Siemens Plus Suite
SKU: KWP-SIEMP0-PRD

Component Drivers

- Siemens S5
- Siemens S5 3964R
- Siemens S7 MPI
- Siemens S7-200
- Siemens TCP/IP Ethernet
- Siemens TCP/IP Unsolicited Ethernet
- Siemens S7 Plus Ethernet
- OPC UA Client

Features

- Connects to S7-1500 controllers and many other Siemens devices
- Supports Symbolic Addressing
- Supports data blocks for direct tag addressing by tag name
- Supports User Defined Types (UDTs)
- Breaks complex data into individual simple data tags, providing easy data access for all OPC clients

SUPPORTED DEVICES AND NETWORKS

- Siemens S7-200
- Siemens S7-300
- Siemens S7-400
- Siemens S7-1200
- Siemens S7-1500
- Siemens S5
- Siemens S5 (3964R)
- Siemens S7 MPI

Note: This is a partial list; unlisted devices may be supported. For a complete listing, please contact Kepware.

ADDITIONAL TECH INFO

- Enables users to compile S7-1500 projects using optimized data blocks
- Automatic symbolic tag generation from STEP7 project directories for S7-300 and 400 models
- Supports PG, OP, and PC Link Types for S7 Industrial Ethernet devices
- Emulates an S7-300 model using the unsolicited driver in order to reduce polling over the network and receive rapid updates from master controllers
- Supports Communications Processors CP-243, 343, and 443 for Industrial Ethernet
- Supports Ethernet Encapsulation for Serial protocol drivers
- Supports low-cost netLink Communications adapter for Siemens Industrial Ethernet to MPI conversion
- Supports Siemens MPI PC adapter or null modem cable for S7 MPI devices
- Supports the EM241 modem module for Siemens S7-200
- Supports the PPI (11 bit) and PPM (10 bit) protocols for Siemens S7-200

Application Support

- OPC Data Access (OPC DA) Versions 1.0a, 2.0, 2.05a, and 3.0
- OPC Alarms and Events (OPC AE) Version 1.10
- OPC Unified Architecture (OPC UA) Version 1.01
- OPC .NET Service (OPC .NET) Version 1.00
- SuiteLink and FastDDE for Wonderware
- NIO Interface for iFIX
- DDE Format CF_Text and AdvancedDDE

Featured Suites

- Manufacturing Suite

Siemens S5

Product Overview

The Siemens S5 driver works in conjunction with KEPServerEX to exchange data between OPC clients and Siemens S5 PLCs using the AS511 protocol, which allows a direct connection to the programming port of the PLC. The programming port utilizes a Current Loop connection, requiring the use of either the supplied programming cable or an external RS-232 to Current Loop converter. For more information on wiring and recommendations for Current Loop converters, refer to the product manual. KEPServerEX automatically optimizes data acquisition based on client demand and ensures data integrity through extensive error handling.

Features

- Supports direct Peer-to-Peer Current Loop connections from the PC serial port
- Supports Ethernet Encapsulation, though the protocol's tight timing requirements may preclude the driver from working in all Ethernet network environments
- Supports multiple PLC connections when using Ethernet Encapsulation
- Supports the following Memory Types: I, Q, F, T, C, and Data Block Access by named type
- Supports all data types
- Modem Support
    - Automatic dial configuration
    - Multiple phone number management
- Communication Serialization

Protocols

- Siemens S5 AS511 Current Loop

Supported Devices

- Siemens S5-95U
- Siemens S5-100U, (CPU-100)
- Siemens S5-100U, (CPU-101)
- Siemens S5-100U, (CPU-103)
- Siemens S5-101U
- Siemens S5-115U, (CPU-941)
- Siemens S5-115U, (CPU-942)
- Siemens S5-115U, (CPU-943)
- Siemens S5-115U, (CPU-944)
- Siemens S5-115U, (CPU-945)
- Siemens S5-135U, (CPU-921)
- Siemens S5-135U, (CPU-922)
- Siemens S5-135U, (CPU-928)
- Siemens S5-155U, (CPU-946)
- Siemens S5-155U, (CPU-947)
- Siemens S5-90U

Siemens S5 3964R

Product Overview

The Siemens S5 3964R driver works in conjunction with KEPServerEX to exchange data between OPC clients and Siemens S5 PLCs using the 3964R protocol. KEPServerEX automatically optimizes data acquisition based on client demand and ensures data integrity through extensive error handling.

