



Connecting People, Equipment and
Business Processes, all Fundamental
to Improving Operational Efficiency

PACSystems™ Edge Solutions

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Accelerate your digital transformation with intuitive,
scalable edge solutions in fit-for-purpose packages.

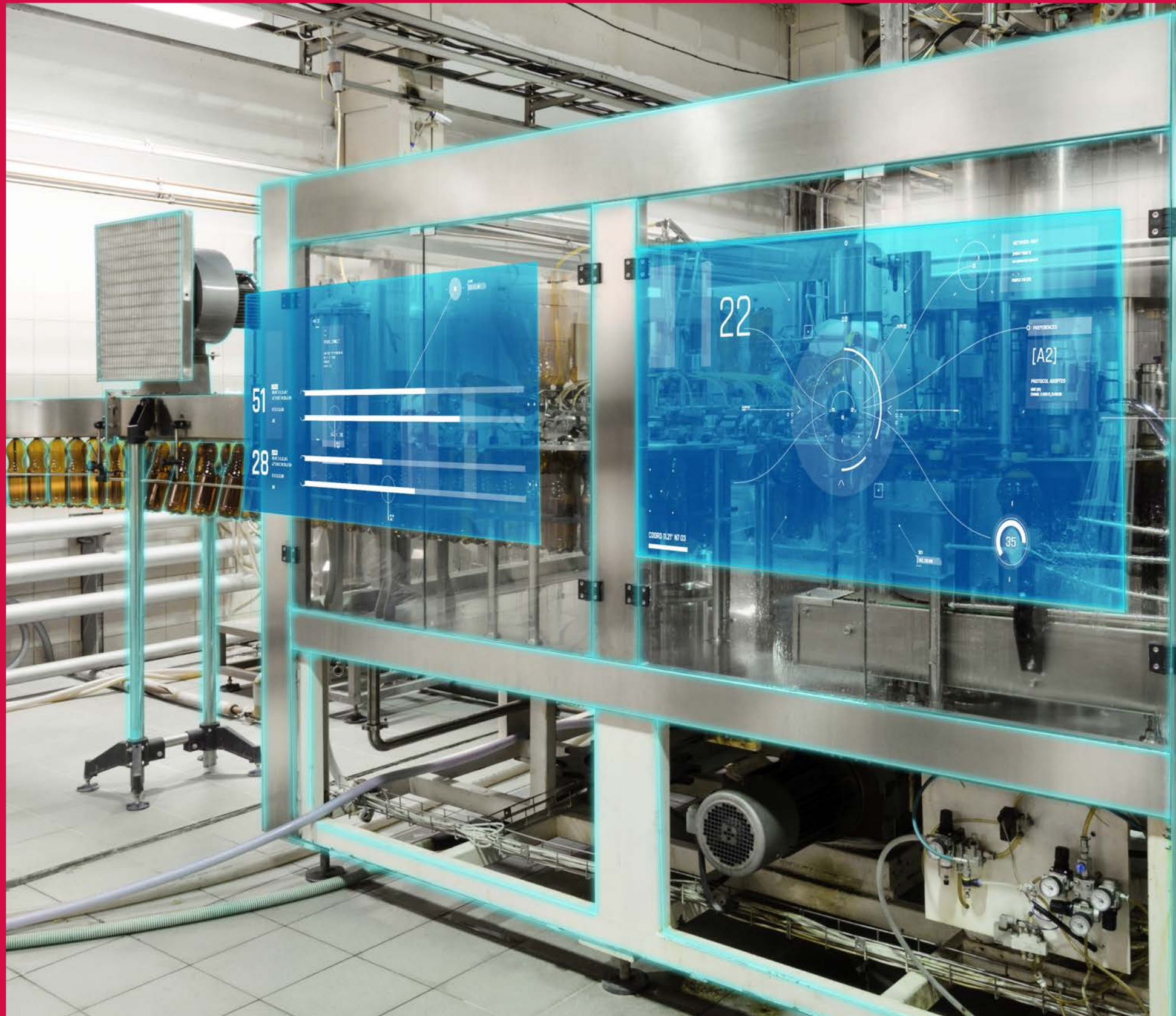


Rich data is available from every corner of the plant, but how do you turn that data into information you can use today?

