




WAGO Cloud

#openandeasy: Universal IoT Solutions for Machines, Systems and Buildings





Users **CLOUD**
 Security Cloud connectivity
System data Measurement data
 Automation **WAGO**
 Machine data **simple** user-friendly
Data security Cloud connectivity **Benefits**
 SaaS **WAGO** Digitalization 
Controller status **CLOUD** **Software**
open from a single source **Users** **Software** **#openandeasy** **Remote access**
CLOUD **Energy savings** **IoT solution** **Security**





WAGO Cloud

WAGO Cloud lets you collect and analyze the data of various machines from a central location. It also allows WAGO Controllers to be easily managed and monitored along with their data and applications. Combining simplicity with usability, WAGO Cloud was developed so that people without IT experience can use it. It is hosted on Microsoft's Azure Cloud.

How does machine data get to WAGO Cloud?

A WAGO PFC Controller serves as a gateway, collecting and sending data to the WAGO Cloud either cyclically or as a response to an event. Users log into their user interface on the Web portal, where they can use various applications and access functions like visualizations, controller and user management and status monitoring. Users can also activate alarm functions, and data can be visualized graphically, evaluated and exported as needed.

Do you need to restrict and select what data is sent to the cloud?

No problem! You decide by configuring the WAGO PFC Controller and then use PLC programming to specify what data to send to the cloud.

Your Benefits:

- User-friendly: Simple operation without IT expertise
- Flexible: Individually scalable solutions – you pay only for what you use
- A single source: Get software, infrastructure and services all from WAGO

**Test WAGO
Cloud now for
free for 30 days**



An Overview of WAGO Cloud Functions

Manage Your PFC Controllers

Connect your WAGO Controllers to WAGO Cloud within minutes and then assign them to customers, sites and systems. Monitor current connection parameters and process data. Alarm and notification functions enable you to respond quickly to exceptions.

Analyze Your Data Centrally

Visualize and compare your machine and system data centrally via WAGO Cloud. Represent your measured data over time graphically, e.g., as trend graphs, bar charts and pointer elements. Create a graphical overview of your controllers' locations and connection statuses.

Access Local Configurations and Visualizations via Remote Access

Remotely access your WAGO Controllers without time-consuming configuration of the IT infrastructure. Use the Web browser to easily set up, control and monitor your systems.



Always Updated

Provide your controllers with the newest firmware in just a few clicks. Distribute an existing application to multiple controllers in a few seconds. You can choose between updating your firmware automatically from the cloud or manually on site.

Export Your Data Easily and Flexibly

Want to use your data with other tools and software in addition to WAGO Cloud? WAGO Cloud offers streamlined and flexible access thanks to various interfaces (RESTful API and CSV).



Keep an Eye on Your Machines

Get email notifications if your data falls above or below specified limit values. Select alarm rules for controller/ connection status and application data.

Access Only with Authorization

You decide who gets what cloud permissions. WAGO Cloud offers user management that has various authorization levels.



The Advantages of WAGO Cloud

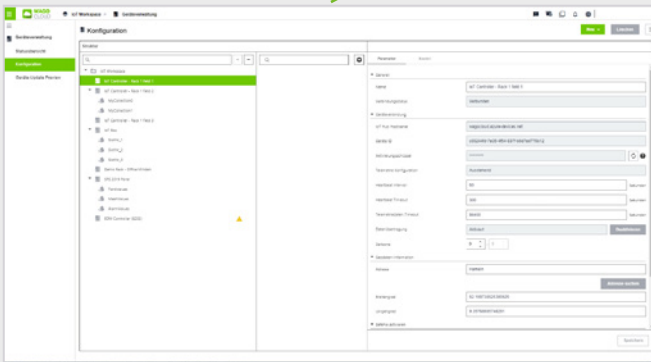
WAGO Cloud is based on the established Microsoft Azure cloud platform. WAGO Cloud offers the following advantages:

