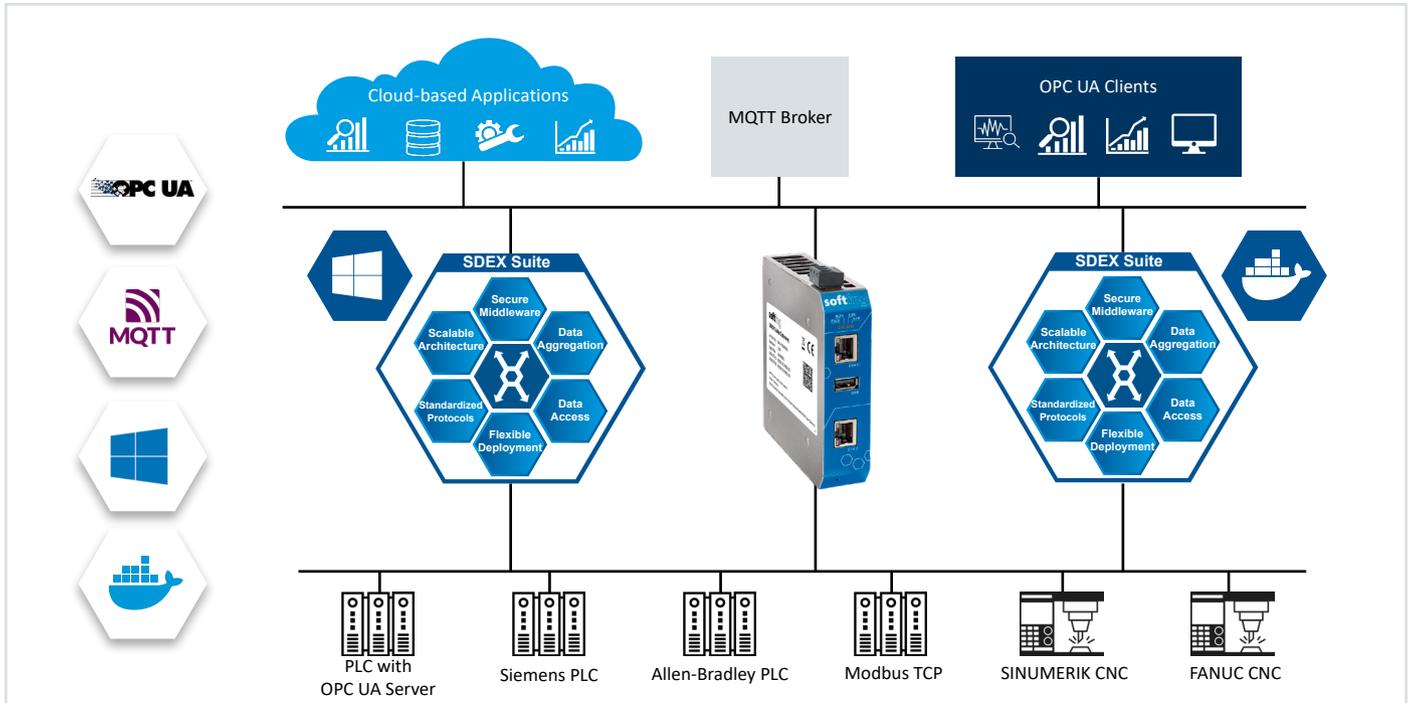


SDEX Suite



Software module to connect controllers and machines to IIoT applications

- **Faster Integration and Deployment**
- **Enhanced Cybersecurity**
- **Cross-Platform Flexibility**
- **Scalable Data Integration**



Faster Integration and Deployment

- Plug-and-play connectivity to leading PLCs and CNCs
- Preconfigured OPC UA and MQTT communication paths
- Minimal engineering effort – no PLC program changes
- Shorter time-to-market for IIoT and analytics projects

Enhanced Cybersecurity

- Secure IT/OT separation via middleware architecture
- TLS/SSL encryption, authentication, and RBAC
- Whitelisting, blacklisting, and DoS protection
- Developed under IEC 62443-certified processes

Multi-Platform Flexibility

- Unified GUI and functions across Windows, Docker, and hardware
- Deploy locally, virtually, or on industrial gateways
- Future-proof updates and unified licensing
- Scales from single machines to multi-site deployments

