

CORVINA





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Cloud-native IIoT PLATFORM



CORVINA IoT Platform

Industrial IoT Digital Platform for Smart Manufacturing and Smart Machine Solutions

Who is CORVINA Platform for?

Machine Builders

- Remote monitoring and control
- Data analysis and insights
- Predictive maintenance
- Centralized remote management
- Improved customer experience
- Increased machine performance and efficiency
- Supports Servitization by offering additional services and value to customers

Manufacturers

- Remote monitoring and control of factory operations
- Data analysis and insights for process optimization and waste reduction
- Predictive maintenance for reducing downtime and improving equipment utilization
- Centralized management of multiple factories for standardization and uniformity
- Improved customer satisfaction and experience through efficient and streamlined processes.

System Integrators

- Increased competitiveness
- Improved customer satisfaction
- Increased revenue
- Data-driven decision making
- Scalability
- Supports core business of system integration

Our industrial IoT platform is designed specifically for businesses looking to take advantage of the latest digital technologies to grow and improve their operations.

The platform includes advanced smart manufacturing and smart machine solutions that allow real-time monitoring, predictive maintenance, and remote control capabilities.

These features are easily accessible through a user-friendly interface, and are specifically designed to help businesses increase efficiency, reduce downtime, and improve overall productivity.

CORVINA is the cloud-based, open industrial IoT Platform that provides the technology you need for the industrial world.

CORVINA is the cloud-based, open industrial IoT platform that provides the technology you need for the industrial world. CORVINA is an administration shell for distributed edge systems, integrating data collection, monitoring and control, configuration management, integrated web tools and programming environments to support the machinery and applications throughout its whole lifecycle providing productivity increase and new Business Model based on Services.

It connects any products, plants, systems, and machines, be they new or legacy. It allows the data generated by the Internet of Things (IoT) to be processed simply and intuitively with advanced analysis.

It bridges layers between IT and OT architecture, providing effective tools to access all the industry 4.0 benefits, such as asset performance management, artificial intelligence, predictive maintenance, data modeling and OT remote monitoring.

The platform offers three main services:

REMOTE ACCESS

The remote access VPN solution allows you to easily and securely connect to your devices and machines that they are connected to. It is an advanced connectivity management solution that puts you in control of your IIoT business.

The platform is entirely web-based and provides users with a way to securely communicate with and manage updates on devices and connected endpoints.

FLEET MANAGEMENT

A complete technology designed to oversee your machine fleet throughout its lifecycle. Supported by the advanced Artifact Registry, it ensures that essential data and configurations are securely stored in a cloud-based space. This intuitive interface grants a comprehensive global overview of every connected machine. Beyond monitoring, the Fleet Management app also streamlines operations through its OTA application, enabling swift update campaigns using files from the artifact registry, and facilitates effortless maintenance via VPN.

IIoT DATA COLLECTION & ANALYSIS

IIoT Data Collection, Visualization and Analysis is the open industrial IIoT Platform. It connects any products, plants, systems, and machines. It allows the data generated by the internet of things to be processed simply and intuitively with advanced analysis. Data is sent from the device to the cloud where it is stored and can be visualized with web-based dashboards. Dashboards can be easily created and edited by users with a drag and drop interface, no programming knowledge is required.



Solution Architecture

IoT data collection, visualization and analysis is the key for machinery servitization and plant digitalization. CORVINA connects any products, plants, systems, and machines, be they new or legacy. It allows the data generated by the Internet of Things (IoT) to be processed simply and intuitively with advanced analysis.

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Key features

MULTITENANT MANAGEMENT

Easy upgrade, easy customization and ongoing cost savings.

REMOTE MANAGEMENT

Proactive Service based on Alarm, Remote Support to the Customer.

DATA MODELING & ALARMS

Optimize the device connection allowing the creation of profiles for machine models. Protect plant uptime and safety minimizing the impact of abnormal situations.

