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METALS & MINING AX01187

The technology marketplace for heavy industry

Secure IIoT platform for automating mining operations

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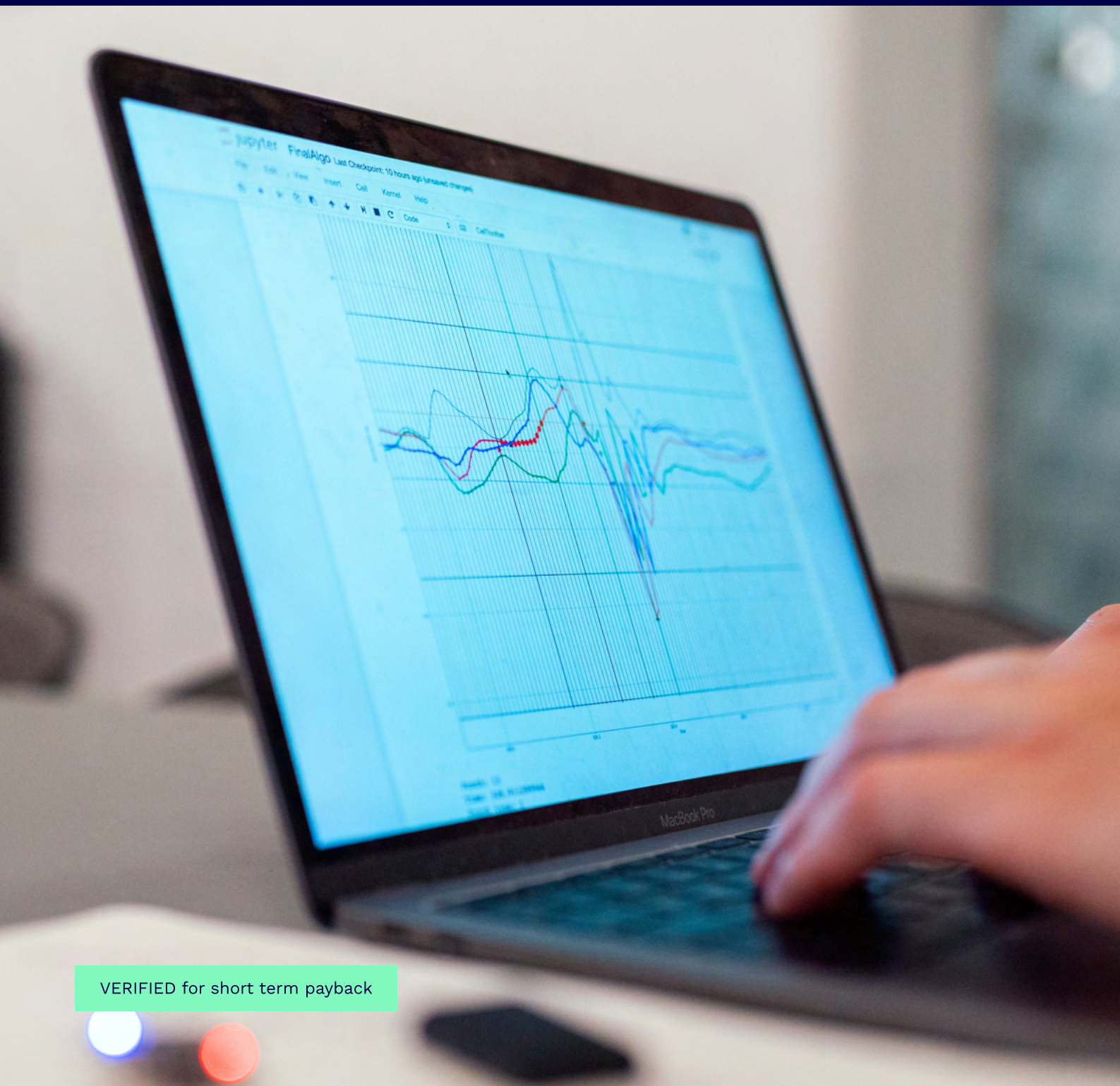