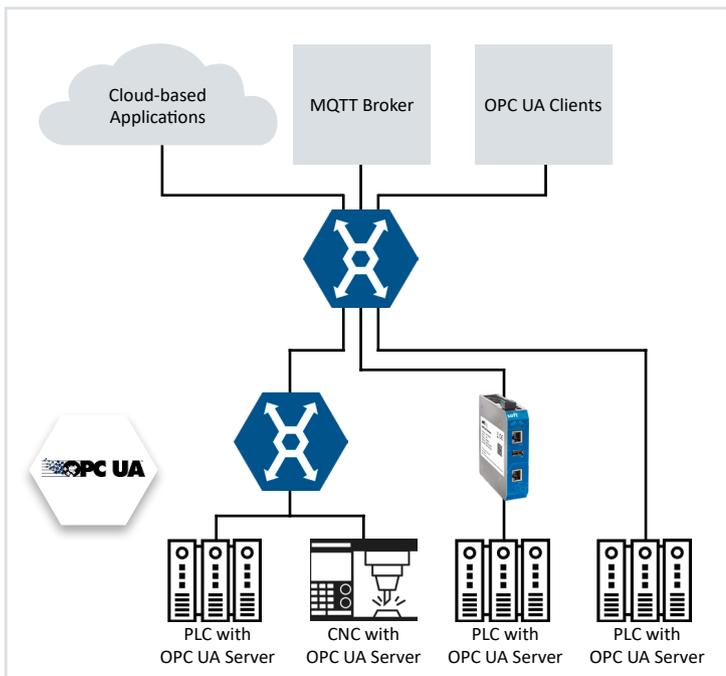
Unified and Scalable Data Access

- Aggregates data from multiple PLC/CNC vendors
- Enables standardized OPC UA address spaces (PADIM, Weihenstephan)
- Compatible with MES, ERP, SCADA, and cloud platforms
- Improves data availability and analytic consistency

Optional Industrial Gateway for Secure OT/IT Integration

- Physically separated network interfaces for OT and IT networks provide an additional security layer to the plant
- Enables deployment close to the machine or inside control cabinets without relying on existing PCs or servers
- Industrial-grade hardware designed for harsh environments and continuous operation
- Preconfigured, dedicated runtime for SDEX Suite simplifies commissioning and reduces operational risk

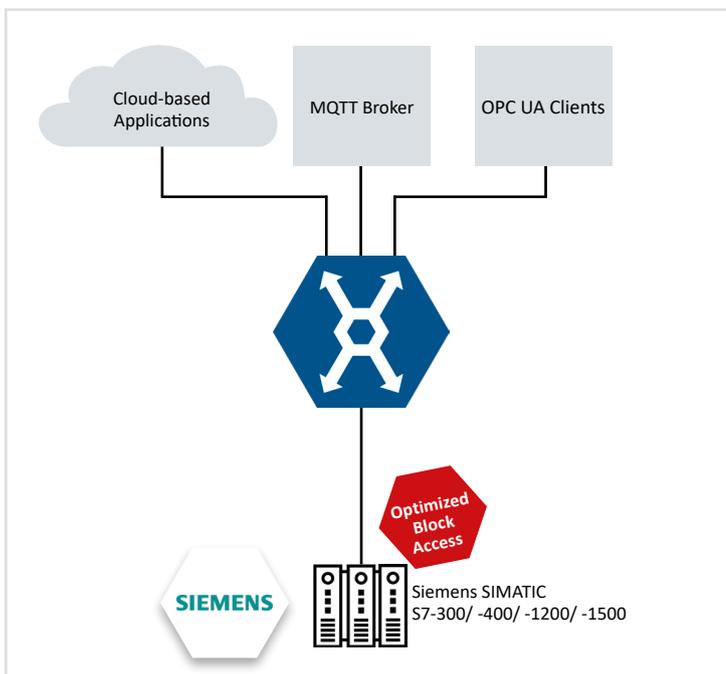
PLC with OPC UA Server



Data aggregation and interface abstraction

- Aggregation of data from multiple sources in a server (aggregation of the namespace)
- Application access to aggregation servers, avoid many individual data sources
- Extensive and flexible OPC UA Service-based address space filtering, down to OPC UA Item level
- Reduced configuration effort (Configuration not required individually for each OPC UA data source and each OPC UA Client)

