

Polysense Introduces iEdge4.0 OS-Enabled Software-Defined Sensors for Enhanced Edge Intelligence

Polysense announces its advanced software-defined sensors powered by the iEdge4.0 OS, designed to address current and future IoT challenges.

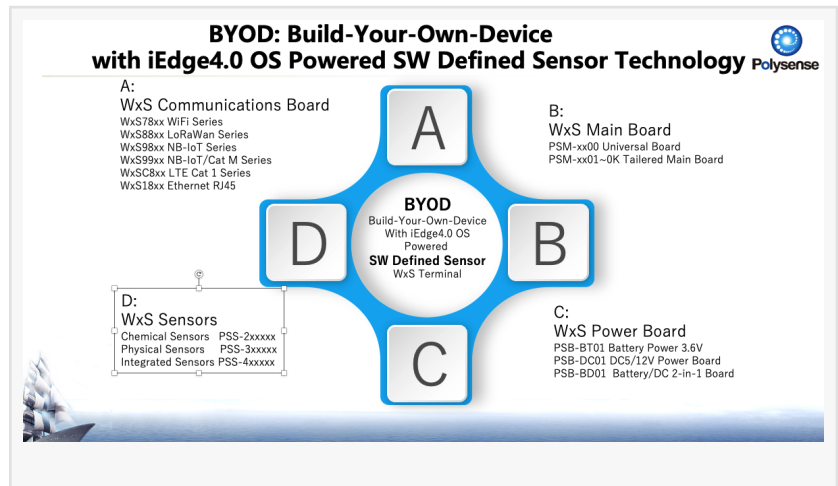
SANTA CLARA, CA, UNITED STATES, December 3, 2024 /EINPresswire.com/ -- Polysense, a pioneer in the domain of intelligent sensor technology, announces the introduction of its next-generation software-defined sensors, underpinned by the advanced iEdge4.0

OS. This innovative virtualized microkernel operating system is purpose-built for edge intelligent devices, offering a modular and configurable platform that supports a comprehensive suite of functionalities essential for modern Internet of Things (IoT) applications.

The iEdge4.0 OS-based software-defined sensors empower users to customize their sensor arrays according to specific requirements, with the ability to select from over 1,000 PSS sensors in Polysense's portfolio. This modular approach facilitates the creation of intelligent sensor systems capable of integrating up to eight PSS sensors per device, providing an unprecedented level of customization in the IoT segmentations market.

As a robust multifunctional sensors platform, Polysense's product line now encompasses RTU control functionality across all devices, marking a significant enhancement in remote terminal unit capabilities. The [WxS8800](#) model as an example, with its LoRaWan connectivity, supports both Class A and Class C configurable via [ConfigurationTool](#) functionalities, this adaptability ensures that sensors can be optimized for diverse applications, ranging from long-range communication to power efficiency.

The Build-Your-Own-Device (BYOD) capability of Polysense's software-defined sensors presents a myriad of opportunities for OEMs, ODMs, white-label and rebranding partners, enabling partners to expedite the development and market launch of new products tailored to specific market demands.



The strategic advantages of Polysense's approach are multifaceted. The agility to rapidly combine BYOD products into new configurations allows developers to respond swiftly to market needs, reducing the time-to-market for new sensor solutions. This speed and flexibility are critical in industries characterized by rapid technological evolution, where the ability to adapt quickly can be the decisive factor between success and obsolescence.

Polysense's dedication to innovation is reflected in the continuous expansion of its PSS sensor portfolio, ensuring that customers have access to state-of-the-art sensor technology. The company's focus on software-defined capabilities positions it at the vanguard of the IoT revolution, where intelligence and connectivity are paramount.

"The debut of our next-generation software-defined sensors, powered by the iEdge4.0 OS, underscores our dedication to providing our customers with solutions that not only satisfy present-day market demands but are also designed to preempt future technological evolutions," remarked Alex Wu, President and CEO of Polysense. "The iEdge4.0 OS marks a substantial advancement in the progression of edge computing. It embodies our mission to equip our clients with the necessary tools to develop highly intelligent, secure, and efficient edge devices that can synchronize with the swiftly evolving IIoT ecosystem. Our technology ensures seamless integration and scalability, guaranteeing that our clients retain a competitive advantage in the dynamic IoT landscape."

Key Features of iEdge4.0 OS:

1. **Modular Architecture:** The software's modular design supports expansion of MCU/CPU, interface, memory, driver, power, and security management. This architecture allows for easy updates and integration of new features as they become available.
2. **MPI Functionality:** iEdge.0 OS offers a Multiple Purpose Interface that enables the integration of different types of sensors and devices, simplifying the development process and reducing the need for custom solutions.
3. **Virtualization and Memory Management:** With virtualized memory address management, iEdge.0 OS can efficiently handle the memory requirements of complex edge computing applications, ensuring optimal performance and reliability.
4. **MCU Pin Definition:** The OS provides clear definitions for MCU pin configurations, streamlining the development of hardware-agnostic applications that can be deployed across a variety of devices.
5. **Support for Future Expansion:** iEdge.0 OS is designed with future-proofing in mind, supporting the integration of upcoming technologies such as TSN (Time-Sensitive Networking) for IIoT smart sensors and PUF (Physical Unclonable Function) based security systems for IoT devices.
6. **Security:** The OS includes robust security features, ensuring that edge devices are protected against cyber threats, which is critical for the deployment of IoT systems in sensitive industrial environments.
7. **Real-Time Application Support:** Besides the non-realtime sensing scenarios, the OS is

designed to support IIoT real-time application scenarios, capable of handling the stringent requirements of time-sensitive industrial processes.

iEdge.0 OS is now available for integration into new and existing Polysense products, with support for a wide range of sensors and devices.

About Polysense:

Established in 2013 in Santa Clara, California, Polysense is dedicated to providing comprehensive, end-to-end solutions for the IoT market. With its iEdge 4.0 virtual microkernel IoT Things OS and advanced configurable, modular open architecture, Polysense simplifies sensing complexity and reduces costs in real-world applications.

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