CUSTOM SDK & REST API

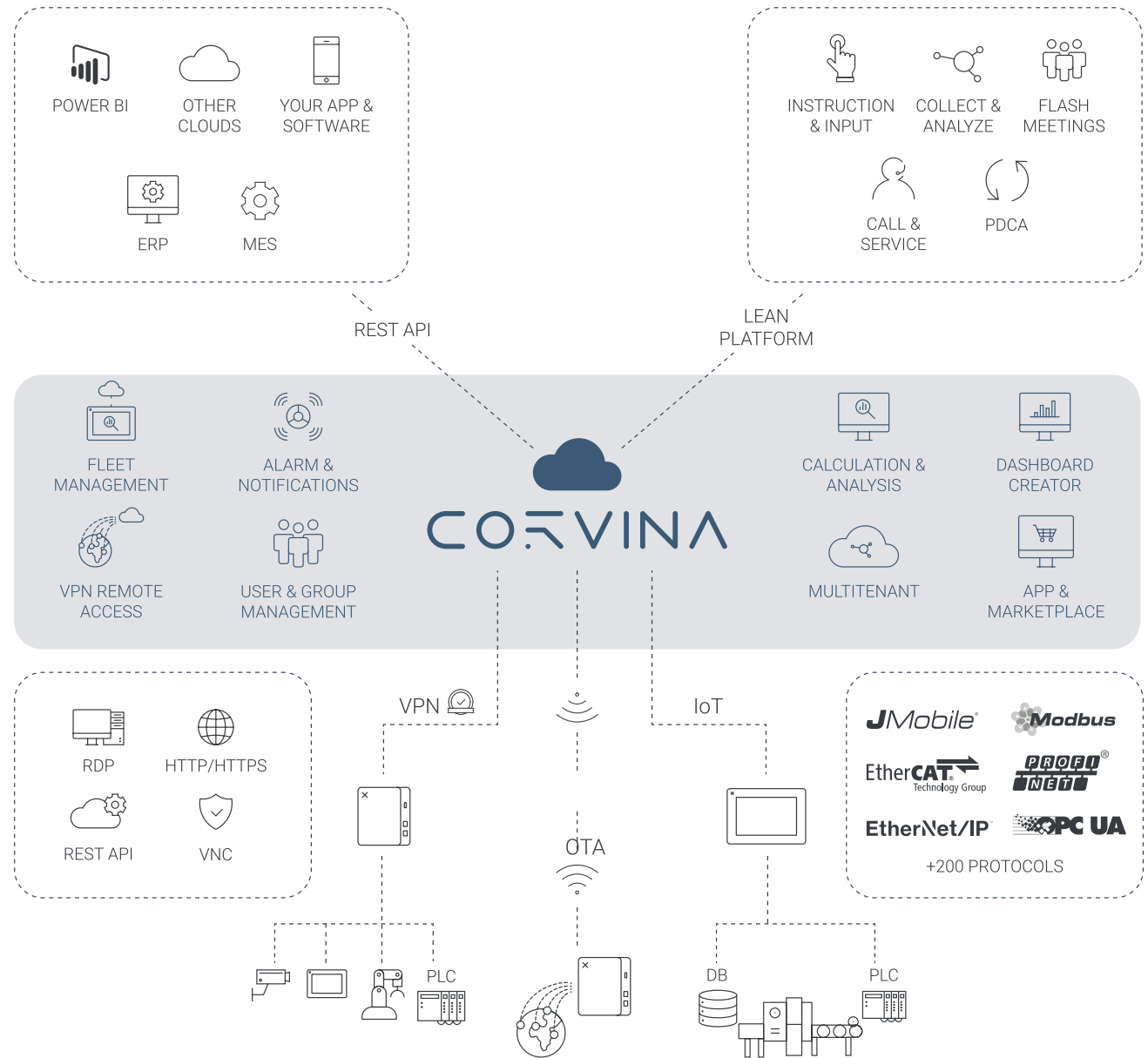
Customize dashboard with implementing widget, kpi, data analysis functions. Offering great deal of flexibility. Data is not tied to resources or methods.

FINE GRAIN ACCESS

Highly specific access constraints to data and function.

DASHBOARD CREATOR & UI CUSTOMIZATION

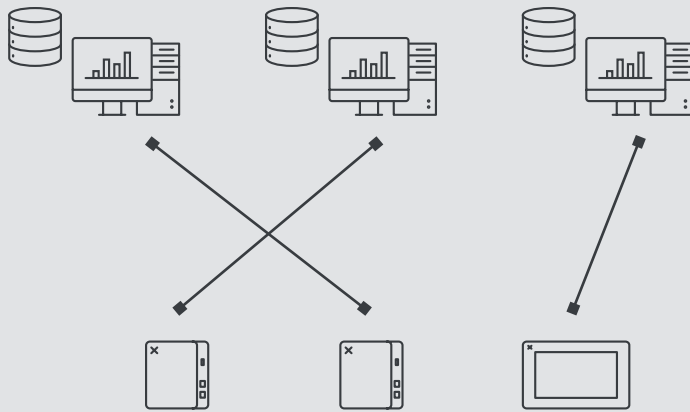
Autonomously increase profits creating dashboard that shows you relevant data for your business. Placing the visual design in line with your brand provides good secondary sales.



