



## OPC UA Client Example

The example 'OPCUAClient\_Example' demonstrates how to use the CODESYS OPC UA Client programmatically. It contains visualizations to access the applied functions via a user interface. The example 'OPCUA\_Datasource\_Example' demonstrates how a CODESYS OPC UA connection can be set up via data source manager.

### Product description

#### Licensing:

No license is required.



'OPC UA Client Example' demonstrates how to use the IEC 61131-3 interface of the CODESYS OPC UA Client. It contains function blocks to connect to and exchange data with other OPC UA Servers. Also it contains two visualizations to operate the cited function blocks via a user interface and check server certificates.

'OPC UA Datasource Example' uses for communication between server and client the data source manager. A direct read of values in device set can be done in client.

#### Application

**OPC UA Client Example:** The example contains a project with two applications: UAClientDemo and UAServerData.

UAClientDemo contains function blocks for using the CODESYS OPC UA Client.

- UAConnection: To establish the connection to any OPC UA Server
- UABrowse: To send browse requests to an OPC UA Server
- UASubscription: To generate OPC UA subscriptions
- UAMonitoredItem: To monitor OPC UA variables ("Monitored Items")
- UAAttributes: To send read/write commands to the OPC UA Server
- UAClient: Maps the state machine for the OPC UA Client to establish and terminate connections and is the basis for the visualization

UAServerData publishes a data set via the CODESYS OPC UA Server.

**OPC UA Datasource Example:** The example contains two projects OPC\_UA\_SERVER and OPC\_UA\_CLIENT with each an application.

In the application of server, Application\_DataSource, different values are written in Server\_PRG and they are send via symbol configuration.

A data source manager is included to client application to read the data, the received values can be accessed in Main\_PRG.

#### Visualization

The example contains two visualizations: CheckCertificate and Visualization.

CheckCertificate provides a user interface to accept server certificates one time and then to establish a secure connection. To trust server certificates permanently, the CODESYS Security Agent can be used (<https://store.codesys.com/codesys-security-agent.html>).

Visualization provides a user interface to operate the CODESYS OPC UA Client by using the UAClient function block.

## General information

### Supplier:

CODESYS GmbH  
 Memminger Strasse 151  
 87439 Kempten  
 Germany

### Support:

<https://support.codesys.com>

### Item:

OPC UA Client Example

### Item number:

000119

### Sales / Source of supply:

CODESYS Store

<https://store.codesys.com>

### Included in delivery:

- CODESYS package with sample projects
- License agreement

## System requirements and restrictions

<b>Development system</b>	CODESYS Development System V3.5.17.0 or higher
<b>Runtime</b>	CODESYS Control V3.5.17.0 or higher
<b>Supported platforms and devices</b>	•
<b>Additional requirements</b>	Runtime system component CmpOPCUClient
<b>Restrictions</b>	<ul style="list-style-type: none"> <li>• The connection to OPC UA Servers is possible via an IP address only, not via a host name.</li> <li>• To establish secure server-client communication, a client certificate has to be generated on the controller by means of the CODESYS Security Agent (<a href="https://store.codesys.com/codesys-security-agent.html">https://store.codesys.com/codesys-security-agent.html</a>) before the connection is established.</li> </ul>

### Licensing



No license is required.

### Required accessories

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