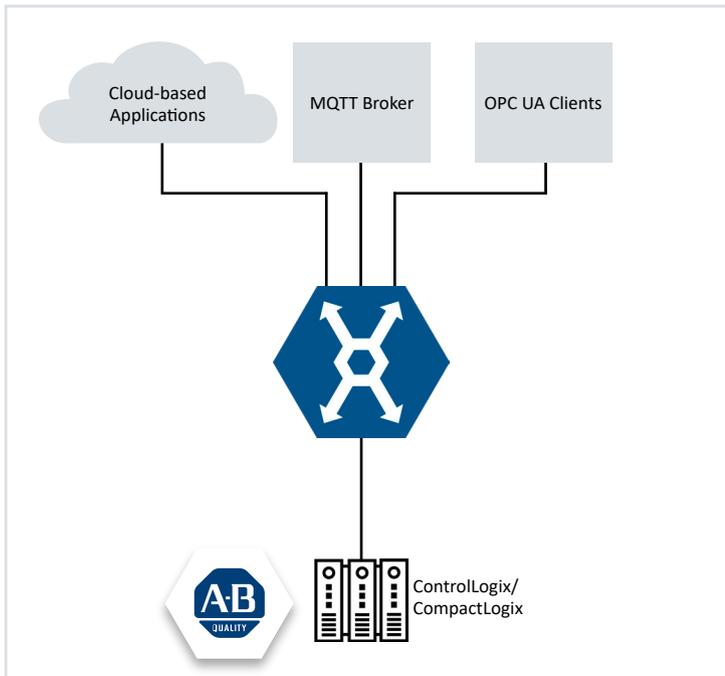
Siemens SIMATIC controllers



Access to Siemens SIMATIC PLC data

- Read and write data access from SIMATIC S7-300, S7-400, S7-1200, S7-1500 controllers
- Support of optimized data blocks in SIMATIC S7-1200/1500 controllers
- Namespace configuration by importing SIMATIC STEP7 or TIA Portal project files or by direct browsing the variables in S7-1200/1500 controllers
- Support of structures and arrays. Possibility to expand arrays into their individual children's elements

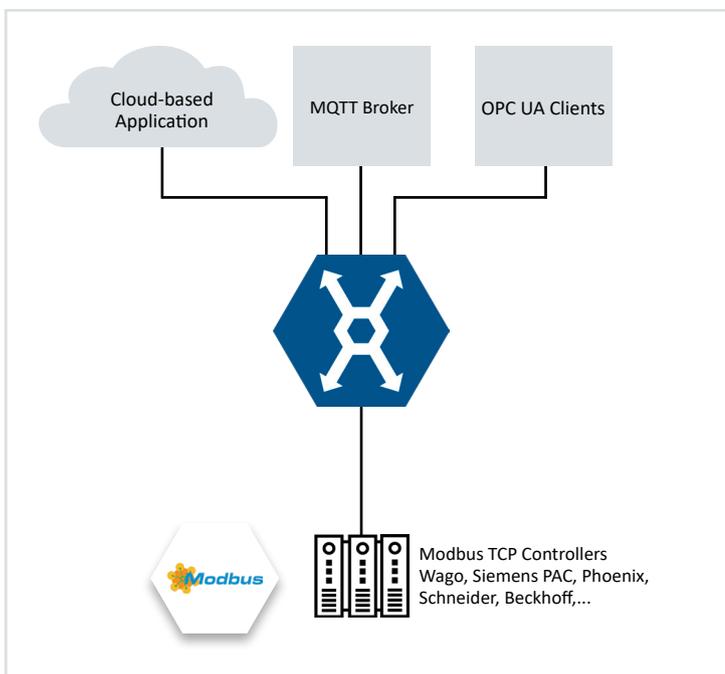
Allen-Bradley controllers



Access to Allen-Bradley controller's data

- Read and write data access from ControlLogix (CLX) and CompactLogix controller through EtherNet/IP CIP.
- Connection to PLCs is possible through routing functionality.
- Support for all atomic data types referred as Elementary Data Types
- Support for structures and arrays. Arrays can be accessed through their individual children's elements.

