



CODESYS OPC UA Server SL

An additional option for CODESYS runtime systems to publish variables via the OPC UA protocol.

Product description

The OPC UA Server exposes variables configured in the symbolic configuration of a CODESYS project to the OPC UA address space. Clients can read, write and monitor the values of the PLC. To enable the OPC UA support in the CODESYS Development System the option "Support OPC UA Features" must be set in the symbol configuration.

Also see [CODESYS Online Help]

(https://help.codesys.com/webapp/_cds_runtime_opc_ua_server;product=codesys).

The OPC UA Server supports the following features:

- Browsing of data types and variables
- Standard read/write services
- Notification for value changes (subscription and monitored item services)
- No restriction in the number of sessions, monitored items, and subscriptions (the number depends on the performance of the respective platform)
- Support of events
- Support of complete access to structures
- Encrypted communication with an OPC UA Client
- Support of multitasking
- Support of OPC UA methods
- Support of Alarms&Conditions

Supported profiles: Currently the OPC UA server supports the "Micro Embedded Device Server Profile". This server profile allows reading, writing, and subscribing of items.

Supported information models: OPC UA allows defining different data types. The combination of customer defined data types, object types and reference types allows defining your own information model. An information model describes how the data should be exposed to the address space.

- PLCopen information model
- User-defined information models (companion specifications)

Also see [CODESYS Online Help]

(https://help.codesys.com/webapp/_cds_using_opc_ua_information_models;product=codesys).

Security:

- signed and encrypted communication
- User management

SecurityProfiles:

- None
- Basic256Sha256 (Sign, Sign_and_Encrypt)
- Aes128_Sha256_RsaOaep
- Aes256_Sha256_RsaPss

User token policy:

- Anonymouse
- Username

The CODESYS OPC UA Server supports the following profiles.

UA Features	Profiles	Link
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UA Features	Profiles	Link
Core	Micro Embedded Device Server Profile	http://opcfoundation.org/UA-Profile/Server/MicroEmbeddedDevice
	UA-TCP UA-SC UA-Binary	http://opcfoundation.org/UA-Profile/Transport/uatcp-uasc-uabinary
Event Access	Standard Event Subscription Server	http://opcfoundation.org/UA-Profile/Server/StandardEventSubscription
Methods	Method Server Facet	http://opcfoundation.org/UA-Profile/Server/Methods
Alarms&Conditions	A & C Base Condition Server Facet	http://opcfoundation.org/UA-Profile/Server/ACBaseCondition
	A & C Refresh2 Server Facet	http://opcfoundation.org/UA-Profile/Server/ACRefresh2
	A & C Enable Server Facet	http://opcfoundation.org/UA-Profile/Server/ACEnable
	A & C Acknowledgeable Alarm Server Facet	http://opcfoundation.org/UA-Profile/Server/ACAckAlarm
	A & C Alarm Server Facet	http://opcfoundation.org/UA-Profile/Server/ACAlarm
Historical Access	not yet supported	
Redundancy	not yet supported	
Security	User Token – Anonymous Facet	http://opcfoundation.org/UA-Profile/Security/UserToken/Anonymous
	User Token – User Name Password Client Facet	http://opcfoundation.org/UA-Profile/Security/UserToken/Client/UserNamePassword
	None	http://opcfoundation.org/UA/SecurityPolicy#None
	SecurityPolicy [B] – Basic256Sha256	http://opcfoundation.org/UA/SecurityPolicy#Basic256Sha256
	Aes128-Sha256-RsaOaep	http://opcfoundation.org/UA/SecurityPolicy#Aes128_Sha256_RsaOaep
	Aes256-Sha256-RsaPss	http://opcfoundation.org/UA/SecurityPolicy#Aes256_Sha256_RsaPss

General information

Supplier:

CODESYS GmbH
 Memminger Strasse 151
 87439 Kempten
 Germany

Support:

<https://support.codesys.com>

Item:

CODESYS OPC UA Server SL

Item number:

2302000041

Sales / Source of supply:


CODESYS Store

<https://store.codesys.com>

Included in delivery:

- License key
- License agreement

System requirements and restrictions

Programming System	CODESYS Development System V3.5.17.0 or higher
Runtime System	CODESYS Control V3.5.17.0 or higher
Supported Platforms/ Devices	CODESYS SoftPLC systems Note: Use the tool "Device Reader" to find out the supported features of your device (free of charge component of CODESYS Development System).
Additional Requirements	TCP/IP stack Real-time watch
Restrictions	-
Licensing	<div style="text-align: center;">  DEVICE </div> <p>Single Device License: The license can be used on the target device/PLC on which the CODESYS Runtime System is installed.</p> <p>Licenses are activated on a software-based license container (soft container), which is permanently connected to the controller. Alternatively the license can be stored on a CODESYS Key (USB-Dongle). By replugging the CODESYS Key, the license can be used on any other controller</p> <p>Note: In demo mode, the software runs for two hours without a license. After that, a manual restart is required.</p>
Required Accessories	Optional: CODESYS Key

Note: Not all CODESYS features are available in all territories. For more information on geographic restrictions, please contact sales@codesys.com.

Note: Technical specifications are subject to change. Errors and omissions excepted. The content of the current online version of this document applies.