Production equipment can provide operations and machinery health data that is critical to improving efficiency, productivity, and performance. But even if you can spare the time to collect that data manually, you typically need a crew of analysts to transform data into actionable insights.

Today's smart technologies make the process of collecting data easier, but plants typically use many different systems to meet a wide variety of needs. Those systems need to be connected to trend, analyze, and contextualize data and turn it into insights that improve day-to-day decision making in the plant and at the enterprise. Selecting those systems and then configuring them to work seamlessly together is both complex and time consuming.

Without an open way to connect, collect, and analyze data, systems quickly become unwieldy to deploy and scale, leaving you spending more time implementing data collection than realizing results.



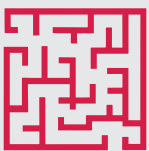
By 2025, 75% of enterprise-generated data will be created and processed at the edge — outside a traditional data center or cloud.
– Gartner 2018



“As more than half the global economy turns digital by 2023, a new species of enterprise will be required to compete and thrive.”
– Frank Gens, senior VP and chief analyst at IDC



Only 30% of companies successfully navigate a digital transformation.
– Boston Consulting Group



How much could you improve performance if you could intuitively connect, collect, and analyze data across your entire organization to turn it into actionable insight?

PACSystems™ Edge Solutions provide natively integrated hardware and software packages to simplify selection, deployment, and validation of IIoT projects to help operators make faster, better decisions.



Engineered with ease of use, flexibility, and scalability in mind, PACSystems Edge Solutions are optimized combinations of Emerson’s industry-leading edge software and industrial computing hardware.



PACSystems Edge Solutions connect to all the smart equipment across your organization and present it as intuitive, actionable information available wherever your personnel may be.

Know the health of your plant at a glance.

Connect to any field device, control system, or other disparate data source to collect data, perform advanced edge analytics or machine learning, and present that information in real-time on a single, common HMI from machine to line level.

