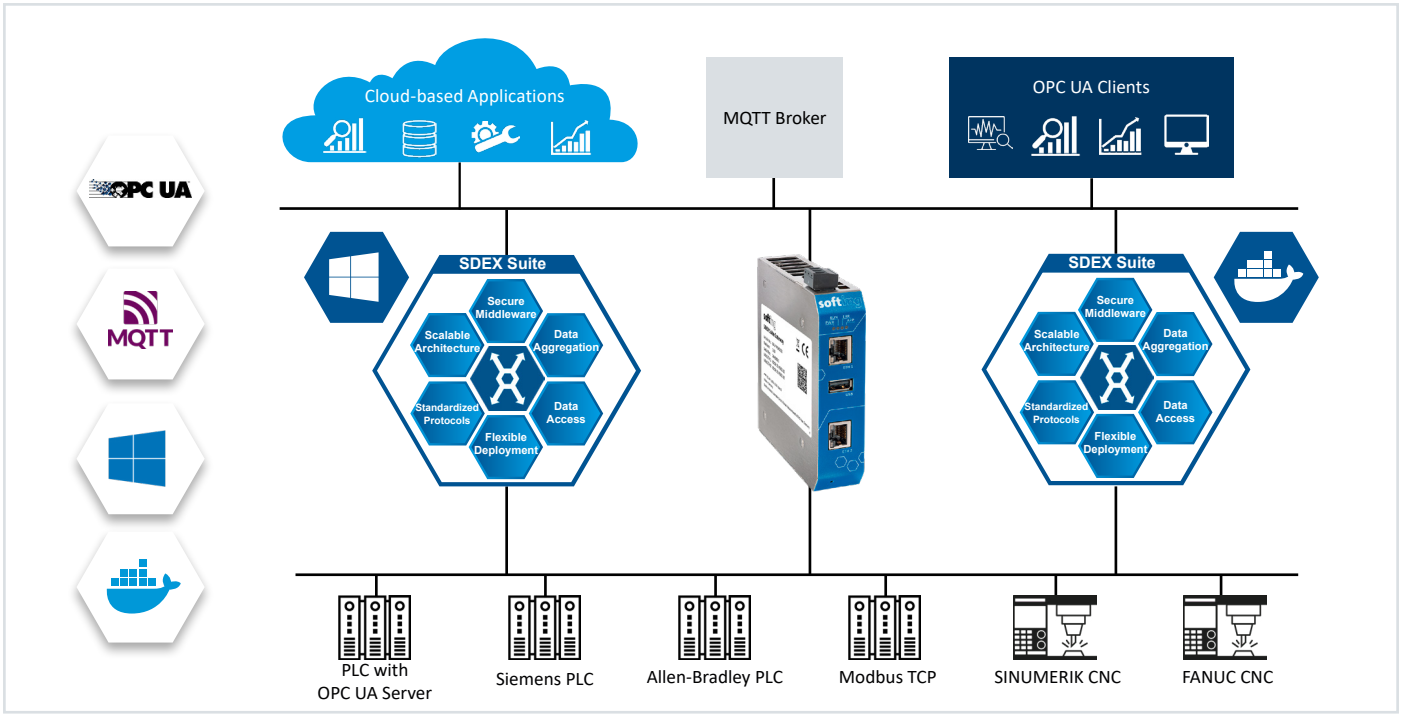
SDEX Suite

Secure PLC & CNC Data Aggregation

- **Fast and secure aggregation of PLC and CNC data via standardized OPC UA & MQTT interfaces**
- **Seamless OT/IT integration into IT systems and cloud platforms through secure, standards-based communication**
- **Flexible cross-platform deployment on Windows, Docker, and industrial gateways**
- **Scalable middleware architecture for reliable industrial data connectivity**



Faster Integration and Deployment

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

Integrated Industrial Cybersecurity

- Secure IT/OT separation via middleware architecture
- Reduced risk of unauthorized access, cyber threats, and production downtime
- End-to-end protection with TLS/SSL encryption, authentication, and role-based access control (RBAC)
- Advanced security mechanisms include whitelisting, blacklisting, DoS prevention, and IEC 62443-aligned

