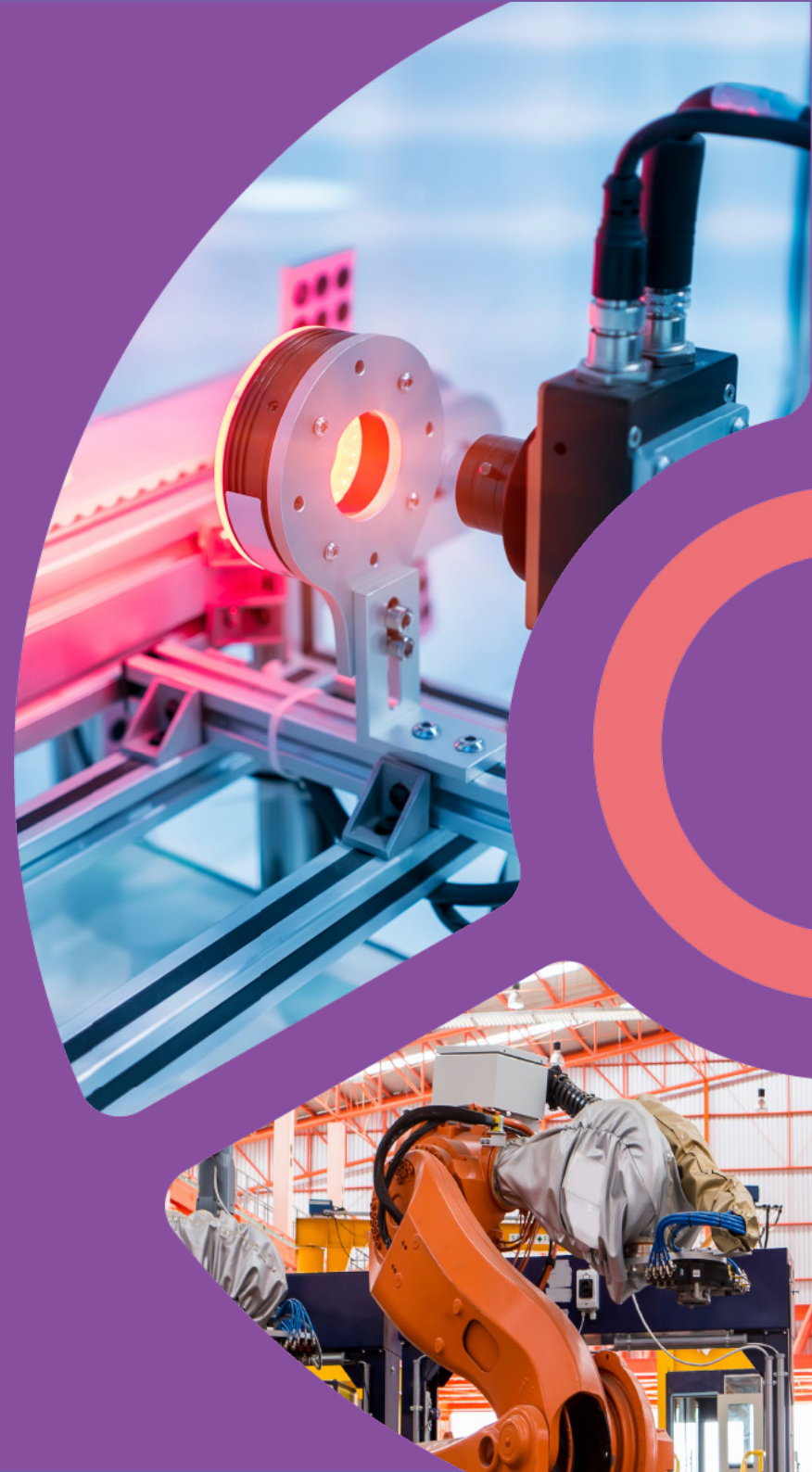




Edge Central

The Open Edge Data Platform

IOTech Edge Central™ provides the freedom to innovate and generate business value at the edge



Edge Central helps liberate your industrial data making it easily accessible, actionable and manageable

Openness, Flexibility and Choice at the IoT Edge

What is Edge Central?

