The Plug & Play Fabric for the Industrial IoT

The VersaSense Wireless Fabric consists of software, networking and hardware elements that can be combined to securely deliver sensor data to IoT platforms or enterprise back-end systems. With VersaSense you can **IoT-enable your plant or facility in a matter of days** and **radically reduce the total cost of ownership** for industrial sensing and control systems.

Based on the award winning MicroPnP™ technology the VersaSense Fabric includes ultra-low power wireless IoT devices, a wide range of sensors and actuators and end-to-end software support. Plug & play IoT solutions from VersaSense power and secure the Industrial Internet across diverse application domains.

The VersaSense IoT Fabric is based on industry standards that enable a new generation of sensing and control systems, eliminating the need for embedded programming. The fabric provides **plug-and-play sensors & actuators** and a **self-organizing wireless network** that can be managed remotely and that integrates seamlessly with existing systems.

The VersaSense IoT Cloud Services provide network administrators with a real-time overview of network operation and device status. Our best-in-class energy management results in a **battery life of up to 10 years**. The SmartMesh IP™ product line provides **99.999% network reliability**, while the LoRa™ product line delivers **multi-KM range**. Best practices in **end-to-end security** are standard across the entire product range.

VersaSense provides out of the box links to cloud based platforms such as the Altizon Datonis IoT Platform, Microsoft Azure IoT Suite and Amazon AWS IoT Platform through a variety of software connectors as well as a unique set of high-level APIs to interact with the system. Private connectors for time series databases are also available.

VersaSense delivers these unique features at a **fraction of the acquisition and operation cost** of traditional sensor and actuator products. VersaSense enables **enterprise developers and Solution Providers** to build flexible IoT solutions that can be easily integrated into private ICT infrastructures.

Contact VersaSense

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Developer & Enterprise Solutions

VersaSense IoT Fabric

The IoT fabric to integrate wireless sensors and actuators with your existing infrastructure.

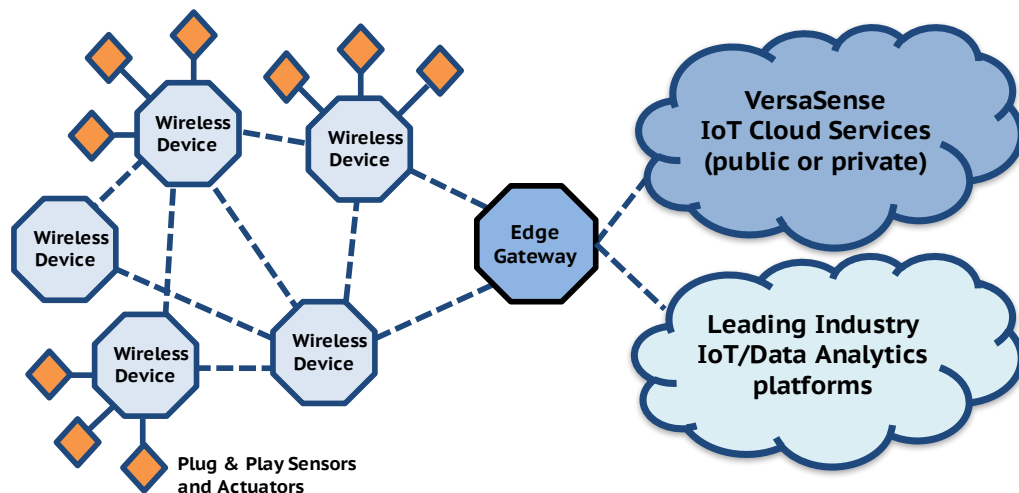### Wireless sensors, devices and gateways

- ❖ Choice of energy efficient plug-and-play sensors
- ❖ Optimized hardware and software combination
- ❖ Seamless integration through standard interfaces

Data & Visualization features

- ❖ Dashboard with live sensing and actuation data
- ❖ Software connectors for various public and private cloud or database backends
- ❖ Simple integration APIs based on REST, MQTT and WebSockets

Management features

- ❖ Integrates with all IP-based networks
- ❖ Device view: version, battery status, peripherals with configurable sampling rate
- ❖ Network view: packets sent, latency and topology
- ❖ Device and gateway update
- ❖ Secure commissioning of devices

VersaSense IoT Cloud Services

Management of your IoT data and fabric for all of your sites, provided as a managed public or virtual private cloud service. You can opt for the core fabric management service, the data analysis service with archiving, visualization and alerting, or both.