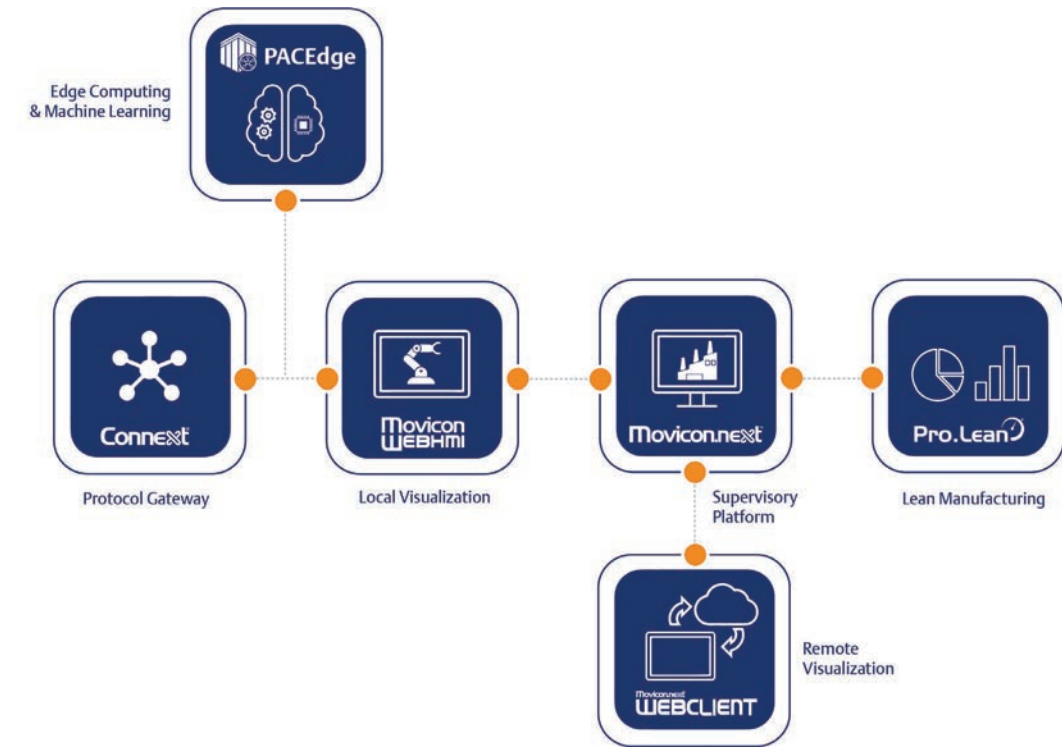
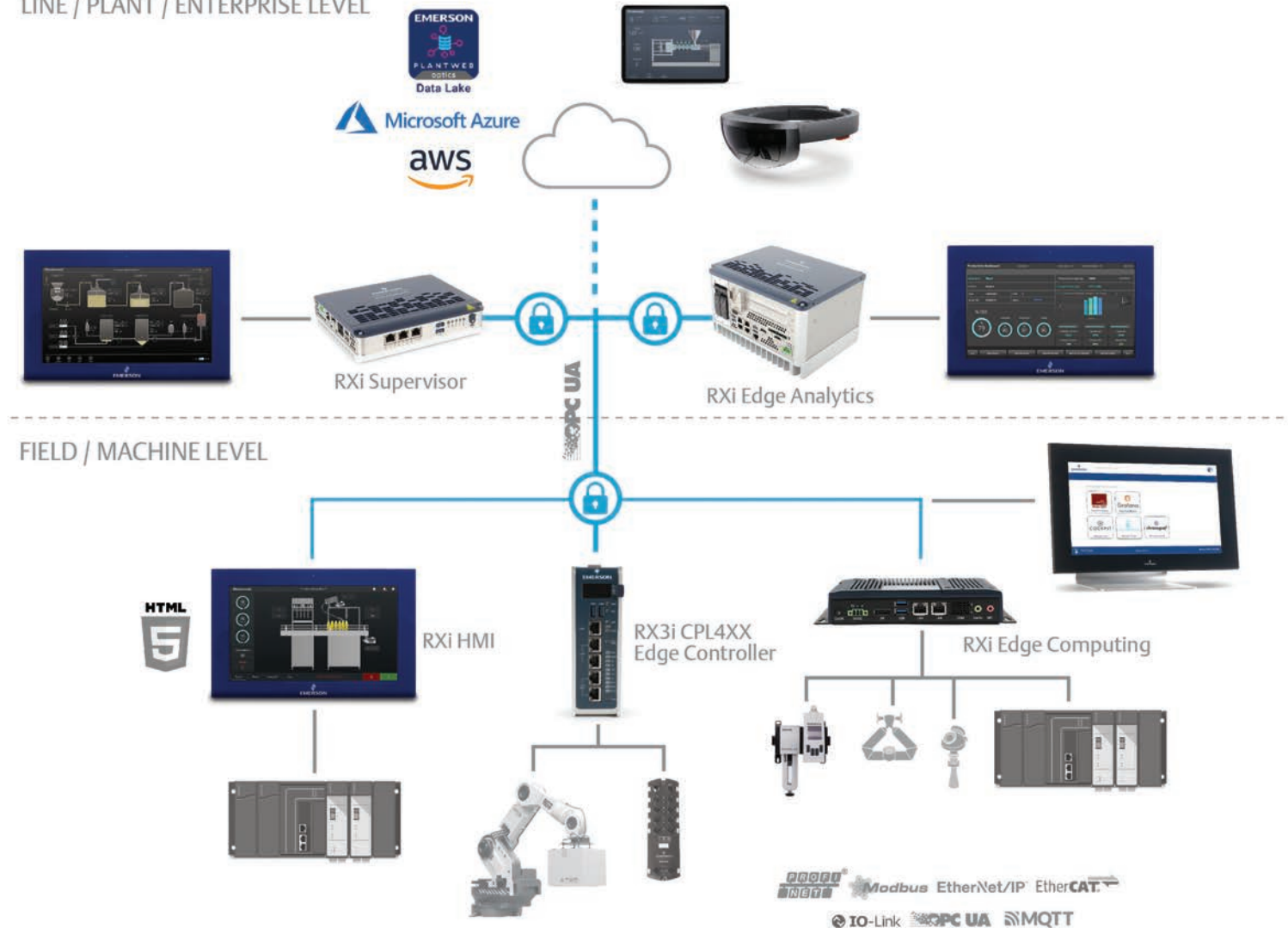
Integrated for ease of use.

PACSystems Edge Solutions fully integrate the Movicon.NExT™ platform with the PACEdge™ industrial edge platform to create a flexible toolset with leading open-source tools, easy OT connectivity, scalable visualization, and built-in cloud and IT connections.

Scalable solutions from low footprint edge computing to full plant analysis.