Edge Central is a modular, “plug and play”, open edge data platform and edge management software toolset. It enables users to maximize business value from their industrial data by easily integrating their southbound OT devices and sensors with their edge decision making, analytics and northbound IT/Cloud systems.

The platform can be deployed on a wide range of Gateway, Industrial PC and Server class devices and is independent from the choice of underlying hardware (e.g. ARM or Intel) and operating system. For companies focused on digital transformations, it helps to address the key business challenge of enabling interoperability between the OT and IT worlds by simplifying the integration effort, reducing time to market and lowering the total cost of ownership of deploying and managing new edge solutions.

Leveraging the EdgeX Foundry

Edge Central is based on the Linux Foundation’s EdgeX Foundry, the worlds #1 open-source edge data platform. It leverages EdgeX for its base set of core services which provide an interoperability foundation on top of which IOTech add significant value-add capabilities required for commercial use across different industrial markets. This allows Edge Central commercial microservices (e.g. OT Device Services) to also be used by customers using open-source EdgeX.

EDGE X FOUNDRY™

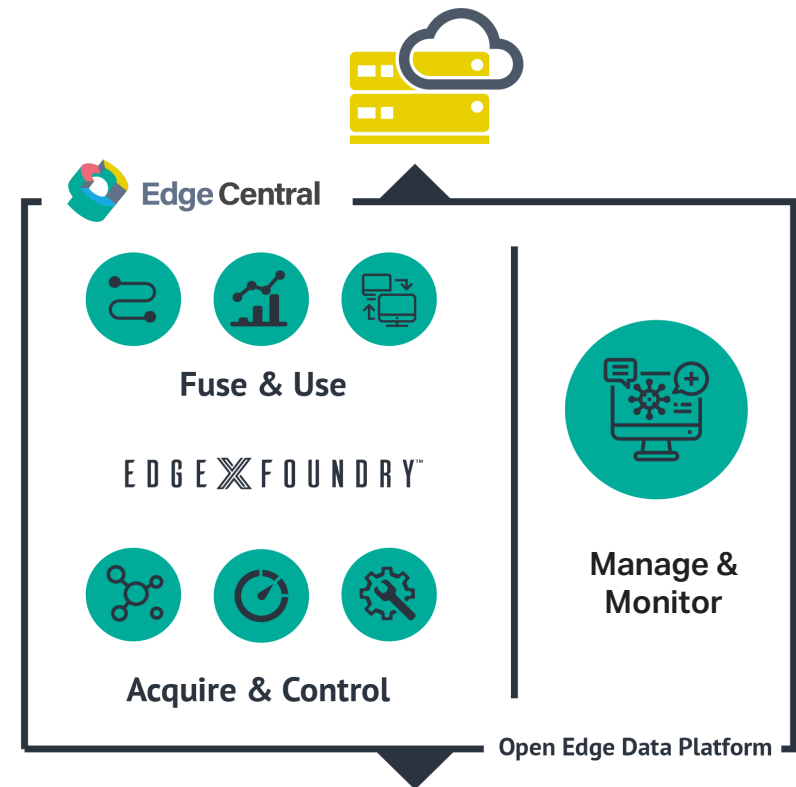


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The Edge Central Advantage

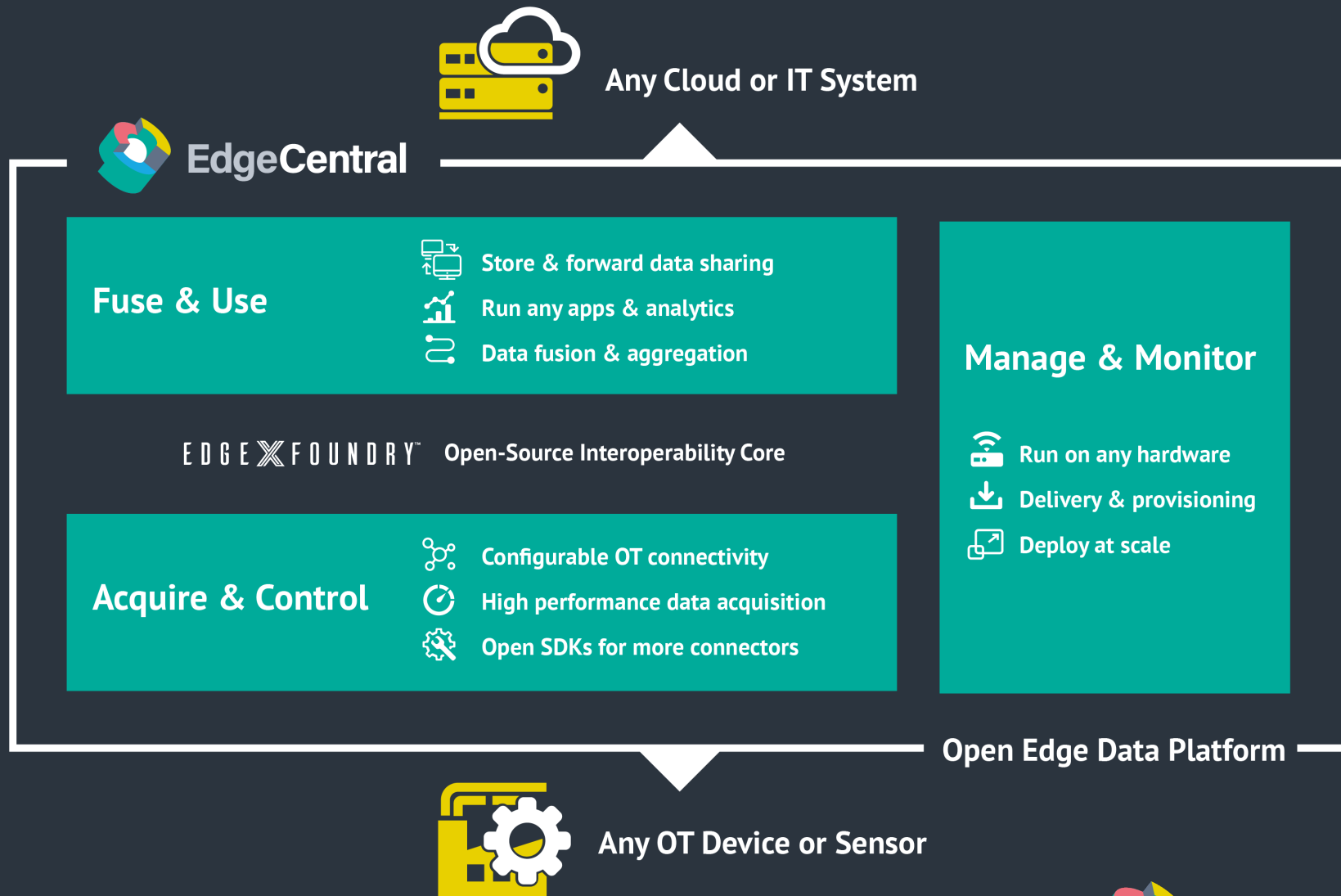
Edge Central is used by the world's leading providers and consumers of industrial edge solutions. The many benefits of Edge Central include:

- A flexible open edge distributed computing data platform and edge management software toolset
- Making industrial data easily accessible, actionable and manageable
- Significantly reducing time to market and integration costs
- Leveraging EdgeX Foundry the world's #1 open-source edge platform and ecosystem
- Modularity allowing use of the whole solution or just the components that you need
- Building your edge solution using technology based on open standards
- Open APIs to avoid lock-in and allow easy extension of the platform with your own IP or best of breed technologies
- Platform independence allowing a choice of hardware, operating system, OT devices and cloud providers
- Open SDKs to address your future connectivity needs
- Openness to plug-in in your value-add business rules, AI/ML or other analytics services
- Ability to provide data in the format required by your industry (e.g. OPC UA, Haystack, SunSpec etc.)



Openness, Flexibility and
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Edge Central - The Open Edge Data Platform Solution



IOtech Edge Central is designed to maximize openness, ease of use, flexibility and choice for organizations developing the next generation of industrial edge solutions.

To meet our customer's needs we have created a software platform and management capability that provides independence from hardware, operating system, programming language, applications, OT protocols and cloud technologies.