Flexible Deployment across IT and OT Environments

- Consistent operation across Windows, Docker, and industrial gateway environments
- Deployment flexibility to match existing IT and OT infrastructures
- Simplified maintenance and upgrade processes through unified versioning and licensing
- Scalable implementation from single machines to global, multi-site architectures

Unified and Scalable Data Access

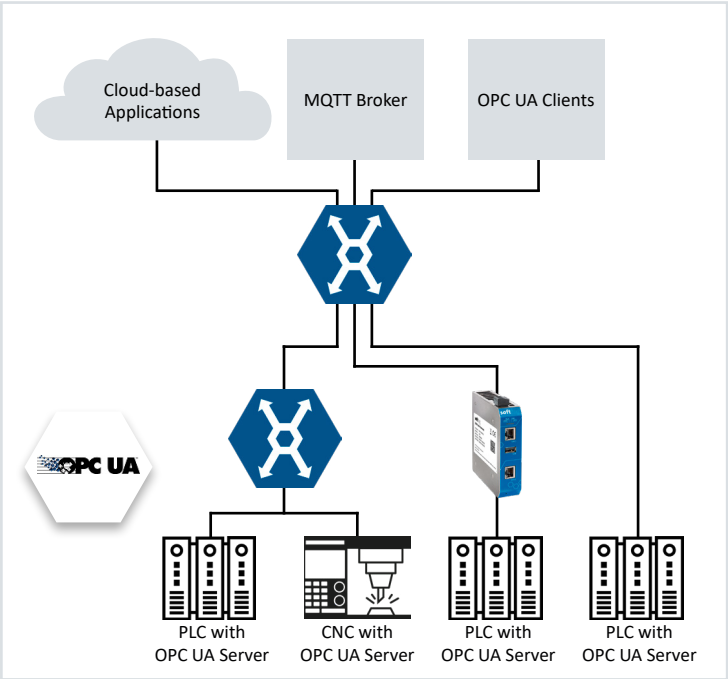
- Vendor-independent data access across heterogeneous PLC and CNC environments
- Consistent data structures through standardized OPC UA information models (PADIM, Weihenstephan)
- Simplified integration into IT, SCADA, MES, ERP, and cloud systems via Unified Namespace (UNS) architectures
- Improved data availability and analytic consistency for reliable reporting, optimization, and advanced analytics

Optional Hardware Gateway for Maximum Network Segmentation and Operational Security

- Enhanced network protection through physical separation of OT and IT interfaces
- Secure edge deployment close to machines or inside control cabinets without dependency on existing PCs or servers
- Reliable continuous operation in harsh industrial environments through robust, industrial-grade hardware
- Reduced commissioning effort and operational risk through a dedicated, preconfigured SDEX Suite runtime

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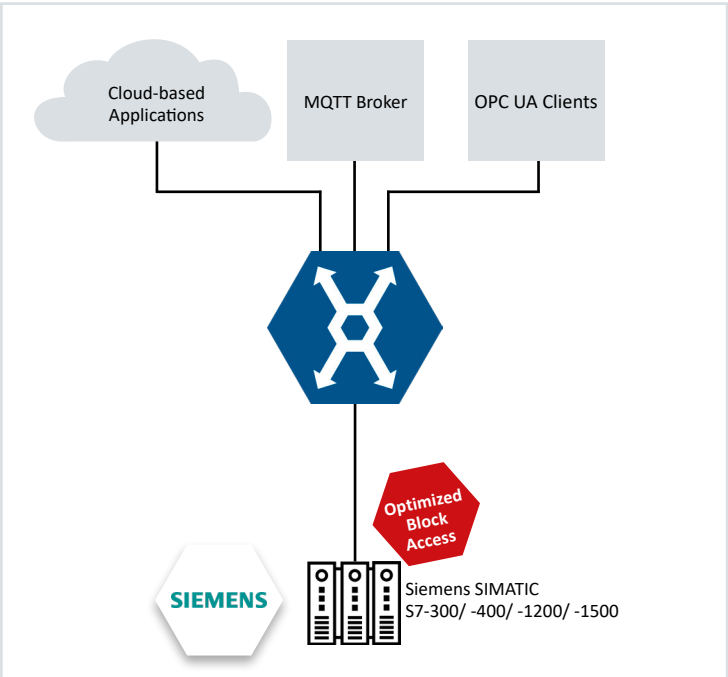
PLC with OPC UA Server



