SOFREL LogUp

A simple, optimal, and cyber-secure solution for water network monitoring

SOFREL LogUp, a response to your challenges in an increasingly constrained environment
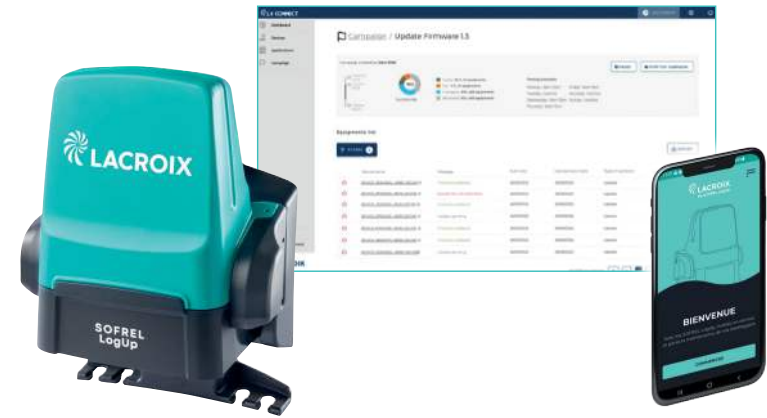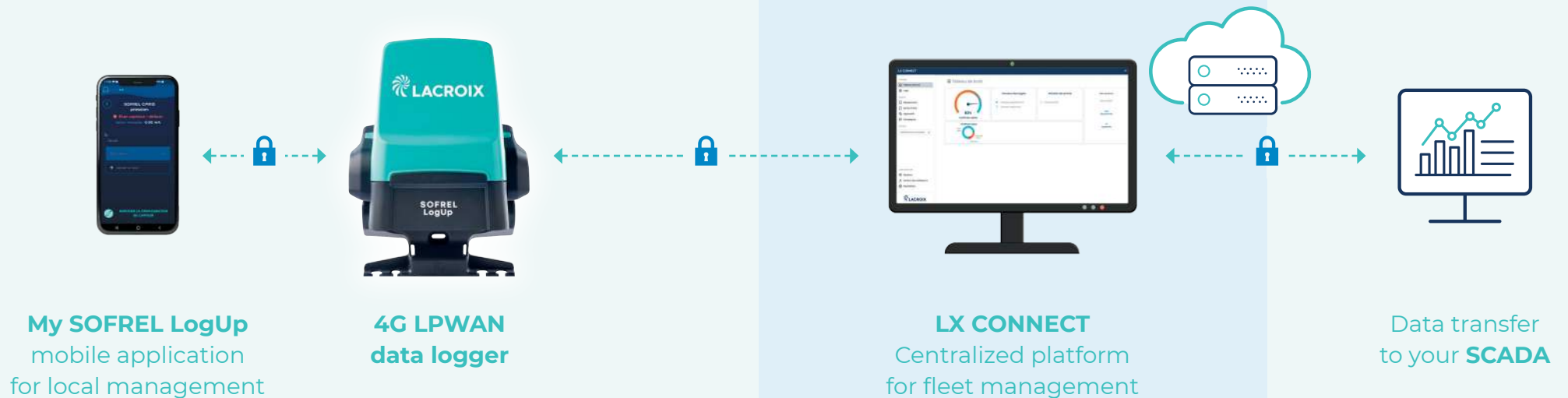
SOFREL LogUp, the **new LACROIX solution for monitoring water networks and isolated sites,** consists of a data logger, a mobile application, and the LX CONNECT platform

This solution has been designed to meet your expectations in terms of **economic optimization, security, and ease of use**, covering all aspects of daily use, maintenance, and operation of data loggers

The SOFREL LogUp solution is based on an architecture and features designed to help you address your challenges, while complying with the **requirements of the IEC 62443 standard for cybersecurity**

SOFREL LogUp, MORE THAN A DATA LOGGER, AN OPTIMIZED SOLUTION TO SIMPLIFY WATER NETWORK OPERATIONS

My SOFREL LogUp
mobile application
for local management

4G LPWAN
data logger

LX CONNECT
Centralized platform
for fleet management

Data transfer
to your **SCADA**

The advantages of the **SOFREL LogUp** solution

Reduce your operating and intervention costs by minimizing travel and on-site presence

