

DATASHEET

Industrial IoT Core Software

Power Actionable, Real-Time Insights for Your Critical Operations

Accelerate and scale operations application deployment with a complete IIoT data platform foundation including Core Services, Gateway, Digital Twins, and Machine Learning (ML) Services to:

- Future-proof your Industrial IoT deployments.
- Cost-optimize and de-risk artificial intelligence (AI) and machine learning (ML) model management
- Meet demands for data quality and transparency
- Secure operations data from the edge

IIoT Core software (formerly Lumada Edge Intelligence) part of Hitachi's Lumada Industrial DataOps portfolio, powers actionable, real-time insights within your industrial operations environment. It enables enterprise-class industrial data management and simplified AI/ML application assembly.

Organizations that need to collect data from various sources, contextualize it, visualize it, and perform analytics on top of it will benefit from Hitachi's IIoT Core software environment.

Solve your Pressing Operations Problems

- Lack visibility of equipment assets or having difficulty monitoring those assets
- Assets distributed throughout different physical locations, countries, continents
- Unplanned downtime plaguing operations and running up repair costs
- Poor service quality due to undetected faults

Optimized for use within industrial operations, IIoT Core efficiently delivers site or asset-level real-time advanced analytic insights at the point of work or anywhere in your organization. It empowers your operations staff across the enterprise to respond more quickly to problems, saves money and harmonizes operations. By enhancing your organizational agility, without requiring modification of existing automation systems, it quickly and efficiently adds new operations management functions to give you a competitive advantage. IIoT Core software provides a trusted IoT analytic hub for operations data that empowers data scientists and data engineers to assemble AI/ML programs using a digital twin and

an ML model training environment; then deploy them to improve site-level and regional operations effectiveness.

Empower Your Organization

- Reduce reaction times to critical events in operations with real-time insights through ML and AI analytics.
- Future-proof and scale your IoT deployments with a standards-based, open, and flexible application and solution environment to drive business differentiation and agility.
- Cost-optimize and de-risk site operations data management and support corporate-wide intelligent data operations.

Rich Industrial IoT Platform Environment

- Data ingestion from industrial sources and sensors
- Data processing, reading payloads and redirecting portions to select destinations
- Data storage for all IoT data
- Data forwarding of collected data to a destination of choice
- Application management of infrastructural aspects of the application, such as the underlying Kubernetes environment
- Digital Twin framework to create, update, and delete digital equipment assets
- Analytics model framework to address operations challenges and requirements

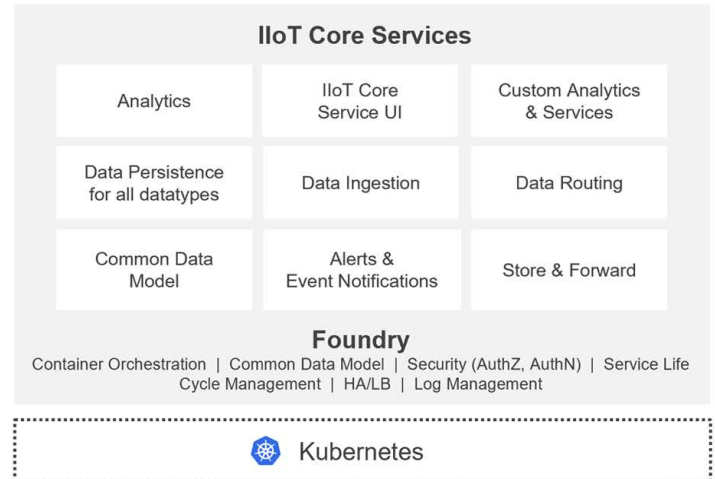
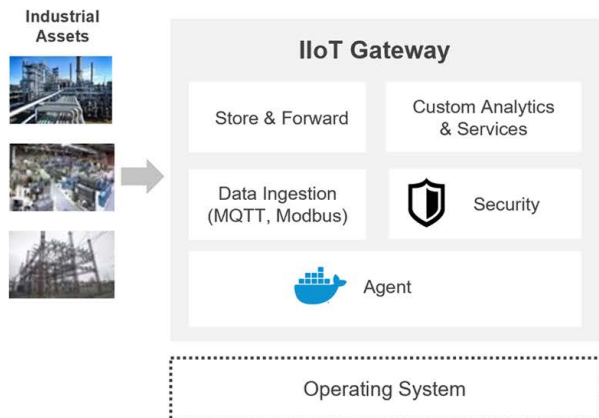
Easy Management Tools and Functions