Centralized Data Aggregation and Interface Abstraction

- Centralized aggregation of PLC and CNC data from multiple OPC UA servers into a unified namespace
- Simplified application access through a single aggregation server instead of multiple individual data sources
- Fine-grained data selection through flexible OPC UA service-based filtering down to item level
- Reduced configuration and maintenance effort by avoiding individual setup for each OPC UA source and client

Siemens SIMATIC controllers

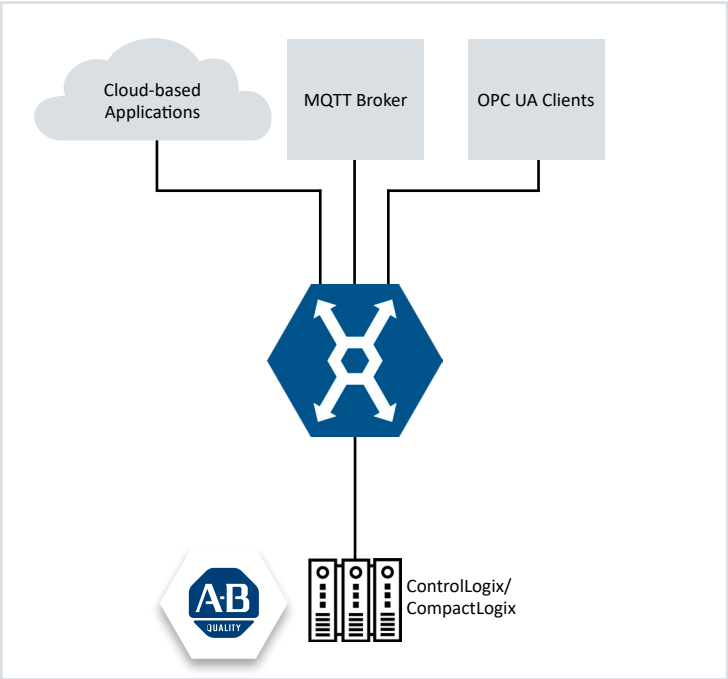


Efficient Access to Siemens SIMATIC PLC Data

- Comprehensive read and write data access from SIMATIC S7-300, S7-400, S7-1200, S7-1500 controllers
- Seamless integration of optimized data blocks from SIMATIC S7-1200 and S7-1500 controllers for efficient data handling.
- Simplified namespace configuration through direct import of STEP 7 or TIA Portal project files or live variable browsing
- Consistent and scalable data modeling with support for S7 structures and expandable arrays

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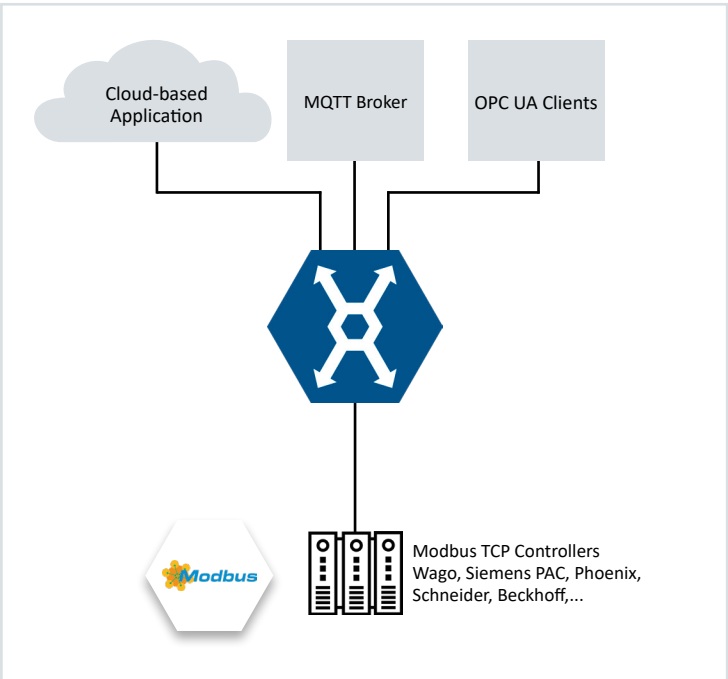
Allen-Bradley controllers



