



Sensors, devices and machines into the cloud: The Data of your industrial assets, plants and sensors are valuable. Acquire and use this data over the entire life cycle of your assets with Device & Data Hub.

Securely connect the real world of heterogeneous device types and forward their data towards the business processes at any business application or platform independent of underlying access technologies with Device & Data Hub: a Robust high-performance unified layer for IoT solutions.

Digitization is progressing inexorably and rapidly. Those who deal with its possibilities now will win. Because speed is more important than ever before. The digitized world demands individual solutions, customer access is being redesigned radically, and new technologies are changing entire value chains.

When will I receive the component? Where is the important construction machine now? How often do I really produce with the system, how high is its degree of utilization? What value did the sensor deliver before the system failed? How much fuel is in the tank? How do I update my devices?

If you have already asked yourself such questions in the past – especially if you are not in the vicinity of the object in question – your company is ready for the Business IoT Device & Data Hub.

What is the Business IoT Device & Data Hub?

This platform provides ready-to-use functions for device management, data collection and processing, and enables the seamless integration of sensors, devices and machines into your enterprise systems and processes. This makes it possible to implement complete end-to-end solutions quickly, sustainably and securely, and to integrate them into other cloud systems.

Your benefits with the IoT Device & Data Hub

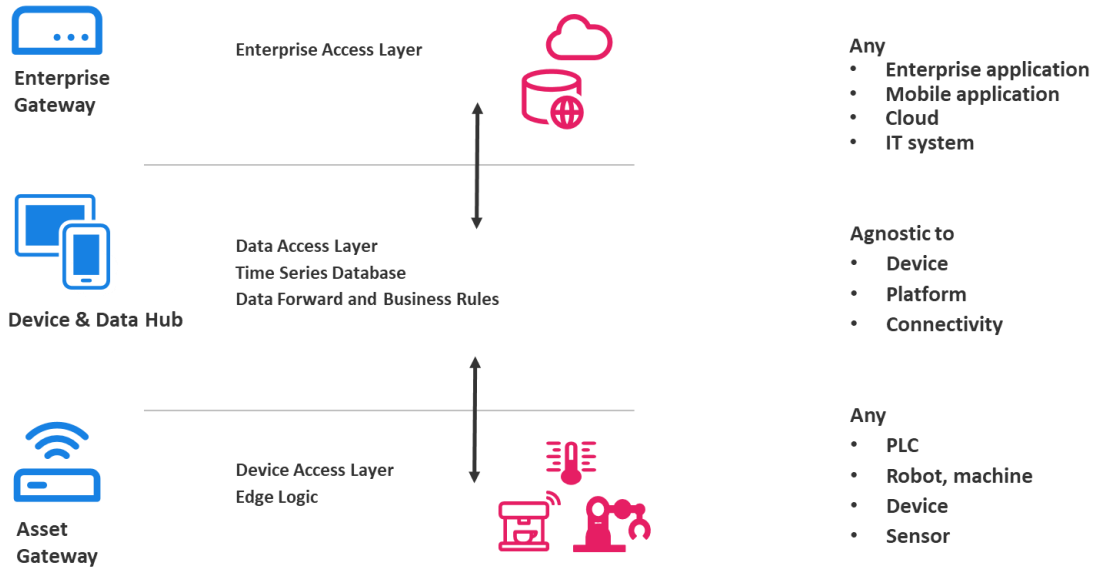
- You will be surprised how flexible, fast and easy your sensors, devices and machines can be connected and data transferred to the cloud.
- You will learn how the best device management solution facilitates your entry into the Internet of Things.
- You will have the opportunity to implement and test your ideas as prototypes.
- You will benefit from our comprehensive expertise in the Internet of Things.
- You will experience significant savings thanks to cloud-based access to your sensors, devices and machines.

It is time to leave theory behind and test concrete solutions.



The information in this document does not constitute a binding offer. It is subject to revision at any time.

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Facts & Figures

Device Integration

Device integration – connects, collects and manages virtually any device through a variety of APIs or through software agents with built-in drivers and peripheral intelligence.

HTTP (S) – protocol and API for a standards-based interface with full bi-directional communication, data collection and functionality between the Device & Data Hub using either the TR50 message format or REST API.

MQTT TR50 – protocol and API for a robust standards-based interface with full bi-directional communication, data collection and functionality between the Device & Data Hub.

Lwm2M – Protocol and API for a data consumption-optimized interface for bidirectional communication between the device and the Device & Data Hub. Full support and use of all functions of the Device & Data Hub with devices based on the Lwm2M standard is guaranteed.

Developer tools – online help, API test environment, debug/log information and source code libraries for a variety of development platforms.



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Device Management	Portal API – APIs as an automation interface to the Device & Data Hub portal. The APIs include management functions for organization, users, devices, logic and signalling as well as usage and billing information.
	Application integration – APIs for data access from web-based and mobile applications.
	Dashboard – display and visualization of device conditions, management information and usage data.
	Campaigns – bulk firmware or configuration changes for all or selected devices.
	Geofencing – processing of coordinates for addresses and map representations, monitoring of the area where devices are used as well as the recording of movements.
	Business rules – implementation of dynamic rules for rapid notification of value violations, definition of alarms and other kinds of logic for data processing and forwarding.
	Administration and security – encryption, secure networking, assignment of rights, authentication, continuous logs for traceability.
IoT Connectivity	Connection to the Connectivity Management Platform (CMP) Mobile – direct access to information on mobile IoT connectivity, condition and consumption of devices as well as modification options.
	Connection to the Connectivity Management Platform (CMP) LPN– direct mapping of LPN-based sensors and devices.
Optional Services	Cloud-enabled modules – realization of the path from the sensor or device to the cloud through special communication modules with extended AT command interface and IoT hardware API.
	Machine integration – use asset gateway software to quickly connect a variety of machine controllers (SPS) using pre-built drivers and transfer data to the cloud.
	Enterprise process integration – leverage enterprise gateway technology to integrate with customer IT systems and enterprise business applications.