gridX

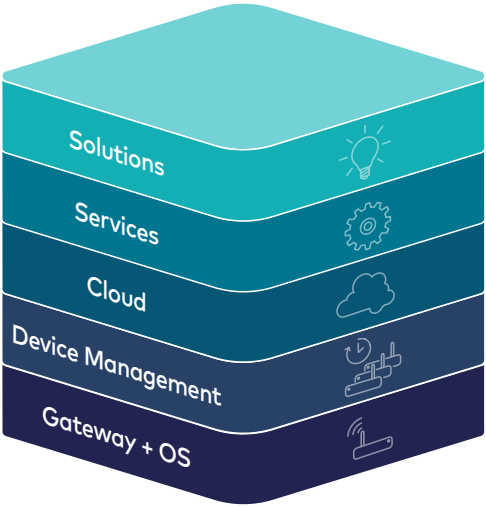
IoT-Solutions for a digital energy world

About Us

The gridX platform is the technical enabler for all future business models along the entire energy value chain. As a manufacturer-independent communication gateway, the gridBox provides the basis for the integration of all decentralized assets, enables interoperability, and delivers a comprehensive platform as a service (PaaS) for rapid development and operation of big data, predictive analytics, AI / machine learning, and IoT software as a service (SaaS) applications. gridX was founded in 2016 by David Balensiefen and Andreas Booke and is based in Germany (Aachen and Munich). It aims to become the operating platform of the decentralized energy age. This will be achieved through the development and use of advanced communication and data analysis tools to enable energy consumers, network operators and utilities to make the generation, transmission and consumption of energy more efficient and sustainable. The gridX solution is already being used by several large companies and Fortune 500 companies.

The gridX platform

In order to deliver the highest flexibility and to achieve a maximum integration between hardware and software, gridX developed an edge gateway (gridBox) as well as an operating system (gridOS) to enable energy IoT-solutions in the safest and most efficient way. For every IoT-project it is crucial to collect the data from a physical asset and to ensure a stable and secure communication to the cloud.



Independent Homes, Smart Charging & Microgrids

Multi-client access, hosting of the IoT-Cloud & more

Receive, store and process big sets of data

Administration of the decentral IoT-appliances

In-house edge gateway & operating system

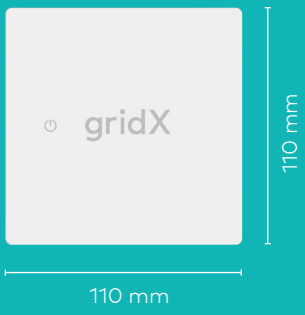
- 2,5 million data points per customer daily
- 90% of inverters integrated
- +5000 dezentralized energy units integrated
- Interprobability with over 150 manufactors and protocols

The gridBox

The gridBox, an edge gateway, provides easy configuration and setup via Plug-and-Play architecture and open interfaces. It meets the highest security and reliability standards. The gridBox counts as one of the most innovative, reliable and cost-efficient IoT edge gateways on the market.

Installation in just two simple steps

1. Connect the gridBox to the Internet via the supplied Ethernet cable
2. Plug in the gridBox



Always up to date

The gridBox's Over-the-Air Update functionality allows us to always deliver the newest software version to all users. This means that users can benefit from all features at any time and are not limited to the state of the time they received the gridBox.

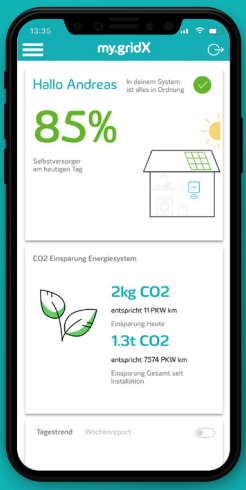
Supports all common interfaces

The newest gridBox version covers more physical interfaces such as RS485, CAN BUS, Xbus, etc., adding more integrations every month.

- +150 cooperations with qualified installers
- 99.95 % availability across all partners since launch

The gridX User- & Admin-Dashboard

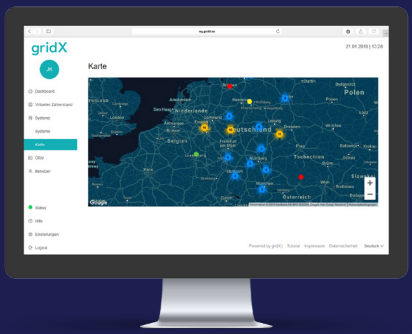
The User-Dashboard



Real-time insights
View energy consumption, feed-in, production & battery charge in real-time and let the system manage your household.

Analysis of historical data
See the historical level of self-sufficiency, self-generated energy and direct consumption in preferred resolutions.

Extendible
Add your own application to the dashboard to provide customers with the most relevant information.



The Admin-Dashboard

All information in one place
See all installed systems in one dashboard and manage them remotely.

Provide better support
Reduce after-sales costs by gathering all the required information and bug reports.

Different views for different roles
Define roles and manage the access rights of your team with the multi-client capability.

Our IoT-Solutions

The green energy era experiences rapid growth and diverse development. With increasing numbers of decentralized energy units, the necessity arises to connect and manage them. IoT devices are the units that collect, store and manage the data to optimize the performance and therefore the (energy) efficiency of physical assets.

Independent Homes

Manufacturer-independent white label energy management and monitoring for your private customers.

