IoT
THE INTERNET OF THINGS

IoT devices are opening up unlimited possibilities for businesses to easily access necessary information in real-time, from anywhere they're located.

Common IoT Use Cases

- Refrigeration Monitoring
- Motion Detection
- Door Monitoring
- Leak Detection
- Gas Monitoring
- Smoke Detection
- Tank Level Monitoring
- Service Request
- Panic Button
- Desk Occupancy
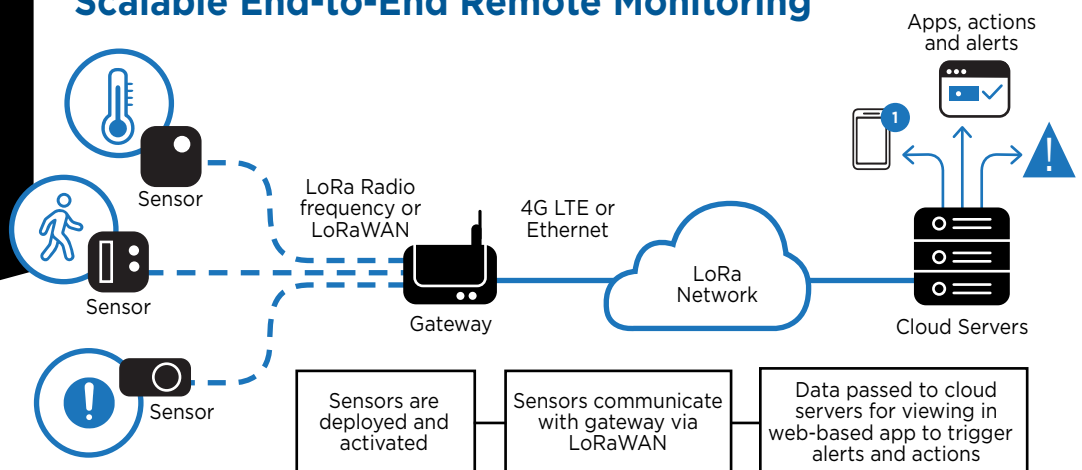- Feedback/Survey
- People Counter

What is IoT?

The Internet of Things (IoT) is a network of physical objects embedded with software and sensors that use the internet to communicate and exchange data with other systems. IoT is revolutionizing the way businesses operate through sensors that can monitor things like motion, light, temperature, moisture, air quality, and more. These sensors enable businesses to anticipate potential needs before they arise, ultimately saving time and money. With IoT, companies can gain real-time access to critical information from any location.

The number of smart devices in businesses is continually growing. Connecting these devices from disparate hardware manufacturers is a difficult task that involves sourcing sensors, decoding payloads, solution design, provisioning, hosting a network, applying logic that makes the devices work together, device management, security from edge to cloud, and managing the supply chain from warehousing to shipping the devices.

To address these issues, Telesystem offers a wide variety of Plug & Play IoT solutions that are able to gather, share, and analyze information and create actions accordingly. Each device collects data for a specific purpose that can be used to increase efficiency and capabilities. This low-cost solution leverages LoRaWAN technology to provide long range radio communications between sensors that collect data about your physical space, devices, people, and assets; and an IoT Gateway that collects the information and sends it over the Internet where it is compiled in an intuitive and highly customizable dashboard where the data can be used to optimize your organization.

Scalable End-to-End Remote Monitoring

Apps, actions and alerts

Sensor

LoRa Radio frequency or LoRaWAN

4G LTE or Ethernet

Sensor

Gateway

LoRa Network

Cloud Servers

Sensor

Sensors are deployed and activated	Sensors communicate with gateway via LoRaWAN	Data passed to cloud servers for viewing in web-based app to trigger alerts and actions

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Features of IoT

Solutions & Devices: Bundled sensors, gateways, connectivity, and software for all verticals and use cases.

Dashboard: Web-based, "single pane of glass", interface to manage and monitor all sensors that is optimized for desktop and mobile devices like Smartphones and Tablets.

End-to-End encryption: All data is fully encrypted from the sensors to the gateways, and from the gateways to the cloud where it is then accessible via the dashboard. Telesystem IoT utilizes Secure Socket Layer (SSL) protocol with 256-bit data encryption to ensure data is transported securely.

Alerts: Receive notifications when sensor readings deviate from normal. Our alert system allows for customization of alrerts – you control the conditions for alerting, who gets notified, and during which hours someone is to be notified (such as working hours and after hours contacts).
Recipients can be notified by Text or Email message.

Reporting: Various reports are available within the dashboard including Summary Reports, Corrective Action Reports, Regulatory Reports, Incident Reports, Predictive Maintenance Reports, or customizable reports.

What's Included In My Solution?

- **Plug & Play Gateway:** Preconfigured to work right out of the box with LTE connectivity and built-in encryption and backup battery
- **Sensors:** Automatically connect with the gateway device using LoRaWAN Technology
- **Customizable Web app:** Monitor and control your organization from a single dashboard using full-featured apps.

Securing the Internet of Things

Many IoT devices will require the collection, analysis and transmission of potentially sensitive data which makes Security the most important aspect of an IoT solution and the foundation of the pillars. Ensuring the network is secure from threats that could impact operations is a key component of a successful IoT implementation. It is essential that this data is adequately protected at all times.

IoT Security is the family of techniques, strategies, and tools focused on protecting connected devices and networks in the Internet of Things. Allowing devices to connect to the Internet opens them up to a number of serious vulnerabilities if they are not properly protected. A common IoT device can be used to infiltrate and attack the larger network. Since IoT is such a broad space, covering devices from smart watches to thermostats to refrigerators, IoT Security must be even broader to cover the variety of devices and methods used to connect these items to the Internet. Application Program Interface (API) security, public key infrastructure (PKI) authentication, and network security are just a few of the methods used to combat against increasing cyberattacks. To ensure that the data is secure and future-proof, organizations should consider managed security solutions along with their IoT strategy.