

optimize!  
**softing**

# OPC UA Competence

Technology,  
Products and Services  
for Secure and Reliable  
Data Integration

**data**  **FEED**<sup>®</sup>



# OPC TECHNOLOGY

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OPC is the world's leading interoperability standard for secure and reliable data exchange in industrial automation and other applications. It ensures the seamless flow of information between devices and software applications of different manufacturers. The current OPC UA (Unified Architecture) standard is platform-independent, leveraging advanced security and data modeling technologies to deliver future-proof, scalable and extensible solutions. Companion Specifications further simplify the use of OPC UA for the end user.

The background is a vibrant blue gradient with a halftone dot pattern. It features several layers of binary code (0s and 1s) in various colors and sizes, some appearing to float or be part of a grid. There are also semi-transparent geometric shapes, including rectangles and circles, overlaid on the binary code. The overall aesthetic is high-tech and digital.

# SOFTING COMPETENCE

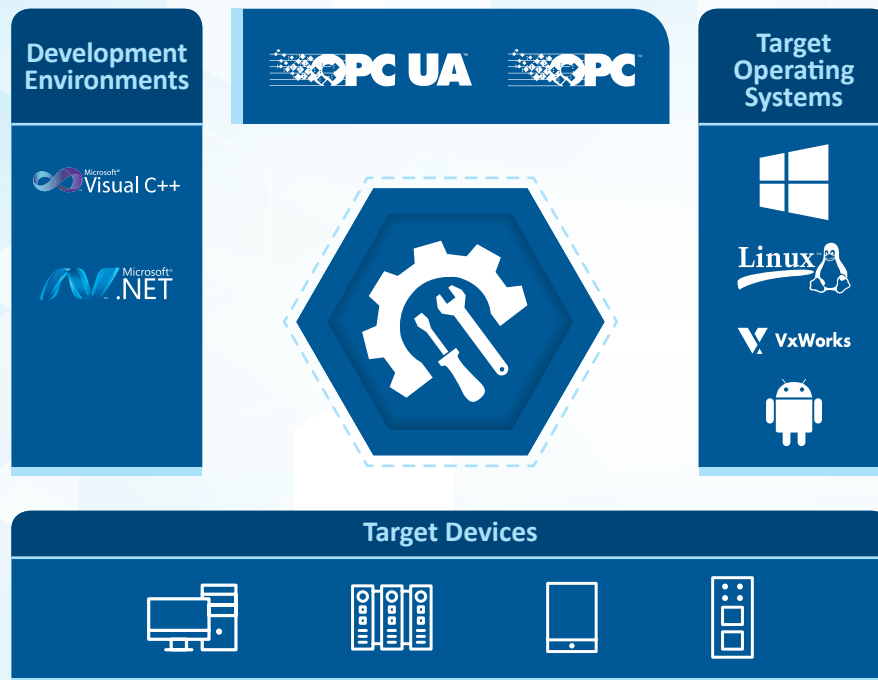
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With more than 20 years of experience in OPC technology and a close working relationship with the OPC Foundation, Softing is the ideal partner for all OPC topics. Softing develops and markets a broad range of development tools and consumer products, including gateways for innovative and secure IoT architectures. This makes it possible to realize state-of-the-art solutions for OPC-based data exchange, optimally tailored to individual requirements, both in brownfield applications and new systems. All Softing products support the state-of-the-art OPC UA technology. Thus, the implemented applications benefit directly from its advantages. The product range is supplemented by appropriate training and development services.

# dataFEED OPC UA and OPC Classic SDKs

## Fast Development of OPC UA Applications

Softing's dataFEED OPC SDKs enable the fast integration of OPC UA or OPC Classic connectivity capabilities in automation applications. The SDKs are built by a comprehensive set of libraries featuring a simple and well-documented programming interface. Relevant example applications as well as test and simulation tools allow for a short time-to-market of OPC-enabled products.



