

# Applied IoT Connect™

## Solutions for Connected Industrial Operations

Applied Industrial Technologies



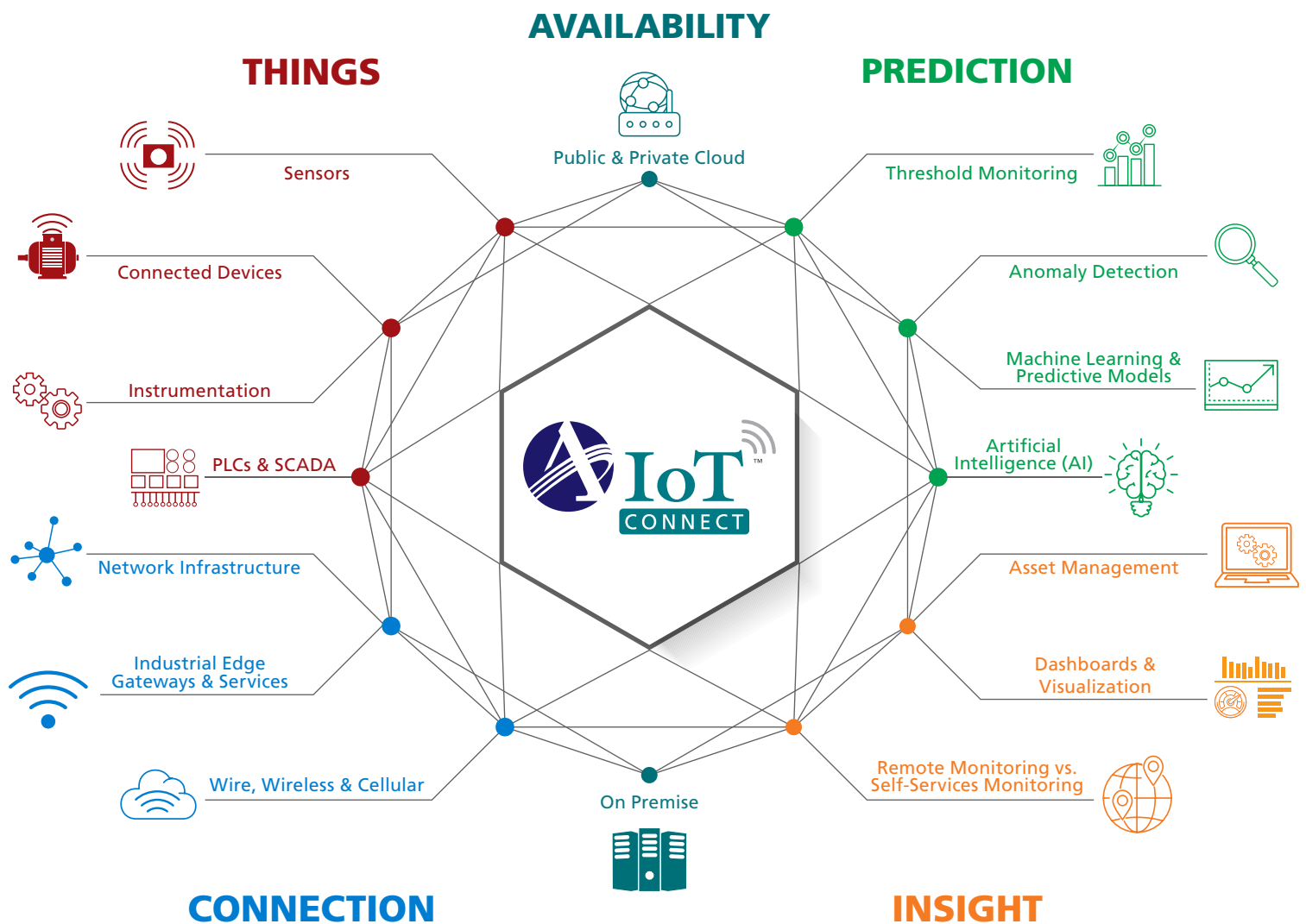


# Connected Solutions for Predictive and Preventative Maintenance

**The Applied IoT Connect™** program engages our best suppliers to deliver smart products and systems that improve predictive and preventative maintenance, enable remote machine monitoring and provide more automated and connected organizations.

As a valued distributor of smart solutions and next generation automation, Applied Industrial Technologies plays an integral role in fully connected industrial solutions. Our comprehensive portfolio of technical service capabilities and premier engineered solution expertise ranges from components and technology solutions to machine automation systems.

As digitization and technology requirements become ever-changing, rely on Applied® to be your full-service, value-added provider of innovative technologies.





### ABB Ability™ Smart Sensor for Motors



ABB Ability™ Smart Sensor for motors transforms simple motors into intelligent machines that tell you when they need servicing. Smart sensors are remote condition monitoring devices that attach to the frame of the motor. They provide information on operating and condition parameters, such as vibration, temperature, overload and bearing condition. The data is analyzed by a specifically developed software program and provided to the plant operator for maintenance planning.

#### Features and Benefits

- Available in retrofit kits or packaged with Baldor-Reliance motors
- Sensor is mounted to the exterior of the frame of the motor
- Wireless connectivity to secure servers provides easy-to-use remote monitoring
- Purchase includes three-year subscription to data analyses
- Analyzed data accessible by smartphone, tablet or PC

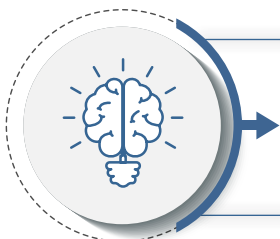
### ABB Ability™ Smart Sensor for Mechanical Products



The ABB Ability™ Smart Sensor for mechanical products is an easy-to-use, wireless sensor that monitors the health of Dodge mounted bearings and gear reducers. The sensor gives warnings on decreasing health status, which allows for planned maintenance before there is a problem. The ability to monitor mechanical products remotely allows maintenance and other relevant personnel to safely perform a health check without touching equipment.