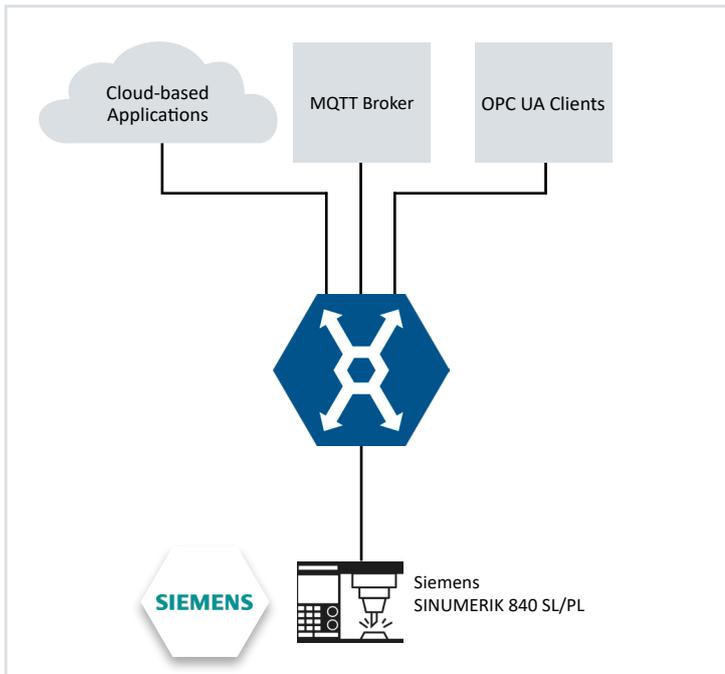
Modbus TCP controllers



Access to data in Modbus TCP controllers

- Read and write access to Modbus TCP controls, e.g. from Schneider Electric, Wago, Siemens PAC, Beckhoff, Phoenix Contact, etc.
- Namespace configuration using a text file created by the user with standard Modbus TCP syntax

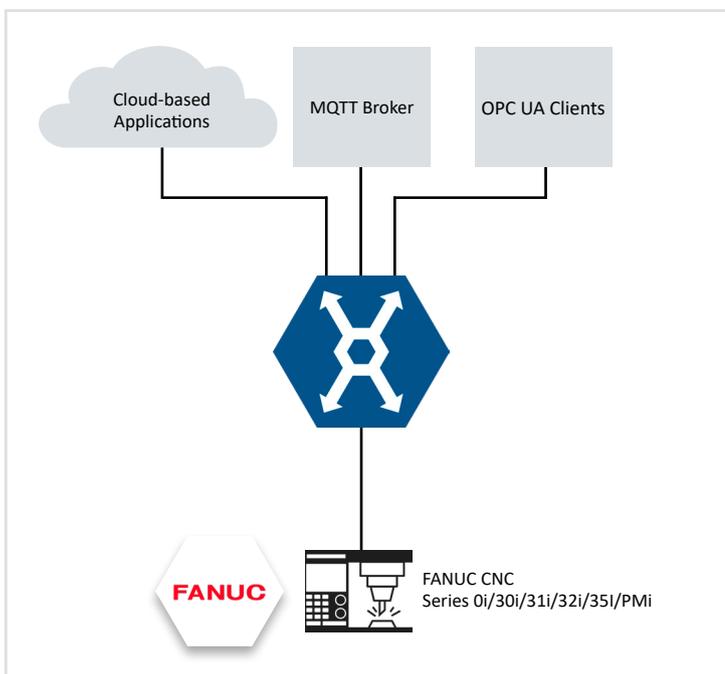
SINUMERIK CNC controllers



Accessing tooling machine data

- Access data SINUMERIK 840D Solution Line and Power Line CNCs
- Pre-defined namespace, customizable for special machine data sets
- Automatic tool recognition and listing of all available magazines and tools
- Reading of CNC/PLC alarms, as well as GUD variables and R parameters

FANUC CNC controllers



Accessing tooling machine data

- Access data from FANUC series:
 - 30i, 31i, 31i-B, 31i-B5, 32i-B, 35i-B
 - Oi-D, Oi-F, Oi-F Plus
 - Power Motion i – A (PM-i)
 - FANUC NCGuide (Simulator)
- Pre-defined namespace, customizable for user defined PMC areas
- No change at the CNC program is needed