Efficient Access to Allen-Bradley Controller Data

- Reliable read and write data access from ControlLogix (CLX) and CompactLogix controller via EtherNet/IP CIP.
- Flexible connectivity through routing capabilities for complex network topologies
- Comprehensive data coverage through support of all elementary (atomic) data types
- Consistent and scalable data modeling with support for user-defined data types (UDTs) and arrays

Modbus TCP controllers

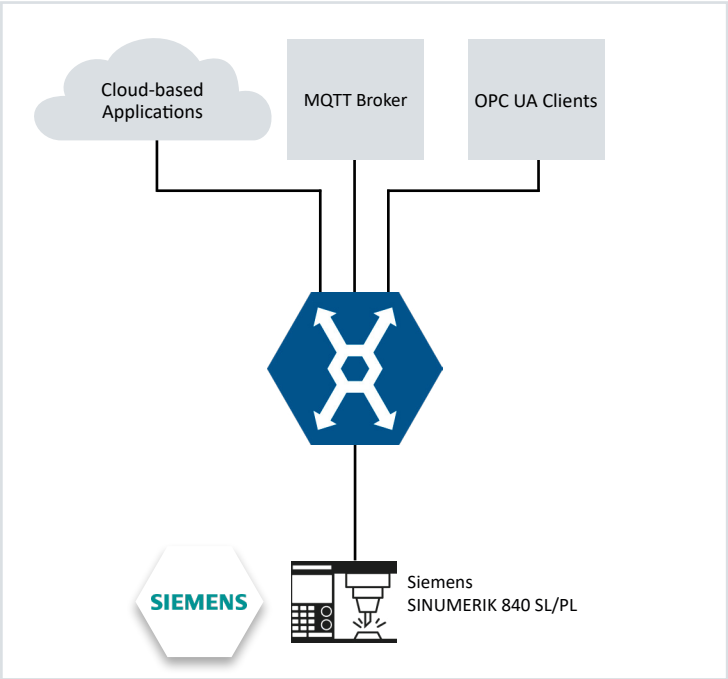


Efficient Access to Modbus TCP Controller Data

- Vendor-independent read and write access to process data from Modbus TCP controllers (e.g., Schneider Electric, Wago, Siemens PAC, Beckhoff, Phoenix Contact)
- Simplified and transparent namespace definition using standard Modbus TCP syntax

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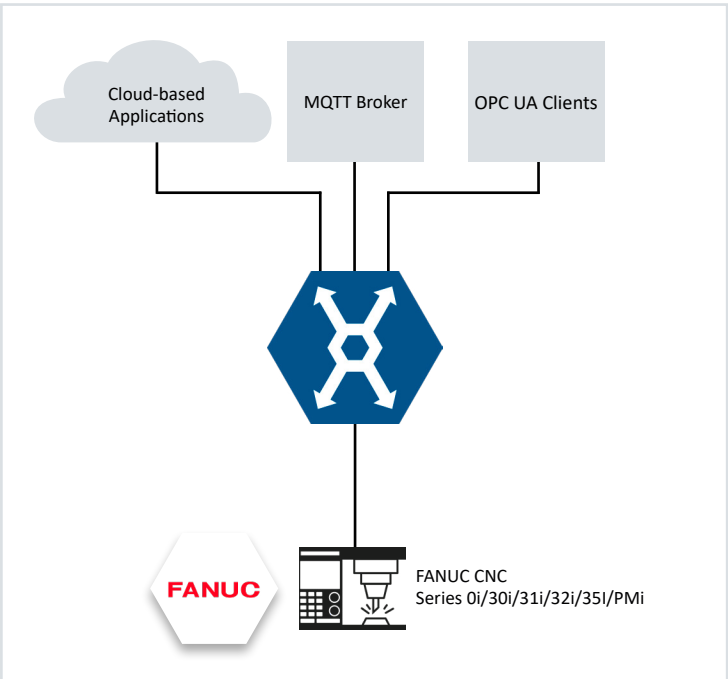
SINUMERIK CNC controllers