### Complete Solution Addressing All Customer Requirements

- Comprehensive set of building blocks offering encapsulation and easy-to-use functionality required for implementing OPC UA Clients/Servers as well as OPC UA Publishers/Subscribers
- Modular design to scale OPC UA functionality according to actual requirements
- Wide range of available functionality, including Extended Security, Data Access, Complex Data, Events, Alarms & Conditions and Historical Access
- Integrated security concepts allowing safe remote data transfer actively addressing modern security threats
- Applicable for time-critical control tasks as well as for complex automation projects
- OPC UA Servers and Clients capable to move data and information between factory floor and enterprise level

### Comprehensive Scope of Delivery for Easy and Fast Development

- Optimized Application Programming Interface (API) and easy to understand documentation
- Complimentary how-to example applications, step by step tutorials, complex test and simulation clients and servers for a lean getting started with OPC UA development

### Investment Security Through Innovative License Model

- Implementation according latest OPC UA Client respectively OPC UA Server specifications
- Free migration to upcoming dataFEED OPC UA SDK versions thanks to SDK software and 3 years' right to updates to future versions
- Technology proven by use in Softing's OPC UA Server and middleware products

#### TRAINING



#### CONSULTING



#### SERVICE



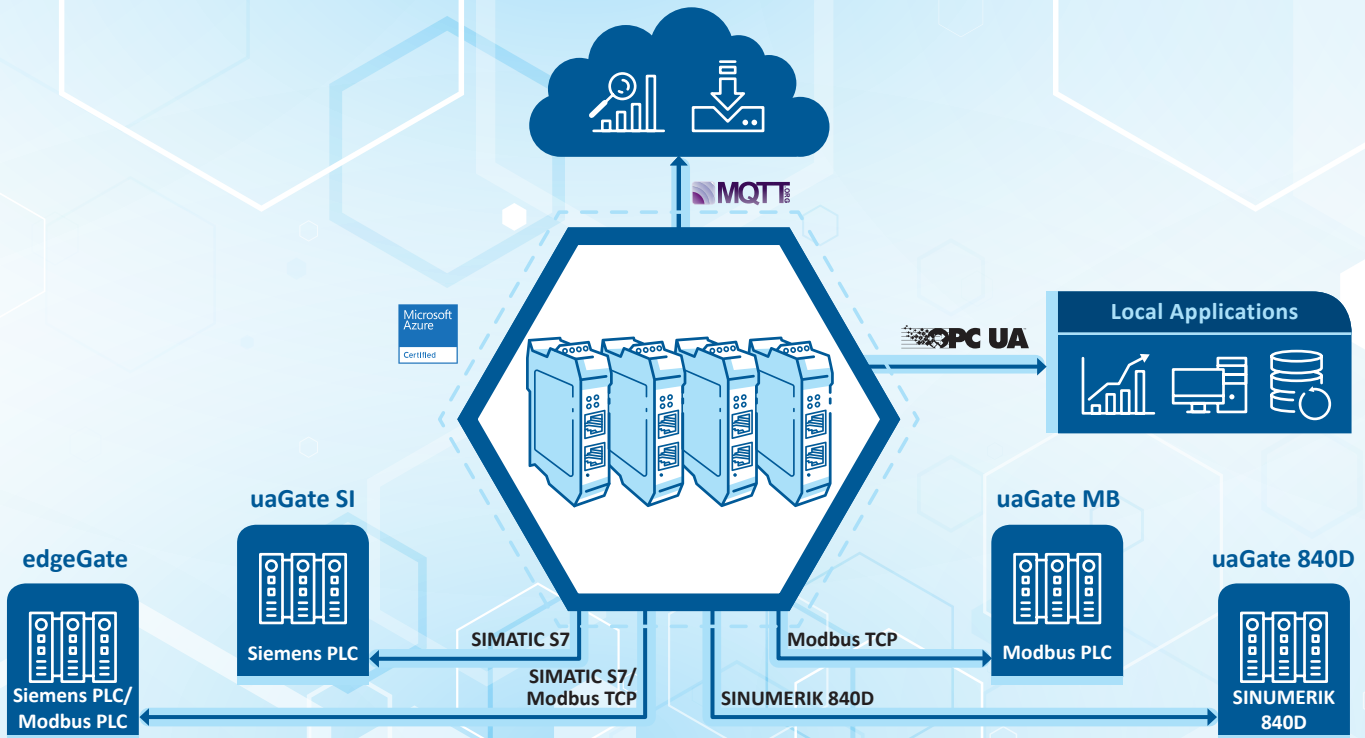
### Product-Related Services

- Free workshops "OPC UA .NET for Developers" and "OPC UA C++ for Developers"
- Custom-specific developer-to-developer consultancy
- Development of tailor-made OPC solutions
- Consultancy for pre-certification and certification support

