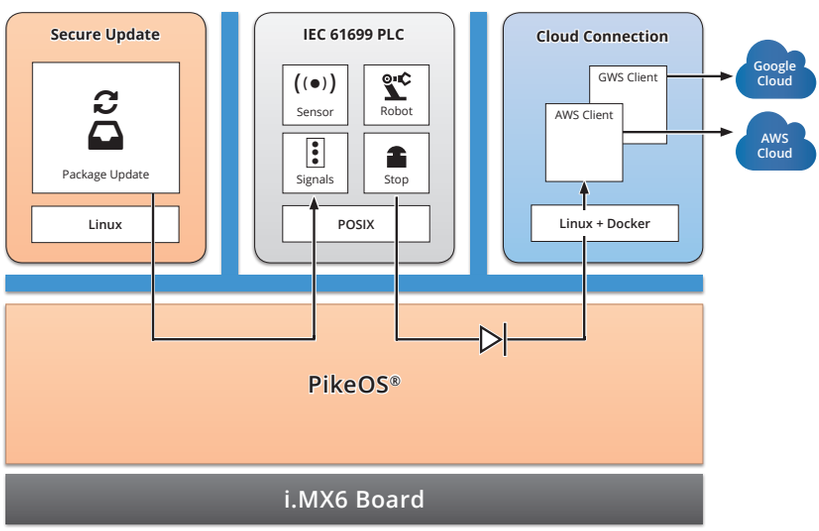
Safety & Security by Design with PikeOS®

Secure Cloud Edge Device

SYSGO presents an edge device demonstrator that combines an IEC 61499-compliant PLC with cloud connectivity. Here we showcase three solutions for common security concerns in edge devices.



Partner

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Use Case 1: Data Diode

Process information from the PLC needs to flow towards the cloud for aggregation, but attackers must not be able to compromise the device via its uplink. PikeOS solves this via a mechanism that lets data travel only in one direction. Even if the virtual machine that contains the cloud connector is compromised, attackers will be unable to gain control over the PLC.

Use Case 2: Secure Update

Device manufacturers want to remotely install updates for units that are deployed on the customer's premises. The update process must be protected against external influence: Firmware images or other data needs to be integrity-checked before deployment. Using public-key encryption in a separate Secure Update partition, PikeOS downloads and installs updates for the PLC running on the same device.

Use Case 3: Flexible Cloud Connectivity

Innovation cycles In the IT world are very short, and Big Data cloud providers come and go. In scenarios where flexibility is the top priority, Docker technology helps to deploy complex applications. In the demonstrator, we show how connectors for Amazon AWS and Google Cloud can be easily swapped out in a matter of seconds on an industrial field device.

About SYSGO: Founded in 1991, SYSGO became a trusted advisor for Embedded Operating Systems and is the European leader in hypervisor-based OS technology offering worldwide product life cycle support. We are well positioned to meet customer needs in all industries and offer tailor-made solutions with highest expectations in Safety & Security. More information at www.sysgo.com/industrial

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