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iCE EdgeFusion: The Ultimate Edge Computing Platform

Unlock the Power of Customization and Performance

Key Features

- Highly customizable to meet specific application requirements.
- Scalable industrial connectivity for versatile deployment.
- Optimized for edge analytics, automation, and secure data processing.
- Supports industrial communication protocols and IIoT frameworks.
- Built-in security features for safe and reliable operation.

Experience the Future of Industrial Edge Computing

Power your operations with EdgeFusion—the intelligent, secure, and scalable edge computing platform designed to meet the evolving demands of Industry 4.0.

Unlock the Power of Customization and Performance

Introducing *EdgeFusion*—iCE IIoT's next-generation edge computing platform designed for high-performance industrial applications. Whether you need a compact solution for edge analytics, secure remote connectivity, or industrial automation, EdgeFusion delivers unparalleled flexibility and power.

Customizable Performance

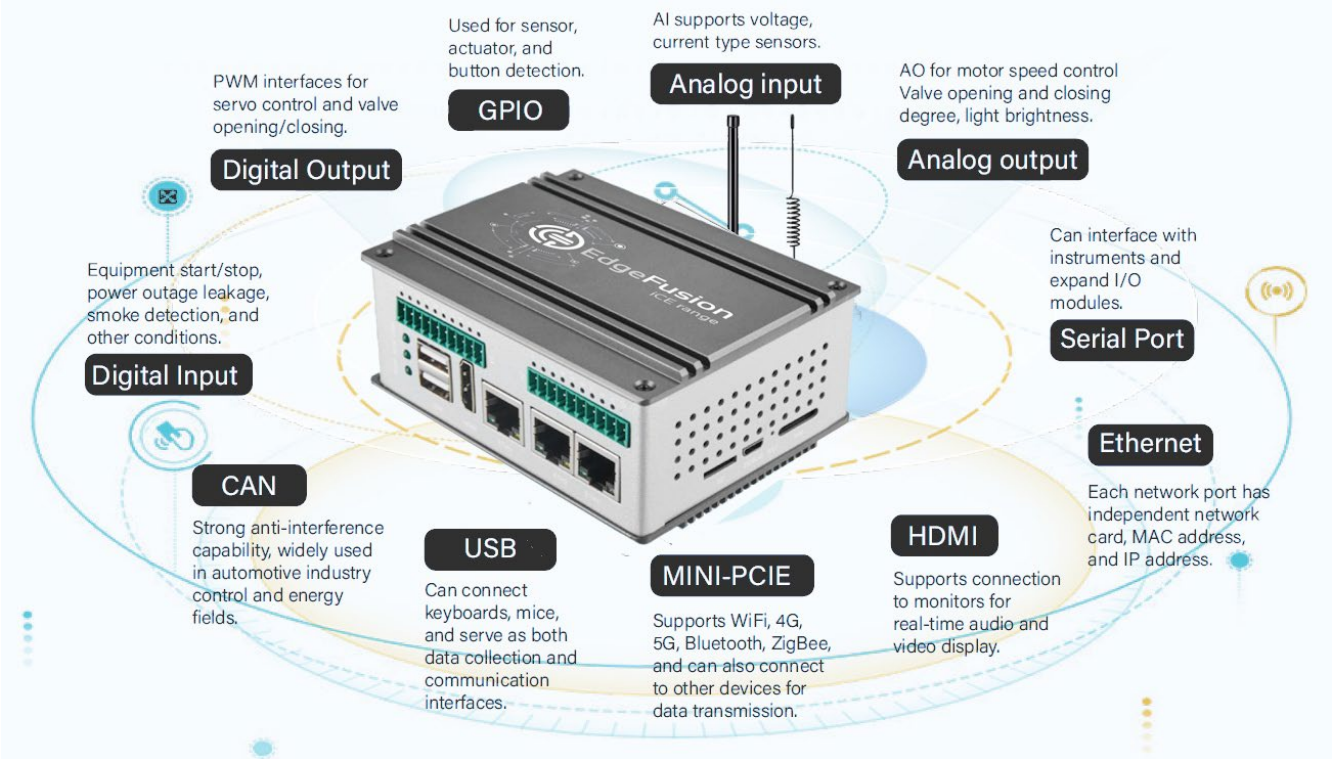
Tailor your EdgeFusion to meet the demands of your specific application with scalable hardware configurations:

- **Chipset:** Select from a range of high-performance processors to match your processing needs.
- **Memory:** Choose memory size and capacity to optimize performance and data handling.