SDEX Suite

Technical Data (Software - Windows / Docker)

| | | |
|-------------------------------|---------------------------|--|
| Supported Protocols | Northbound | <ul style="list-style-type: none"> MQTT V3.1, V3.1.1 & V5 OPC UA Server |
| | Southbound | <ul style="list-style-type: none"> OPC UA Client Modbus TCP SIMATIC S7, RFC1006, S7+: S7-300, S7-400, S7-1200, S7-1500 PLCs Ethernet/IP CIP: Allen-Bradley ControlLogix (CLX) and CompactLogix PLCs SINUMERIK (RFC1006): SINUMERIK 840D PL & SL CNCs FOCAS (Ethernet): FANUC CNCs |
| Supported MQTT Specifications | | V3.1, V3.1.1 & V5 |
| Supported MQTT Features | | <ul style="list-style-type: none"> MQTT Publisher & Subscriber TCP, TLS/SSL, WS, WSS (including certificates) QoS, Retain, Last Will & Testament Store & Forward Max. 25 connections |
| Supported OPC Specifications | | <ul style="list-style-type: none"> OPC Unified Architecture V1.05.02 |
| OPC UA Roles | | OPC UA Client and OPC UA Server (by both all profiles from nano to standard) |
| OPC UA Profiles | | Data Access, Complex Data, Methods (including file transfer) |
| OPC UA Security | Security Methods | <ul style="list-style-type: none"> Aes256Sha256-RsaPss Aes128SHA256-RsaOaep Basic256Sha256 Basic256 Basic128Rsa15 None |
| | Authentication | <ul style="list-style-type: none"> Anonymous Username and Password Certificate |
| OPC UA Firewall | | <ul style="list-style-type: none"> OPC UA Service-based address space filtering, down to OPC UA Item Level Limitation of OPC UA Client connections Restriction of OPC UA services IP address filter (White list/ Black List) Detection of denial of service (DoS) attack on OPC UA authentication |
| OPC Compliance | | Test based on compliance test tools of OPC Foundation |
| Configuration Interface | | <ul style="list-style-type: none"> Username / Password LDAP / LDAPS |
| Logging, Diagnostics | | <ul style="list-style-type: none"> Built-in trace and audit logging facilities, configurable and accessible through the web interface Docker integrated trace logging, Prometheus Metrics Information |
| Supported Operating Systems | Windows based application | <ul style="list-style-type: none"> 64 Bit version Windows 7, Windows 10, Windows 10 IoT Enterprise, Windows 11, Windows 11 IoT Enterprise, Server 2008 R2, Windows Server 2016, Windows Server 2019, Windows Server 2022, Windows Server 2025 |
| | Docker based application | <ul style="list-style-type: none"> Linux (Docker Engine), Windows 10 and Windows 11 (Docker Desktop and Docker Engine through WSL2) |
| Supported Architectures | | AMD64, ARM64, ARM32 |
| Minimum Hardware Requirements | | Disk Space: 320 MB (Docker), 400 MB (Windows) RAM: 2 GB |
| Licensing | | Licensed via Softing's License Server |
| Demo Version | | Time-limited to 72 hours |
| REST-API | | Available for Docker based application |

SDEX Suite

Technical Data (Gateway)

