

# **OPC Competence**

Solutions matching different requirements for data integration

## Industrial



## OPC TECHNOLOGY



OPC is the interoperability standard for secure and reliable data exchange in the industrial automation sector and in other industries. It ensures the seamless flow of information among devices from multiple vendors.

The initial OPC specifications - now known as OPC Classic - have been restricted to the Windows operating system. Today, they are supplemented by the OPC UA (Unified Architecture) standard using modern security and data modelling technology for implementing a future-proof, scalable and extensible open-platform architecture.

## SOFTING COMPETENCE



Based on more than 20 years of experience, Softing is the OPC partner of your choice. It offers a complete set of OPC UA and OPC Classic development tools and end user products. These provide a comprehensive set of functionality for implementing state-ofthe-art data exchange solutions addressing all individual connectivity issues.

The portfolio is accompanied by complementing training and development services as well as the world-wide leading OPC book.

## **OPC UA and OPC Classic Development Toolkits**

#### Fast Development of OPC Servers and Clients

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



#### Easy To Use Integration Interface -Faster Time-to-Market and Time-to-Revenue

- Development of OPC UA Servers and Clients for integrating OPC UA interfaces in Windows-based automation equipment
- Optimized Application Programming Interface (API) and easy to understand documentation
- Complementary how-to example applications, step by step tutorials, complex test and simulation clients and servers for a lean getting started with OPC UA development
- Applicable for time-critical control tasks as well as for complex automation projects

#### **Proven Performance from Market Leader**

- Access to more than 15 years of expertise in the OPC development toolkit business
- Technology incorporated in Softing's state-of-the-art OPC Servers and Middleware products
- Efficient development of OPC UA Servers and Clients for moving data and information from factory floor to enterprise level
- \* The OPC UA Publisher/Subscriber model is currently under development, thus so far it is refering to a prototype implementation
- \*\* "Industrie 4.0" is a German government-driven initiative for implementing an Industrial Internet of Things

#### **Complete Solution for All Customer Requirements**

- Comprehensive set of building blocks offering encapsulated and easy-to-use functionality required for implementing OPC Servers and Clients
- Wide range of OPC functionality, including UA Extended Security, Data Access, Complex Data, Eventing and UA Historical Access in C# or C++ for Windows, respective Linux, VxWorks and embedded operating systems
- Integrated security concepts allowing safe remote data transfer actively addressing modern security threats
- OPC UA Publisher/Subscriber\* model offering thin and efficient protocol for cyclic message exchange, allowing device-side real-time handling

## Reduced Total Technology Cost of Ownership (Development, Maintenance)

- OPC Right out of the box Up-to-date with OPC specifications
- Saving of up to two years of development effort, considerably reducing time-to-market
- Very fast way to 100% OPC compliance and proven interoperability
- Enabler for "Industrie 4.0"\*\* and Industrial Internet of Things communication

## **OPC UA and OPC Classic Servers, OPC Middleware**

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

The dataFEED OPC Suite offers a full package of components for OPC communication within a single product. It enables access to the controllers of leading manufacturers. Additional functionality eliminates DCOM problems and improves the communication between the PLCs, OPC Servers and OPC Clients, independent of the use of OPC UA or OPC Classic.



#### **Easy and Independent Access to Controllers**

- Read and write access to data in PLCs of leading manufacturers
- No changes to control program required
- Easy integration of legacy and new controllers into "Industrie 4.0"\* solutions
- Integration of non-OPC UA-ready components like Siemens S5 controllers into OPC UA applications
- Cost savings through continued use of existing OPC Classic components
- Gateway functionality for connecting controllers and components with integrated OPC UA Server to OPC Classic applications

#### **Comprehensive Processing System**

- Wizards for fast and easy setup of database connections
- Storage of OPC Server data and local data in databases via SQL statements
- Features for performing required proof and analysis tasks
- Suitability for use in process optimization

#### No Need for DCOM Configuration

- Easy industrial communication by avoiding DCOM and its complex security settings
- Time-saving configuration of OPC Classic communication across networks
- Minimum requirements on configuration of PCs used in network
- Compliance with corporate computer and network security policies, e.g. firewall settings

#### **Easy Configuration**

- State-of-the-art, intuitive graphical user interface for rapid configuration of OPC communication
- Use of intelligent, practice-oriented defaults, setup wizards and drag-and-drop support
- Time savings through effective and efficient configuration of distributed automation systems comprising a large number of OPC Servers

<sup>\* &</sup>quot;Industrie 4.0" is a German government-driven initiative for implementing an Industrial Internet of Things

### dataFEED uaGate SI

#### Embedded OPC UA Server Gateway for Siemens PLCs

dataFEED uaGate SI is a gateway to Siemens PLCs that can be integrated into new or existing plants and provides OPC UA Server functionality. It allows the implementation of easy and secure data connectivity with higher-level management systems, such as ERP, MES or SCADA. dataFEED uaGate SI combines a compact size with industryproven hardware.



#### **Easy Controller Connectivity**

- Connectivity between controllers and IT (ERP, MES, SCADA) systems as well as between controllers using the standardized, open, platform-independent and market-proven OPC UA standard
- OPC UA technology supporting easy local and global networking as well as routing through firewalls
- Gateway configuration based on web interface allowing easy symbol import directly from SIMATIC STEP 7 and TIA Portal projects

#### **Ultimate Security**

- Physically separated network interfaces preventing intrusions
- Individually protected access to PLC data
- Separate configuration rights on controller and IT levels, especially beneficial to OEMs and machine builders wanting to keep proprietary controller configuration undisclosed
- Data encryption and user authentication meeting highest security requirements

#### **Investment Protection**

- Adding modern communication capabilities to existing plants
- Standard component that can be integrated into both small and large automation projects
- Suitable for new applications and retrofits

#### Zero Maintenance

- All-hardware gateway no need for software updates, operating system patches or PC maintenance
- No PLC programming or dedicated PC required
- Failure-free operation for years after device has been pluggedin and configured once

### **Education and Additional Services**

#### OPC Training and Consultancy, Lead by Experience

Softing offers a complete bundle of services, ensuring the successful entry to OPC technology. These include offerings fitting to the specific needs of manufacturers of OPC products, software developers or users of OPC technology. All services are driven by Softing's rich OPC experience and are technically sound, practical and targeted to the participants' requirements.



## OPC Development Training and OPC Consultancy

- Custom-specific developer-to-developer consultancy on design, development, optimizing and testing of customerspecific OPC enabled products based on Softing OPC Toolkits
- Available for both OPC UA and OPC Classic technologies
- Access to top-level experience on selecting suitable OPC specification, optimal architectural options and tools for implementation
- Porting of OPC Client or Server Toolkit to customer-specific operating system and hardware platform

#### **OPC Development Services**

- Project-based development of tailor-made OPC solutions according to specific customer requirements
- Consultancy for pre-certification and certification support

#### OPC User Training and OPC UA Technology Jump Start

- Efficient OPC UA jump start for decision makers, technical leaders, and product managers
- Compact but well-founded introduction into OPC UA
- Evaluating the relevance of new OPC UA technology
- Support of decision about right time and approach to start OPC UA development

#### **OPC Book**

- From OPC Data Access to OPC UA
- Overview of fundamentals, implementation and application of standardized data exchange via OPC
- Key focus on OPC UA
- Discussion of tools and demo programs

# optimize!

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