Cal/Amp®

E-Book

Why Equipment Manufacturers Need Industrial IoT

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What is Industrial IoT and Why is it Used?

Industrial IoT (IIoT) refers to devices, sensors, and industrial applications networked together via Internet connectivity to collect, exchange, and analyze data.

For Industrial OEMs, gateways and sensors mounted on equipment in the field collect real-world data that is fed into various systems to better inform decision-making. Devices used to collect data are purpose-built for rugged environments, offering shock resistance, extreme operating temperature support, and IP ratings for dust and water ingress protection. IIoT adopters utilize these capabilities to achieve operational visibility, productivity, efficiency, financial, and other benefits.

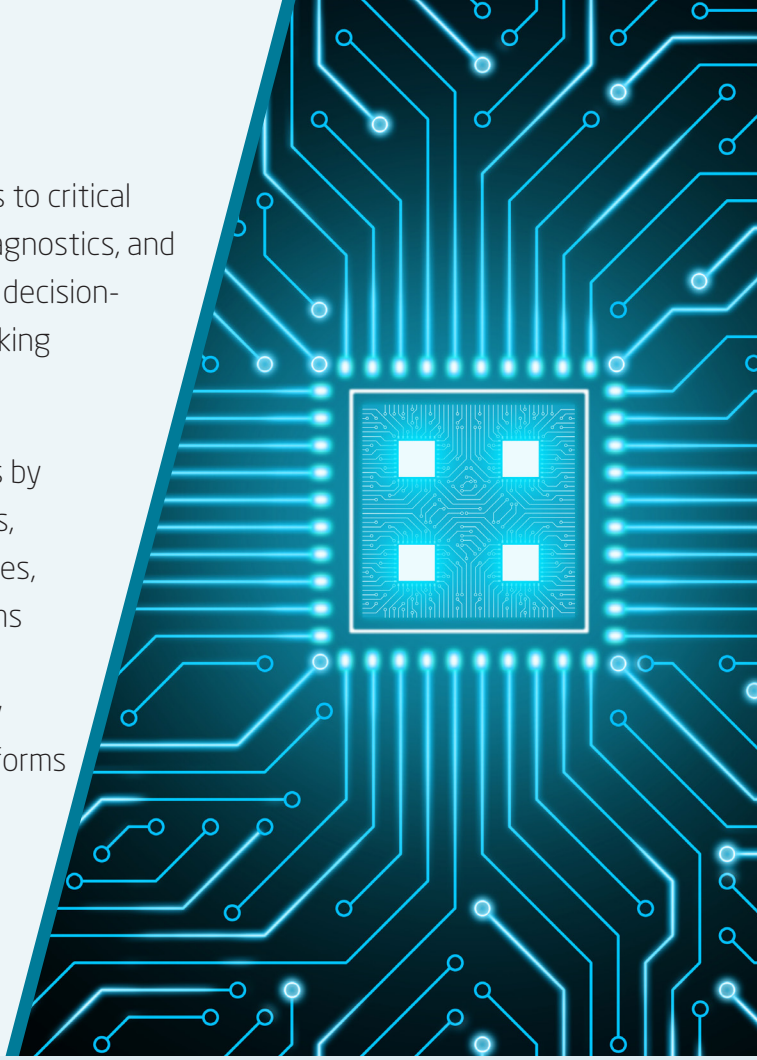
Who Uses IIoT?

The world's largest industrial equipment manufacturers in construction, agriculture, manufacturing, and other industries are contributing to this momentum, increasingly relying on connected technology to deliver critical insights that impact top-line and bottom-line financial performance. This document outlines the business case for industrial equipment manufacturers adopting IIoT.

Remove Guesswork in Design and Testing

Product development teams often have limited or no access to critical data on equipment utilization, location, maintenance and diagnostics, and warranty-related details. This dearth of information hinders decision-making, forcing manufacturers to act on assumptions in making consequential decisions.

Reliable IIoT technology helps OEMs tackle these challenges by centralizing valuable data on asset history, utilization, trends, location, mileage traveled, hours of service, diagnostics codes, service records, and more. With accurate data, product teams can avoid guesswork before finalizing potentially costly decisions about design, component selection, and warranty coverage. The knowledge gained from precise field data informs feature trade-off decisions, helps target and streamline functional design and testing efforts, and avoids inclusion of unnecessary components in the final bill of materials.