# OPC UA Gateways

## Embedded OPC UA Server Gateways for Siemens and Modbus PLCs

Softing's OPC UA gateway portfolio offers everything needed to make existing and new systems ready for "Industrie 4.0". The integrated OPC UA Server enables easy and secure data connections to higher-level management systems, such as ERP, MES or SCADA systems. The OPC UA gateways are compact, sustainable and at the same time industry-proven many times over.



### edgeGate – Reliable Connectivity of Siemens and Modbus PLCs to IoT Hubs

- Chance for analytics, storage, computing applications in cloud solutions from different vendors, e.g. Amazon AWS, IBM Bluemix, Microsoft Azure
- Generic MQTT Publisher and OPC UA Server functionality for connecting industrial networks to IT applications running on-premise or in cloud
- Connectivity for up to five Siemens and Modbus controllers
- Direct symbol import from SIMATIC STEP 7 and TIA Portal projects

### uaGate SI – OPC UA and MQTT Communication Upgrade of Siemens Retrofit Plants

- Integration of modern OPC UA communication functionality
- Easy integration for Siemens S7-300/400/1200/1500 controllers
- Direct symbol import from STEP 7 and TIA Portal projects or optimized access to S7-1200/1500 controller variables via browsing

### uaGate MB – OPC UA and MQTT Communication Upgrade of Modbus TCP Plants

- Integration of modern OPC UA communication functionality
- Access to Modbus controllers, e.g. from Schneider Electric, Wago, Beckhoff, Phoenix Contact, etc.
- Symbol import of controller data using web interface

### uaGate 840D – OPC UA and MQTT Connectivity for Complete SINUMERIK 840D Data

- Access to PLC, NCK and Drives data from Siemens SINUMERIK 840D
- Integration of different NCU types with software version newer than V4.3
- Delivered with pre-defined symbol files for 4 axes and 4 drives, individually adaptable by user
- Use of data for analysis, condition monitoring, predictive maintenance or data logging purposes

#### TRAINING



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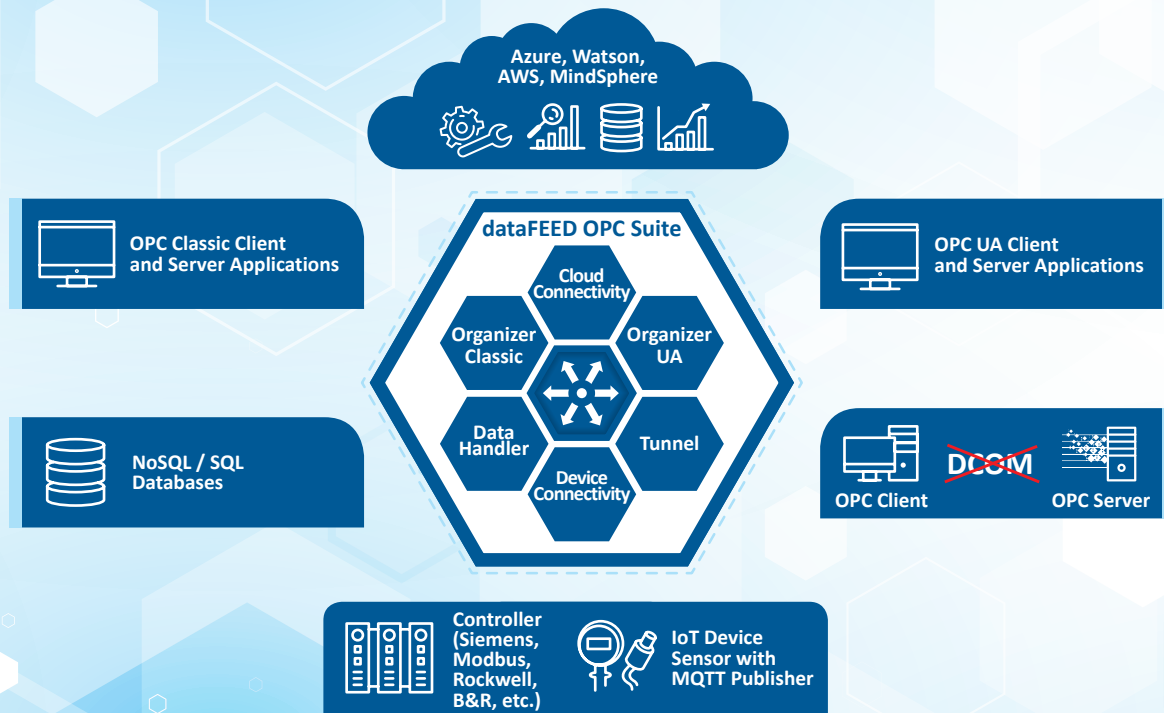
## Product-Related Services

