sidOS®

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 und frameworks are trying to provide solutions using a wide and general approach, without considering the specific requirements of energy systems.

With sidOS®, 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.

sidOS® 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 sidOS® as we understand energy systems as critical infrastructure. Remote update management, cryptographic protocols and certificate-based authentication are key features.

sidOS® 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 sidOS® 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.

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