Powered by Movicon.NExT™ Software

LINE / PLANT / ENTERPRISE LEVEL



RXi Supervisor

Movicon.NExT enabled IPC to connect plant assets and production data into a comprehensive, real-time view of production operations with anywhere-access visualization.



RXi Edge Analytics

Movicon Pro.Lean™ enabled IPC to simplify access and visibility of plant productivity and performance with intuitive, pre-configured analytics.



RXi HMI

Movicon WebHMI enabled operator interface to improve visibility into machine operation and performance, and empowering operators with quick access to critical information.



RX3i Edge Controller

Unlocking real-time process optimization through high-speed, deterministic control and machine intelligence in a single device, powered by PACEdge™ and Movicon platforms.



RXi Edge Computing

PACEdge platform enabled IPC to harness data from any source to deliver real-time insights and machine learning to help the plant more quickly and easily diagnose complex production issues.

Simplify SCADA with innovative and flexible Movicon™ software to unlock Industry 4.0.

RXi Supervisor



Easily access performance insights

See how assets or production lines are performing — from on the plant floor or from anywhere across the globe. Automatically generated trends and charts provide visibility through intuitive HMIs on local displays, or through secure access via web client on any mobile device.



Comprehensive data collection across various data sources

A vendor-neutral software interface makes it easy to retrofit edge solutions into existing infrastructure. Eliminate time spent manually collecting data and the errors that can result during data transcription, regardless of equipment type.



Know asset health before it becomes a problem

Fully customizable alarms and event notifications improve visibility of asset health. Remote alarm management via mobile device helps operators stay aware of impending problems before they become serious.



Accelerate deployment

Ready-to-configure devices go from power on to project import in less than 15 minutes. Simply customize the solution with the installation wizard and bring the system online, with no need to spend time activating licenses or generating extensive tag lists.



Open, flexible platform

PACSystems Edge Solutions fully integrate OPC UA for open connectivity to connect any field device to any SCADA/MES/ERP application, record data in a database, or send it to the cloud. Multiple native PLC protocols help OT and IT connect effortlessly to all equipment across the plant or enterprise.

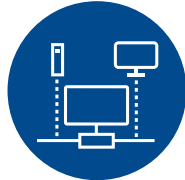
Improve productivity by augmenting the power of RXi Supervisor with the analytics of Pro.Lean.



RXi Edge Analytics



Mobile, intuitive access to KPIs, OEE values, alarms, and more make it easy to increase productivity across the plant or across the enterprise.



PACSystems Edge Solutions are designed to connect to any automation system in the manufacturing industry.



Better visibility and improved decision support reduce waste, increasing productivity while helping meet regulatory requirements.



Track, trend, and predict asset health to intervene and replace critical equipment before malfunction causes an outage or safety incident.



Improve time-to-insights

RXi Edge Analytics' easy to use, flexible wizards — powered by Movicon.NEXT — instantly create projects and identify production inefficiencies affecting productivity and performance. Intuitive displays unlock real-time awareness of production data while powerful reporting tools provide detailed production analysis — from a single machine to the entire plant.



Spend time producing, not analyzing

Access to insights shouldn't tie up key personnel for hours, days, or weeks. RXi Edge Analytics automatically generates KPI indexes, overall equipment effectiveness (OEE) values, and production time analysis to maximize production while real-time analytics help identify the production bottlenecks that keep operations from meeting their true potential.

Improve productivity with real-time analytics from Movicon Pro.Lean.



Downtime analysis: Identify and eliminate recurring production issues with real-time KPIs that calculate downtime and track and schedule production.



Isolate production problems: Identify bottlenecks and improve operational efficiency with powerful built-in algorithms that help identify root cause of performance and operational issues.



Improved production efficiency: Comprehensive setup wizards ensure you collect the right data to unlock greater utilization of assets and lower operating costs.

Build flexible, intuitive machines for easier operations with Movicon WebHMI enabled operator interfaces



An intuitive digital interface in your hand and on your machines

The most valuable interfaces are the ones personnel already know how to use. Emerson's PACSystems RXi HMI provides smartphone-style performance in a rugged interface built for the factory environment. Experience better visibility with realistic and vivid 2D representations of equipment powered by HTML5 graphics. Bright screens are easy to view in all lighting environments and provide fast responses to intuitive touch commands.