- Product training "Communication for Industrie 4.0 in Practice"
- Free workshop "Industrial Communication for Industrie 4.0"
- Development of tailor-made OPC solutions
- Consultancy for pre-certification and certification support

# OPC UA and OPC Classic Servers, OPC Middleware

## All-In-One Software Solution for OPC Communication

dataFEED OPC Suite offers a full package of components for OPC communication and cloud connectivity within a single product. It enables access to the controllers of leading manufacturers and IoT devices. Additional functionality eliminates DCOM problems and improves the communication between PLCs, OPC Servers and OPC Clients, independent of the use of OPC UA or OPC Classic. MQTT Connector and REST Connector enable the dissemination of data to IoT clouds.



### Simple and Independent Access to Controllers and IoT Devices

- Read and write access to data in controllers from leading manufacturers
- Use without modifying control program
- Easy integration of existing and new controllers into “Industrie 4.0” solutions
- Integration of non-OPC UA-capable components, such as Siemens S7 controllers, into OPC UA solutions
- Cost savings through further use of already existing OPC Classic components
- Gateway functionality for connecting controllers and components with integrated OPC UA Server to OPC Classic applications
- Direct connection of IoT devices (MQTT Publisher) without using an MQTT Broker

### Gateway to Big Data and IoT Clouds Solutions

- Integration of automation devices via MQTT Publisher, MindConnect and REST Client functionality in IoT cloud applications, e.g. Siemens MindSphere, Bosch PPM or Microsoft IoT Connected Factory
- Easy integration of production data into NoSQL Big Data storage solutions such as MongoDB
- State-of-the-art security by SSL/TLS support, including certificates

### Easy Configuration

- Modern, intuitive graphical user interface for fast OPC communication configuration
- Use of smart hands-on defaults, setup wizards and drag-and-drop support
- Time savings through effective and efficient configuration of distributed automation systems with many OPC UA and OPC Classic Servers