The modular microservices architecture of Edge Central enables users to create plug-and-play business value-adding applications by liberating their valuable industrial data and drive top and bottom-line business impacts by supporting the following main functions:



FUSE & USE

Allows you to leverage the platform's data processing services including edge rules, transformations and filtering.

Data collected from the OT devices and sensors can also be processed by your own edge applications that use the latest AI/ML, analytics or inferencing technologies.

The data processing results can be shared with other endpoints such as cloud services, while actuation commands can also be sent back to the OT environment to control the equipment.

The platform provides standard configurable connectivity to enterprise cloud systems from AWS, Microsoft, Google and IBM, again with an open SDK to create more integrations.



ACQUIRE & CONTROL

Allows you to connect to any device and acquire your OT data in real-time. Data can be collected from many sources and then normalized, aggregated and securely shared with any other platform service or endpoint.

The platform provides extensive pluggable connectivity for many of the most common Southbound OT protocols used by the leading device manufacturers (e.g., Modbus, OPC UA, BACnet, EtherCAT, EtherNet/IP, PROFINET, Siemens S7 and many others).

There is also an open SDK to create more connectors as needed. Data is read/write and can be acquired at low latency and in high volumes through tool-based configuration and without the need for custom coding.



MANAGE & MONITOR

IOtech Edge Manager enables users to automate the management of their edge nodes, Edge Central applications and connected devices centrally and at scale. Edge systems are managed from a centralized controller that can be hosted either on-premise or in the Cloud.

Users can interact with the controller via GUI or CLI tooling, or programmatically via GraphQL or REST APIs. Platform independence from both the managed nodes (Gateway, Industrial PC, Server or even MCU class devices) and the Cloud environment (public or private) on which the controller is deployed ensures flexibility and choice.

The loosely coupled event-driven architecture of IOtech Edge Manager helps address scaling and can support the management of 100s or 1000s of edge device nodes and their applications. It supports the deployment and management of both containerized Edge Central applications, native Linux binary applications or scripts and other configurations files.



IOTech Edge Central is a key enabler of many industrial verticals where the integration and normalization of data from OT devices is a requirement for smooth business operations.

Edge Central has been deployed successfully in many different verticals including Manufacturing, Building Automation, Smart Energy & Utilities, Oil & Gas, Retail and Transportation.

Edge Central Industry Use Cases

Smart Manufacturing & Industry 4.0

To help create operationally efficient smart factories, manufacturers are increasingly focusing on automating the data exchanges between their equipment and control systems, as well as adopting modern technologies such as edge AI and computer vision.

IOTech Edge Central provides the software foundation for users to build autonomous decision-making processes, monitor assets and processes in real-time, and create unified networks and systems through simple vertical and horizontal integration.



Renewable Energy

IOTech Edge Central is helping the providers of Battery Energy Storage Systems (BESS) deliver safer, more efficient, and cost-effective solutions to their customers.

By standardizing connectivity to underlying battery, inverter, and other equipment control systems, BESS manufacturers can exploit the rich data held in these systems.

Vendors can choose and easily integrate energy products from a variety of equipment suppliers to, for example, maximize energy density, and create the most appropriate overall hardware and software solution for each of their customers or customer sites.





Smart Buildings

The Buildings Automation industry is being transformed by the adoption of modern data-driven approaches to smart building management.

Edge computing is the enabler for getting scalable solutions to the market. It enables advancements in artificial intelligence and machine learning helping to provide tangible benefits to both building operators and their tenants.

IOtech Edge Central is used to acquire data from a wide variety of building devices including HVAC systems, lighting systems, access control and CCTV. Data from all of these sources can be fused together to provide a complete operational picture that can help optimize the efficiency of the building.



Smart Retail

IOtech Edge Central is enabling the integration of a range of retail devices from multiple different vendors. This includes point of sale hardware, RFID scanners, weight scales and smart cameras that can be easily added to the system to create an integrated solution for retail.

IOtech Edge Central is used to merge all the available data at the edge in order to create a single operational picture which in turn can support multiple retail focused use cases using the same data sets including people counting, line estimation, shift management, stock control and point-of-sales loss prevention.





For additional information on Edge Central,
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Visit our website
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