#### Features and Benefits

- Increase safety
- Increase productivity
- Reduce maintenance
- Eliminate unplanned stops
- Easy to use



Developments in Artificial Intelligence, Smart Machines, Embedded Intelligence, Machine Learning and Data Analytics are changing and significantly affecting how condition monitoring data is collected, processed and presented to users.





Belt condition monitoring ensures safe and cost effective operation of the conveyor system.

## Continental Belt Monitoring Systems



Continental Conveyor Belt Monitoring Systems generate an overall picture of conveyor belt health. Reliable belt monitoring tools can easily be adjusted to accommodate the typical changes that occur over the life of a conveyor belt. Belt condition reports are generated by Continental's monitoring software. Any detected issues while the belt is in operation are identified and prioritized for maintenance and repair by the system based upon the size and position of the damage.

### Features and Benefits

- Reduces risk of catastrophic belt failure
- Monitors over entire belt life cycle
- Best-in-class sensor technology
- Reliability and high quality data output
- User-friendly graphical interfaces

## Continental Smart CrimpIQ™



To crimp a fitting onto a hose, simply use the touchscreen interface. Save presets, access tech support and back up your data to the cloud with the touch of a button. With full MyCrimp™ crimp specification app integration, you can easily import and store up-to-date crimp specifications with no manual entry required. CrimpCloud™ is connected via Wi-Fi or Ethernet to keep your die preferences, users and settings information secure and accessible 24/7.

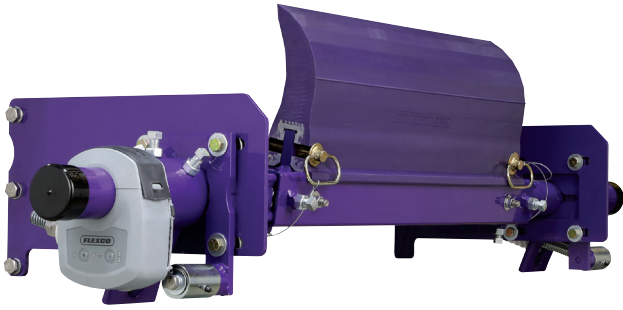
### Features and Benefits

- Secure access 24/7
- Wireless
- Screen capture capabilities
- Import and store data
- Easy to use





## Flexco Elevate™



Flexco Elevate™ belt conveyor intelligence is an innovative, real-time monitoring system that harnesses the power of predictive analytics. Mining, aggregate and cement operations can remotely gather critical insights that optimize belt conveyor productivity and heighten operational efficiencies. Flexco Elevate is a wireless platform that transfers data insights to an intuitive cloud-based dashboard, allowing remote monitoring of belt cleaners.

### Features and Benefits

- Increased productivity
- ROI from day one
- Improved safety
- Asset management
- Leverages existing assets



## Fluke Connect™



The Fluke Connect™ Asset Health Dashboard provides a simple, concise view of a facility's asset health. Get a quick snapshot of asset trends, recent alarms / activities and the status of your Fluke sensor. Quickly understand the condition of each asset and determine what to prioritize. Enable your team to use real time, historical vibration and power monitoring data to take actionable steps to prevent unplanned downtime.

### Features and Benefits

- Gain continuous monitoring of assets
- Identify the root cause faster
- Monitor equipment safely from anywhere
- Track asset health with temperature and vibration
- Examine single, split and three-phase systems

## Regal Perceptiv™ Technologies

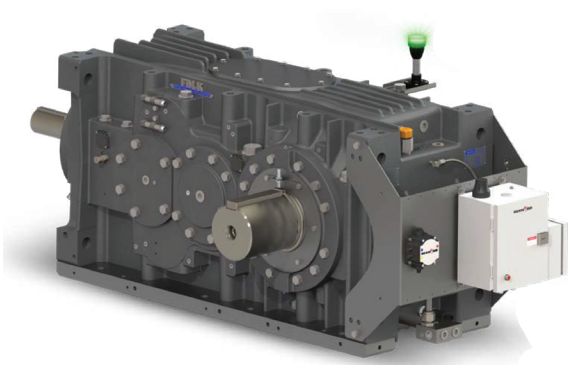


Regal combines extensive electrical and mechanical power transmission product knowledge and vast application experience along with diagnostic tools and troubleshooting expertise to provide a complete technical service. The full range of services include monitoring, diagnostics, education, design and installation to help transform data into actionable information.

### Features and Benefits

- Critical asset monitoring
- Building Management System (BMS) integration
- Maintenance system integration
- Multiple facilities, single platform
- Multiple data sources and types, single platform

## Rexnord Smart Condition Monitoring System



The Rexnord Smart Condition Monitoring System (SCMS) is offered in four tiers from entry level to comprehensive. This scalable system was created to address current priorities and budget, while extending the life of facility assets. Rexnord's SCMS uses proprietary algorithms to continuously compare sensor data against models of healthy drive operating conditions. Under abnormal conditions, contextual alerts are sent to a local visual indicator, your control system and the Rexnord Connect.

