# sid-OS

the energy development framework

In modern energy systems the connectivity of power and data are linked directly together. However, there is no standard how the connection of devices and cloud should be realized. At the same time, the decentralization of the energy market results in a rapidly increasing number of devices. IoT platforms, SDK's and frameworks are trying to provide solutions using a wide and general approach, without considering the specific requirements of energy systems.

With sid-OS, we provide a development framework for Embedded Linux specialized on decentral energy systems. It provides all necessary layers and components to develop energy management systems (EMS), gateways for virtual power plants (VPP) or behind-the-meter gateways.

sid-OS supports a constantly growing number of devices and communication protocols, which will be provided and updated as basic features. The high-performance data access, storage and transport are realized within a data framework which is optimized for time-series data. The cloud connection can be realized using a preconfigured cloud connector or an individual connector using the cloud connector framework. Security is one of the key essentials of sid-OS as we understand energy systems as critical infrastructure. Remote update management, cryptographic protocols and certificate-based authentication are key features.

sid-OS allows a fast and efficient development of individual applications for energy systems. Apps from third parties and standard apps can be included using a predefined interface. With sid-OS we provide a development framework to connect decentralized energy systems by data. It is the complimentary part to our power electronics ambiBOX® - which connects by power.
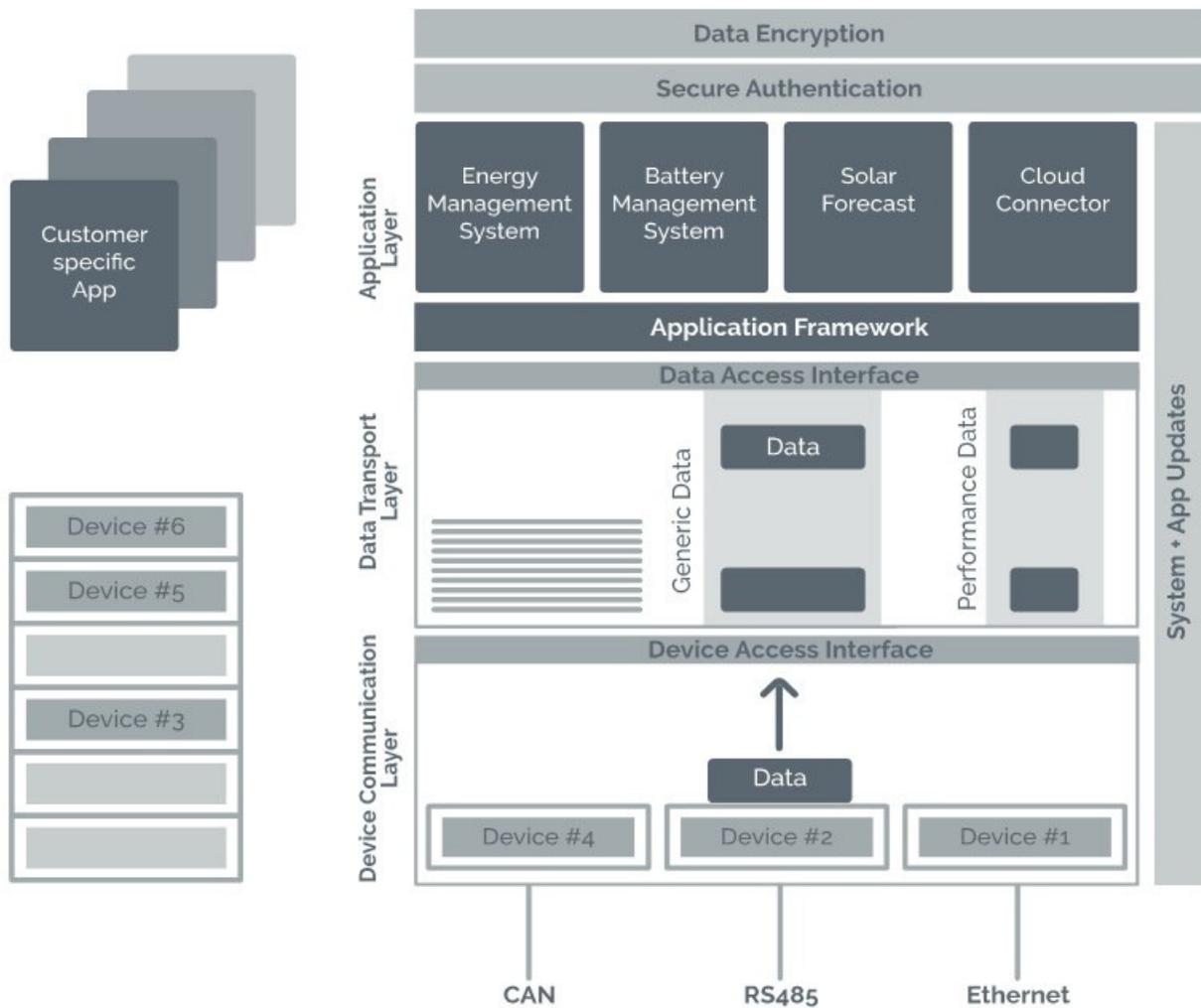
Key Features

Multi device support
- Many products already supported
- Easy integration of new devices

Industry standard security concept
- Customized Linux Distribution with respect to security
- Secure authentification & encrypted data transfer with cloud server
- Design by security
- Firmware Updates via Cloud
- Secure Device Updates via Gateway

High performance data access
- Inhouse data-transfer protocol optimized for times eries data
- Device data stored for ~1 year on local gateway

App Store for individual Energy Management
- Select from Ambibox approved apps to control, analyse or visualize your energy system
- Develop your own app based on an Easy-To-Use SDK for fast application development