Consistent Performance:

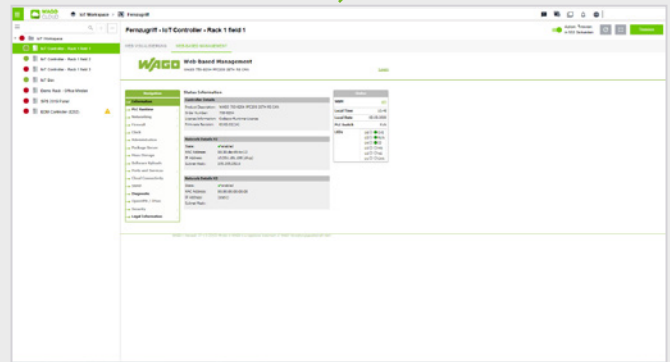
Microsoft Azure is highly scalable in terms of computing power, data storage, transactions, availability and security standards.



Device Management



Remote Access



Function

High availability of cloud services (> 99%)

Hosted in the Microsoft Data Center

Completely clear pricing through a clear license points model

High security guaranteed by compliance with security standards, verified (via penetration test) by TÜV Rheinland I-Secure GmbH, for example

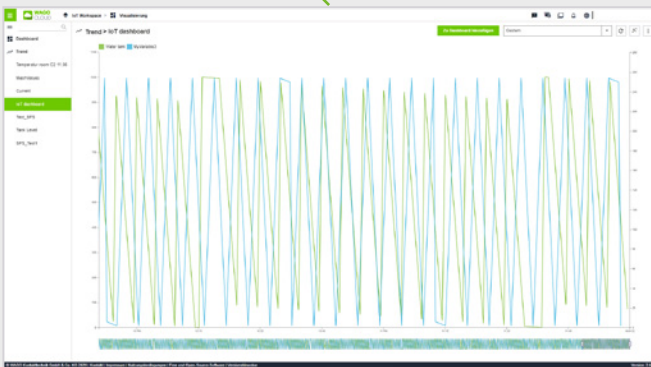
Central monitoring and administration of IoT devices; display of connected controllers and relevant connection details

User-friendliness: View all functions at a glance thanks to the intuitive app structure

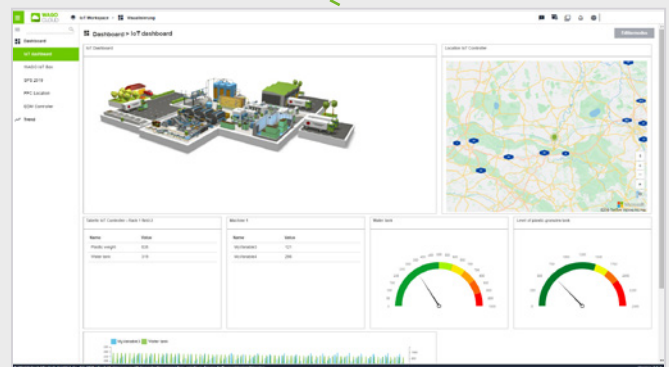
User/role concept implemented through simple assignment of permissions and unlimited user login

VAGO CLOUD

Visualization



Dashboard



ions

Central data acquisition and analysis for greater transparency and optimized processes

Alerts triggered by the automatic detection of alarms and fault messages

Remote diagnostics and maintenance for all connected IoT devices

A data hub provided by simplified, flexible data export via the RESTful API interface to third-party systems

Dashboard customization with a large number of data point display options; create custom dashboards and use graphics and trends



Getting Started Is Easy: Register and Test at No Charge for 30 Days

Register at <https://cloud.wago.com> for a free 30-day, no-obligation trial.

WAGO Cloud offers you complete IoT device management which, together with WAGO's PFC Controller family, easily connects to new or existing machines and systems. You can use WAGO Cloud for free for the first thirty days. During this period, you'll have full access to the entire range of services.