**Model 1010** – Entry Level

**Model 1020** – Oil Condition Monitoring

**Model 1050** – Comprehensive System

**Model 1150** – Cloud Connected Comprehensive System

### Features and Benefits

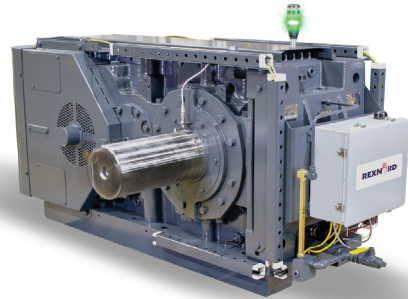
- Eliminate unnecessary maintenance costs
- Early warning system to avoid unplanned downtime
- Allow personnel to see the health of your equipment from a distance



**New Bearing App**  
All information and tools  
in one quick scan

## Rexnord Smart PT Select Mounted Spherical Roller Bearings and V-Class Gear Drive

The Rexnord Industrial Internet of Things (IIoT) Smart PT Select Mounted Spherical Roller Bearings and V-Class Gear Drive may proactively identify problems in your equipment through data collection and analysis.



## Rexnord Smart PT Select Mounted V-Class Gear Drive

### Features and Benefits

- A smart gear drive that thinks for you and talks to you
- Automation system connectivity throughout Ethernet / IP into your PLC
- IIoT Smart Gear Drive measures in real time
- Real-time snapshot of your operational status
- Reduced mean-time-to-replace (MTTR) and increased mean-time-between-failure (MTBF)
- Off-the-shelf sizes for quick turnaround needs
- Prelubricated with standard grease for normal operation

## Rexnord Smart PT Select Mounted Spherical Roller Bearings

### Features and Benefits

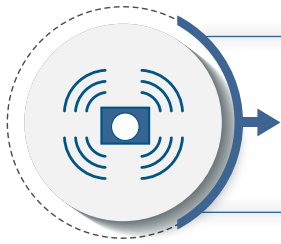
- Scan the QR Code for instant access to critical support documents
- "Self-Serve" technology connects equipment with meaningful information
- Housing design allows increased strength while optimizing material
- Off-the-shelf sizes for quick turnaround needs
- Prelubricated with standard grease for normal operation

**REXNORD**  
OUR INNOVATION MOVES



Online systems can incorporate on-board logic and decision making with machine diagnostics so that data is analyzed and screened for alarm violations automatically. Data storage can be accomplished by the end user locally or stored and accessed via the cloud.





Machine monitoring sensors offer the ability to monitor the degradation of mechanical and electrical components within rotating machine equipment, sometimes months in advance.

## SKF Pulse™



SKF Pulse™ is your entry point to predictive maintenance. It combines an easy-to-use, portable sensor with a free iOS app to monitor machine health and quickly identify machinery issues before operations are impacted. Acting as a smart vibration tool, the sensor transmits wirelessly to the SKF Pulse app, instantly providing intuitive machine diagnostics.

### Features and Benefits

- Easy start-up with no prior training or experience needed
- Quickly monitors machine health and issues
- Instant feedback from vibration and temperature measurement
- In-app SKF Pulse Checks provide expert analysis, advice and diagnostic reports
- Cost-effective price point

**SKF®**

## Schaeffler FAG SmartCheck Service Kit



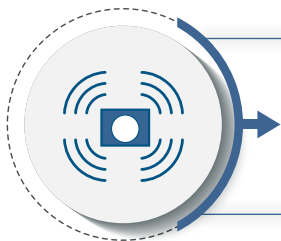
The FAG SmartCheck is a compact, modular, online measuring system for continuous, decentralized machinery and process parameter monitoring. Schaeffler offers a supplementary solution package, the FAG SmartCheck Service Kit, which is aimed specifically at users who already have initial experience of machine diagnosis.

### Features and Benefits

- Ideal for service providers, machine operators or aftersales service teams
- Simple verification and documentation of implemented maintenance and repair work
- Initial anomalies identified on routes or during offline measurements can be investigated in greater detail
- Measuring system with flexible mounting
- Derives appropriate maintenance measures from historical data

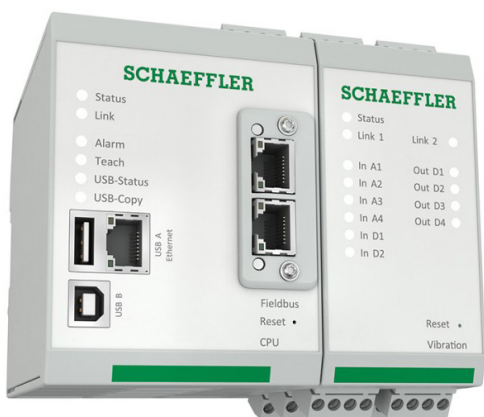
**SCHAEFFLER**





Machine monitoring sensors offer the ability to monitor the degradation of mechanical and electrical components within rotating machine equipment, sometimes months in advance.

## Schaeffler ProLink



ProLink condition monitoring system is ideal for monitoring entire production facilities. The modular design and flexible integration into existing systems combined with the high level of signal and analysis quality delivers maximum efficiency in machine and facility monitoring.

### Features and Benefits

- Foundation for Industry 4.0 solutions
- A plug-in field bus module ensures integration into every infrastructure
- Flexible scaling due to modular design
- Intuitive configuration with intelligent, machine-specific templates
- Universal gateway solutions from sensor to cloud

## Schaeffler OPTIME



Schaeffler OPTIME is an efficient and low-cost solution designed for comprehensive condition monitoring. OPTIME provides early warning of damage to machine components such as electric motors, fans and pumps. Assets can be grouped according to user requirements and their condition can be presented in a range of user-specific views.

