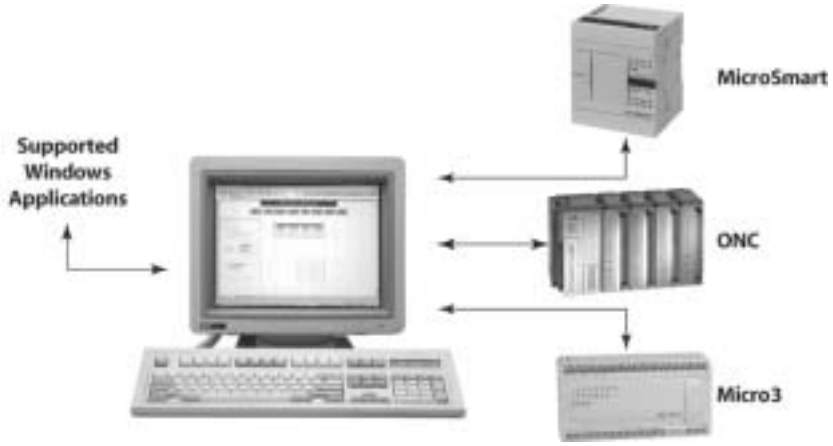
WindSRV Software

WindSRV software acts as a server application for any OPC and DDE compliant Windows software, using RS232, RS485, or Ethernet to link to an IDEC PLC. Install WindSRV on your PC for a simple monitoring system without purchasing any extra hardware.

- Supports OPC and DDE server technologies
- Analog and discrete I/O support for the entire IDEC PLC family
- No custom drivers or development necessary
- Allows user-defined and dynamic tags
- Connects to unlimited number of IDEC PLCs (depending on license purchased)
- Compatible controllers are: MicroSmart series, OpenNet Controllers, Micro series & FA series



Part Numbers

Item	Description	Part Number
WindSRV software	**Link 1 PLC to your PC using WindSRV**	WINDSRV-1
	Link up to 4 PLCs to your PC using WindSRV	WINDSRV-4
	Link up to 8 PLCs to your PC using WindSRV	WINDSRV-8
	Link up to 12 PLCs to your PC using WindSRV	WINDSRV-12
	Link an unlimited number of PLCs to your PC using WindSRV	WINDSRV-U

WindSRV compliant programs include Microsoft Excel and Access, Siemens WinCC, GE Cimplicity, Keyware QuickClient, Visual Basic, Visual C++ applications and user interfaces, and any other OPC/DDE compliant program.

System Requirements

Minimum	Recommended
Pentium®or Pentium Class CPU 200Mhz	Pentium CPU 400Mhz
Windows® 98	Windows® NT 4.0 or later, Windows® 2000
32MB RAM	64MB RAM
10MB free hard disk space	10MB free hard disk space

Definitions

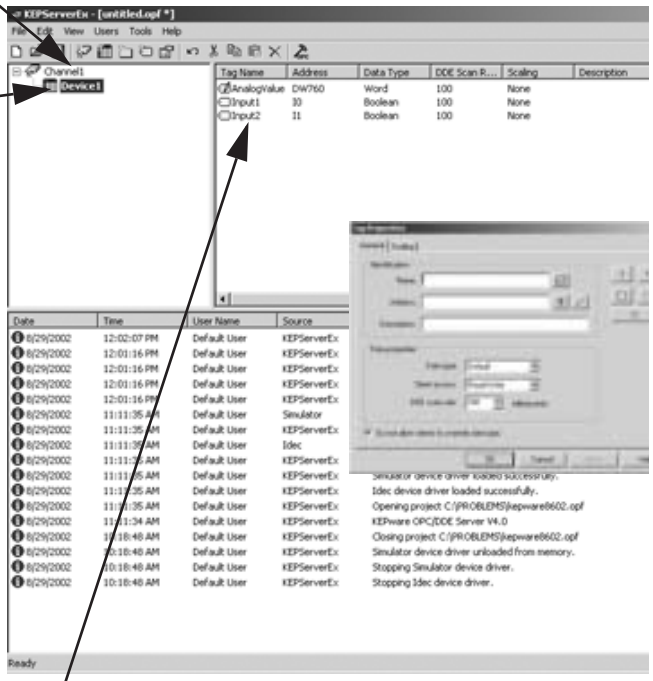
Term	Definition
OLE	Object linking and embedding, used for connecting and transferring data between objects and devices in Microsoft based software.
OPC	OLE for process control.
DDE	Dynamic data exchange, which has the same use as OLE but is of an older design.
SCADA	Supervisory control and data acquisition.
Server	A software device used to connect two dissimilar program packages for transferring data back and forth. Could also be used as a translator.
HMI	Human machine interface.
Node	Individual computerized device on a network. For WindSRV it refers to an IDEC PLC.
PLC	Programmable logic controller, such as a MicroSmart or OpenNet controller.
MES	Manufacturing execution system software, which allows better control and quality of your plant process.
ERP	Enterprise resource planning software, allows better control over your plant resources.
SPC	Statistical process control, or quality tracking and reporting.