Configure your data loggers before receiving them and **simplify** their deployment

Secure your data and its **exchanges**

SOFREL LogUp, AN **INNOVATIVE**, ROBUST, COMPACT, AND **SCALABLE** DATA LOGGER

Optimized costs
- Quick installation and field implementation
- Robust, waterproof, and designed to last for many years
- Embedded energy management optimizing autonomy
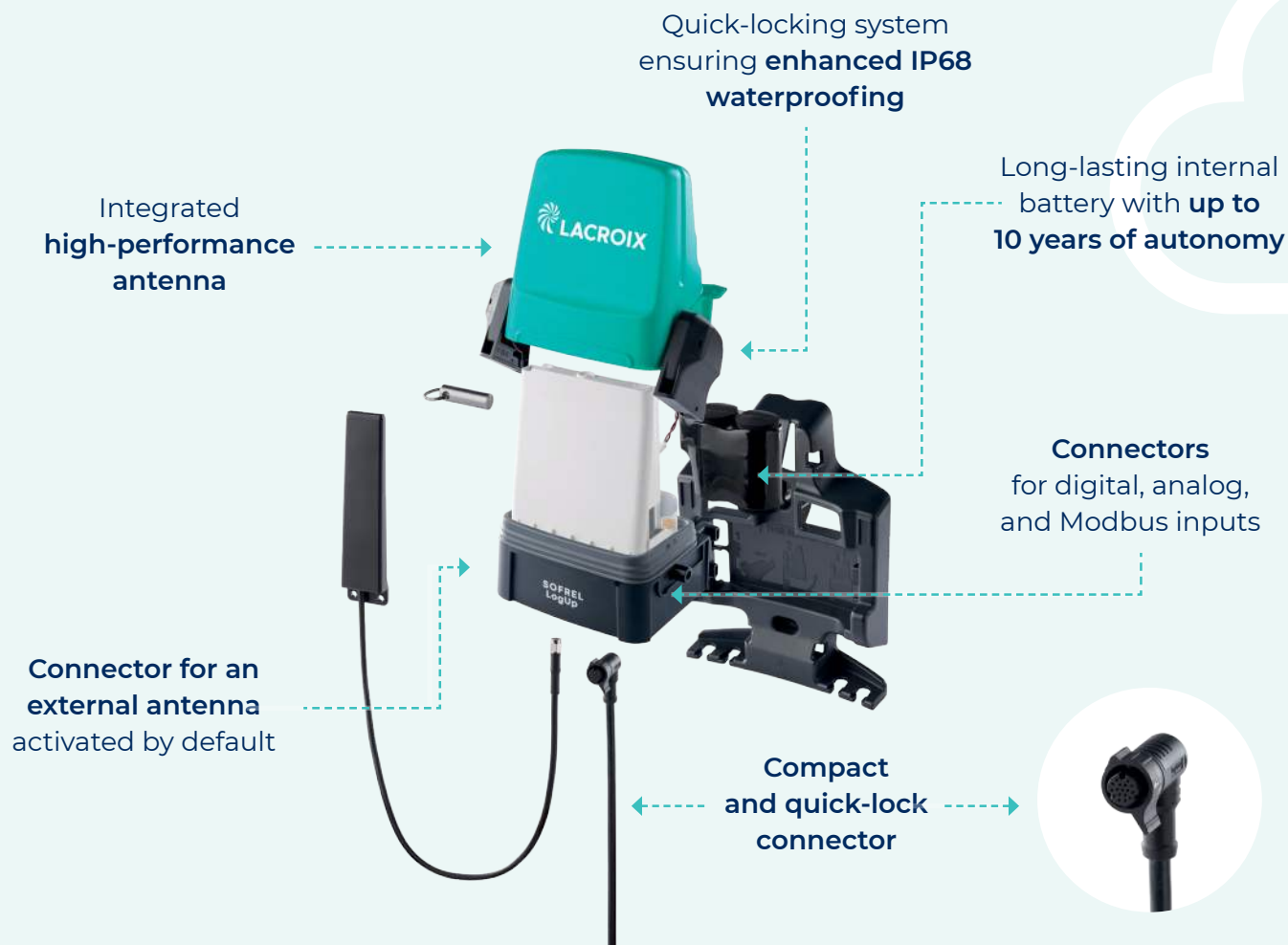
For more simplicity
- A single model for all uses, drinking water and wastewater
- Connection of sensors via quick-lock connectors