### Features and Benefits

- Scalable wireless IoT solution
- Comprehensive and automated condition monitoring
- Cost savings compared to manual offline measurement
- Integrates several hundred assets
- Supported by Android / iOS app

# SCHAEFFLER

## Sumitomo CycloSmart®



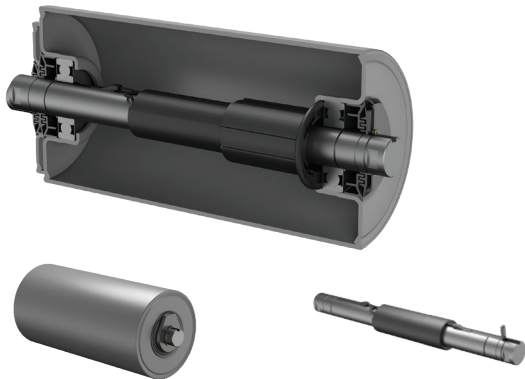
The CycloSmart® is a vibration monitoring system that provides predictive maintenance by notifying personnel via local Ethernet or broadcast if the machine needs attention. It minimizes the risk to employees, while avoiding catastrophic failures. CycloSmart increases machine uptime, enabling you to schedule convenient maintenance for your facility.

### Features and Benefits

- Vibration monitoring for critical machines
- Maintenance intervals are planned in advance
- Machine diagnostics for early warning and detection
- Lower overall ownership cost
- Multi-reducer monitoring

**Sumitomo Drive Technologies**

## PPI Smart-Idler®



Failed and failing idlers can cause conveyor belt damage, overheating temperatures and noise pollution. PPI has developed an innovative new product for the global mining sector called the Smart-Idler®. The product predicts and reports idler failure. The electronics monitor the temperature, vibration and sound within the idler and communicate this data to the gateway via wireless network. The Smart-idler is powered directly from the rotation of the Idler roller.

### Features and Benefits

- Autonomous and online 24/7 monitoring
- Preemptive detection of idler failure
- Reduction in spares inventory
- Improved operational data
- Predictive maintenance insight



## WEG Motor Scan



WEG Motor Scan measures the vibration, temperature and running hours of the electric motor diagnosing any faults. The information is uploaded to the cloud via smartphone or gateway. The data can be analyzed on the smartphone screen or on the WEG IoT Platform.

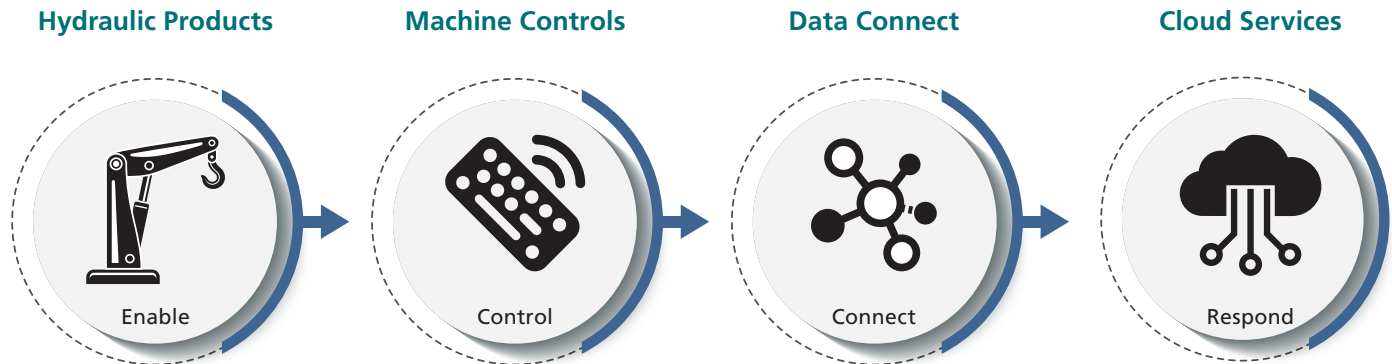
### Features and Benefits

- Ready for Industry 4.0
- Maintenance routine optimization
- Reduction in spare parts
- Increased equipment efficiency
- Downtime reduction



## Your Total Integration Solution

Machines designed for the toughest jobs in the world need a centralized power management solution that integrates quickly and efficiently to reduce build time and speed your product to market. Turn to the single source that can make it happen: the Applied Fluid Power network. Our team is ready to support your smart technology needs from telemetric monitoring and automated steering to data recording cloud environments for remote diagnostics and machine control.



## Applied Fluid Power® and IIoT Predictive Maintenance Technology

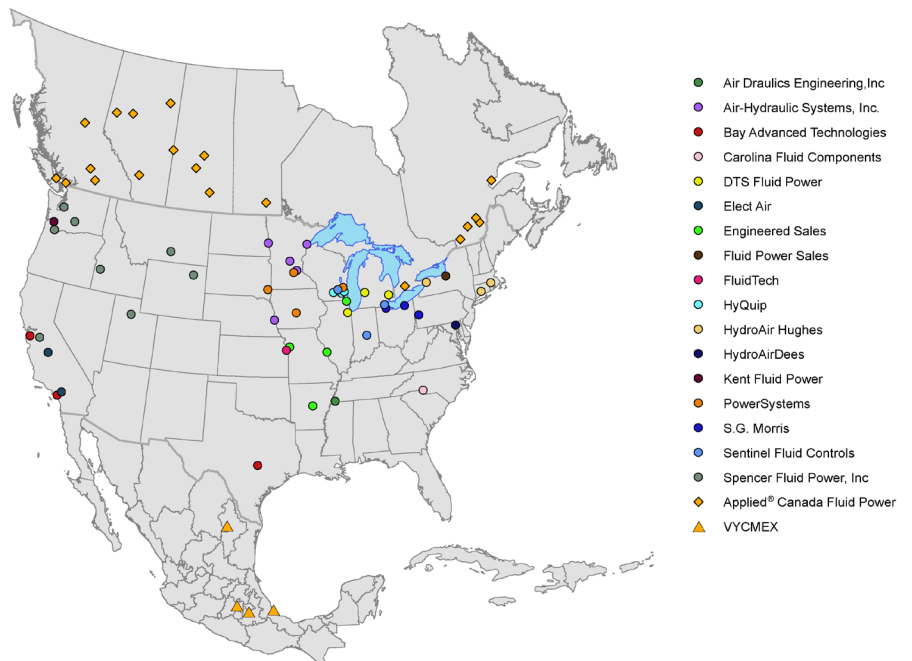
### ADD SENSORS DURING REPAIR!