VERIFIED for short term payback

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View the solution on our marketplace

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SECURE IIOT PLATFORM FOR AUTOMATING MINING OPERATIONS

How it works

Typically operators rely on multiple legacy servers to store and analyse multiple datasets. Meanwhile, data from other less integral edge assets lie uncollected or require manual collection, which often gets lost on spreadsheets and is not integrated with other data. This makes data validation tricky, and creating an overview of all the different data inputs and how they relate to each other is time-consuming, expensive, and challenging. Plus, repairing these entrenched systems often involves sending engineers out to remote locations, which is again costly, time-consuming, and can disrupt the production process.

Quick and easy to deploy, this compact secure industrial IoT edge solution integrates all core-asset and edge-asset data. This includes oil and gas data, ignition-certified systems, and DCS data, as well as nearly all industrial protocols - Modbus TCP Serial, digital, analogue, and SCADA systems. It leverages MQTT to securely transmit this data into an out-of-the-box cloud or a customer-specified location.

It displays these multiple datasets on a single dashboard, where they are analysed for actionable insights that highlight where improvements can be made. It also makes it possible to control and monitor the entire operation without being in situ, reducing the number of staff required on-site and minimising maintenance field trips to the facility.

Following login, the user is presented with a list of assets and tools based on their login credentials. Users can access detailed real-time and historical data on their computer or mobile, which they can use to depict visible trends and receive configurable alerts.

This solution uses cellular, WiFi connections, and cloud technology to make all real-time data available anytime, anywhere, without having to install any further infrastructure. And, to ensure that it can be successfully deployed in remote locations, it can be powered by mains electricity, battery, or solar power.

As this solution integrates with and optimises existing server hardware, it means that operators can avoid otherwise inevitable legacy infrastructure upgrades. And, as it is cloud-based, it avoids having to install a whole new data system running off multiple servers for new operations, significantly reducing construction costs.

Key facts

up to

90%

reduction in construction time

typically

75%

reduction in CapEx costs

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TOP BUSINESS BENEFITS

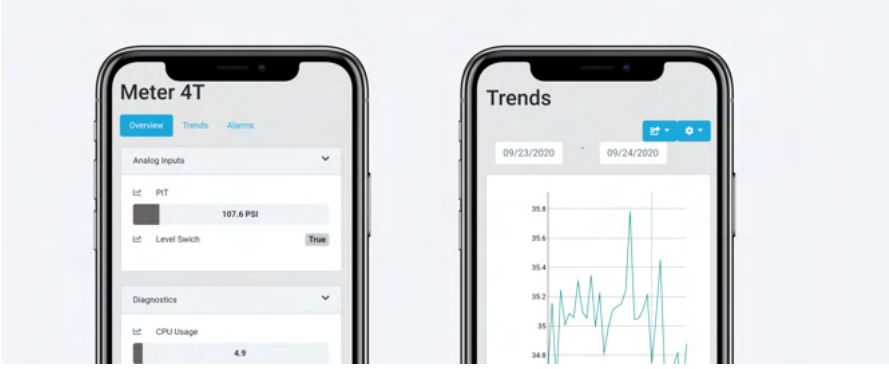
There are six main business benefits to this secure industrial IoT edge solution:

- Reduces CAPEX by up to 75%
- Reduces construction times and costs
- Reduces infrastructure investment and maintenance
- Cuts carbon footprint
- Reduces the on-site SCADA workforce needed
- Enhances security

This solution allows you to integrate multiple oil, gas, metals, and mining macro and micro datasets on a single dashboard. In doing so, it fills in gaps in existing SCADA networks and heightens security. With its built-in I/O, it replaces a PLC or RTU. Its open architecture can be used for bespoke applications or built on top of existing PLCs to cost-effectively bring data into a centralised place, removing the need for traditional, expensive, on-premises hardware and software.