Linking Client Applications

Step 1: Define channel object
Each protocol or driver used in the WindSRV server and project is referred to as a channel. Channels are specific communications drivers (i.e. - RS232, RS485, Ethernet, Dial-up modem). All WindSRV projects can consist of many channels.

Step 2: Define device object
Device names are set up to represent the PLCs that you are communicating to. Each device name must be unique inside each channel but may be the same from channel to channel.
Device Properties has an option to enter tags manually, or select an automated tag database generator. If Automatic I/O Configuration is selected, tags must first be exported from WindLDR and saved as a text file.

In Device Properties, enable “automatic tag data base generation of device startup” and attach the text file. It will then automatically generate tag objects.



Step 3: Tag object
WindSRV allows user defined and dynamic tags.

- User defined tags have the benefit of allowing tag browsing and tag scaling.
- Tags can also be automatically generated through WindLDR/WindSRV.
- Dynamic tags are entered directly at the OPC client that specifies device data.
- All tag names must be unique within a given device branch or group branch.

Step 4: Select Quick Client
You can easily check and control your PLCs with QUICK CLIENT software. It allows you to test your PLC connection, toggle I/O, read/write values and test ASCII strings in real time while sitting comfortably at your PC.

Step5: Completed link
Easily interface with compatible Windows software applications such as Excel or Access without having to develop custom drivers. This allows you to develop acquisition or monitoring systems, and interface intelligent devices, such as bar code readers and labelers. You can also create links to your custom VisualBasic or Visual C++ applications and user interfaces.

Linking Client Applications con't

Group object

WindSRV works by adding tags in groups or files. Tag groups allow you to construct a layout of the OPC or DDE data to be collected in a logical manner. You can structure the groups to fit the needs of your application.

Using tag groups allows you to use multiple sets of identical tags under one device. This can be very convenient when using PLCs that have very similar addressing and similar machine segments.

Tag grouping allows segregation of your tags into functional groups that make finding your tags and troubleshooting easier.

Additional tag properties

A pop-up diagnostics window, known as Quick Client, shows detailed realtime information for easy troubleshooting. Powerful built-in data scaling allows you to configure each I/O point for the engineering units it represents or requires, reducing the need for extensive math calculations in your client software. Data types supported are Byte, Word, Dword and floating point math (with user defined decimal point location). Scaling features include high and low limits, clamping and I/O data range.

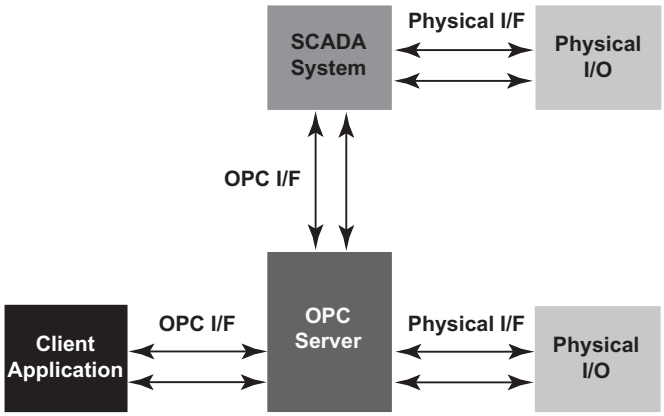
OPC/DDE

What OPC allows you to do

OPC, or OLE (Object Linking and Embedding) for Process Control, is an industry standard created by a number of worldwide leading hardware and software suppliers in cooperation with Microsoft. The OPC Data Access specification, as maintained by the OPC Foundation, is a non-proprietary technical specification that defines a set of standard interfaces based upon Microsoft's OLE/COM technology. An OPC server allows items such as distributed control systems, programmable logic controllers, I/O systems and smart field devices to communicate with a wide range of HMI/SCADA software packages residing on a PC.

What OPC does

OPC is primarily used for accessing data from a network server, OPC interfaces can be used in many places within an application. The architecture and design makes it possible for an OPC server to allow a client application to access data from many OPC servers. Many different OPC vendors running on different nodes via a single object can provide the data.



WindSRV provides legacy DDE support

While WindSRV I/O Server is first and foremost an OPC Server, it is recognized that a number of legacy applications still depend upon DDE for their underlying client server technology. Early in the development of Windows, Microsoft provided a generic client server technology called DDE (Dynamic Data Exchange). DDE did provide a basic architecture that would allow many Windows applications from a wide range of vendors to share data, but there was one problem. DDE was not designed for the industrial market, lacking much of the speed and robustness desired in an industrial setting. However, this did not stop DDE from becoming a dominant client/server architecture, largely due to its availability in most Windows applications.

OPC and DDE support

WindSRV supports the following server technologies

- OPC Data access version 1.0a, the original specification from the OPC foundation
- OPC Data access version 2.0, the latest version with better COM technologies
- FastDDE for WonderWare™
- SuiteLink for WonderWare™
- DDE Format CF_Text
- DDE Format XL_Table
- DDE Format AdvancedDDE