Add IIoT sensors to your gearboxes, cylinders, lube systems and power units while they are in an Applied Fluid Power shop for repair! These sensors provide predictive maintenance, giving you advanced warning when pieces of your equipment are about to fail.

#### Features and Benefits

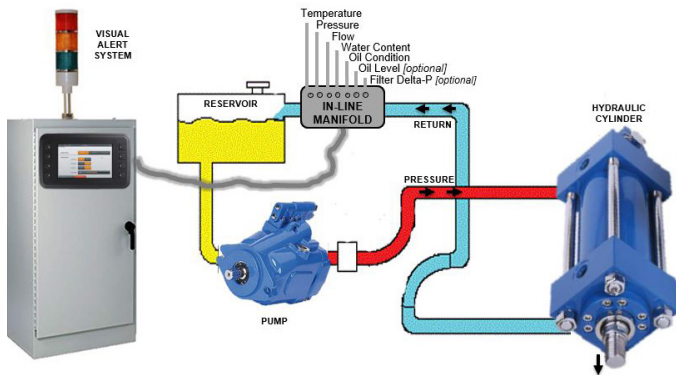
- Temperature sensors monitor the temperature of the hydraulic oil
- Level sensors are used to continuously monitor the level in the reservoir
- Bearing sensors monitor temperature and vibration
- Pressure sensors provide the information necessary to control the valves via the system pressure in the hydraulic circuit

70+ Locations; More than 1,000 Associates Ready to Help You Improve the Performance of your Machines





## Applied Fluid Power® Total Monitoring System (TMS)



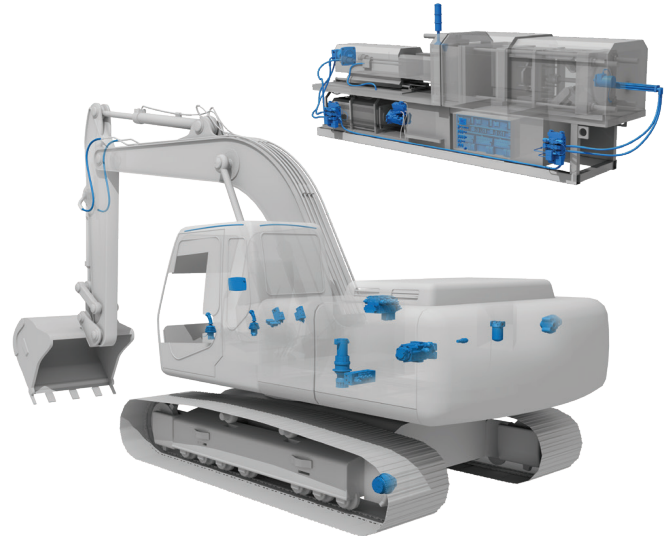
TMS monitors the health of your hydraulic system through a continuous analysis of hydraulic fluid. An intuitive smart screen provides real-time data visuals that aid in identifying potential problems and alert you when your machine needs attention. Before a system fails without warning, consider installing the affordable TMS solution from Applied Fluid Power.

### Features and Benefits

- Better hydraulic performance understanding
- Proactive reliability
- Predictive maintenance
- Lower total cost of ownership
- Less downtime



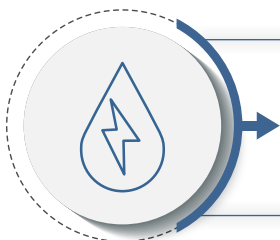
## Eaton P1



Applied Fluid Power® Companies have partnered with Eaton and the P1 ("Power of One") Program which provides all components, services and support for both electronic and hydraulics parts and solutions from one single source. It takes one software package, HFX controller and VFX display to run and monitor the performance of all the moving parts – pumps, valves, cylinders, motors, steering, etc. Combine that with knowledgeable Applied® P1 engineers, Eaton technical support, and access to the largest inventory of electrical and hydraulic products in the world and we can engineer a custom design solution that meets specific performance goals.

### Features and Benefits

- Access to the industry's finest electro-hydraulic experts
- Broadest set of electrical and hydraulic products available anywhere
- Rapid prototypes to refine the solution with a series of iterations
- Lower total cost of ownership
- Human-centered design principles



The fluid power industry is embracing the world of Industry 4.0 by using smart sensors, which allow hydraulic systems to provide the health status of electrohydraulic machines.



## Donaldson Filter Minder®



### Features and Benefits

- Filtration insights for an entire fleet of vehicles / equipment consolidated into a dashboard view
- Patented low-energy sensor helps conserve power and extend battery life
- Clear insights and customizable alerts by text, phone, email or dashboard
- Scalable platform that can expand in the future to monitor fuel, lube and hydraulics filters
- Integrates with the existing Geotab management system

The Filter Minder® wireless monitoring system enables you to service your vehicle / equipment exactly when you need it. The Filter Minder wireless sensor makes use of the existing Geotab telematics infrastructure. Installation is easy — simply screw the sensor into the air cleaner indicator port and connect the receiver into the IOx port on the Geotab gateway.



## Des-Case IsoLogic®



Des-Case's patent-pending IsoLogic™ technology offers a solution to gather essential data about the assets in a plant. This new IIoT offering adds value to any reliability program by detecting and recording spikes in humidity and water ingress. Early detection of system upsets and unplanned downtime saves you money, maintains operational efficiency and provides one less headache for you and your organization.

