

FICHA TÉCNICA DE PRODUTO

PRODUCT DATASHEET

HMI – Automação e Instrumentação, Lda.

Travessa da Indústria, nº 111 4780-573 Santo Tirso PORTUGAL Tel. +351 252 850 501 Fax. +351 300 013 487

Web: www.hmi.pt Email: hmi@hmi.pt



ABB MEASUREMENT & ANALYTICS

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.

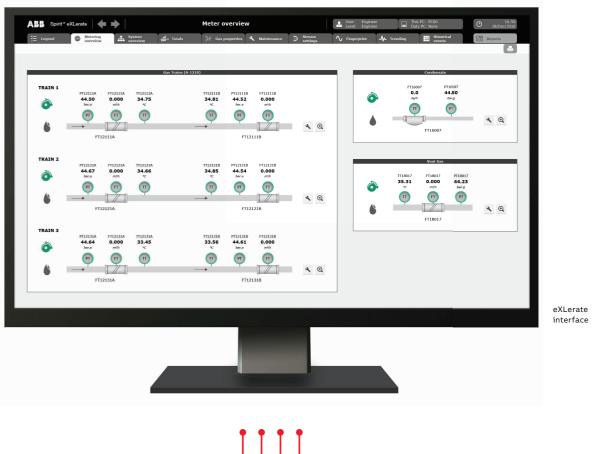
Unlike many typical solutions, eXLerate not only automates the daily operations, but also the routine work of maintenance, engineering and accounting.

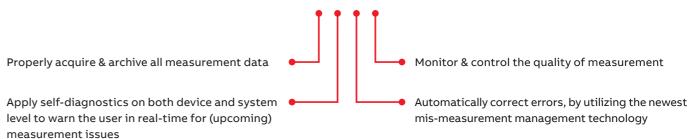
And it provides unique detection and correction functionality to minimize measurement errors and billing mistakes.

Made for accurate custody transfer

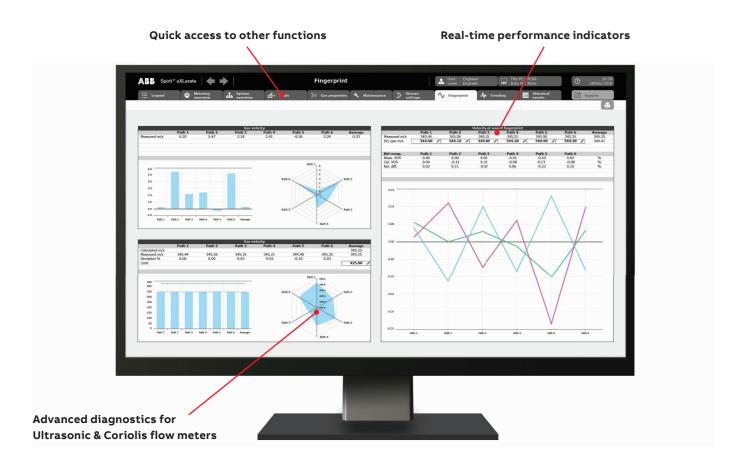
Features specific to the energy industry

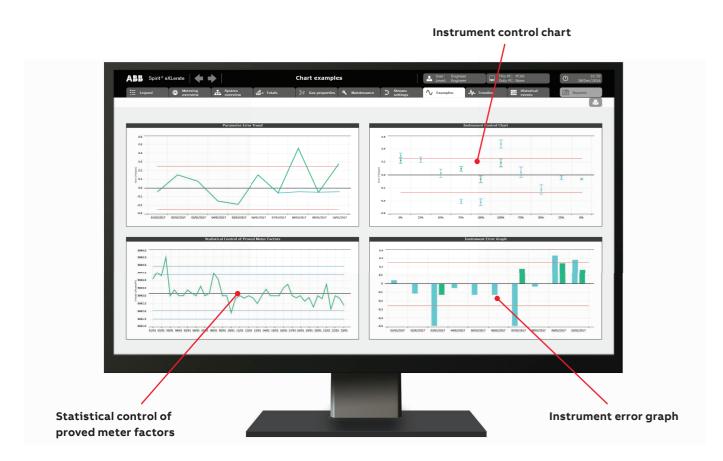
Unlike general-purpose HMI/SCADA software, eXLerate has all the essential functions for supervisory control of gas and liquid flow metering and liquid loading systems in a reliable, smart and efficient way.





4 EXLERATE SUPERVISORY SOFTWARE EXLERATE SUPERVISORY SOFTWARE





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 Monitoringtechnology.
- 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.

Intuitive graphical overviews ensure efficient operation and trouble-shooting

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.



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



8 EXLERATE SUPERVISORY SOFTWARE EXLERATE SUPERVISORY SOFTWARE

Operator station with redundant servers 177 777 **Local Clients** Clients over **Remote Desktop Services** 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.

Metering supervisory & control

Terminal automation

Pipeline network management

Flow calibration
facility management

LACT control

Virtual flow computing systems













EXLERATE SUPERVISORY SOFTWARE EXLERATE SUPERVISORY SOFTWARE

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.

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

The Standalone Edition runs as one single server. It communicates with external equipment via serial or Ethernet interfaces.

SERVER EDITION

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.

CLIENT EDITION

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

75 1/0	150 I/O	3001/0	7501/0	1500 I/O	30001/0	6000 I/O	320001/0

RUNTIME MODE

RUNTIME ONLY

The Runtime Only-license has the restriction that This is a full-featured license, where the user is not able to modify or inspect the application configuration.

RUNTIME + DEVELOPMENT

modifications can be made on a runtime system, when the operator has sufficient security rights.

DEVELOPMENT ONLY

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.



ABB B.V.

Measurement & Analytics

Achtseweg Zuid 151A / Strijp-TQ Entrance 5 5651GW Eindhoven The Netherlands Phone: +31 40 236 9445 Mail: nl-spiritit-sales@abb.com

ABB Malaysia Sdn Bhd. Measurement & Analytics

Lot 608, Jalan SS 13/1K 47500 Subang Jaya Selangor Darul Ehsan, Malaysia

Phone: +60 3 5628 4888

abb.com/midstream

ABB Inc.

Measurement & Analytics

7051 Industrial Boulevard Bartlesville OK 74006 United States of America Phone: +1 800 442 3097

ABB Limited

Measurement & Analytics

Oldends Lane, Stonehouse Gloucestershire, GL10 3TA United Kingdom

Phone: +44 7730 019 180





Our offering:

e B	Actuators and Positioners		Analytical Instruments
	Device Management, Fieldbus and Wireless		Flow Measurement
	Force Measurement	e de la constante de la consta	Level Measurement
PP	Natural Gas Measurement		Pressure Measurement
TE TOTAL	Recorders and Controllers	0 10	Temperature Measurement

HMI – Automação e Instrumentação, Lda.

Travessa da Indústria, nº 111 4780-573 Santo Tirso PORTUGAL Tel. +351 252 850 501 Fax. +351 300 013 487

Web: <u>www.hmi.pt</u> Email: <u>hmi@hmi.pt</u>