ABB

eXLerate Supervisory Software
Automation solutions for the custody transfer of liquid and gas

Measurement made easy

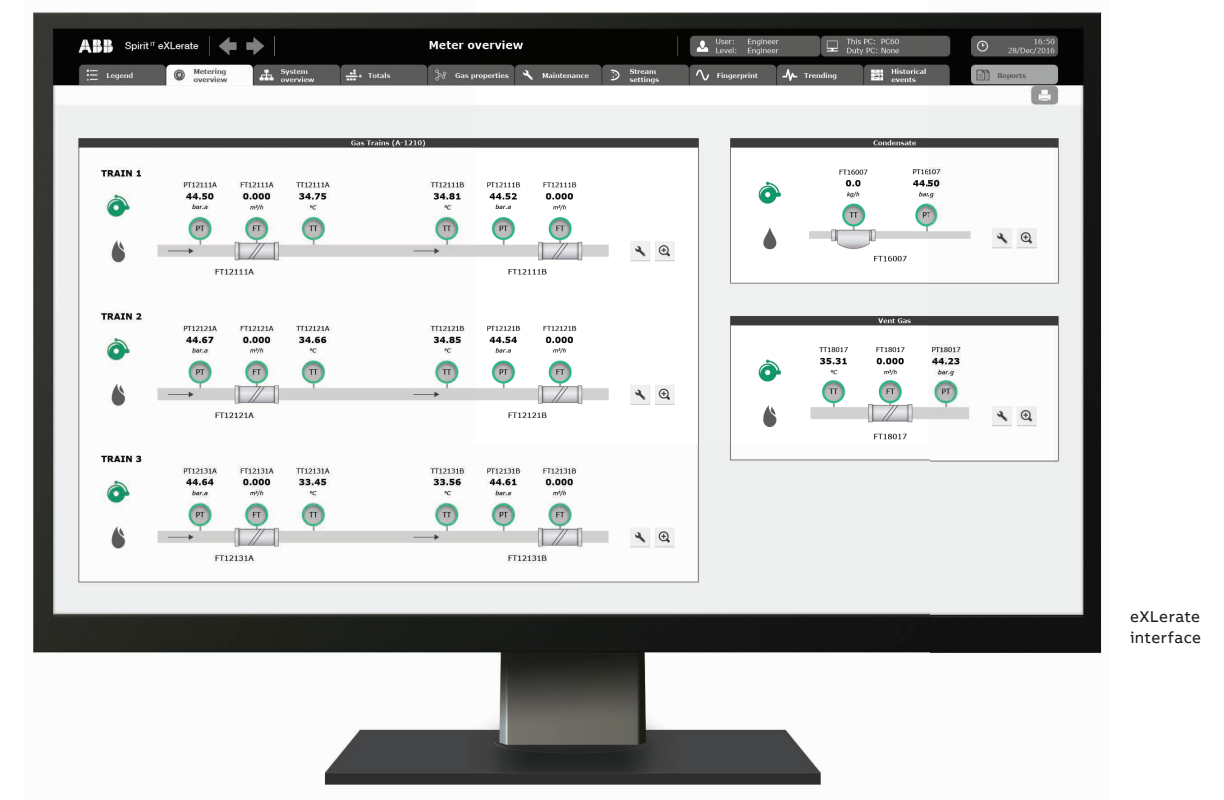**eXLerate is especially made for supervisory control of high-accuracy flow metering systems.**

Unlike many typical solutions, eXLerate not only automates the daily operations, but also the routine work of maintenance, engineering and accounting.

And it provides unique detection and correction functionality to minimize measurement errors and billing mistakes.

Made for accurate custody transfer
Features specific to the energy industry

Unlike general-purpose HMI/SCADA software, eXLerate has all the essential functions for supervisory control of gas and liquid flow metering and liquid loading systems in a reliable, smart and efficient way.