Easy visibility from anywhere you may be

Travel, social distancing, and even weather events can stand between staff and the information they need to minimize downtime. Whether they are inside the factory or across the globe, personnel can instantly access PACSystems RXi machine interfaces to gather critical information. Scalable graphics unlock secure, web-based remote access from phones, tablets, or PCs to provide digital workers the tools they need to comprehensively diagnose issues from anywhere.



Empower personnel to diagnose and troubleshoot issues

Today's factory personnel are digital natives. Emerson's PACSystems RXi HMI provides them the tools they need to quickly and easily troubleshoot production challenges and minimize downtime.

- **Remote alarms:** Ensure operators, engineers, and maintenance have constant situational awareness
- **Real-time and historical data trending:** Provide personnel the insights they need to make better, safer, and faster decisions

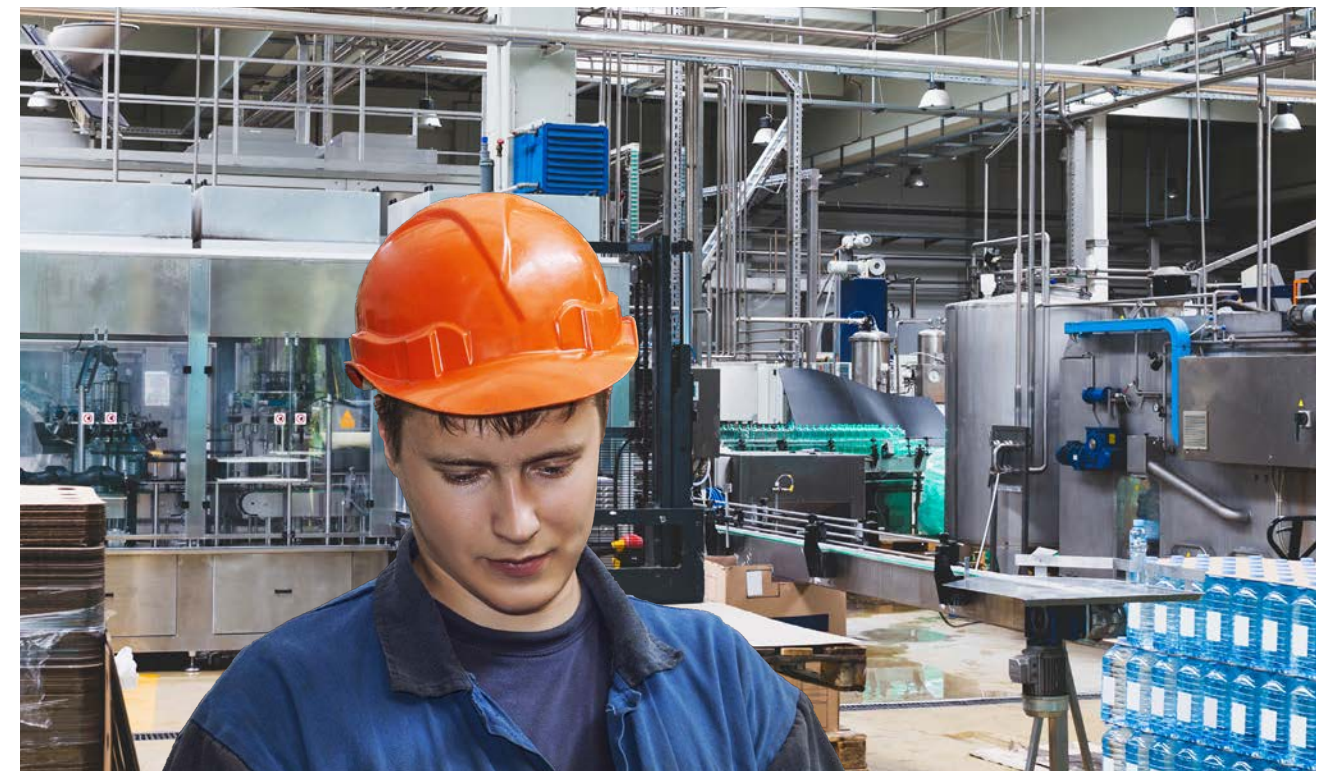


Open connectivity across services and devices

Your facility has a wide range of devices and systems and optimizing production means leveraging data from as many of them as possible. Easy, open connectivity to local systems and the cloud helps ensure you are ready to connect to predictive diagnostics and other services. OPC UA architecture and extensive protocol support helps you leverage the tools you use today, plus any you may need in the future. Collect data from disparate sources to generate intuitive displays that help you actively predict performance.