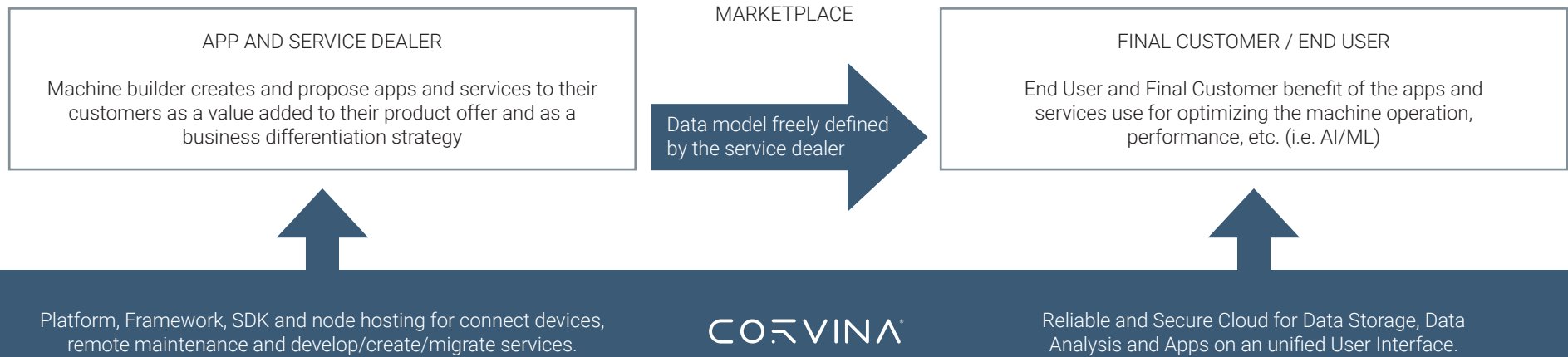
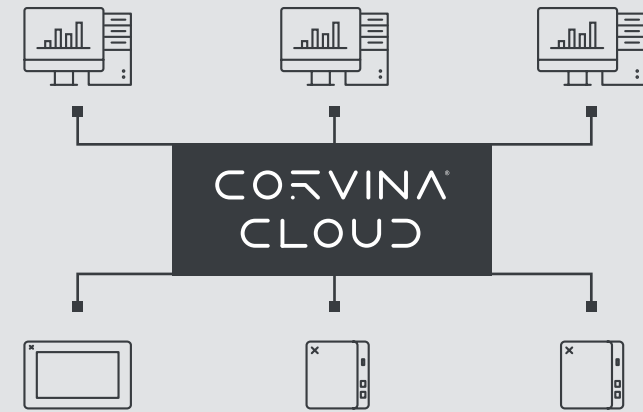
Apps and Marketplace

CORVINA allows to implement and deploy services and apps inside the platform as internal tools or as value added or market differentiator for the product. A unique access to the Cloud platform allows tenants to access to their application, service or complex analytics in a uniformed and harmonic visualization. There is no limit in the application and service that can be implemented.