Comprehensive security
- Automatic integration of security certificates
- Efficient and secure data transmission
- Intrusion detection on-site and product movement detection

Innovative and easy to install, the SOFREL LogUp data logger provides an effective and economical solution for remote management and diagnosis of water networks

Quick-locking system ensuring **enhanced IP68 waterproofing**

Long-lasting internal battery with **up to 10 years of autonomy**

Integrated **high-performance antenna**

Connectors for digital, analog, and Modbus inputs

Connector for an external antenna activated by default

Compact and quick-lock connector

LACROIX

SOFREL LogUp

SOFREL LogUp, A UNIQUE, **ECO-DESIGNED**, AND PATENTED MODEL

Tightening tool

2 PATENTED INNOVATIONS **FOR IMPROVED WATERPROOFING**

- ◣ Simple and effortless locking system ensuring the waterproofing of the data logger
- ◣ Designed to keep the connectors dry

AN ECO-DESIGNED PRODUCT **FOR A REDUCED CO_2 FOOTPRINT**

- ◣ Significant improvement of the carbon footprint throughout the product's entire life cycle (greenhouse gases, water consumption, raw materials…) from manufacturing to recycling

PATENTED

CO_2

IP 68

Sealing air bubble:
Keeps the connectors dry by trapping air under the data logger with a protective skirt

THE **MY SOFREL LOGUP APPLICATION,** TO REDUCE FIELD DEPLOYMENT TIME

Optimization of implementation costs
- Increase efficiency in commissioning and configuring your data loggers thanks to a highly intuitive mobile application
- Reduce on-site presence time to the bare minimum

For greater simplicity
- Configure the data logger and sensors via a dynamic interface
- View current values and operating statuses locally

Enhanced Security
- Rely on a secure Bluetooth connection (data encryption) to connect locally with your equipment

The solution includes the **My SOFREL LogUp** mobile application through which a user can commission, configure, and diagnose its installation

Data is transmitted exclusively between the mobile application and the data logger via the secure local connection
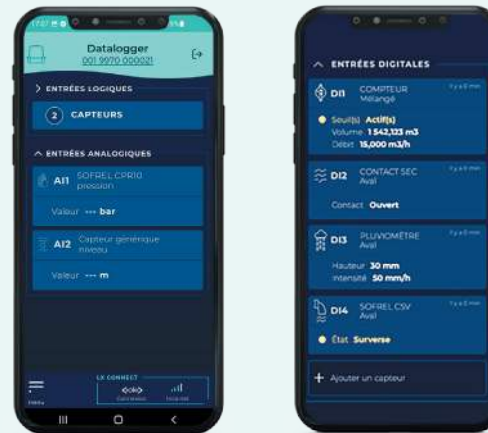
The configuration of the data logger is carried out optimally while allowing for a reduction in on-site presence time

The configuration can subsequently be retrieved and completed remotely from **LX CONNECT**

LX CONNECT: THE IoT PLATFORM FOR SOFREL LogUp DATA LOGGERS

The **LX CONNECT** platform enables centralized management of a remote monitoring network and automates cybersecurity as well as software updates for your equipment fleet