eXLerate interface
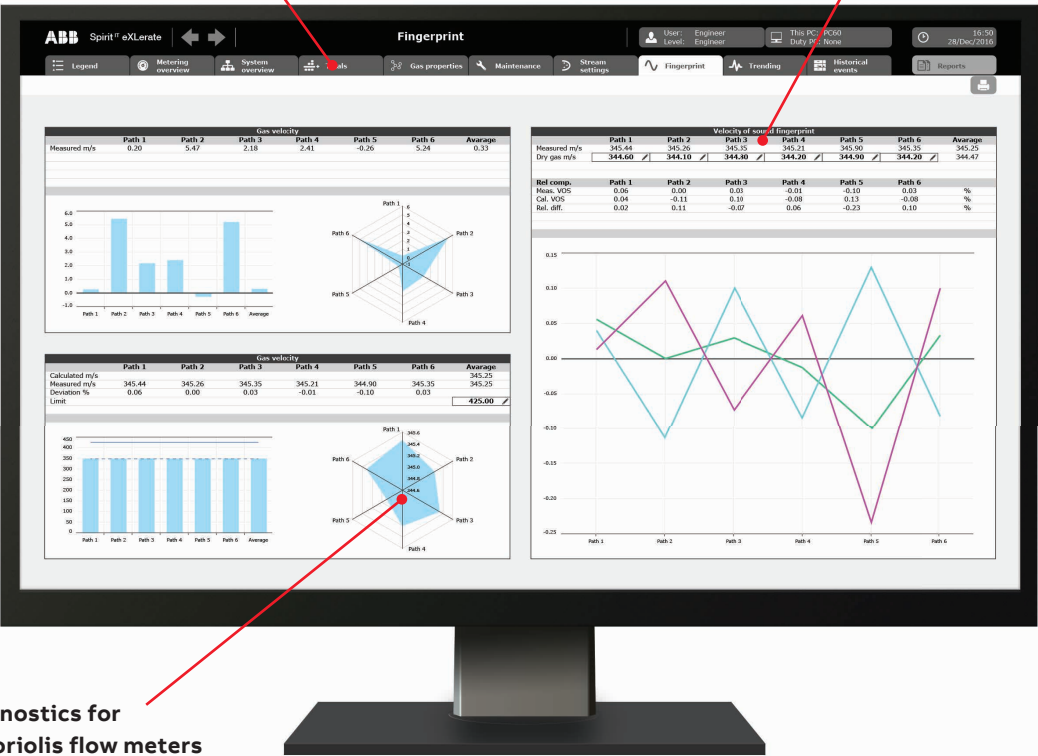
Properly acquire & archive all measurement data

Monitor & control the quality of measurement

Apply self-diagnostics on both device and system level to warn the user in real-time for (upcoming) measurement issues

Automatically correct errors, by utilizing the newest mis-measurement management technology
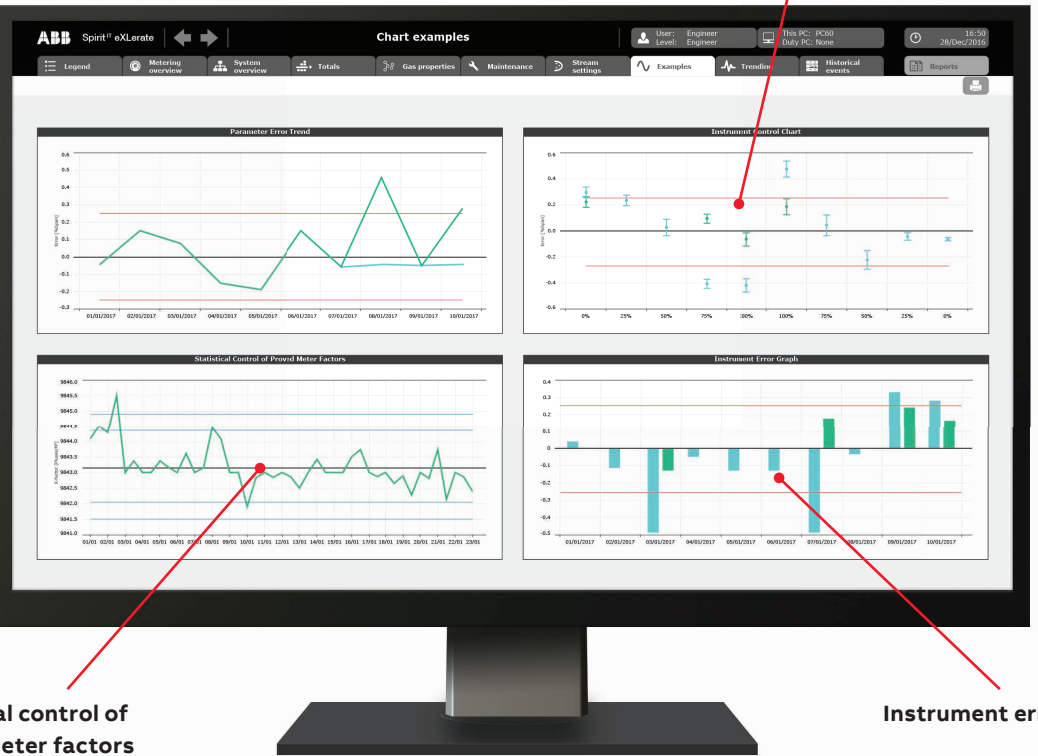
Quick access to other functions