Test WAGO
Cloud now for
free for 30 days!



License Model

Paid Functions

Free 30-day evaluation phase (100 test points)
Transparent license use management in WAGO Cloud

	Cloud Functions	Contents
Data management	Data packets	Connect PFC Controllers to WAGO Cloud Transmit data to WAGO Cloud Monitor devices and data Storage period: 1, 2, 3, 4 or 5 years
	Data export	Data export via REST API or CSV export for other cloud services or customer systems
	Data import*	Bulk data upload
Device management	Firmware and application updates*	Install firmware and application updates on your PFC Controller from the cloud
	Remote access	Remote access to the local Web visualization and the controller's Web-Based Management feature
Payment method	Ongoing billing	Automatic billing thanks to open contracts; it is no longer necessary to enter license points.
	EDM-Flat	Costs per controller limited by EDM-Flat
	License points	Billing with a simple points model based on WAGO Cloud license points

*Available Q3 2020

100 WAGO Cloud license points: Item No. 2759-1061/651-010
500 WAGO Cloud license points: Item No. 2759-1061/651-050
1,000 WAGO Cloud license points: Item No. 2759-1061/651-100



You can now calculate license points with the online calculator at www.wago.com/cloud!

Direct IoT Connection via Cloud Connectivity

**Besides software, we also supply the right hardware:
PFC Controllers and WAGO Touch Panels 600 with cloud connectivity**

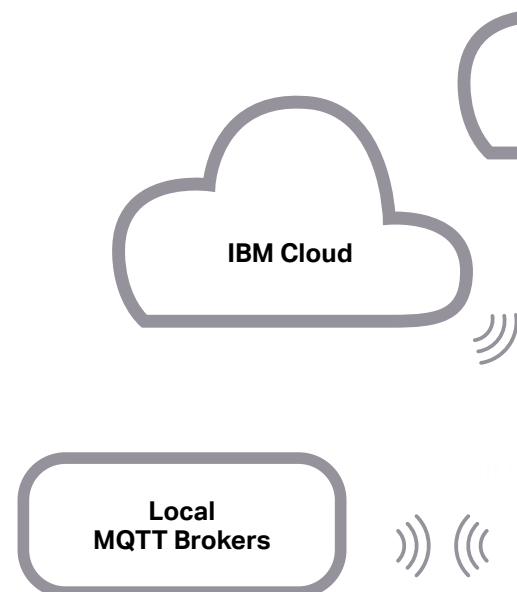
Record, digitize and link data profitably – these are the core ideas of Industry 4.0. A connection to the field level is established by the open I/O System 750, 750 XTR or I/O System Advanced. Data is then sent to the cloud or a local MQTT broker by a controller from WAGO's PFC range or a control panel from the WAGO Touch Panels 600 family; once in the cloud, data can be aggregated and used for analysis. This capability creates tremendous added value for your company – whether it's increasing the efficiency of in-house production, implementing energy management in buildings or developing additional end-customer services.

Future-Proof

Existing systems also become IoT-ready, making them future-proof. Communication between PFC Controllers and cloud suppliers is performed via the MQTT protocol and encrypted via TLS 1.2. Cloud connection data is configured via Web-Based Management (WBM). The WAGO **e!COCKPIT** Engineering Software includes appropriate libraries for specifying the variables for transfer to the cloud in the PLC program, allowing the PLC programmer to maintain complete control. Controller information, such as run/stop, connection status and device information, can also be transferred to a cloud solution via cloud connectivity or distributed by an MQTT broker.

