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CISCO
The bridge to possible

Cisco Industrial Asset Vision

Contents

## Optimize your preventative maintenance processes with Cisco industrial IoT sensors

With increasing supply chain pressures and the need to improve sustainability, operations teams are under increasing pressure to optimize their processes, reduce cost and maximize asset uptime.

To achieve this, they require accurate visibility of environmental and performance data. Many organizations are able to monitor their core business assets but have incomplete visibility of their operation, particularly if it is distributed over a wide area, which can cause digital blind-spots. For example, food manufacturers may have refrigeration units that are not monitored, increasing the risk of food spoilage. Typical blind spots might relate to machine health, tank level, temperature or humidity levels, which can impact product quality and compliance.

Cisco Industrial Asset Vision helps you monitor your assets and facilities to address these digital blind-spots and keep everything running efficiently. It has all the technology you need in one solution, including industrial sensors, gateways, and a management dashboard – secure, integrated, and ready to go.

The entire solution deploys in minutes using a simple QR code, and scaling up by adding more sensors is easy. As a cloud-based solution for management and visualization, Industrial Asset Vision requires little technical expertise to deploy or use. This reduces the burden on IT and helps operations teams react quickly when issues occur.

Users can view insights in one easy-to-use dashboard. For example, they can see that the temperature of an asset is outside acceptable values, or that a warehouse door has been left open. The dashboard provides a single view of asset or facility health across all connected industrial sensors. It also provides visibility into the health of the network gateway itself.
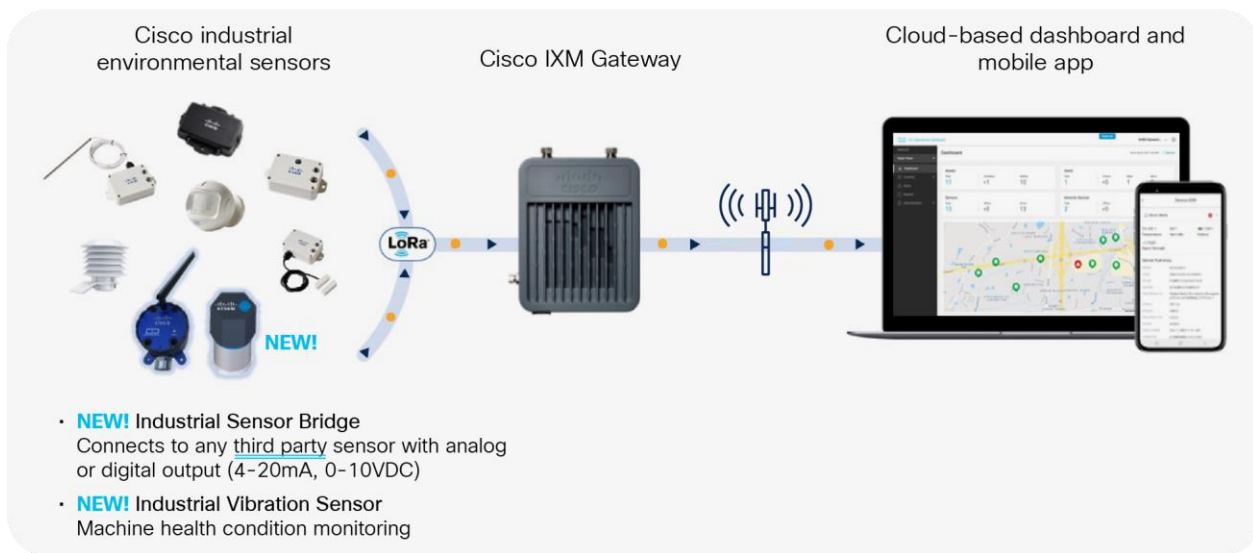
Figure 1.
Cisco Industrial Asset Vision: all you need, ready to go

Industrial sensors: Cisco® Industrial Asset Vision, a simple and secure all-in-one cloud-managed industrial sensor solution, offers the following benefits:

- Helps operations teams to address digital blind-spots, improve asset utilization and reduce equipment downtime easily and securely, while aligning with IT policies

- Provides real-time centralized visibility of your data

- Supports wide area deployments and low power consumption in industrial indoor and outdoor environments through the use of LoRaWAN connectivity

- Reduces the need for time consuming site visits and manual equipment checks

Get a clear picture of how facilities are performing, easily

Today, most asset monitoring and tracking solutions are often complex, and composed of separate components from different vendors. This makes it difficult for operations managers to deploy, scale, and manage these solutions. With multiple dashboards and interfaces, it is difficult to identify problems and business-impacting trends. These delays can lead to missed insights and lost opportunities to improve operations. These solutions are not simple.

Cisco Industrial Asset Vision is a simple, secure, all-in-one, cloud-managed solution for visualizing assets and facility conditions. This turnkey solution enables operations managers to enhance safety and efficiency and improve operational resiliency while protecting investments and lowering costs.