Rich and Scalable Interfaces

EdgeFusion's modular design ensures seamless integration with various industrial environments:

- **Digital Inputs & Outputs** (DI/GPIO) – Enable real-time control and monitoring.
- **Analog Inputs/Outputs** – Support precision industrial applications.
- **Serial Ports** – RS232/RS485 connectivity for legacy system integration.
- **Ethernet** – High-speed, secure networking for industrial environments.
- **HDMI** – Display interface for direct monitoring and control.
- **Mini PCIe** – Expansion options for wireless modules and additional peripherals.
- **USB** – Multiple ports for peripheral connectivity.
- **CAN Bus** – Seamless automotive and industrial communication.



Seamless Integration with iCE NEO (& 3rd Party Applications)

NEO-III, is our latest generation of cloud-based IIoT central monitoring platforms. Built with cutting-edge web technologies, NEO-III delivers real-time insights and rapid responsiveness, offering a seamless user experience. Its advanced architecture ensures optimal data handling, enabling real-time monitoring and long-term data storage with precision and efficiency. The platform is designed for scalability and reliability, allowing businesses to make smarter, data-driven decisions with ease, while offering unparalleled performance, security, and ease of integration into existing systems.

Key Features

- **Data management:** Manage and store data from iCE IoT gateways securely and efficiently, including real-time and historical data.
- **Data visualization:** Visualize and analyse the data collected from our IoT devices, such as dashboards, reports, and analytics.
- **Device management:** The ability to manage and monitor IoT devices remotely.
- **Connectivity management:** Manage and secure the connectivity between IoT devices and the cloud platform.
- **Integration capabilities:** Integration options with other systems and applications, including third-party analytics and alerting tools.
- **Alerting and notification:** Configure automated alerts and notifications based on pre-defined thresholds, events, or anomalies.
- **Scalability:** The ability to scale the platform to accommodate large numbers of IoT devices and users, as well as handle high volumes of data.
- **Flexibility:** Flexible and customizable to meet the specific needs and requirements of each business.

Communication

A reliable communication channel is essential for the success of IoT as it allows devices to send and receive data in a timely and accurate manner. With the large amount of data generated by IoT devices, a stable connection is necessary for efficient real-time analysis, which is crucial for many IoT applications. This is especially important in remote monitoring and control applications where a stable communication channel is essential for sensors to continuously transmit data to a central management system. Any disruptions in communication can result in data loss, delayed decision-making, or system failures, which can have significant consequences in terms of safety, productivity, and overall performance.

Seamless Integration with iCE NEO…

iCE offer several communication channel options and services, for redundancy and maintenance:

- **Ethernet:** iCE IIoT devices have the option to use Ethernet to connect to local networks and the internet. This is often configured as the primary channel where internet access is available.
- **Cellular:** iCE IIoT device and gateways can also use cellular networks to transmit data to the cloud or other systems. This channel can be configured as the primary for "out-of-band" communication or as redundancy where the primary Ethernet channel fails. Dual SIM support is available in certain models where required.
- **LoRaWAN:** Low-Power Wide-Area Networks (LPWAN) such as LoRaWAN are optimized for low-bandwidth, low-power communication over long distances, making them ideal and are utilised in iCE, IIoT sensors and gateways.
- **MQTT:** MQTT's lightweight design, efficient communication, and flexible QoS levels make it the ideal protocol for IoT applications. All iCE gateways utilise MQTT as the primary protocol.
- **SIM Cards:** iCE offers the capacity to provide IoT SIM cards and management options for the supporting data and SMS bundles.

Key Benefits of the overall iCE IIoT Solution

- **Increased efficiency and productivity**: IoT devices can automate various processes, reduce downtime, and increase overall efficiency, which can result in higher productivity.
- **Improved safety**: IoT sensors can detect safety hazards, such as gas leaks or fires, and alert workers to potential danger, thus improving safety in the workplace.
- **Enhanced predictive maintenance**: IoT devices can monitor equipment performance in real-time and detect potential issues before they become major problems, allowing for proactive maintenance and reducing downtime.
- **Cost savings**: IoT devices can reduce energy consumption, optimize resource utilization, and improve supply chain management, resulting in cost savings for businesses.
- **Improved decision-making**: IoT data can provide valuable insights and analytics, enabling informed decision-making and optimization of business processes.
- **Increased customer satisfaction**: IoT can provide real-time monitoring of products and services, allowing for faster response times and better customer service.
- **Increased security**: IoT devices can be used to monitor and secure commercial spaces, protecting against theft, vandalism, and other security threats.
- **Environmental sustainability:** IoT devices can help businesses monitor and reduce their environmental impact, such as by tracking energy consumption or reducing waste.