Remote management platform
LX CONNECT

Web browsers
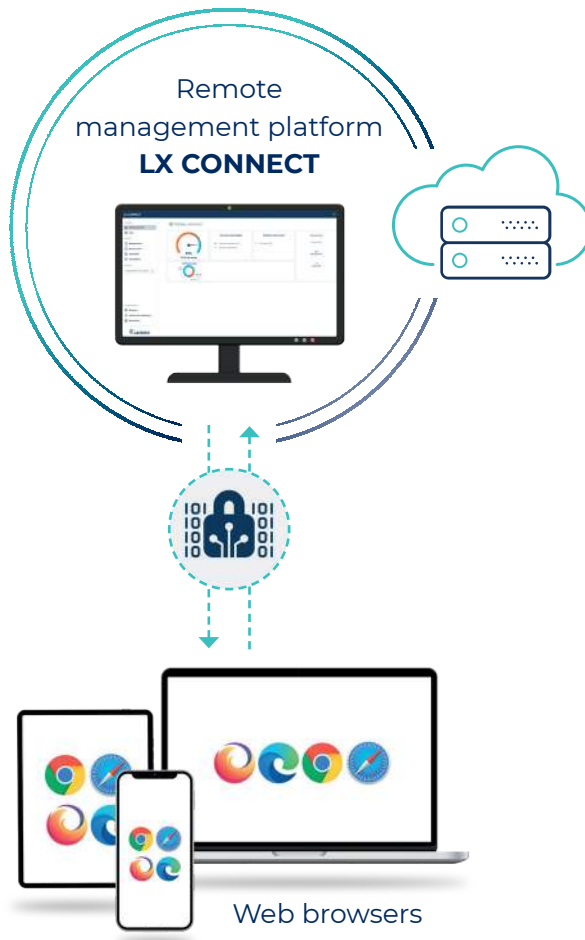
COST OPTIMIZATION BY ANTICIPATING OPERATIONS
· **Prepare in advance** or after installation the configurations of your data loggers
· **View the operational status** of your equipment fleet (battery, firmware) **at any time** and remotely for optimal maintenance
· Access your data from any web browser and **manage your fleet in real-time**

SIMPLICITY ON A DAILY BASIS
· **Manage user rights** associated with the equipment fleet
· **Centralize** all your field data on the LX CONNECT platform
· Centrally and coordinatedly **update** your equipment fleet and its software versions
· **Remotely modify** business configurations
· **Share** field data from the platform with one or more SCADA systems

SECURITY AT THE HEART OF THE SOLUTION
· Rely on the **high level of security** of the solution, which fully meets the requirements of the IEC 62443 standard
· Connect the solution to a Microsoft PKI for the **automatic creation and renewal of authentication** certificates for data loggers

# LX CONNECT: A NEW ARCHITECTURE FOR AUTOMATED CERTIFICATE MANAGEMENT

An automated and self-sufficient procedure ensuring cybersecurity

Daily monitoring of the certificate validation duration, true digital **passports for the equipment**

Automatic certificate renewal with Microsoft PKI before expiration

Connection to **SOFREL LogUp data loggers or SOFREL S4W** via **LX CONNECT** to ensure they have properly registered the new certificates

