U-CON OPC Server

The User-CONfigurable (U-CON) driver for KEPServerEX allows you to quickly and easily create your device driver for those Serial and Ethernet devices where there is no off the shelf driver. The U-CON driver's intuitive interface was designed for the non programmer. All you need is a basic knowledge of protocols, the protocol manual, and the device. OPC and other proprietary client interface technologies are handled within KEPServerEX making client side communications a non issue. The U-CON driver also supports all feature sets available within KEPServerEX. Typical devices U-CON is used for include barcode readers, weigh scales, various sensors, and RTU's to name a few.

Analyzers	Controllers	Recorders
Balances	Counters	RFID Devices
Bar Code Scanners	Displays	Sensors
Check Weighers	Guages	Weigh Scales

Kepware offers a special program based around our U-CON driver. If you need to have your profile developed we can provide you a list of certified integrators. We also provide numerous examples that will provide you an excellent starting point and tutorials to help you in your own development. For a list of Certified U-CON developers please search our SI database and look for the U-CON Certified logo. To download an example profile please visit our U-CON Profile Exchange.

The U-CON driver is also included in the following:

Building Automation Suite
Oil and Gas Suite
IT and Infrastructure Suite
Power Distribution Suite
Manufacturing Suite

Plug-in Driver Features:

- Function Block Support
- Solicited and Unsolicited Modes (Master/Slave)
- Global, Scratch and Initialization Buffer Support
- Event Counter support to automatically keep track of how many times it is executed.
- Multi-threaded design ensures optimum performance
- Scalable, with support for up to 100 concurrent serial port and network interface card (NIC) configurations
- Built-in Ethernet Encapsulation for device/terminal server connections
- Error recovery, adjustable timeouts, write optimizations
- Robust communication diagnostics system w/ protocol display
- Runs as a service under Windows NT/XP/2000/2003
- Full Time On-line operation allows on the fly changes
- Dialup modem features for serial device connections
- Supports direct scaling of device data which allows raw device data to be converted to engineering units for OPC client applications

Available Protocol Transaction Commands:

With each of these transaction commands, U-CON provides a wide range of formatting options allowing data to be sent and received in packed binary, ASCII, ASCII Hex, and simple text formats.

- Write Character
- Write Device ID
- Write String
- Write Checksum
- Write Tag Data
- Transmit Message
- Read Message
- Test Byte
- Test Device ID
- Test Checksum
- Jump to Step
- Update Tag

Protocol Requirements

In order to create a profile you must obtain protocol documentation from the device manufacturer. Many hardware vendors will provide the protocol documentation with the device or will post it as a .pdf on their website. Be sure to have the device model no. and determine whether your device has either a serial or Ethernet option.

The U-CON's transaction editor uses a menu driven interface, which allows the configuration of read & write transactions (data packets) to establish runtime communications with the device. After you create these transactions upload them as Tags in our reliable and field proven OPC/DDE server.

U-CON Support and Profile Development

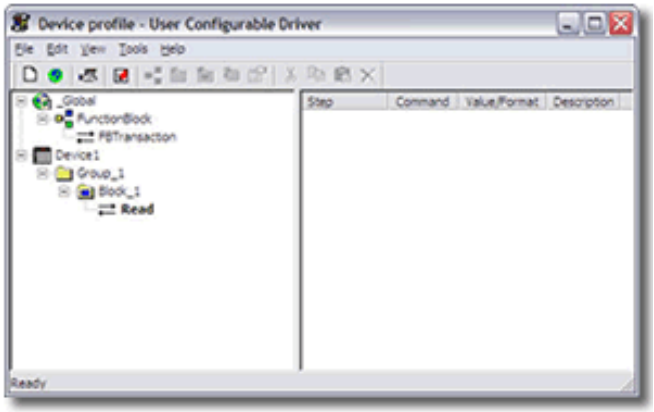
Kepware will provide basic assistance with your U-CON project and can review the device protocol to determine if a profile can be created. Members of Kepware's U-CON Certified Developer program may be available for consultation and profile development for a fee. You can review and download submitted profiles at the U-CON Profile Exchange, search our database of System Integrators or contact Kepware Technical Supportfor assistance. If you are interested in becoming a Certified U-CON Profile Developer please submit this short form for additional information.