Data Analysis service

- ❖ Scalable and secure data communication with your devices
- ❖ Unlimited redundant data storage and processing
- ❖ Data visualization and alerting support with real-time multi-site data streaming.
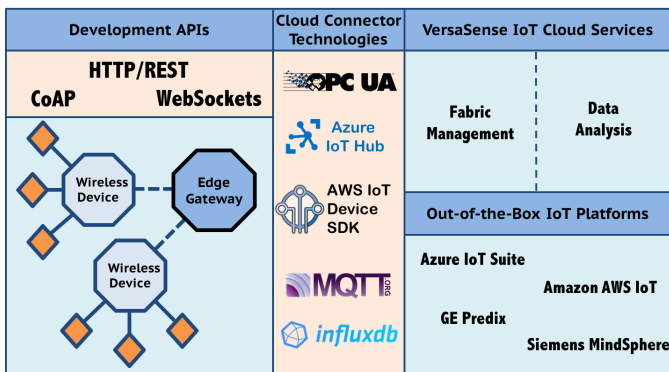
Fabric Management service

- ❖ Scalable and secure management communication with your devices
- ❖ 24/7 availability and fault monitoring of devices across different sites
- ❖ Network and system health reviews and reporting
- ❖ Lower total cost of ownership

Key Technologies

Our Industrial IoT solutions combine best-in-class wireless networking with plug & play sensing system and the VersaSense IoT Cloud Services.

Plug & Play Sensing and Control

❖ True plug & play sensors eliminating the need for any embedded development
❖ Self describing peripherals eliminating device updates as new devices are added
❖ Over 30 standard sensors & actuators, plus easy integration of custom peripherals
❖ End-to-end security with NIST certified technologies

Connectors and APIs

❖ Standard connectors for a variety of cloud based IoT platforms
❖ Full access to your devices using IETF CoAP, HTTP/REST, and WebSockets
❖ Business logic may run anywhere, from your local network to the Cloud

SmartMesh IP

❖ 99.999% wireless network reliability
❖ NIST-certified AES-128-CCM security
❖ Extensible, self-healing mesh networks
❖ Standards-based: 6LowPAN, 6TiSCH and IEEE 802.15.4e

LoRaWAN

❖ 5KM suburban range, longer in appropriate deployment conditions
❖ 128-bit AES-CTR security
❖ Compatible with all major LoRaWAN providers worldwide

Application Domains

VersaSense works with customers and partners to deploy custom sensing and actuation projects. **What can VersaSense do for you?**
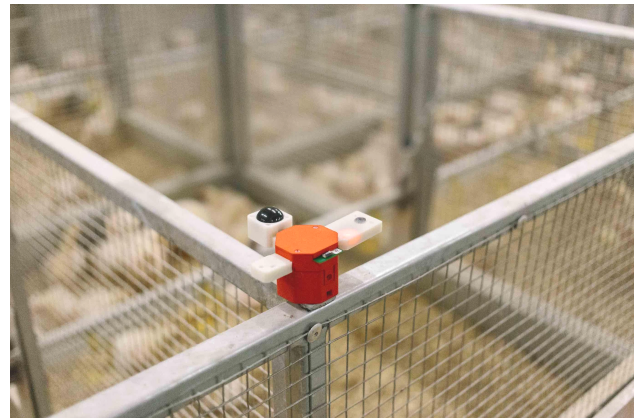
Production Line Monitoring

VersaSense devices monitor production line equipment or factory infrastructure, providing **precision monitoring and real time alerts** as needed. The VersaSense mesh network provides an extremely reliable and extensible wireless communications medium that can extend to cover entire factories, while operating for up to a decade on a single battery.

Precision Agriculture

VersaSense provides real-time monitoring of livestock. Efficiency is enhanced through plug-and-play sensors and actuators that install in minutes to provide **live, high-resolution data on animal conditions** including: feed consumption, water use, temperature, humidity, air quality and pollution.

Building Energy Management

VersaSense devices are being applied in energy management use cases that range **from home energy profiling to data center optimization**. Plug-and-play sensors provide a detailed understanding of energy flow in the environment along with monitoring of appliance power consumption. Plug and play actuators allow for automatic control of devices.