▸ **Automatic certificate management** that operates seamlessly for the operator

▸ **Dashboards** for monitoring the deployment of certificates

▸ **Scheduling** of large-scale certificate renewal campaigns

SCADA

SCADA

LX CONNECT

Microsoft PKI

SOFREL **S4W**
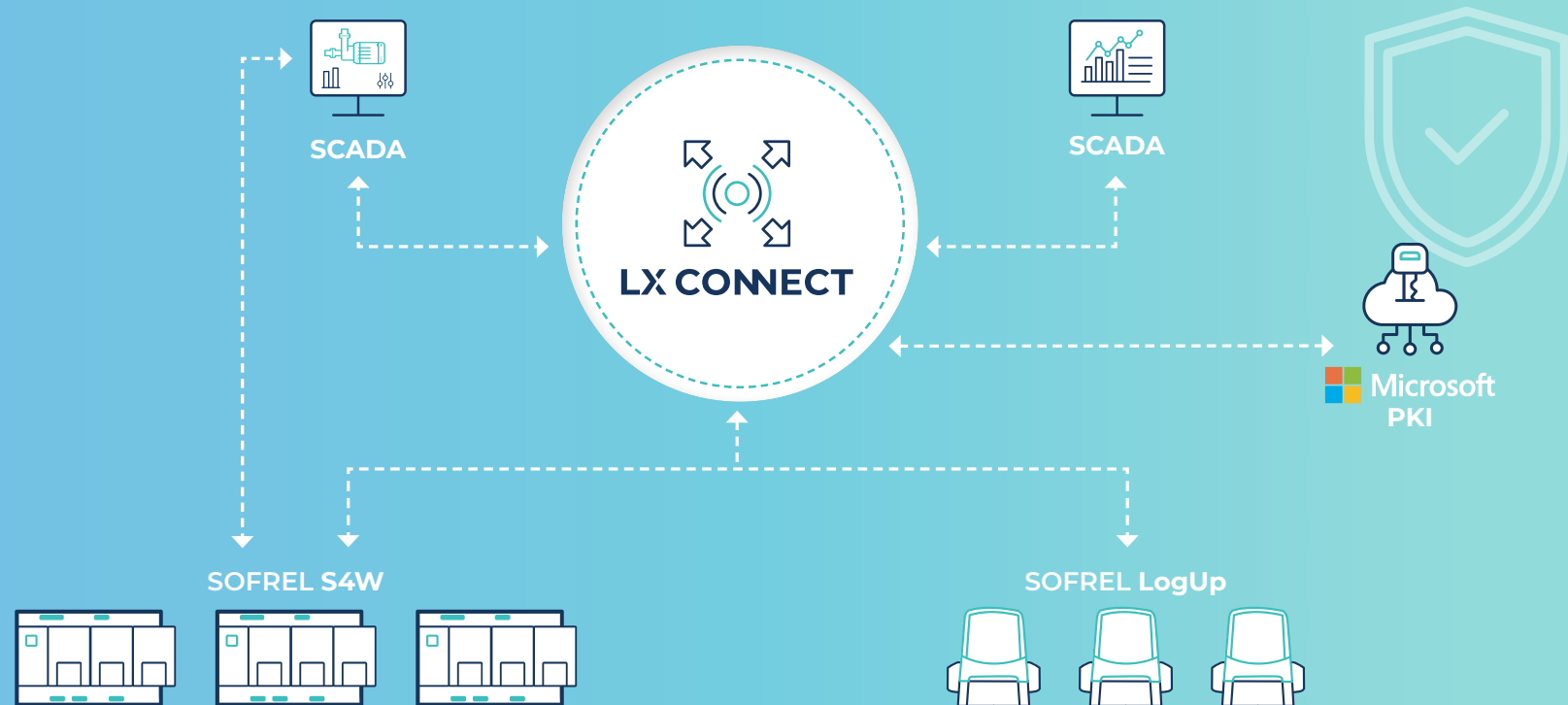
SOFREL **LogUp**

CYBERSECURITY AT THE CENTER OF THE SOFREL LogUp SOLUTION

A solution that fully complies with the European cybersecurity regulatory framework
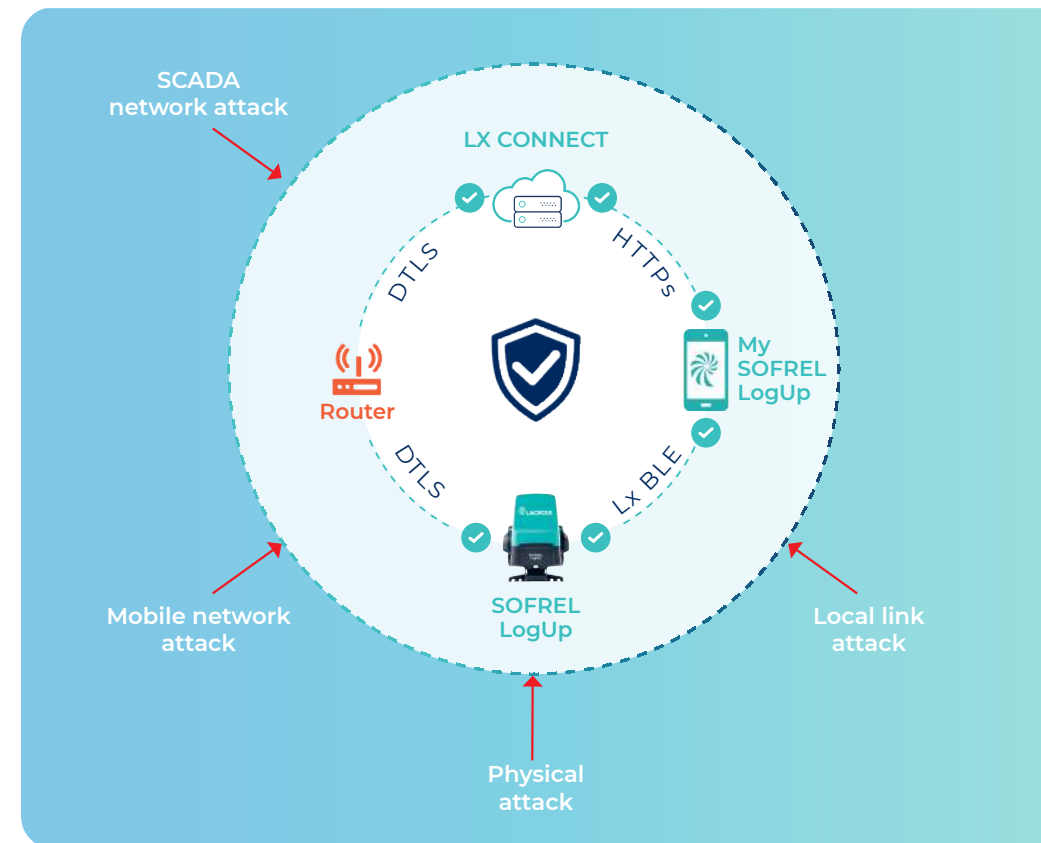
IEC 62443

