chain & obsolescence management

Technical information

Hardware Components

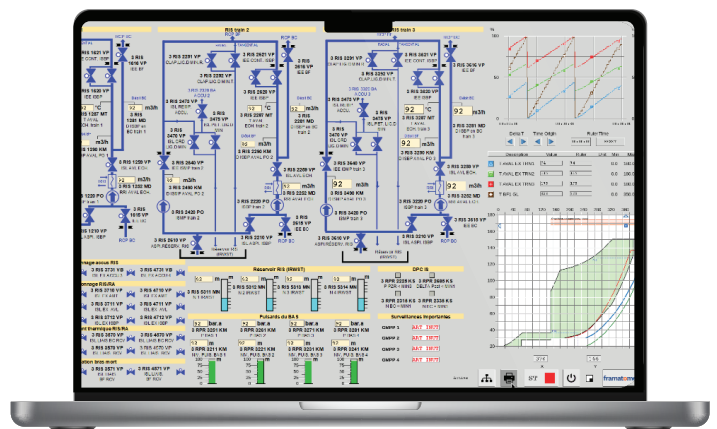
- **QDS Display:** Color LCD with integrated resistive touchscreen, offering 1280 x 1024 resolution and 16.7 million colors in a durable metal housing
- **QDS CPU Rack:** Powers the software and connects to the TELEPERM XS I&C system, delivering information to the QDS Display
- **QDS Periphery:** Ergonomic keyboard with trackball, USB-compatible, with touchscreen operation capability

Software and Tools

- **QDS Online Software:** Built on a deterministic time-triggered kernel, ensuring real-time performance, robust behavior, and fault tolerance with guaranteed reproductibility
- **QDS Maintenance Tools:** Specialized tools for touch screen calibration, diagnostic testing, and service operations
- **QDS Engineering Tools:** Comprehensive suite for graphical interface development with seamless TELEPERM XS signal integration

Features

- Qualified for implementing Human System Interface (HSI) for safety Instrumentation and Control on nuclear power plant
- Provides real time performances with deterministic behavior, robustness and fault tolerance
- QDS offers the following features designed to implement Human-Machine Interface (HMI) functions for safety I&C systems while ensuring precise display of critical safety parameters :
 - Data processing
 - Data recording for the purpose of trend curves display
 - Login feature with access rights depending on profile
 - Display signals from TELEPERM XS and allow operators to send requests to TELEPERM XS for data and information retrieval using graphical widgets



Example of a QDS complex application



QDS CPU Rack

Key Figures

16.7 million colors

34 QDS already installed in

11 reactors in **4** countries

Your performance
is **our** everyday **commitment**

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