### Features and Benefits

- Most accurate breather on the market
- Notification when breather is fully saturated
- Pairs with IsoLogic app
- Interactive dashboard provides saturation direction, breather temperature and battery life
- Leverages Des-Case's VentGuard™ breather

## Remote Monitoring by Des-Case



Ensure successful lubrication of your critical assets by monitoring the lubricant's health, cleanliness and RH level. Edge gateways included. Three subscription levels allow for self-monitoring via IsoLogic platform app, remote diagnostics with enhanced IsoLogic features or custom enterprise solutions. A team of lubrication experts will provide best practices, training and reporting to unique to your conditions.

### Features and Benefits

- Peace of Mind
- Holistic Monitoring
- Cartridge Replenishment
- Program Sustainability
- Personalized Reporting
- Workforce Efficiency



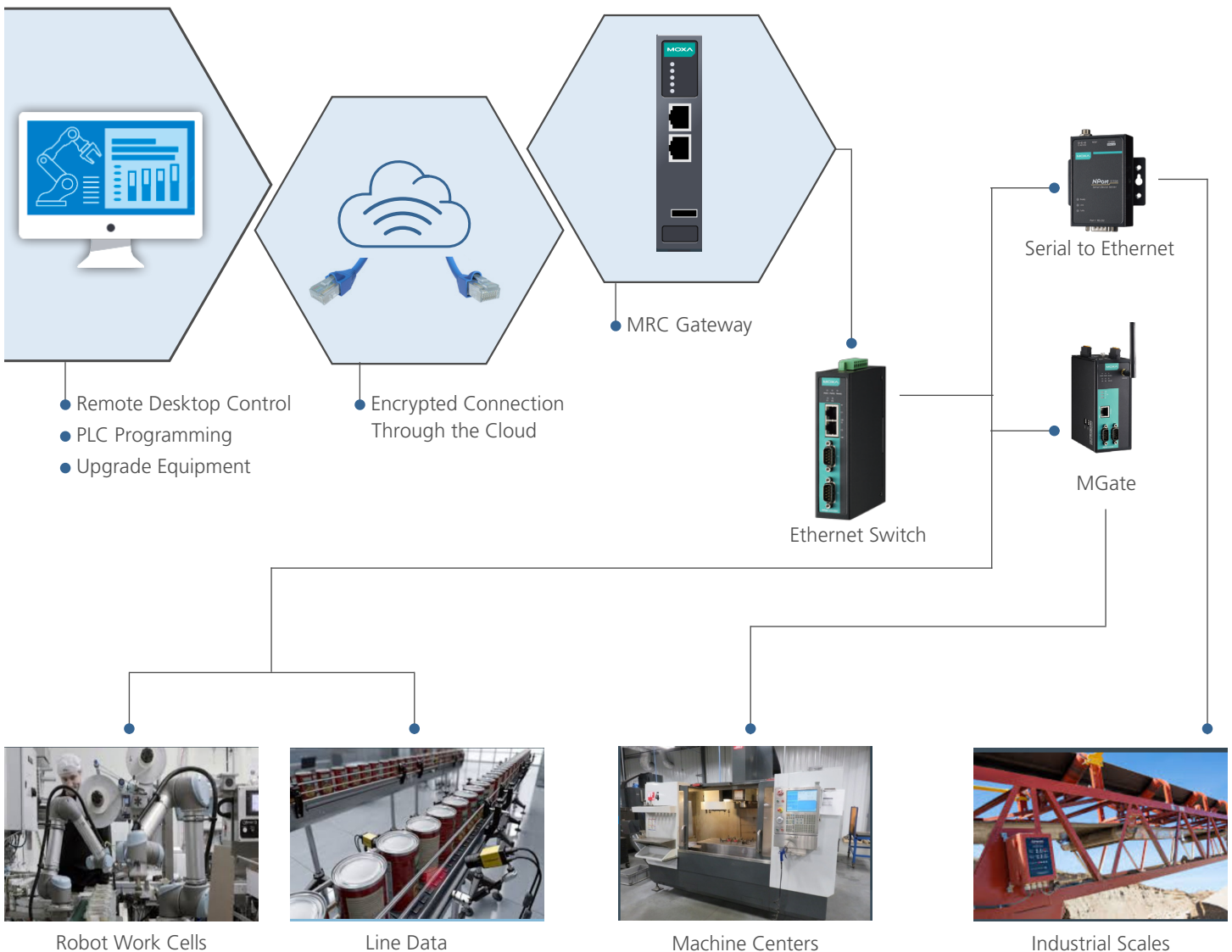


## Industrial Internet of Things

Olympus Controls brings to Applied®, a full range of value-added automation expertise with leading technology solutions and an established geographic footprint. From components and assemblies to machine automation systems, Olympus is a full-service provider of innovative technologies and complete engineered solutions for OEMs, machine builders, integrators, and end users.

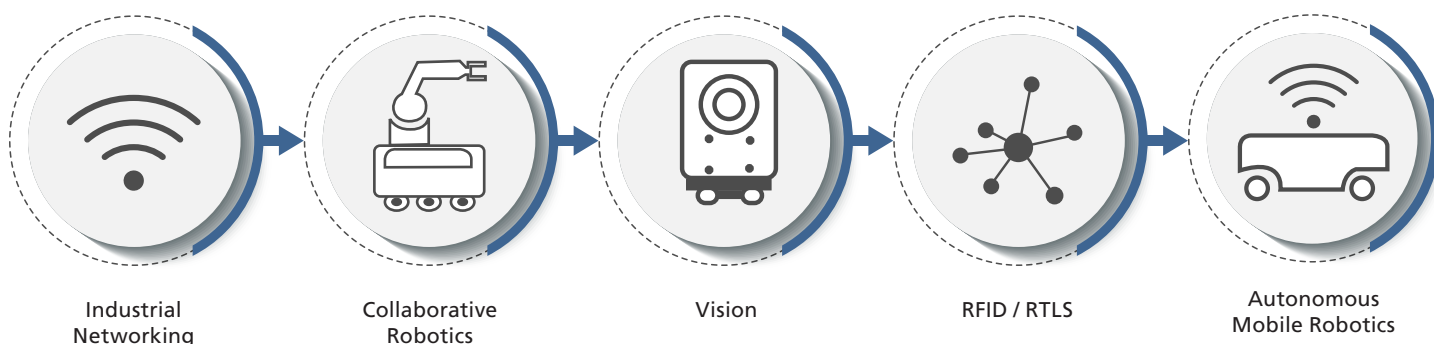
Olympus Controls cutting-edge product portfolio ensures superior performance for industrial networking applications. Our solutions take connectivity to the next level by expanding communication and collaboration between various devices, technologies, systems and protocols. We help you drive productivity and cost reduction through network convergence from the edge to the core.