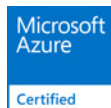
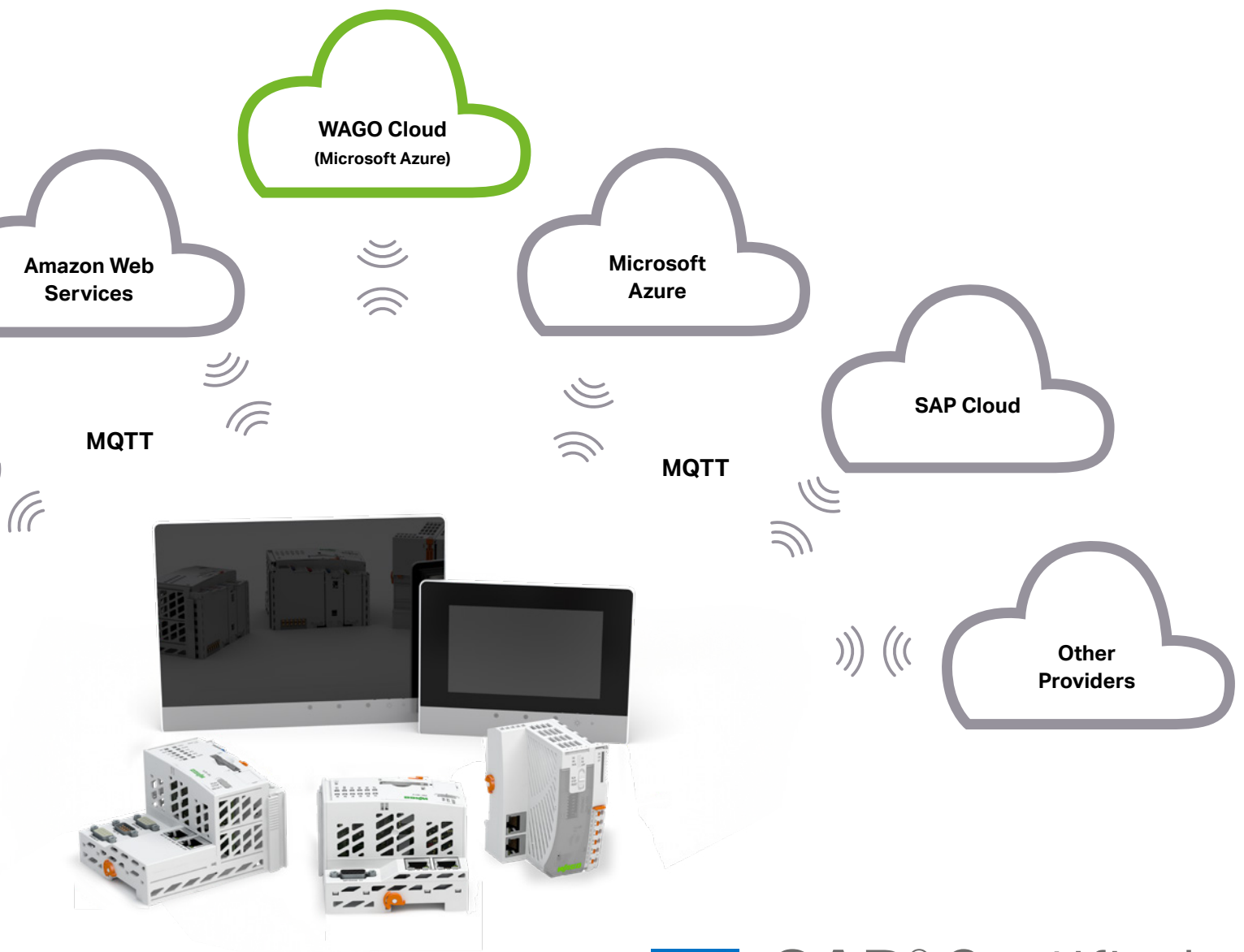
Interfaces

With a wide variety of interfaces, WAGO's Controllers also provide the perfect foundation for an IoT gateway. They can collect numerous field signals, communicate in a large number of industrial protocols and even enable cloud connection of sensors and actuators that themselves have no Web interface. Thanks to the standardized MQTT protocol, it is possible to connect to cloud providers such as Microsoft Azure, Amazon Web Services, IBM Cloud and SAP Cloud. Of course, other MQTT brokers or solutions like WAGO Cloud can also be connected. Cloud connectivity has been a standard feature of the PFC Controller since firmware version V11; the required library is included in **e!COCKPIT** from version V1.4 onward. With firmware version V12 and higher, WAGO's Touch Panels 600 supply the connection; from version V1.5 on, **e!COCKPIT** contains the required libraries.