| | | |
|-----------------------------------|--|---|
| Hardware | Processor | Broadcom BCM2711 quad-core ARM Cortex-A72 (ARM v8) 64-bit SoC @ 1,5GHz |
| | Status LEDs (Gateway) Real-Time Clock | PWR (Power Supply), RUN (Running), ERR (Error), APP (Application) Real-Time clock with buffering, setting the time via browser or by NTP server (buffer time depends on conditions such as ambient temperature and duration of use) |
| Interfaces | Ethernet | 2x IEEE 802.3 10BASE-T/100BASE-TX/1000BASE-T, Connector: RJ45 |
| | USB | 1x USB 2.0, Connector: Type A |
| | HDMI | 1x HDMI 2.0, Connector: Type A |
| Supported Communication Protocols | | <ul style="list-style-type: none"> ▪ MQTT V3.1, V3.1.1, & V5 ▪ OPC UA Server ▪ OPC UA Client ▪ Modbus TCP ▪ SIMATIC S7, RFC1006, S7+: S7-300, S7-400, S7-1200, S7-1500 PLCs ▪ EtherNet/IP CIP: Allen-Bradley ControlLogix (CLX) and CompactLogix PLCs ▪ Sinumerik (RFC1006): Sinumerik 840D PL & SL CNCs ▪ FOCAS (Ethernet): FANUC CNCs Series 30i, 31i, 31i-B, 31i-B5, 32i-B, 35i-B, 0i-D, 0i-F, 0i-F Plus, Power Motion i- A, and FANUC NCGuide (Simulator) |
| Physical Properties | Dimensions (H x W x D) | 120 mm x 28 mm x 110 mm |
| | Weight | Approx. 420g |
| | Power Supply | 24Vdc ±20%, SELV/PELV supply mandatory, typical input current 500mA (max. 1A, considering rush-in current at switch-on) |
| | Typical Power Loss | 9.5W |
| | Operating Temperature | -20°C ... +60°C |
| | Storage Temperature | -40°C ... +85°C |
| | Relative Humidity | 5% ... 95%, non-condensing |
| | Cooling | Convection, no fan |
| | Mounting | DIN rail 35mm |
| Protection Class | IP20 | |
| Conformity/Standards | CE | Electromagnetic compatibility (EMC) and Restriction of Hazardous Substances (RoHS) EN61000-6-2 Generic standards – Immunity standard for industrial environments EN61000-6-3 Generic standards – Emission standard for residential, commercial, and light-industrial environments EN61000-6-4 Generic standards – Emission standard for industrial environments EN61326-1 Electrical equipment for measurement, control, and laboratory use EN61131-2 Programmable controllers – zone B EN55011 Industrial, scientific, and medical equipment – Radio-frequency disturbance characteristics – Group 1 Class B EN55032 Electromagnetic compatibility of multimedia equipment – Emission Requirements - Class B EN 50581:2012/EN IEC 63000:2018 RoHS, Assessment of the restriction of hazardous substances |
| | FCC | FCC 47 CFR Part 15B and ICES-003 – Class B |
| | VCCI | Class B Information Technology Equipment (ITE) set forth in the Agreement of Voluntary Control Council for Interference by Information Technology Equipment (VCCI), April 2015 |
| | | |
| | | |

SDEX Suite

Scope of Delivery (Software - Windows / Docker)

| | |
|---------------|--|
| Software | SDEX Suite, Download via Softing Webpage or Docker Hub |
| License Key | E-mail delivery |
| Documentation | Online help (German / English) and Github (Docker) |

Order Numbers

| | |
|---------------|---|
| LRA-XX-040001 | SDEX Suite - Package 1 - Perpetual License |
| LMA-XX-040101 | SDEX Suite - Package 1 – Software Upgrade License |
| LRA-XX-040002 | SDEX Suite - Package 2 - Perpetual License |
| LMA-XX-040102 | SDEX Suite - Package 2 – Software Upgrade License |
| LRA-XX-040003 | SDEX Suite - Package 3 - Perpetual License |
| LMA-XX-040103 | SDEX Suite - Package 3 – Software Upgrade License |

Scope of Delivery (Gateway)

| | |
|-------------|---|
| Hardware | SDEX Suite Gateway |
| Software | Integrated web interface to configure the device Integrated web interface to configure the machine data connectivity Integrated web interface to administrate the controller connectivity licenses |
| License Key | When order together with the device: Printed on the edgeGate label and pre-activated for immediate use When order separated from the device: E-Mail delivery, require to be manually activated for its use |

Order Numbers

| | |
|---------------|-----------------------|
| GAL-YY-040101 | SDEX Suite Gateway P1 |
| GAL-YY-040102 | SDEX Suite Gateway P2 |

Additional Products and Services

| | |
|---------------|---|
| GAL-YY-040000 | SDEX Suite Gateway |
| 161701-PRO | ACCON NetLink PRO compact (Adapter to connect with S7-300/S7-400 PLCs and SINUMERIK 840D PL CNCs without CP or ethernet interface) |

Your local Softing contact:

<https://industrial.softing.com>

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