Features

- Supports the following Memory Types: I, Q, F, T, C, and Data Block Access
- Supports all data types
- Supports Ethernet Encapsulation
- Modem Support
    - Automatic dial configuration
    - Multiple phone number management

Protocols

- Siemens S5 3964(R)

Supported Devices

- Siemens S5-115U, (CPU-941)
- Siemens S5-115U, (CPU-942)
- Siemens S5-115U, (CPU-943)
- Siemens S5-115U, (CPU-944)
- Siemens S5-115U, (CPU-945)
- Siemens S5-135U, (CPU-921)
- Siemens S5-135U, (CPU-922)
- Siemens S5-135U, (CPU-928)
- Siemens S5-155U, (CPU-946)
- Siemens S5-155U, (CPU-947)

Additional Tech Info

- This driver works with devices that support the 3964 or 3964R protocol and use the RK 512 computer link program. It is intended for use with Siemens S5 PLCs communicating via a communications processor card (such as the CP 544) configured to use the 3964R or 3964 protocols and the RK 512 computer link. Multiple CPU systems are supported.
- This driver is not designed to respond to unsolicited data from the PLC.

Siemens S7 MPI

Product Overview

The Siemens S7 MPI driver works in conjunction with KEPServerEX to exchange data between OPC clients and Siemens S7-300 and S7-400 PLCs using the MPI protocol. The MPI interface requires the use of the Siemens S7 MPI serial port adapter available from your Siemens dealer. The serial port MPI adapter allows KEPServerEX to communicate with Siemens S7-300 and S7-400 PLCs at either 19.2 KBaud or 38.4 KBaud. The driver talks directly to the MPI adapter cable without additional software packages or libraries. KEPServerEX automatically optimizes data acquisition based on client demand and ensures data integrity through extensive error handling.

Features

- Supports Ethernet Encapsulation
- Supports multiple Master Multi-drop
- Automatically handles network configuration
- Supports Stations 0-126
- Supports the following Memory Types: I, E, Q, A, M, F, T, C, Z, and Data Block Access
- Supports bit-level access
- Supports all data types
- Supports arrays for byte, char, word, short, DWORD, long, float and LBCD data types
- Modem Support
    - Automatic dial configuration
    - Multiple phone number management

Protocols

- Multi Point Interface (MPI) S7-300/400 Communications Protocol

Supported Devices

- S7-300 - Family
- S7-400 - Family

Siemens S7-200

Product Overview

The Siemens S7-200 driver works in conjunction with KEPServerEX to exchange data between OPC clients and Siemens S7-200 PLCs using the PPI (11 bit) or PPM (10 bit) protocol. It includes direct support for the EM241 Modem Module. KEPServerEX automatically optimizes data acquisition based on client demand and ensures data integrity through extensive error handling.

Features

- Supports the EM241 Modem Module
- Supports the PPI (11 bit) and PPM (10 bit) protocols
- Supports Single Master Multi-drop RS485
- Supports Stations 0-126
- Supports Communication Serialization
- Supports the following Memory Types: I, Q, M, S, V, T, C, HC, AI, and AQ
- Supports all data types
- Modem Support
    - Automatic dial configuration
    - Multiple phone number management

Protocols

- Point-to-Point (PPI) S7-200 Communications Protocol
- Point-to-Point Modem (PPM) S7-200 Communications Protocol

Supported Devices

- Any Siemens S7-200 devices
- S7-212
- S7-214
- S7-215
- S7-216
- S7-224

Additional Tech Info

The driver normally operates using the standard 11 bit PPI protocol. If the use of the EM 241 modem module is required, the S7-200 PPM model must be selected. The S7-200 PPM model allows the driver to operate in a 10 bit mode, which is more compatible with a wide range of off-the-shelf modems. The 10 bit PPM mode can also be used directly on the PLC's programming port. To enable the 10 bit PPM mode, set the S7-200 programming cable 10 bit mode.

Siemens S7 Plus Ethernet

Product Overview

The Siemens S7 Plus Ethernet driver provides Symbolic access to S7-1200 and S7-1500 PLCs through the native S7 Comm Plus protocol. With online automatic tag generation there is no longer a need to manually transfer your tags from your TIA Portal Projects. The Siemens S7 Plus Ethernet driver supports optimized and non-optimized block access as well as symbolic reads and writes of time, elementary and array elements.