Real-time performance indicators

Advanced diagnostics for Ultrasonic & Coriolis flow meters

Instrument control chart

Statistical control of proved meter factors
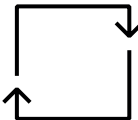
Instrument error graph

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Intuitive graphical overviews ensure efficient operation and trouble-shooting

Key benefits

Custody transfer reporting
High-quality reports are fully integrated and may be automatically or manually generated.

Embedded hot-standby redundancy
Redundancy on communication link, device and server level is fully embedded in the software.

64-bit data
eXLerate aims for the highest accuracy. Data is communicated, processed and stored with 64-bit resolution.

Certified oil & gas calculations
eXLerate provides a rich set of certified flow and fluid property calculations.

Virtual flow computing
eXLerate provides embedded Virtual Flow Computing for continuous verification of the primary flow computers.

Accurate station totalizers
A programmable summary with current & past alarms and events is available.

On-line meter diagnostics
A database server is available with ready-to-use functions for easy integration and further analysis.

Optional features

- Virtual Flow Computing (VFC) functionality with detailed diagnostics.
- Validation and calibration procedures, ensuing real-time verification of field devices.
- Ultrasonic / Coriolis diagnostics & performance monitoring with Condition Based Monitoring-technology.
- Control features of proving, sampling and batching.
- Virtual printer management: possibility of retrieval, storage, processing & printing of fiscal flow computer reports.
- For custody transfer applications, the unique functionality of 100% redundancy and Mis-measurement Management.
- Real-time uncertainty calculations
- Real-time hydrocarbon and water dewpoint calculations

Gas & liquid calculations

- AGA3, AGA5, AGA7, AGA8, AGA9, AGA10 & AGA11
- API chapters 11.1, 11.2, 12.2, 21.1 and 21.2, API 2540, API 1952, 1980, 2004 tables (both metric and US versions)
- ISO 5167 (all editions), ISO 6976 (all editions), NX19, SGERG, GOST, PTZ, GERG2004, GERG2008
- GPA 2172 / ASTM D3588, TP15, TP16, TP25, TP27
- IAPWS-IF97 steam and water
- NIST-1045, API 11.3.2.1 Ethylene (API-2565)
- ASTM D1550
- Time & flow weighted averages, periodic time series. Accurate period & accumulative totalizers and reporting.
- Linearization curves for correction of calibrated meters.
- Dynamic viscosity, isochoric heat capacity, isobaric heat capacity, isentropic, exponent, energy, entropy, and many other properties.

Automation intelligence
Maximize quality and results

100% Hot-standby Redundancy

eXLerate provides a 100% redundant system architecture with synchronization of all real-time and historical data.

In case of a failure, the system retains its full functionality, accuracy and data. Server change-overs are 'bumpless' with the operator not being distracted by nuisance alarms or a loss of control and information.

As eXLerate software offers the highest degree of redundancy in its systems, exactly the same data is shown from any operator interface, independent of which server is in control .

MMM: Mis-Measurement Management

Measurement errors are often detected late or not at all, causing billing errors and a significant loss for either the buyer or the seller. Resolving billing disputes is time-consuming and expensive.