Your Benefits:

- Direct connection between the field level and the cloud
- Expansion of existing systems with the PFC and control panel as an IoT gateway
- Connection to Microsoft Azure, Amazon Web Services, IBM Cloud or other MQTT brokers via standardized MQTT protocol
- High level of security thanks to TLS encryption
- No extra costs – the PFC and control panels are IoT-ready



SAP[®] Certified
Built on SAP Cloud Platform

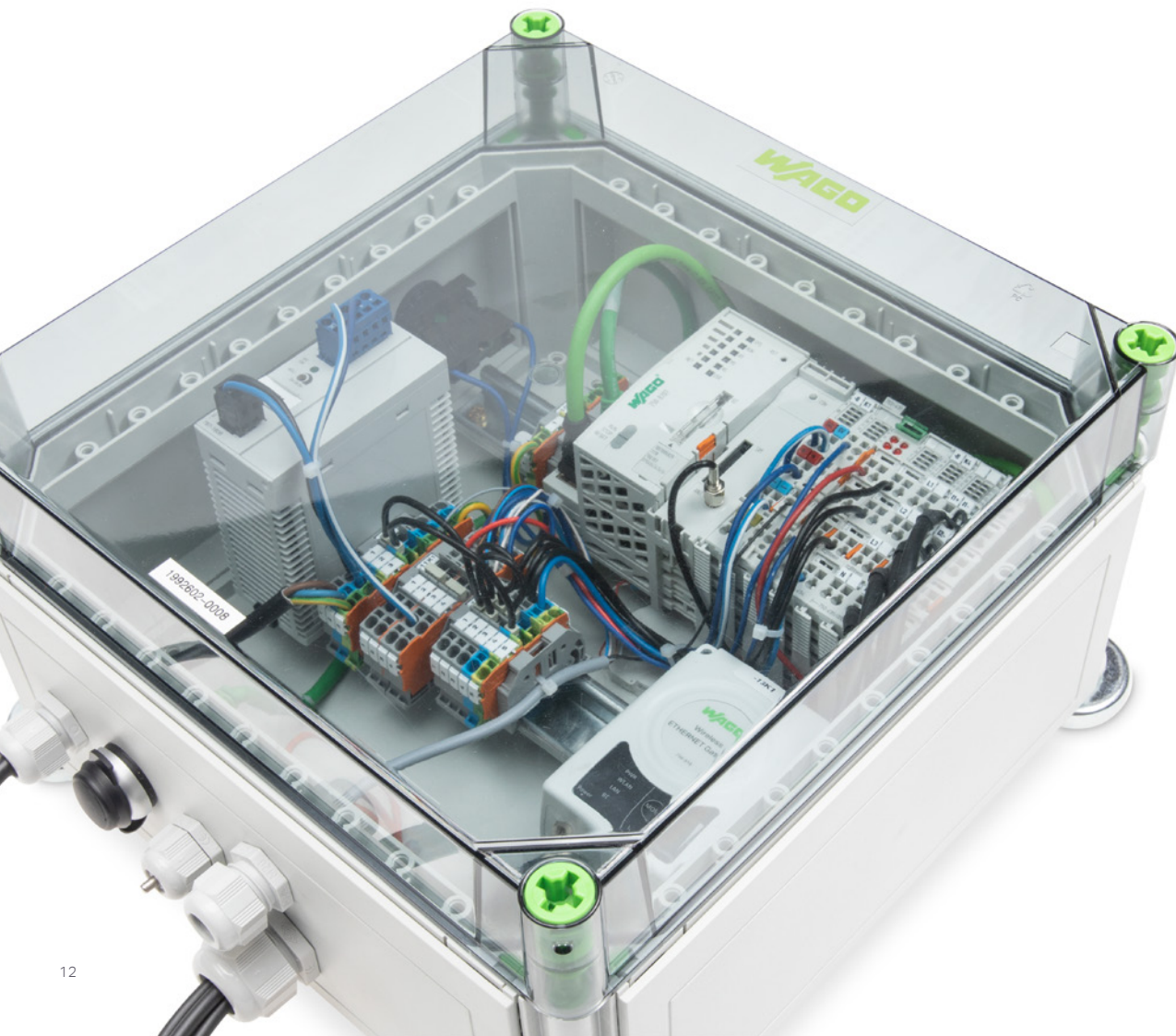
WAGO IoT Boxes: from Application Straight to the Cloud

