CAN Newsletter Online

COLLECTING DATA

Edge devices with CANopen

Wago offers two edge devices: The Edge Controller and the Edge Computer. Edge devices can take over data mining from controllers that require low latency and a high level of determinism.

(Source: Wago)

In many cases, transferring data from machines and systems directly to a cloud solution is resource-intensive and not feasible due to the low latency often required for industrial applications. Edge computing has established itself because it combines the advantages of de-centralized cloud architectures with those of a local network architecture. Collected data of the edge devices can be evaluated directly, displayed graphically, and made available to the cloud.

The Edge Controller utilizes an ARM Cortex-A9 quad-core processor and offers a selection of interfaces, including one CANopen port, two Ethernet ports, and two USB ports. It also has a serial interface and four digital inputs/outputs for connecting local devices or sensors. Project design for the Edge Controller can occur in the company's e!Cockpit environment, so it fits seamlessly within Wago's automation solution ecosystem.

The Edge Computers feature a 1,91 GHz quad-core Atom processor and are equipped with Debian Linux. An SSD disk can be installed to expand the existing 64 GiB flash memory for data volumes. Despite their extended temperature range from −20 °C to +60 °C, the computers come without a fan. Software, such as Node-Red, can be used on all edge devices. These devices communicate via all common protocols including CAN, both on the factory floor and with the cloud, explained the company.

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