## MRC Software





## Technologies Include:



### Industrial Networking

Industrial Networking uses routers, gateways and switches to integrate factory floor networks with company enterprise networks for predictive and preventative maintenance.

### Collaborative Robotics

These robots are easy to use, fast to deploy and flexible in many applications in your plant. Cobots help you fill the labor gap and secure the growth of your company.

### Vision (1D,2D, and 3D)

Vision Systems give your machines eyes, allowing for the use of barcodes on boxes, counting to make sure you have the right number of bottles in a case or providing dimensions of your precision machined parts.

### RFID / RTLS

Track your products in, out, and through your plant process using RFID and RTLS technologies. The factory of the future will move us towards knowing about our products and their history, status, and availability for the customer

### Autonomous Mobile Robotics (AMRs)

Robots that can maneuver around the factory create a factory logistics system that yields flexibility and scalability to the factory floor.



## Network Adapters

Connecting your serial devices is easier than you think. Moxa offers easy-to-use solutions to make sure all kinds of serial devices can be connected to an Ethernet-based network or to the cloud. Our enhanced security features and mass device management tools make the lives of engineers easy during system operation.

### NPort Series: Serial Device Servers



#### Features and Benefits

- Wide range of industrial protocols
- Easy-to-use interfaces
- Industrial design

### MGate Series: Protocol Gateways

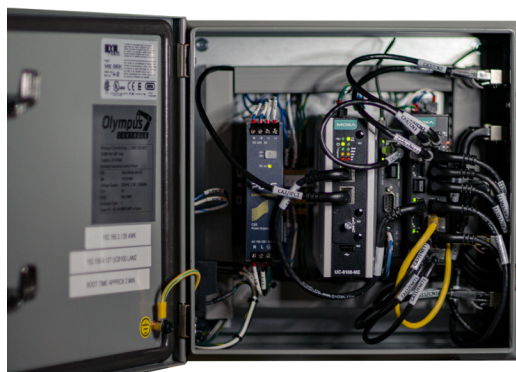
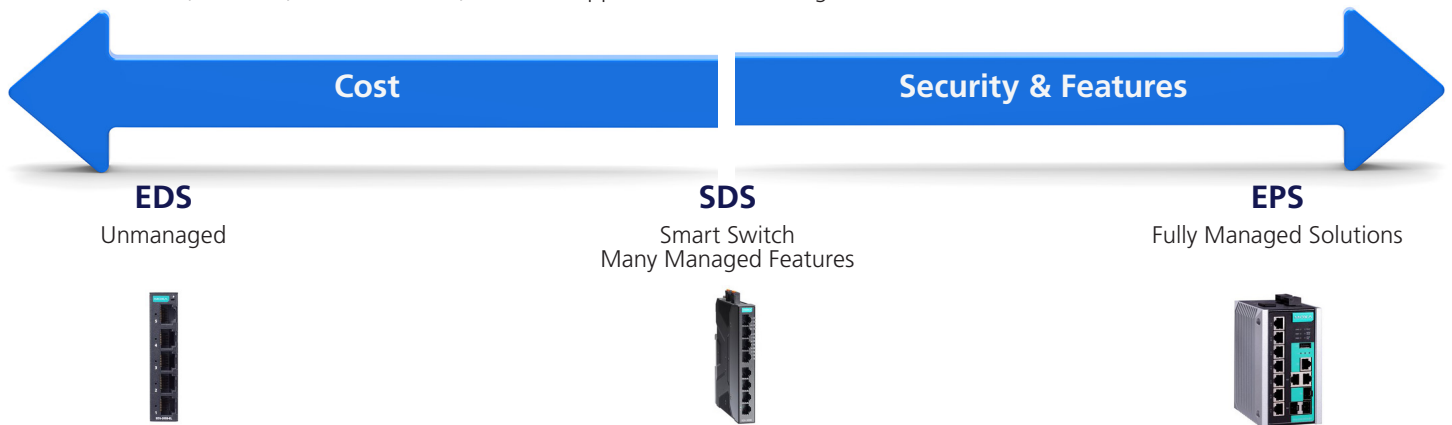


#### Features and Benefits

- Wide range of industrial protocols
- Easy-to-use interfaces
- Industrial design

## Industrial Ethernet Switch

Moxa's smart switches simplify daily tasks with easy configuration, quick installation, and field-site monitoring. Designed for easy connections, SCADA/HMI monitoring, and enhanced controllability, Moxa's Layer 2 smart switches support multiple industrial protocols such as PROFINET, Modbus, and EtherNet/IP, and also support several mounting methods.