Test our open, ready-made solutions and enjoy rapid connection to the IoT ecosystem.

The WAGO IoT Box gives you a practical, easy-to-use solution with real added value. The box is highly versatile and ideal for machine, device and building connections, as well as asset management. It is fully pre-assembled, housed in a solid enclosure and equipped with pioneering WAGO automation technology. The box is a complete and open solution for fast connection to cloud systems. It allows access to WAGO Cloud, as well as other services, and can be used as a gateway to existing

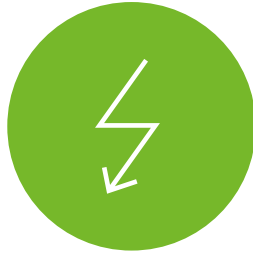
production systems. As a fully pre-assembled box, it can be deployed quickly. Easy configuration makes it ideal for measuring currents, voltages, production cycles, equipment statuses and other signals. The IoT Box is perfect for implementing preventive maintenance, which is becoming more and more important.

For additional information and to see all models, visit: www.wago.com/de/iot-box





Railway Systems



Power Engineering



Manufacturing Industry



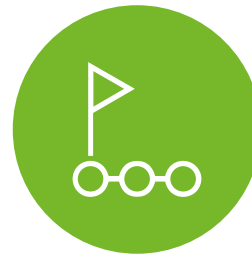
Building Technology



Lighting Connections
and Device Technology



Marine and
Offshore



Process Industry

WAGO Cloud for All Industries

Custom Solutions

With M&M as a member of the WAGO Group, WAGO has a partner for the integrated development of industrial and technical software solutions.

We examine the unique requirements of your company together with you and find the solution that's right for you. Because WAGO Cloud is the underlying platform, actual expansion can start immediately. Based on Microsoft's Azure Cloud, WAGO Cloud has a rapidly expanding number of services and tools to provide you with the perfect foundation for implementing application-specific solu-

tions. We're always willing to provide guidance. You can find additional information at:

<https://mm-software.com>



**» The WAGO Cloud
solution developed
for us is a tailored
solution that still allows
unlimited scalability.«**

Lars Baumann
Asset Management Team Leader
Avacon Natur GmbH

WAGO Cloud Success in Use

Avacon Natur GmbH

Avacon Natur GmbH uses WAGO Cloud for data analysis of its energy systems and heating networks. The cloud stores all the measurement data and provides an interface to Avacon Natur's existing energy data management system, which also runs on the Microsoft Azure platform. The PFC200 Controller collects both measurement data (heat quantities, flow rates, supply/return temperatures) and motor data from the CHP plants. Both employees at the

company headquarters and local service technicians use this to monitor the energy systems.

Avacon Natur GmbH is an energy service provider and operates CHP plants, heating networks and heating service systems. The firm also boasts a wide range of renewable energy generation systems.



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