Features

- Supports symbolic reads/writes of the following elementary data types: Bool, Byte, Char, Sint, USInt, Int, Word, UInt, Dint, DWord, UDInt, ILInt, Real (float-type), Lint, LWord, LReal (Float-type)
- Supports individual array elements
- Supports symbolic reads/writes of the following time types: S5Time, Time, Time of Day, Date Time Long (DTL)
- Online auto-tag generation directly from devices that have symbolic names attached, is accessible and marked visible to the HMI
- Supports for the following complex data types: UDT members, Struct members and DTL members
- 256 channels total channels with 16 devices per channel

Protocols

- Siemens S7 Comm Plus

Supported Devices

- S7-1200- Family
- S7-1500- Family

Siemens TCP/IP Ethernet

Product Overview

The Siemens TCP/IP Ethernet driver works in conjunction with KEPServerEX to exchange data between OPC clients and Siemens S7-200, S7-300, S7-400, and S7-1200 PLCs using the TCP/IP Ethernet protocol. The driver talks directly to the S7 PLC using a standard PC network interface card, and does not require additional software packages or libraries. Specialized block read and write optimizations automatically increase the speed of many applications when using CP243, CP343, and CP443 communications processors.

The Siemens TCP/IP Ethernet driver also supports the netLink adapter cable.

Features

- Supports multiple connections for each device
- Supports the CP-243, CP-343, and CP-443 TCP/IP Communications Cards
- Supports access on PC/PG/OP access ports
- Supports the following Memory Types: I, E, Q, A, M, F, T, C, Z, and Data Block Access
- Supports Bit Level Access
- Supports the low-cost NetLink communications adapter
- Supports the NetLink Configuration Utility (Gateway from Ethernet to S7 MPI)
- Supports Automatic Tag Generation from a Simatic STEP 7 project for S7-300 and S7-400 devices

Protocols

- Siemens Industrial Ethernet

Supported Devices

- S7-1200- Family
- S7-1500- Family
- S7-200 - Family
- S7-300 - Family
- S7-400 - Family
- netLink -MPI - S7-400
- netLink 50-MPI - S7-300
- netLink 50-MPI - S7-400
- netLink-MPI - S7-300
- netTap 40-MPI - S7-300
- netTap 40-MPI - S7-400

TIA Portal Exporter Utility

The TIA Portal Exporter Utility enables users with Siemens S7-300, S7-400, S7-1200, or S7-1500 controllers programmed with Siemens TIA Portal to automatically generate the specific tags they need for their KEPServerEX projects. Offered at no additional cost as a standalone installation, it provides compatibility with TIA Portal V13 SP1, V13 SP2, and V14.

The TIA Portal Exporter Utility features the ability to:

- Select a specific controller within the Siemens TIA Portal project
- Select tags from all tag tables, data blocks, UDTs, and function blocks
- Search/filter on tag name, address, or data type
- Import the specific tags required in a KEPServerEX project

Siemens TCP/IP Unsolicited Ethernet

Product Overview

The Siemens TCP/IP Unsolicited Ethernet driver was designed specifically for use with the KEPServerEX communications platform. It acts as a simulated Siemens PLC, and is intended for simulation of Siemens S7-300. The mode of communications is S7 Messaging on Industrial Ethernet (ISO 8073 Class 0) over TCP/IP as defined in RFC1006.

The Siemens TCP/IP Unsolicited Ethernet driver does not require special libraries or hardware. All that is needed is a standard Ethernet card. Devices require specialized ladder programming to communicate with this driver.

Features

- Supports 256 virtual devices
- Supports the SFB14-GET and SFB15-PUT commands

Protocols

- Siemens Industrial Ethernet

Supported Devices

- Simulated S7-300 (Slave)

