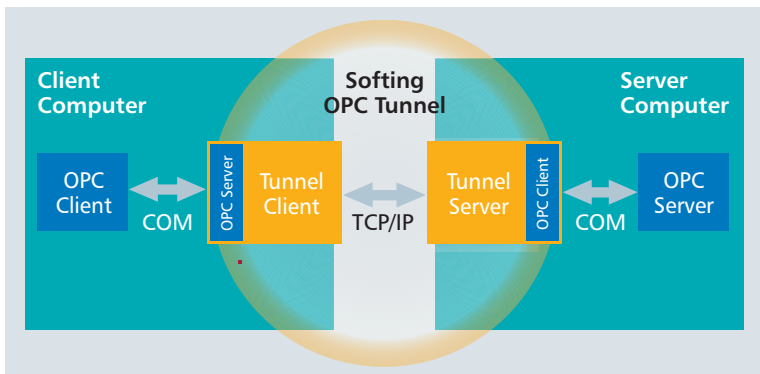


# OPC Tunnel

## Networked OPC Communications without the Complications of DCOM

### Save Costs with OPC Tunnel

Softing's OPC Tunnel enables a safe, secure method of network-spanning OPC communication while eliminating the problems associated with configuration of DCOM security settings. OPC Tunnel removes the burden of figuring out how to network OPC clients and servers running on different platforms, in different domains, and even in completely separated networks. This also minimizes time-consuming support calls to the OPC client and server supplier. The exchange of data between clients and servers is highly efficient, robust, and reliable.



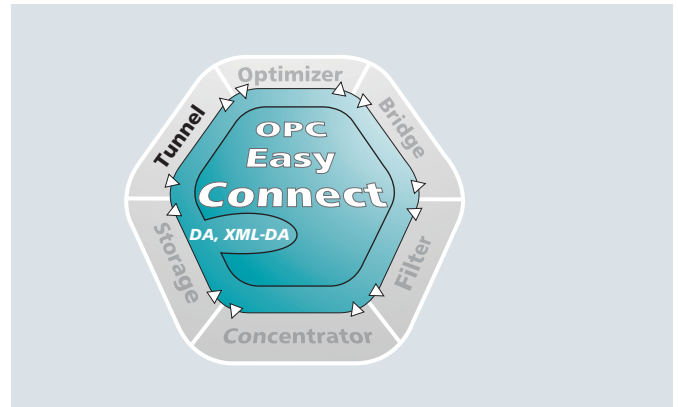
### Simplified Data Exchange with OPC

OPC has become the de facto standard for exchanging data between industrial automation applications. As a standard interface between software components, OPC simplifies start-up, maintenance, and operation of automation projects. With millions of installations in all kinds of industrial applications, OPC makes it possible to exchange data very fast and reliably between system components supplied by multiple and diverse vendors.

### Communication between Networked Computers

Microsoft's COM (Component Object Model) is the key for communication between OPC clients and OPC servers. Distributed COM (DCOM) permits OPC clients transparent access to OPC servers on remote computers. Setting up OPC communication between networked computers requires configuring DCOM security settings. This requires expert knowledge, but despite the level of user expertise, DCOM security often leads to problems.

## Product Information



### Fast Start-Up with Softing OPC Tunnel

OPC Tunnel is one of Softing's OPC Easy Connect products. Used as a "DCOM bypass," OPC Tunnel enables high-performance and robust communication between OPC components on networked computers. The user installs OPC Tunnel components on both the OPC client computer and the OPC server computer. Communication between the client-side and server-side OPC Tunnel components is via a TCP/IP connection (encrypted, if desired). Therefore, the data between client and server applications is "tunneled" via TCP/IP, bypassing DCOM completely while eliminating time-consuming and nerve-wracking DCOM setup work. The OPC client and server applications work as though they are running on the same machine, while exchanging data across a network without DCOM.

