Net**StaX**™ ESDK

ETHERNET/IP SCANNER DEVELOPERS KIT

Pyramid Solutions' NetStaX™ EtherNet/IP Scanner Developers Kit (ESDK) allows you to quickly introduce secure EtherNet/IP Scanner Class and/or Adapter Class functionality for your products.

Our stack provides I/O server, I/O client, message server, and message client functionality along with an Application Programming Interface (API) for using Common Industrial Protocol (CIP) over standard Ethernet. It interfaces with your product's application software and socket level TCP/IP interface.

Rest assured that your connections will be secured with the ESDK's CIP Security feature. It adds secure connection capabilities that will allow your product to communicate with other devices that support conformant CIP Security EtherNet/IP functionality. Secure connectivity prevents bad actors from attempting to spoof connections to your products and spoofing devices on your network.

The ESDK scanner stack configures via the Scanner's application code or through the network via the included Connection Configuration Object (CCO). Connections configure through Rockwell Software's RSNetWorx™ for EtherNet/IP or other tools capable of interfacing to the CCO. Embedded platforms to PCs to mid-level computer systems all successfully utilize the ESDK stack.

NetStaX ESDK is distributed under a royalty free software license agreement.

ESDK Includes:

- EtherNet/IP Scanner protocol stack source code for portability

- Example Scanner Class Application (binary and source provided)

- ESDK Getting Started, Porting Guide, and software reference manuals

- ESDK C# and COM APIs for using the ESDK with VB6 and .NET applications - 32 and 64 bit DLLs included

- STC file for conformance testing

- Sample EDS file that includes use of the ESDK as a Class 1 connection originator by software tools, such as RSNetWorx for EtherNet/IP

ESDK Features

EtherNet/IP Compatibility
- Compliant with ODVA CT20
- Enables EtherNet/IP Scanner Class functionality for your product
- CIP Security enabled
- UCMM (unconnected) messaging Client and Server
- Class 3 (connected) messaging Client and Server
- Class 1 (I/O) connection Client and Server

Resource Utilization and Management
- All resources initialized at startup
- No dynamic memory or thread allocation
- Stack runs on a single thread

Platform Compatibility and Portability
- Every platform specific routine is in a single set of "Platform Files," simplifying the porting process to other platforms
- Sample platform files included
- Core stack source is 'C' code for portability

Supported/Included Objects
- Message router
- Connection manager
- CIP Security
- Port
- File object
- Ethernet link
- TCP/IP
- Connection configuration object
- QOS
- DLR
- CIP Sync
- Assembly
- Identity
- Custom objects
- Modbus translator
- Class 0 support
- Energy object
- LLDP

PYRAMID SOLUTIONS

EtherNet/IP™

ODVA CONFORMANT