ABB's patented MisMeasurement Management technology finally overcomes this inefficiency. Being the first to automatically detect and resolve all mis-measurement issues in (near) real-time, this technology incorporates extensive methods varying from basic checks to sophisticated algorithms. Furthermore, it includes a highly accurate and patented method based on API MPMS Chapters 21.2 and 21.2, to optimize the measurement accuracy.
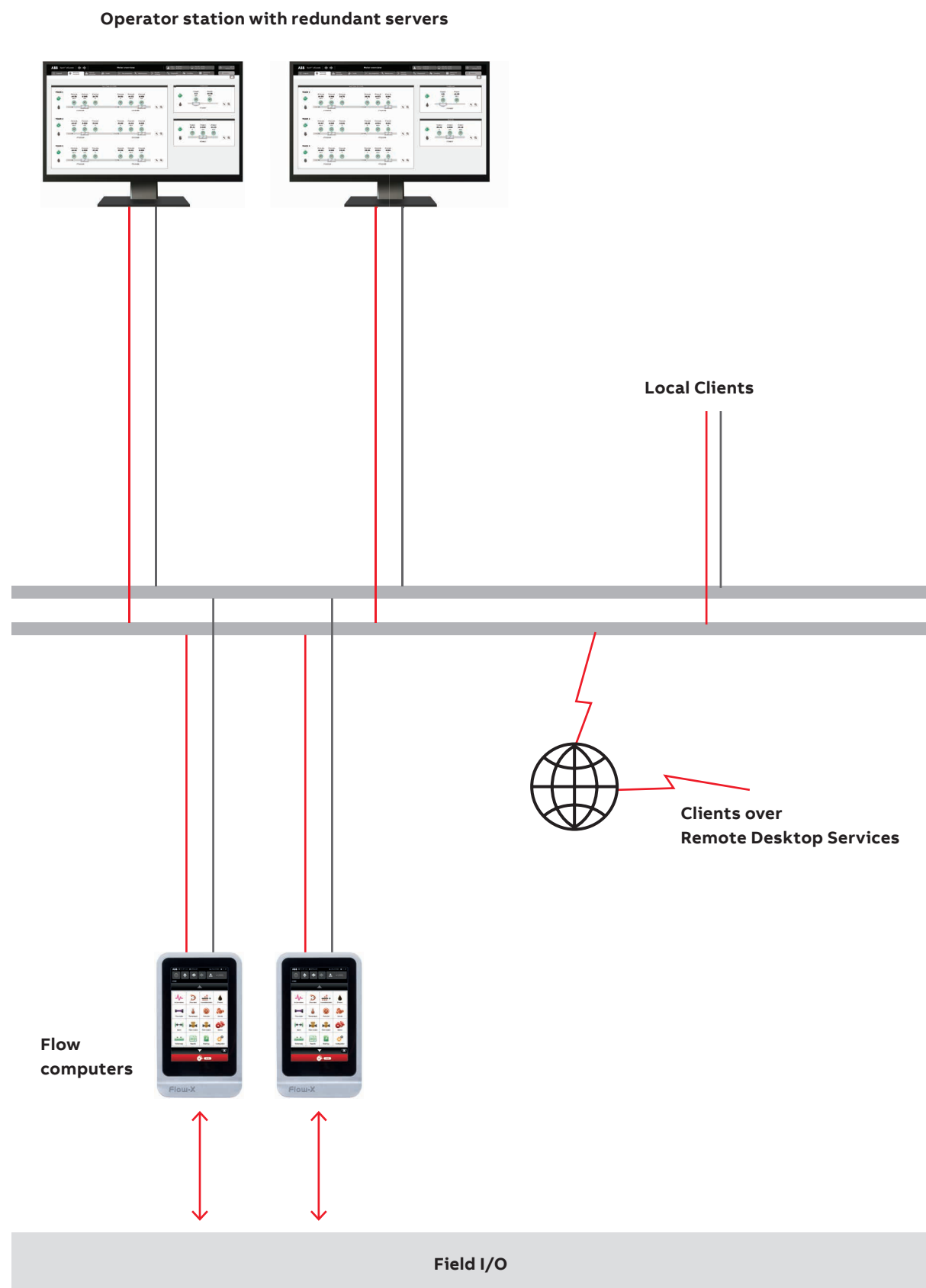
The MMM technology:
- Detects errors as early as possible;
- Allows the user to efficiently analyze the issue;
- Corrects errors as precisely as possible;
- Facilitates automatic billing corrections;
- Saves time and money.