LEGACY SERVICES













APPS AND SERVICES WITH CORVINA

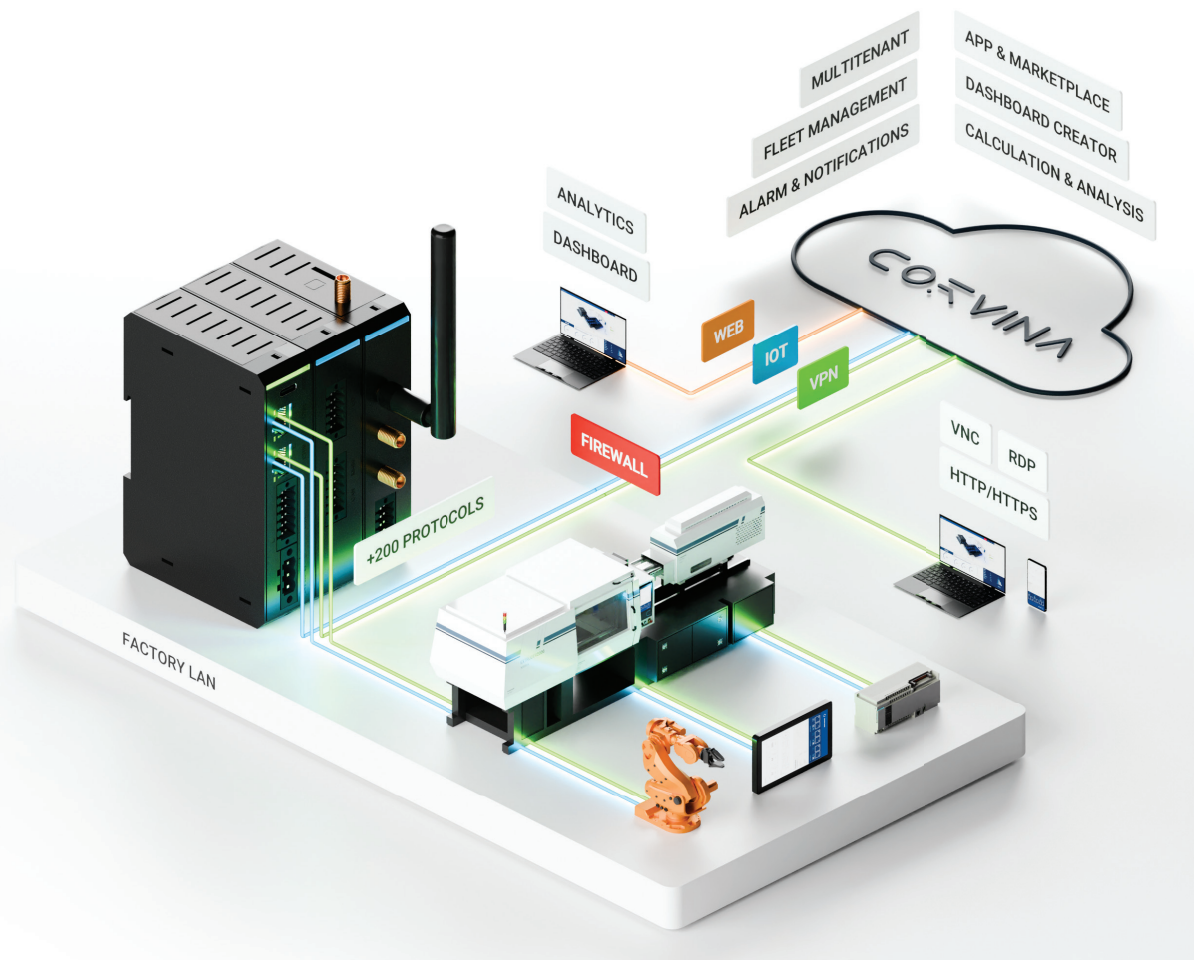


Applications

Overview of the CORVINA applications so far.

<p>Remote Access VPN</p> 	<p>Industrial Fleet Management</p> 	<p>Advanced Documentation</p> 	<p>Predictive Maintenance</p> 
<p>Remote Monitoring</p> 	<p>Condition Monitoring</p> 	<p>Lean Machine Analytics</p> 	<p>Energy Efficiency</p> 
<p>Performance Consultancy</p> 	<p>Shift Management</p> 	<p>Custom Apps</p>	<p>Future Apps</p>

Hardware



MicroEdge Series VPN & IIoT gateways

Modular and scalable technology to connect your machinery and enable after-sales services.

MicroEdge serves as **the bridge between the OT and IT worlds**, a compact and lightweight device designed as an Edge Controller - IoT Gateway, ideal for building efficient and data-intensive IoT solutions. With compatibility across a wide range of communication protocols, this device **simplifies integration with existing installations** and excels as a **perfect technology for translating industrial protocols**.

MicroEdge, available in three variants, caters to the needs of machine manufacturers, enabling remote connectivity, data collection, and both **Edge and Cloud Computing**.

This duality allows for a highly flexible use of the device, ensuring low latency by **processing data close to the source**, while also harnessing the **power of a robust industrial cloud**.



Remote Access

Only outgoing connections through VPN



Data Acquisition

Field data collected directly from the machines



Protocol conversion

across more than 200 industrial drivers



CyberSecurity

Aligned with the latest cybersecurity guidelines

Hardware

	Model	MicroEdge Basic	MicroEdge Plus*
Technical Data	CPU	ARM Cortex Single Core	ARM Cortex Quad Core
	Flash	4 GB	8 GB
	RAM	512 MB	2 GB
	FRAM & Real Time Clock	✓	✓
	Status Led & Buzzer	✓	✓
	Ethernet	2 - 10/100 BaseT	2 - 10/100 BaseT
	USB	1 - USB 2.0 OTG	1 - USB 2.0 OTG
	RS485 (Isolated)	1	1
	CAN (Isolated)	1	1
	Modules compatibility	4G / Wi-Fi	✓
Serial / CAN Ports Extender (Isolated)			✓

* Preliminary Technical Data.



Software

	Configuration	Description
MicroEdge Basic	VPN	MicroEdge Basic - Modular Edge Gateway + Corvina VPN LifeTime Activation Key
	JMX	MicroEdge Basic - Modular Edge Gateway + JMobile Runtime License
	IoT	MicroEdge Basic - Modular Edge Gateway + JMobile Runtime License + Corvina VPN LifeTime Activation Key
MicroEdge Plus	JMX	MicroEdge Plus - Advanced Modular Edge Gateway + JMobile Runtime License
	IoT	MicroEdge Plus - Advanced Modular Edge Gateway + JMobile Runtime License + Corvina VPN LifeTime Activation Key



Industrial Automation Platform