Creating Read / Write Transactions

The development of a custom communication profile begins by defining the tags or data that needs to be read from or written to a serial device. After the tags have been defined the next step is to define the transactions needed to communicate with the device. The transaction editor provides a wide range of tools and actions that can be used to build the messages that will be sent to a device. Additional actions allow the responses from the device to be processed and turned into tag data available to your OPC client applications.

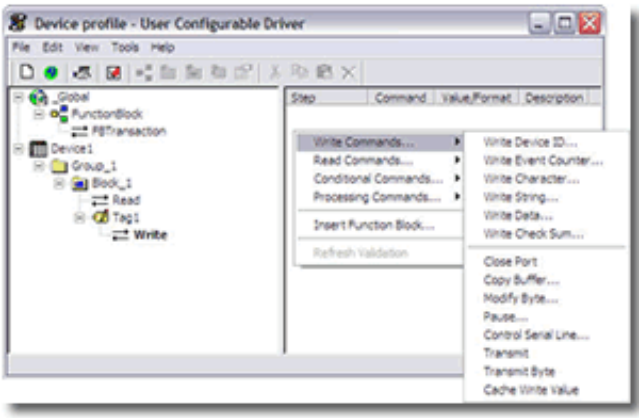
Step 1: Defining Tags

The first step is to define the tags required by your OPC application.



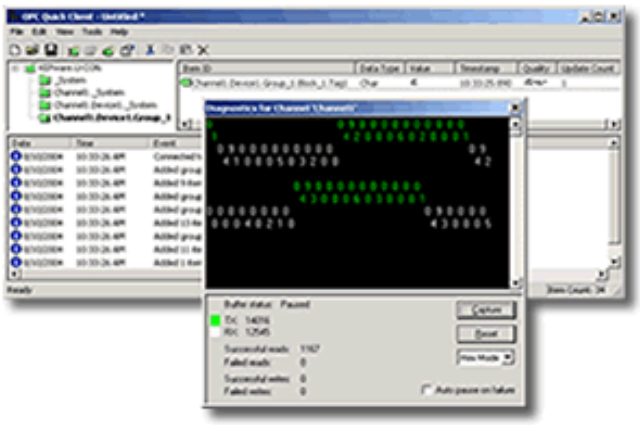
Step 2: Defining the Transactions

The next step is to define the transactions that read or write data from your tags.



Step 3: Testing your Profile

Finally use the diagnostic view and OPC Quick Client to test your driver profile.



Application Support

- OPC Data Access (OPC DA) Versions 1.0a, 2.0, 2.05a, 3.0
- OPC Alarms and Events (OPC AE) Version 1.10
- OPC Unified Architecture (OPC UA) Version 1.01
- SuiteLink and FastDDE for Wonderware
- NIO Interface for iFIX
- DDE Format CF_Text and AdvancedDDE

Additional Information and Resources:

- U-CON User's Manual (PDF)
- U-CON Profile Exchange
- U-CON Certified Developer Sign Up
- U-CON Certified System Integrators
- U-CON Driver for KEPServerEX Brochure (PDF)
- U-CON Typical Applications
- U-CON Driver Revisions
- U-CON Configuration Viewlet Part 1
- U-CON Configuration Viewlet Part 2
- U-CON Configuration Viewlet Part 3
- OPC Server Features

Related Products:

- LinkMaster OPC Bridging Software
- DataLogger Option for KEPServerEX
- Advanced Tag Option for KEPServerEX
- RedundancyMaster OPC Redundancy Software
- Hardware Accessories
- Support and Maintenance Pricing
- Legacy Pricing Policy

Drivers "Plug-in" to KEPServerEX

The U-CON OPC Server is a plug-in device driver for KEPServerEX. A "Plug-in" is a software program (.dll) that extends the capabilities of KEPServerEX to fit the communication requirements of a specific device or system. The plug-in driver handles all of the proprietary communications between the device/system and the OPC layer, KEPServerEX. The KEPServerEX core then handles all OPC and Proprietary Client communications between the plug-in driver and the Client application. For a complete list of features and capabilities please visit the KEPServerEX overview page.

- OPC Foundation Certified - The Best of OPC on the Market
- High Performance - Multi Threaded - Runtime Configurable
- Detailed Protocol Diagnostics - Communications Trace
- Detailed OPC Diagnostics - Communications Trace
- Native Interfaces - Client Connectivity Beyond the OPC Standards
- Stratus High Availability Computing - Certified
- Marathon High Availability Computing - Certified
- Kepware 2 Hour Demonstration Mode on all Products