Drive efficiency and productivity with intuitive, engaging interfaces

Today's workforce are digital natives, accustomed to always-on connectivity via highly-engaging, easy to operate visual interfaces. Attract and retain the best talent with tools that help them make the best decisions and operate from anywhere. Emerson's PACSystems RXi HMI provides a best-in-class user interface that feels like an extension of the same mobile tools personnel use every day.



Eliminate unplanned outages and improve quality and efficiency.

RX3i Edge Controller



Real-time deterministic control and industrial edge computing all in one package

Edge control solutions combine powerful real-time deterministic control capabilities with data processing, logging, and analytics all in one box. With Emerson's PACSystems™ RX3i Edge Controller, you can collect data from disparate sources and analyze them at the industrial edge next to the control and feed the results back to the real-time deterministic controls to optimize the machine or process for better outcomes in a safe, cooperative manner.



Better visibility wherever you are

Gain better visibility with HTML5-based machine visualization. There is no need for separate machine HMIs with machine visualization capability right at the edge – see the status of your machine either from your mobile device or attach a web panel to the controller to visualize your machine right from the cabinet.



Data where it is most useful

- Collect data from disparate sources – traditional controls as well as smart sensors and devices
- Store and analyze data locally
- Manage data on the local intranet
- Natively send data to IT environments including enterprise and the cloud.

Logical separation between edge connectivity and deterministic control improves access to data across the enterprise without increasing the vulnerability of critical systems.

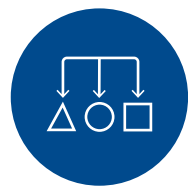
Accelerate the development of IIoT applications at the edge.

RXi Edge Computing



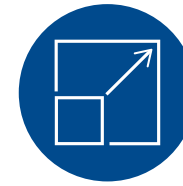
Utilize industrial edge computing to achieve next generation business outcomes

Increasing revenue, reducing operating costs and building better products are the leading business drivers behind the next generation of Industry 4.0 applications. To accomplish these, companies are developing applications that achieve energy reduction, out-of-spec quality analysis, labor workflow optimization, and equipment remote monitoring to name a few. But doing so effectively requires the power of edge computing to meet solution requirements, reduce complexity, maintain compliance, and scale over time.



Less complex implementation

Whether you are developing an application for energy management, machine health, workforce optimization, or product quality, you need development, deployment, and management of that application to be as simple as possible. PACSystems Edge Computing combines the intuitive but powerful PACEdge IIoT application development environment with industrial edge computing hardware. The combination of easy-to-use function block programming with hardware specifically built for connectivity between industrial and IT environments greatly reduces the time between ideas and results.



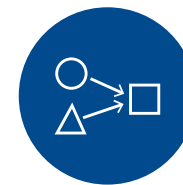
Ready to scale

When you're ready to take your solution from pilot to enterprise you need the ability to easily scale. Whether the need is contextualizing the data, synchronizing data sources, or consistent data reliability across your enterprise, PACSystems Edge Computing will allow you to unlock the high repeatability you need with minimal impact to your existing operations.



Turn raw data into actionable information

Gleaning actionable insight from the mountains of data generated by your solution is challenging. PACSystems Edge Computing allows you to sort, filter, contextualize, and visualize data in ways that allow users to immediately recognize opportunities and challenges often hidden within a sea of data. These insights can then be used to reduce energy costs, improve machine performance, increase labor utilization, and improve product quality.



Highly dynamic solutions

Both modern and legacy equipment provide valuable data, but it is hard to use unless you can gather it efficiently, add relevant context, process for mathematical analysis, execute machine learning, visualize the results, and centralize it for access by all stakeholders.