Bolster Maintenance and Support

A lack of centralized maintenance, diagnostics, and usage data hamstrings customer support teams' efforts to troubleshoot problems in the field, uncover recurring failures, and provide necessary warranty claim support. Inability to remotely deploy firmware and machine configuration updates exacerbates these problems, leading to added support costs for OEMs and dealers and unnecessary downtime for customers.

IIoT gives support teams usage data for warranty coverage validation. Remote troubleshooting capability with over-the-air updates expedite root cause analysis and resolution for both localized and recurring issues.

Enabling technologies, such as CalAmp EdgeCore with EdgeApp development capabilities, benefit OEM customers' maintenance programs as well by streamlining mobile app and 3rd party sensor integration. By capturing better data and provisioning it for customers to easily consume, OEMs enable users to employ more effective preventive maintenance programs. In doing so, users can avoid downtime, increase productivity, and maximize their return on equipment investments. Customers can even boost resale value by producing comprehensive service records for older equipment.

Find New Revenue Streams and Improve Cash Flow

Beyond informing design and testing decisions and empowering support personnel to operate more efficiently, field data provides a catalyst for increasing revenue as well. Specifically, automated notifications based on pre-defined usage and maintenance triggers can initiate targeted customer communications with timely offers for replacement parts, service, and equipment upgrades. When there is an immediate or looming customer need, the right offers become significantly more effective. OEMs have the option to act on this information directly and/or make it available to partners on a subscription basis.

In addition to top-line growth, the right IIoT solution can also help finance teams resolve nagging cash flow problems. By derating systems operated by customers with egregious payment behavior, OEMs can compel immediate corrective action by customers. Anecdotally, using this strategy, one large CalAmp OEM customer realized a 75% reduction in customer delinquency (over 120 days late), totaling $450 million.

Build a More Competitive Solution and Boost Customer Satisfaction

A number of IIoT capabilities, some mentioned previously, help OEMs bring a more competitive solution to market. The resulting improvements in maintenance management, asset utilization, breadth of data, and user interface and experience significantly boost value perceived by OEM customers.

Capability	Enabled By	OEM Customer Impact
Remote troubleshooting	• Diagnostic codes • Alerts • Usage history • Maintenance records • 3rd party sensor integration	• Reduced downtime/costs • Increase resale value
Preventive maintenance		
Asset location	• GNSS • Reverse geocoding • Geofence support/alerts	• Theft avoidance/mitigation • Proof of delivery • Increased productivity (not hunting for equipment) • Proof of service
Asset utilization	• Usage history	• Maximize ROI
Mobile app support	• Purpose-built firmware • Advanced app development tools	• Precision asset fleet management
Easier integration of 3rd party sensors		• Breadth of data for precision asset fleet management
Tiered performance settings		• Enables equipment rental companies to map functionality to tiered pricing (e.g., boom lift can only reach a certain height at a lower price)
Over-the-air updates		• Resolve maintenance issues faster • Access new features
Equipment operator tracking		• Track performance indicators (e.g., engine RPMs, hydraulic pressure, oil temperature) to identify training and coaching needs • Reduce maintenance costs

CalAmp is a global leader in IIoT technology, providing industry leaders such as Caterpillar, Kubota, Bobcat, and Toro with reliable solutions that perform day in and day out in harsh environments. We offer a complete array of rugged IoT solutions to capture the right data to make more informed decisions, reduce costs, fuel new business opportunities, and propel your business.

Contact us today to discuss your Industrial IoT needs.

About CalAmp

CalAmp (Nasdaq: CAMP) provides flexible solutions to help organizations worldwide monitor, track and protect their vital assets. Our unique combination of software, devices and platform enables over 14,000 commercial and government organizations worldwide to increase efficiency, safety and transparency while accommodating the unique ways they do business. With over 10 million active edge devices and 275+ issued or pending patents, CalAmp is the telematics leader organizations turn to for innovation and dependability. For more information, visit calamp.com, or LinkedIn, Facebook, Twitter, YouTube or CalAmp Blog.

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15635 Alton Parkway, Ste 250, Irvine, CA 92618
Tel: 888.3CALAMP • calamp.com

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