The SOFREL LogUp solution natively integrates a level of cybersecurity compliant with IEC 62443

"Secure by design," the **SOFREL LogUp**, data logger, the mobile application, and the **LX CONNECT** platform are cybersecurity-secured from end to end

Cybersecurity is deployed automatically and transparently for the user

To maintain the level of cybersecurity at all times, regular updates of authentication certificates are automatically conducted by LX CONNECT without user intervention:

- ◣ Deployment of cybersecurity for **data exchanges** between field devices and supervision

- ◣ **Management of users**, their rights, and the history of their interactions with the ecosystem

- ◣ **Mutual authentication** of devices through certificate exchanges to prevent any attempt at impersonation

- ◣ **Integrity of the system** ensuring that exchanged data cannot be modified

- ◣ **Encryption of data** ensuring that it cannot be read by unauthorized individuals

SCADA network attack

LX CONNECT

DTLS

HTTPs

Router

My SOFREL LogUp

DTLS

Lx BLE

SOFREL LogUp

Mobile network attack

Local link attack

Physical attack

A SINGLE DATA LOGGER MODEL WITH **UPGRADEABLE REMOTE SOFTWARE**

1 **CHOOSE AND ORDER**

2 **UPGRADE REMOTELY**

A single common hardware for both drinking water and wastewater in **a Pack** that meets your **needs**

The capabilities of your equipment and integrate **upcoming new features**

101

1 counting DI
1 dry contact DI

202

2 counting DI
2 dry contact DI

222

2 counting DI
2 dry contact DI
2 AI mA

M101

Open Modbus
1 counting DI
1 dry contact DI

M222

Open Modbus
2 counting DI
2 AI mA
2 dry contact DI

An evolving pack that covers **100%** of water-related use cases

LX CONNECT - LACROIX'S CENTRALIZATION SOLUTION FOR MANAGING NEXT-GENERATION TELEMETRY EQUIPMENT

A common platform for S4 and LogUp products deployed in **2 FORMATS**

- **LX CONNECT EDGE**: a centralization platform that is easy to **deploy and manage by the operator** for data and equipment management, closely connected to the telemetry network

- **LX CONNECT PREM**: an evolving centralization platform that can be deployed in a **private cloud** or a **managed data center**

3 service packs

		Centralized management of equipment and users	S4W	LogUp
Included	**CONNECTIVITY** Pack	Update of individual firmwares	X	X
		Monitoring and automatic renewal of certificates	X	X
		Access to event logs		X
		Centralization of configurations		X
		Data visualization		X
		Data sharing with a third-party application (e.g., SCADA)		X

		Orchestration of software and cybersecurity updates for the equipment fleet	S4W	LogUp
License required	**ADVANCED FLEET MANAGEMENT** Pack	Advanced monitoring of a fleet of SOFREL S4 & LogUp equipment	X	X
		Campaign management for mass and scheduled updates of SOFREL equipment regarding firmware and certificates	X	

		Remontée des données métiers vers plusieurs applications tierces	S4W	LogUp
License required	**DATA SHARING** Pack	Data sharing to multiple SCADA systems via Web Services		X

CONNECTED TECHNOLOGIES FOR **SMARTER WATER** & **ENERGY**

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