#### Features and Benefits

- Compact and flexible housing design to fit into confined space
- Web-based GUI for easy device configuration and management
- Ethernet/IP, PROFINET, and Modbus TCP industrial protocols supported for easy integration and monitoring in automation HMI/SCADA systems
- Multi-language web GUI: English, Traditional Chinese, Simplified Chinese, Japanese, German, and French
- Supports RSTP/STP for network redundancy

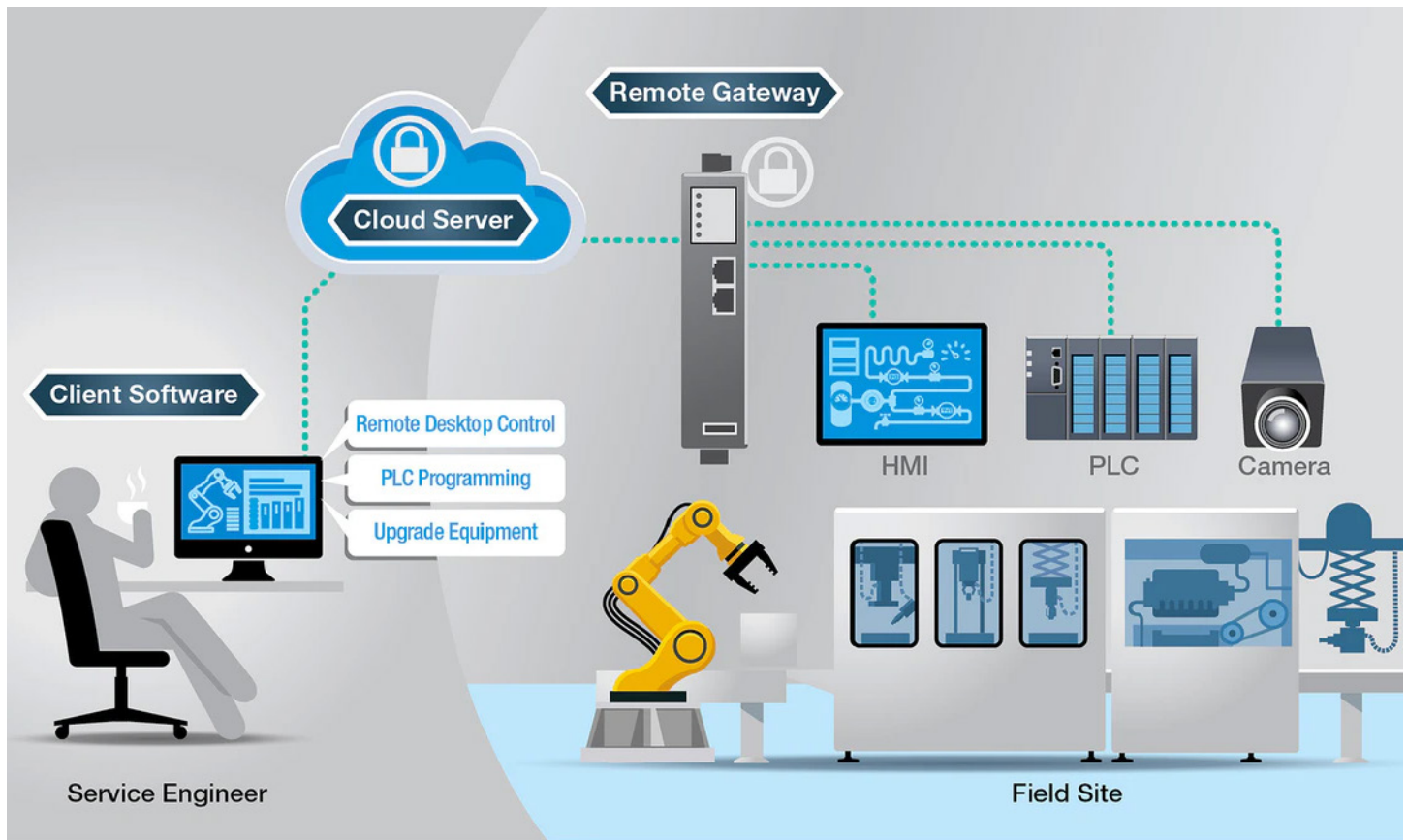
## MOXA Remote Connect



The Moxa Remote Connect gives you a secure, easy-to-deploy, flexible, and scalable remote access solution that enables you to remotely configure, maintain, and troubleshoot your devices with the software on your PC just like you were there. Connection of 5GB of data a month is free for five years.

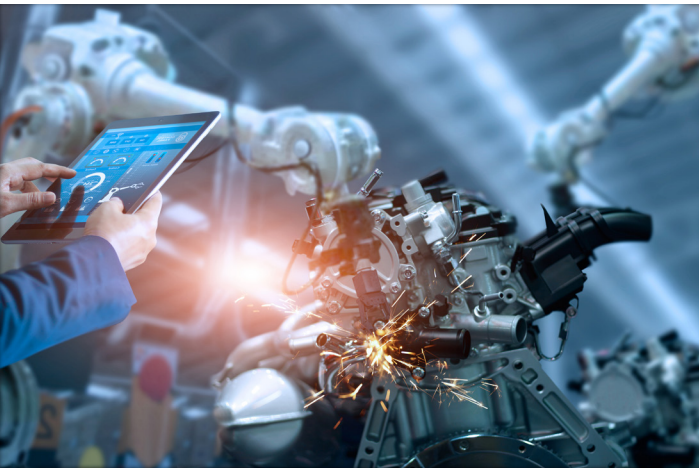
### Features and Benefits

- Easily deploy remote access in your machines without extensive IT knowledge
- Skip complex firewall settings and IP reconfigurations
- End-to-end encryption to keep transmitted data secure
- Supports various user scenarios and applications
- Provides connection flexibility and scalability





# Developing Solutions for Connected Industrial Operations



Connect with your local Applied® Service Center  
**[www.AppliedCanada.com](http://www.AppliedCanada.com)**

Authorized distributor:

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