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Due to its MMM-technology, eXLerate sets the highest standard in custody measurement

Operator station with redundant servers

Local Clients

**Clients over
Remote Desktop Services**

**Flow
computers**

Field I/O

eXLerate architecture: scalable from small to large

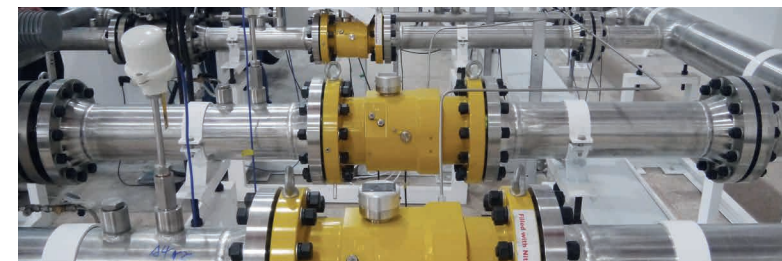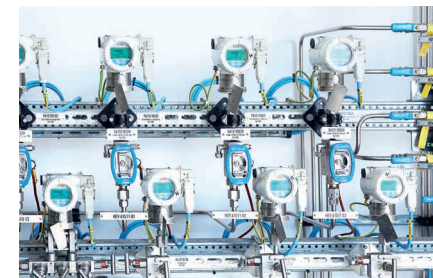# For any flow metering application
Used in more than 1400 systems worldwide

eXLerate is used for supervisory control of flow metering systems, liquid loading and unloading systems (road, rail and marine) and flow calibration facilities.

A single eXLerate server creates a solid, reliable HMI solution, while for mission-critical systems where stability and availability are essential, eXLerate provides redundant system architectures.

Additionally, the system can be extended with multiple client computers, that each act as fully functional operator station.

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Metering supervisory
& control

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Terminal automation

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Pipeline network
management

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Flow calibration
facility management

—
LACT control

—
Virtual flow
computing systems

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Service and support
Advice, assist and teach

Product licensing for integrators
eXlerate is open software enabling system integrators to create their own applications. Engineering and consulting services can be provided on either a turnkey or project basis, including any application development.

Technical support
We provide life-cycle management services to support the work of system integrators and equipment manufacturers. Conducted by a global network of trained experts, this includes strategic cooperation, consultancy and total project management.

Training
In order to make users feel confident with our software, we provide customized operator training to turn them into eXLerate- and metering specialists.

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System integrator benefits
All you need to build a modern metering control system

Easy programmable
With our user-friendly and comprehensive MS Excel-oriented development environment, you will have full control over software configurations.

Integrated features
Powerful built-in wizards, tools and features will get you quickly up and running.

Training programs
ABB provides engineering training programs, that are tailored to your own specific needs and knowledge level in order to achieve optimum results.

Flexible license model
We offer licenses with various editions, sizes in number of I/O tags and operation modes. Each license can be configured to preference and specific project needs.

LICENSE EDITION

STAND ALONE EDITION	SERVER EDITION	CLIENT EDITION
The Standalone Edition runs as one single server. It communicates with external equipment via serial or Ethernet interfaces.	The Server Edition runs in a redundant environment and is able to communicate with external equipment. Each server can run either as Duty or Standby.	The Client Edition computer is additional to the Server Edition and is connected to a duty server via one or more networks. It allows full control and operation, where all data and reports are obtained from a duty server.

LICENSE SIZE

LITE	BASIC	STANDARD	EXTENDED	PRO	PLUS	LARGE	FULL
75 I/O	150 I/O	300 I/O	750 I/O	1500 I/O	3000 I/O	6000 I/O	32000 I/O

RUNTIME MODE

RUNTIME ONLY	RUNTIME + DEVELOPMENT	DEVELOPMENT ONLY
The Runtime Only-license has the restriction that the user is not able to modify or inspect the application configuration.	This is a full-featured license, where modifications can be made on a runtime system, when the operator has sufficient security rights.	This license is available for system integrators who have completed our eXLerate training. The user can modify or inspect the application, but after a built-in timeout of one hour, communications are terminated.

Additional hardware-based protection
eXLerate supports two kinds of dongles: a Maintenance dongle, which allows an engineer to enter the Development mode on a Runtime Only system, and a Runtime dongle, which allows easy transfer of a license from one computer system to another.

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