It also makes it possible to control and monitor the entire operation without being in situ, minimising the number of staff required on-site and cutting down on costly maintenance field trips to the facility. And, as this solution integrates with and optimises existing server hardware, it means that operators can avoid otherwise inevitable legacy infrastructure upgrades. If installed on a new facility, it removes the need for much of this infrastructure altogether, bringing down the overall build time and cost.

The data insights offered up by this solution help to maximise productivity, while keeping on-site staff numbers to a minimum and improving sustainability, significantly reducing CAPEX and providing a rapid ROI.



Screenshot of solution dashboard

Top benefits

- Reduces CAPEX by up to 75%
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CUSTOMER SUCCESS STORIES

American mine

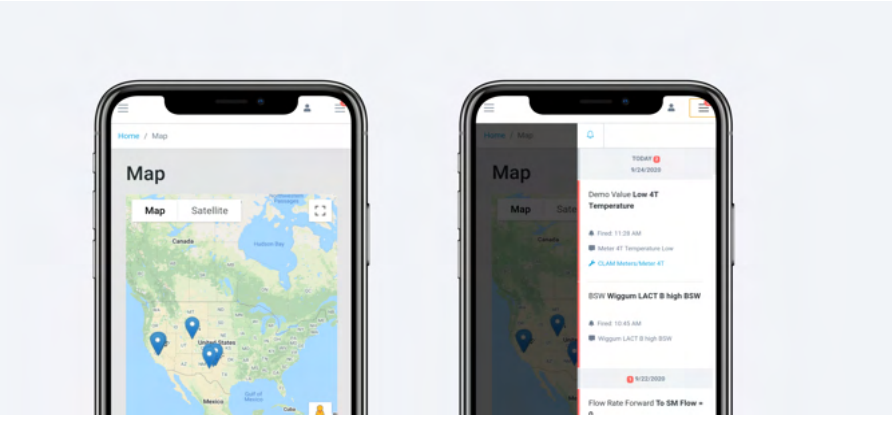
Challenge
This American mine operator was experiencing inefficiencies in its water management processes.

Solution
This industrial IoT edge solution was deployed to control and monitor the pumps used in its water management process. It reduced running costs by pinpointing where fuel, staff, and other resources assigned to this process could be cut. It made the water management process significantly more efficient and reduced the mine's carbon footprint.

American oil and gas producer

Challenge
This American oil and gas producer needed to obtain accurate pressure measurements along its pipeline. It had been sending workers down to take spot readings, which was expensive, time-consuming, and prone to human error.

Solution
This industrial IoT edge solution enabled accurate pressure readings to be measured remotely, reducing the workforce numbers at the pipeline, cutting costs, and providing more accurate readings.



Screenshot of solution dashboard

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FAQ

Can this secure industrial IoT edge solution only be used via the cloud?

No, there is no requirement to utilise the cloud-based solution. A hardwire implementation can be used for data collation, although the cloud integration provides some advantages.

Is this secure industrial IoT edge solution easy to deploy?

Yes, it is a simple plug-and-play solution that can also be customised to support most industrial and cloud protocols.

What is the technical specification?

We can provide full technical details on request, but a sample of key details is as follows:

- Monitoring and controls: 10 digital input channels, 5 digital output, 4 analogue input, Modbus Serial, Modbus TCP/IP
- Input voltage: 12-30VDC
- Consumption: 3.5W Avg, 5W max
- RTC battery: Rechargeable lithium, 100k+ hours
- Cellular- & WiFi-enabled - Dual-band (2.4 & 5 GHz)
- GPS-enabled

About Axora

Axora is the global technology **marketplace** for heavy industry. We source the best innovative solutions, to solve the biggest industrial problems.

Our service helps industrial companies to discover, evaluate, procure and deploy technology from all over the world.

Entrusted globally by 100s of industrial leaders and innovative solution providers, we help companies take action to hit their safety and sustainability goals.

About the solution provider

This automation and integration company was born out of the need to secure sensitive devices and data based in remote parts of the world. Its secure Industry 4.0 cloud SCADA platform and IIoT edge devices remotely monitor and control industrial processes across the oil and gas, mining, and other industries worldwide.

Your next steps

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