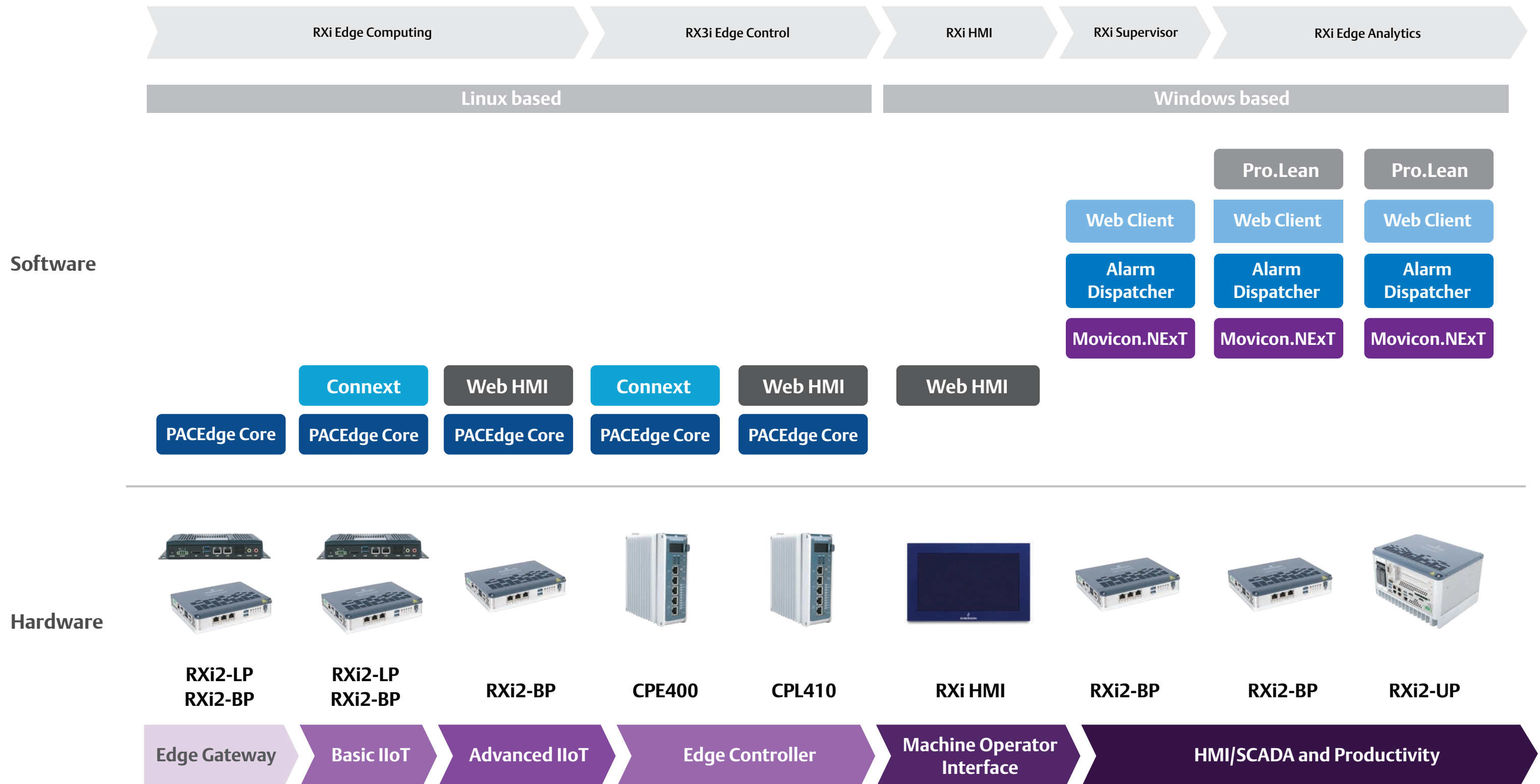


Connectivity from the plant floor to the enterprise

Bring all your equipment into one environment to analyze locally or use connectivity to the enterprise or cloud to unlock advanced tools such as enterprise reporting or multivariate analysis using artificial intelligence and machine learning.

PACSystems™ Edge Solutions

Powered by Movicon.NExT™ Software



The foundation of PACSystems Edge Solutions is the wide variety of RXi technologies that come together to create a customized architecture for your plant. Mix and match PACSystems Edge technologies to build a comprehensive, cost-effective solution to meet the unique needs of your environment.

Powerful edge solutions with the flexibility to grow when you do.



From low footprint connectivity and computing to plantwide analytics and supervision, the PACSystems Edge Solutions portfolio delivers a scalable range of edge capabilities in fit-for-purpose packages. Access to critical data and analytics right at the point of generation will empower your personnel to take fast, informed action to improve production.

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