For more information, see page 7 and visit:
www.gridx.ai/independent-homes

Smart Charging

Efficient charging takes the current market prices, the power source and the various charging modes according to the users preferences into account.

For more information, see page 8 and visit:
www.gridx.ai/smart-charging

Microgrids

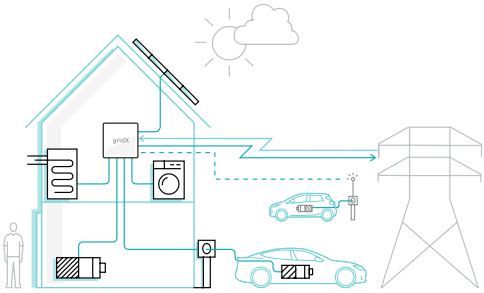
Our microgrids solution offers an independent decentralized grid, which can be disconnected from the public power grid. Our peer-to-peer energy trading allows direct trading of energy between your customers.

For more information, see page 9 and visit:
https://gridx.ai/microgrids

Independent Homes

gridX 'Independent Homes' is the first white label offering for flexible energy management and energy monitoring of private households with self-sufficiency. The customer increases the independence from volatile energy prices and gives every end customer valuable insights into his energy flows. Energy costs and the CO2 footprint are reduced drastically as gridX takes weather conditions into account and utilizes the storage capacity and the energy generation peaks.

gridX helps to connect decentralized energy devices



- Photovoltaics
- Battery Storage
- Electric vehicle
- Heat pump, ventilation & climate

Advantages of the 'Independent Homes' solution for your customers:

Maximized self consumption

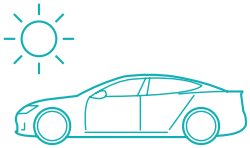
Fully automated energy flow management and monitoring

Can be combined with other gridX solutions

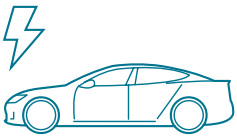
Smart Charging

As electric vehicles (EVs) are not today's state of the art transportation mode, an efficient and controlled charging is not realized. EV charging stations charge the EV as soon as it is plugged in. gridX makes charging smart and considers the actual market price of energy as well as the source of energy generation and the current load. This is due to the fact that a multitude of active energy consumers or a cloudy sky can effectuate a cost-intensive and fossil-fuel based charging process. The gridBox enables grid-friendly charging thanks to vehicle-to-grid (V2G) communication. This avoids congestion at the grid connection point and helps to reduce forecasting errors in the widespread use of PV. Hence several protocols are used by the gridBox to operate the EV charging station, the photovoltaic system, and the battery storage of our customers in an efficient, self-sustaining and optimized manner.

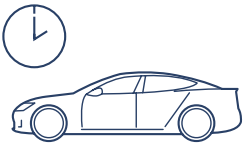
It is possible to choose between different charging modes via a mobile app, which are suitable for every customer requirement.



Ecomode



Fast Charging

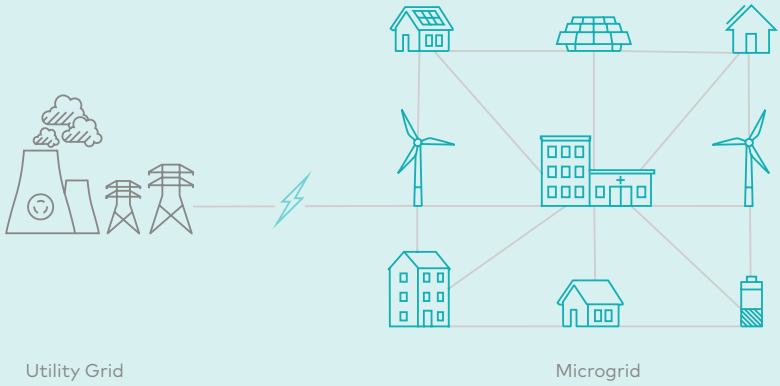


Point in time Charging

We enable the bidirectional communication between the electric vehicle and the grid operator, which is one of the crucial steps in the smart grid.

Microgrids

With the increasing number of decentralized production units as a result of the energy revolution arises supply security and grid development problem. Blackouts of the energy grid due to a grid frequency instability threaten customers. A supply alternative is inevitable that allows for temporary independencies of the grid if necessary. gridX's 'Microgrids' solution provides an independent, environmentally friendly and cost-effective solution. With its components the gridX 'Microgrids' solution enables monitoring, managing, and billing the energy flows of the customers to prepare forecasts for the management of the decentralized power plant fleets



- Offers control centre for microgrid community members
- Remote maintenance
- Remote diagnosis
- Overview of all energy flows
- Open for third-party vendors & interfaces
- Enables P2P energy trading through the use of blockchain technology

gridX The solution for your IoT project

VIESMANN

innogy

DIGITAL ENERGY SOLUTIONS

EEBUS

energy web FOUNDATION

aws

SIEMENS

e·on

»Millions of $ are invested by energy companies for the in-house development of an IoT-Cloud infrastructure. Up to 90% of the time is used for fundamental developments that are independent of the real solution.«

- The modular design allows easy adaptation to customer needs and the CI
- Availability of expansion modules for special applications
- Flexible solutions of gridX that allow a combination of multiple business solutions
- Easy development, fast implementation, and cost-effective operation of Energy-IoT models.

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