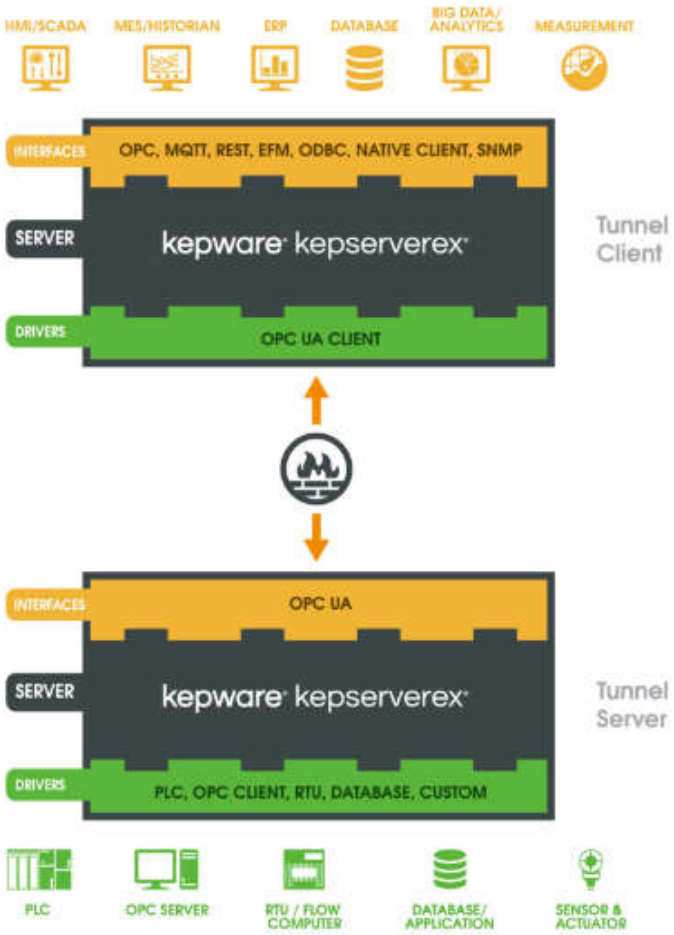
OPC UA Client

Product Overview

The OPC UA Client driver paired with the OPC UA Server interface of another KEPServerEX implementation provide an ideal secure tunneling solution. The OPC UA Client driver provides a communications protocol between two or more computers, allowing data to be transferred securely and reliably. This eliminates reliance on Microsoft COM and DCOM technology, and provides secure, authenticated communications and higher performance.

The OPC Tunneler uses client/server architecture to transfer data over an Intranet, Internet, or WAN. It also creates a secure OPC Tunnel through firewalls and complements existing OPC DA applications. The OPC Tunnel provides end-users, integrators, and automation suppliers with a favorable solution for remote connectivity to OPC applications. In comparison to remote OPC connectivity via DCOM, the OPC Tunneler boasts security, ease of use, and maintainability. Furthermore, there is no need to expose applications to unauthorized or anonymous users since OPC UA does not require a VPN connection for security.

Kepware's OPC Tunneling solution is an ideal way to share information in real-time with B2B applications for automation.



KEPServerEX: A Single Server and Tunneling Solution
Kepware's OPC Tunneling solution can be used with a range of products, including third-party OPC clients and OPC servers. In addition to the OPC UA Client driver and the OPC UA server interface, KEPServerEX also provides OPC DA, OPC AE, DDE, and several vendor-specific interfaces. Its breadth of connectivity options ensures a complete and robust system regardless of the different hardware and software vendors used.

OPC Tunneler: Redundancy
Coupling the OPC UA Client driver based tunnel with the Media Level Redundancy plug-in in KEPServerEX provides support for high availability environments through the ability to configure secondary tunnels and triggering conditions. The Media Level Redundancy plug-in allows the definition of redundant communications paths and devices, and supports a user configurable triggering mechanism to initiate a failover.

OPC UA Client Driver: An Aggregation and Gateway Solution
The OPC UA Client driver aggregates data from third-party OPC UA servers and KEPServerEX, which has the ability to act as a gateway by converting existing OPC DA servers to OPC UA servers (or by enabling OPC DA clients to connect to OPC UA data sources).

OPC UA: The Latest and Most Capable Specification
OPC UA is the most capable OPC specification for interoperability between automation software products. It unifies previous OPC Classic specifications, data encryption to RSA standards, and authentication based on the x509 Certificate standard. It is firewall-friendly and allows communications within the automation environment, across the enterprise, and through public network segments with high security and performance.

Features

- OPC Tunneling for OPC DA 1.0, 2.05a and 3.0
- Works within the Corporate Network, through Wide Area Networks, over VPNs, and through Firewalls
- Provides remote access for OPC, Native Interfaces, and DDE
- Supports media-level redundancy, including the ability to configure secondary tunnels and triggering conditions
- Data Encryption via RSA Standards
- Endpoint Authentication through x509 Certificates
- Automatic Discovery of OPC UA Servers
- Automatic Tag Database Generation
- Ability to set OPC UA Server Priorities
- Poll or Report by Exception (On data change)
- Endpoint management of a per connection basis
- Ability to integrate third-party server data with all KEPServerEX drivers
- Keep Alive and Watchdog features to ensure reliable connectivity

Protocols

- OPC Unified Architecture (UA)

Additional Tech Info

BENEFITS

- Eliminates DCOM configurations
- Firewall-friendly
- Provides easy network management
- Provides enhanced security