IIoT Core Services UI:

The IIoT Core Services app configuration, and management. It facilitates a quality data stream for use in analytics at the edge and enables other enterprise applications, data hubs and data lakes. This provides a productive user interface (UI) to monitor and update the system software, add assets, manage digital twins in a heretical model, remotely monitor devices, configure, and manage data routes, and set up alerts. APIs also provide integration with external applications.

IIoT Core - Core Services and Gateway

Scalable, Composable and Extensible



Edge Connect:

Edge Connect comes with many historian, sensor, computerized numeric control (CNC), programmable logic controller (PLC), distributed control system (DCS) and industrial gateway drivers for fast implementation of your edge computing needs. Don't see a driver you need? Let us know, and we can provide custom driver scripts to support your industrial gateway device.

Interface for Third Party Dashboard Tools:

Leverage open-source visualization tools like Grafana and others for near-real time visibility into key data in broad industry areas, such as manufacturing, transportation, energy, and smart spaces. Configure visual key performance indicators (KPIs) as well as notifications and alerts to individuals, based upon events or opportunities derived from the system.

Data Processing and Management:

IIoT Core enables a trusted IoT data hub for operations data. It provides the ability to tier data from gateways to site or asset-level hyperconverged servers to data centers and the cloud. At the edge, create data pipelines and subscribe to data streams coming from operations technologies. For example, applications can be run at the edge to allow real-time stream processing, advanced analytics, and windowing of data as an extension to other operations applications and control systems.

Application Enablement and Analytics:

IIoT Core helps build, package, deploy and maintain industrial IoT containerized applications and scale them easily. It abstracts away container orchestration and security technology. It also offers you the flexibility to bring your own docker containers. Thus, it allows customization and differentiation in a more modern framework. Common data access APIs and pub-sub services allow you to easily subscribe to a data stream or call an API to integrate with workflow or application logic.

Integration:

IIoT Core offers a flexible way to read, write and transform data to and from operations systems via MQTT, AMQP, Modbus and other protocols. It provides a console, which includes access to out-of-the-box device interfaces and allows you to manage gateway devices for storage and forwarding. It enables integration with other products from Hitachi Vantara as well as third-party tools for analysis and data management.

Infrastructure:

IIoT Core runs on any hardware platform that supports the Linux-based or Kubernetes OS and meets minimum hardware requirements. Micro-services scale up or down, depending on the available compute.

IIoT Core software is a great addition to any IoT solution where cloud or data center storage costs, application latency, intermittent network connectivity and site- or asset-level reaction time is a concern.

A Competitive Edge for your Analytics Team

- Ability to build, deploy, train, and manage ML models
- Interface with external simulation tools for greater accuracy
- Easier assets modeling and IoT deployment
- Flexible according to your environment
- Support for public and private cloud vendors



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Hitachi Vantara solves digital challenges by guiding you from what's now to what's next. Our unmatched industrial and digital capabilities benefit both business and society.

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Let us help you find the best solutions.

Hitachi Vantara

Corporate Headquarters
2535 Augustine Drive
Santa Clara, CA 95054 USA
hitachivantara.com | community.hitachivantara.com

Contact Information
USA: 1-800-446-0744
Global: 1-858-547-4526
hitachivantara.com/contact

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