Efficient Access to Siemens SINUMERIK CNC Data

- Direct access to production and tooling data from SINUMERIK 840D Solution Line and Power Line CNC systems
- Structured and customizable data representation through predefined namespaces for machine-specific datasets
- Transparent visibility of tools and magazines through automatic tool recognition
- Reliable access to NC and PLC alarms, GUD variables, and R parameters for monitoring and diagnostics

FANUC CNC controllers



Efficient Access to FANUC CNC Data

- Direct access to production and tooling data from FANUC CNC systems, including Series 30i/31i/32i/35i, 0i, Power Motion i-A, and NCGuide
- Structured and customizable data representation through predefined namespaces with support for user-defined PMC areas
- Transparent access to machines and process data without changes to existing CNC programs

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SDEX Suite

Technical Data (Software - Windows / Docker)		
Supported Protocols		▪ 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)
Supported MQTT Specifications		V3.1, V3.1.1 & V5
Supported MQTT Features		▪ MQTT Publisher & Subscriber ▪ TCP, TLS/SSL, WS, WSS (including certificates) ▪ QoS, Retain, Last Will & Testament ▪ Store & Forward ▪ Max. 25 connections
Supported OPC Specifications		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, Reverse Connect (including file transfer)
OPC UA Transport		TCP Transport, UA Binary Encoding, UA Secure Conversation HTTPS Transport, UA Binary Encoding
OPC UA Security	Security Methods	Elliptic Curve Cryptography Aes256Sha256-RsaPss Aes128SHA256-RsaOaep Basic256Sha256 Basic256 Basic128Rsa15 None
	Authentication	Anonymous Username and Password Certificate
OPC UA Firewall		▪ 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 access filter (Whitelist/Blacklist) ▪ Detection of denial of service (DoS) attacks on OPC UA authentication
OPC Compliance		Test based on compliance test tools of OPC Foundation
Configuration Interface		▪ Username / Password ▪ LDAP / LDAPS
Logging, Diagnostics		▪ 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	▪ 64 Bit version ▪ Windows 10, Windows 10 IoT Enterprise, Windows 11, Windows 11 IoT Enterprise, Server 2008 R2, Windows Server 2012 R2, Windows Server 2016, Windows Server 2019, Windows Server 2022, Windows Server 2025
	Docker based application	▪ 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

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SDEX Suite

Technical Data (Gateway)		
Hardware	Processor	Broadcom BCM2711 quad-core ARM Cortex-A72 (ARM v8) 64-bit SoC @ 1,5GHz
	Status LEDs (Gateway)	PWR (Power Supply), RUN (Running), ERR (Error), APP (Application)
	Real-Time Clock	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		▪ 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

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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 Standard – Perpetual License
LMA-XX-040101	SDEX Suite Standard – Software Upgrade License
LRA-XX-040002	SDEX Suite Advanced – Perpetual License
LMA-XX-040102	SDEX Suite Advanced – Software Upgrade License
LRA-XX-040003	SDEX Suite Enterprise – Perpetual License
LMA-XX-040103	SDEX Suite Enterprise – 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 ordered together with the device: Printed on the device label and pre-activated for immediate use • When ordered separately from the device: Delivered by e-mail and requires manual activation before use

Order Numbers	
GAL-YY-040101	SDEX Suite Gateway Standard
GAL-YY-040102	SDEX Suite Gateway Advanced

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)
700-5596-04	AC/DC plug-in power supply, 24 V, 30 W, EU/UK/US plugs

Your local Softing contact:

https://industrial.softing.com

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