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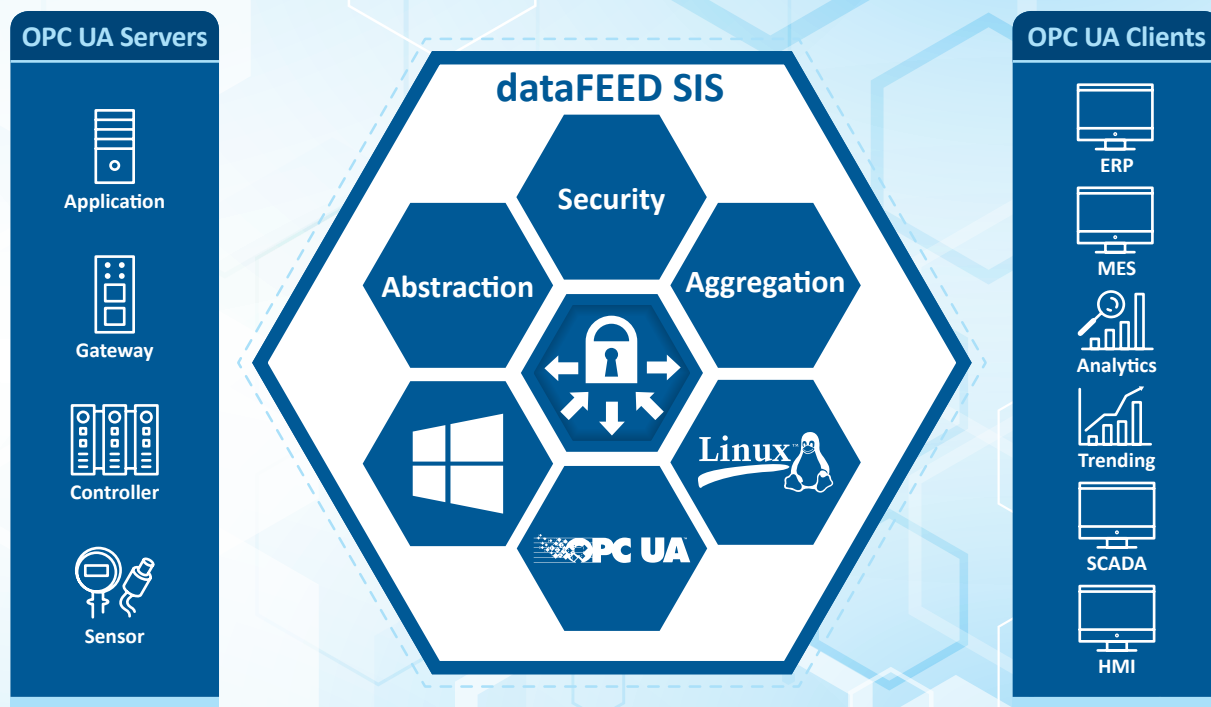
## Product-Related Services

- Product training “Communication for Industrie 4.0 in Practice”
- Free workshop “Industrial Communication for Industrie 4.0”
- Development of tailor-made OPC solutions
- Consultancy for pre-certification and certification support
- Application integration

# dataFEED Secure Integration Server

## Secure and Flexible OPC UA-based IT/OT Integration Solution

dataFEED Secure Integration Server offers a secure data integration layer for IoT applications aggregating production and machine data. IT applications can access this data through consistent software interfaces. End-users gain the ability and flexibility to continuously scale their IoT solution throughout the life cycle of their control system while, at the same time, benefit from significantly reduced costs for integration and configuration.



### Secure Communication

- Support of all safety functions of OPC UA standard
- Provide different data for different users and applications
- Support for multiple OPC UA Endpoints (client or server), each with its own certificates
- Filtered access, depending on IP address (White List / Black List for OPC UA Endpoints)
- Detection of DoS (Denial of Service) attacks on OPC UA authentication

### Solutions for Edge Architectures

- Edge solution with features and benefits identical to those resulting from using central cloud platforms
- Running local clients (e.g. for edge analytics) in parallel with cloud-based applications
- Start with small IoT solution on cloud basis, later adaptation and expansion over time possible

### Data Aggregation

- Aggregation of data from multiple sources in a server (aggregation of OPC UA Namespace)
- Application access to aggregation servers, not to 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)

### Interface Abstraction

- Common, stable OT interface for different IT applications
- Adaptations in automation network transparent for IT applications
- Easy integration of IT applications with standard OPC UA Clients in different OT environments
- Decoupling of investment decisions in IT and OT environment

### TRAINING



### CONSULTING



### SERVICE



## Product-Related Services

- Product training “Communication for Industrie 4.0 in Practice”
- Free workshop “Industrial Communication for Industrie 4.0”
- Consultancy
- Integration services

MQTT  
IORS

Microsoft  
Azure  
Certified

OPC  
FOUNDATION

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A ROCKWELL AUTOMATION PARTNER

OPC UA

Silver  
Partner  
MindSphere

SIEMENS

REST

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