#### Customer Benefits

- **Cost savings:** It only takes a few minutes to set up communication for networked applications
- **Safety:** One-second communication monitoring provides fast detection of aborted communication sessions
- **Reliability:** OPC Tunnel automatically reconnects OPC links after aborted communications sessions
- **Flexibility:** Cross-platform OPC communications can occur beyond firewall boundaries
- **Security:** There is no need to expose computers to unauthorized access from outside, unlike OPC via DCOM
- **Information:** Monitoring tools, activated during runtime provide an excellent overview on all relevant activities in your system

## Softing AG

Industrial Automation  
Richard-Reitzner-Allee 6  
85540 Haar, Germany

Tel.: +49 (0)89 4 56 56-340  
Fax: +49 (0)89 4 56 56-399  
info.automation@softing.com  
www.softing.com

## Softing North America, Inc.

29 Water Street, Suite 301  
Newburyport, MA 01950  
USA

Fon: +1 978 499 9650  
Fax: +1 978 499 9654  
info.usa@softing.com  
www.softing.us

## Product Information

### OPC Tunnel: Networked OPC Communications without the Complications of DCOM

## OPC Tunnel Communications Scheme

The figure, see reverse, shows the relationship between the OPC Tunnel components and their roles in exchanging data between a local OPC client (client computer) and a remote OPC server (server computer). On the client computer, the OPC Tunnel component behaves as a common OPC Data Access and/or Alarms and Events server. Simple configuration only requires setting the server computer's name and the IP port it uses for communications. On the server computer, the OPC Tunnel client component provides for selecting the specific remote OPC server application from which to access the data.

When the application OPC client internally establishes a connection to the Tunnel client component, the latter will automatically connect to the remote Tunnel server component, using the configured IP-Address. The Tunnel server component will then scan the OPC namespace of the remote application OPC server and transmit the namespace information back to the application

OPC client via TCP/IP, bypassing DCOM altogether. Read- and write- requests from the application OPC client, as well as call-backs from the remote OPC server, are "tunneled" transparently to the user. OPC Tunnel is also completely transparent to the application OPC client.

Unlike DCOM, OPC Tunnel is able to monitor connections every second. In the event of an aborted communications session, OPC Tunnel tries to reconnect cyclically at user-configurable intervals. In addition, the namespace of OPC Tunnel can be synchronized periodically with the namespace of the remote application OPC server for applications that employ a dynamic namespace. At runtime, both the client- and server- side components of OPC Tunnel can activate logging functionality used for logging OPC calls, notifications and data, and sent/received OPC Tunnel frames.

OPC Tunnel can be combined with other Softing OPC Easy Connect Products (OPC Concentrator, OPC Filter, OPCtoDataBase...).

## OPC Tunnel

OPC specification	Data Access 1.0 / 2.05 / 3.0, Alarms and Events 1.10
OPC role	On the OPC server computer: OPC client On the OPC client computer: OPC server
OPC data types	VARIANT data types I1, UI1, I2, UI2, I4, UI4, I8, UI8, R4, R8, CY, DATE, BSTR, BOOL and arrays with these data types (VT_ARRAY)
Type of implementation	OutProc Server, InProc Server, Service
Operating systems	Windows NT 4, 2000, XP, Server 2003, Vista, CE 5.0, others on demand
Certification	Client: Test with several OPC servers in the context of the Interoperability Workshop of the OPC Foundation Server: Test with several OPC clients in the context of the Interoperability Workshop of the OPC Foundation, Test with Compliance Test Tool of the OPC Foundation
Demo version	Full functionality, one session time limited to 15 minutes
Documentation, Help	Online help in German and English
Logging	Recording of all OPC function calls, OPC messages, OPC data, Tunnel messages
Encryption	On demand
Licensing	Runtime license per computer, OEM version on demand

## Order Number

OPC-EASYCONNECT	OPC Tunnel with software-based copy protection
LIC-USB-1	OPC Tunnel with USB key as copy protection, only in combination with OPC-EASYCONNECT
LIC-PAR-1	OPC Tunnel with key for parallel port as copy protection, only in combination with OPC-EASYCONNECT