The solution includes a family of industrial sensors that provide telemetry and tracking information for assets and facilities. These sensors are pre-integrated with the Cisco LoRaWAN gateway and management dashboard. Their IP65 and IP67 ratings allow the devices to be deployed in outdoor and indoor industrial environments. Field technicians can deploy one or many sensors to monitor a wide variety of characteristics, including vibration, temperature, humidity, leak detection, ingress and egress, lighting, occupancy, and asset location.

Gain deep insights by correlating data across your business

For complete visibility, data from existing third party standard current loop (4-20mA), voltage (0-10V) sensors can be collected using the new industrial sensor bridge, and monitored in the Industrial Asset Vision dashboard.
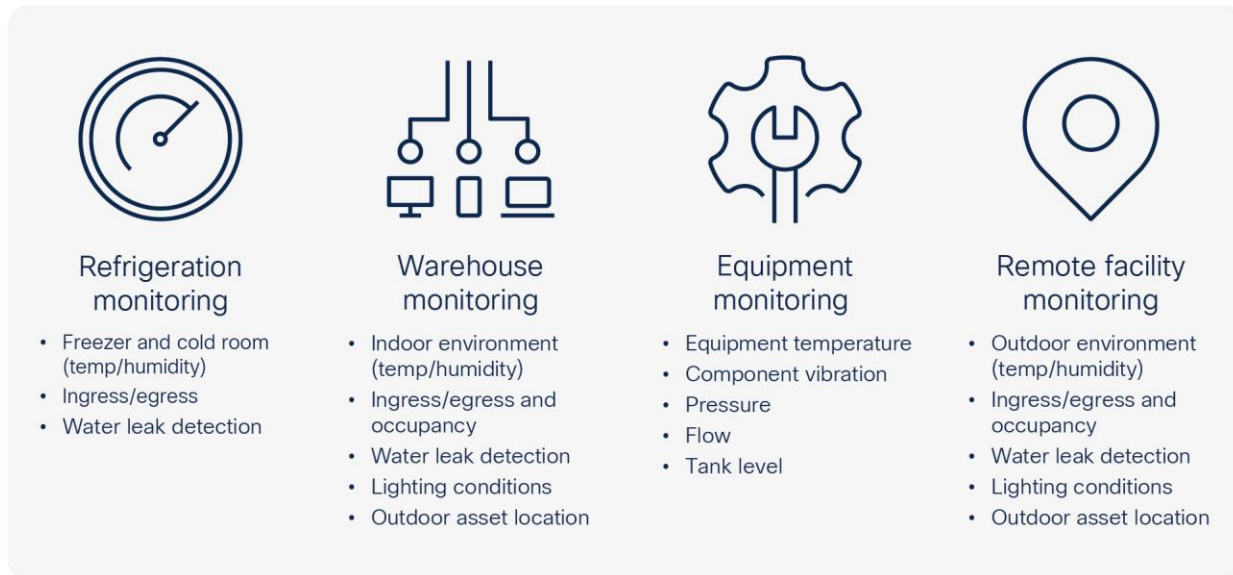
This enables workers the flexibility to view data including anything from tank levels in manufacturing facilities to the number of pallets in their warehouses and combine this with the environmental and other facility data collected directly from the Industrial Asset Vision industrial sensors.

Using REST APIs and the MQTT connectivity protocol, data from Industrial Asset Vision can be shared with external enterprise systems such as Enterprise Resource Planning (ERP), service management, inventory control and analytics solutions to provide a holistic view of data across your operations.

This helps to simplify and transform operational processes by ensuring that your employees have accurate data spanning your complete business operations in a single pane of glass.

The gateway supports LoRaWAN for wireless connectivity and, like the sensors, is designed for outdoor and indoor industrial environments. The cost-effective, small-form-factor gateway delivers secure, reliable, long-range connectivity, reducing the number of gateways required. With its geolocation capabilities, the gateway can track and monitor assets and locations and help to improve logistics, prevent theft, and enhance operational efficiency.

Industrial Asset Vison comes with an easy-to-use, cloud-based management dashboard, providing visibility into the location and condition of your assets and facilities. With support for plant and GIS map views, defined geofenced areas that overlay assets, and location breadcrumbs, you will always have full visibility into your industrial assets.

Refrigeration monitoring
- Freezer and cold room (temp/humidity)
- Ingress/egress
- Water leak detection

Warehouse monitoring
- Indoor environment (temp/humidity)
- Ingress/egress and occupancy
- Water leak detection
- Lighting conditions
- Outdoor asset location

Equipment monitoring
- Equipment temperature
- Component vibration
- Pressure
- Flow
- Tank level

Remote facility monitoring
- Outdoor environment (temp/humidity)
- Ingress/egress and occupancy
- Water leak detection
- Lighting conditions
- Outdoor asset location

Figure 2.
When to use industrial sensors

For more information

Cisco Industrial Asset Vision is a module in IoT Operations Dashboard, which enables Operations teams to manage the industrial edge easily, securely and at scale. For additional information about Industrial Asset Vision visit https://www.cisco.com/go/iav.