Automation Protocol Suite (APS)

Automation Protocol Suite (APS)

The Automation Protocol Suite (APS) is a family of software tools to simplify the installation and use of the Industrial Automation Platform (IAP) family of Device Servers™. It includes a Windows® based configuration tool and installable communication drivers for most industrial protocols. The APS is provided on a CD-ROM and is shipped with all IAP Device Server products.

- Installable communication drivers provide specific industrial device support
- Windows® based configuration software simplifies the process of communication driver installation and setup
- Multi-Master support allows a single device to share data with multiple other devices or users simultaneously
- Outgoing Message Mapping facilitates peer-to-peer device communications
- Standard Serial Tunneling provides a quick and easy replacement for limited distance point-to-point serial connections

Supported Protocols:

PROTOCOL	DEVICES	MULTI-MASTER SUPPORT	OUTGOING MESSAGE MAPPING	COMPATIBLE W/ COMM PORT REDIRECTOR
Allen-Bradley DF1 (Full Duplex)	MicroLogix, SLC 500, PLC-5 and others	✓ (4 sockets)	✓	✓
Modbus (ASCII, RTU, TCP)	Various	✓ (8 sockets)	✓	
Standard Serial Tunneling	Various			✓

APS

Software Tools

LANTRONIX®

Standard Serial Tunneling

Serial Tunneling is the encapsulation of serial data into network packets, and the transport of the data over a network. Typical applications (example A) for Serial Tunneling are remote configuration, programming, monitoring and management of industrial devices.

Where Windows® based Personal Computers (PCs) are used, an Ethernet adapter and Comm Port Redirector™ software may be used in place of a Device Server. Redirector allows the creation of virtual serial ports (64 maximum), which can be mapped to remote Device Servers on the network. Redirector is shipped with all Lantronix Device Servers.

Redirector (example B) allows one COM-port to be mapped to the PLC, while another is mapped to the Variable Speed Drive. In this application, Serial Tunneling is transparent to the connected devices as well as the respective application software.

In some cases, Standard Serial Tunneling may not be adequate to accommodate protocols with strict timing requirements or those that are sensitive to brief gaps in the serial data transmitted.

Multi-Master

Multi-Master (example C) is the ability to allow access to a single serial device from multiple locations on a network simultaneously.
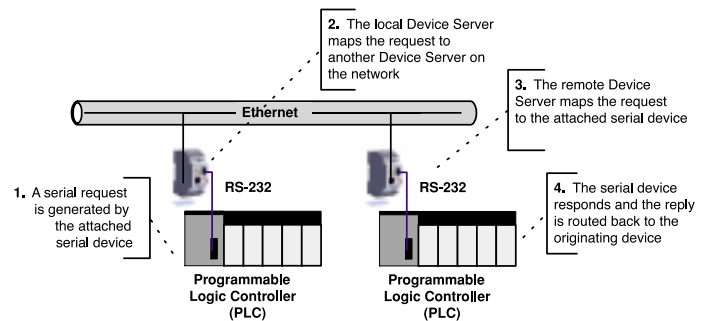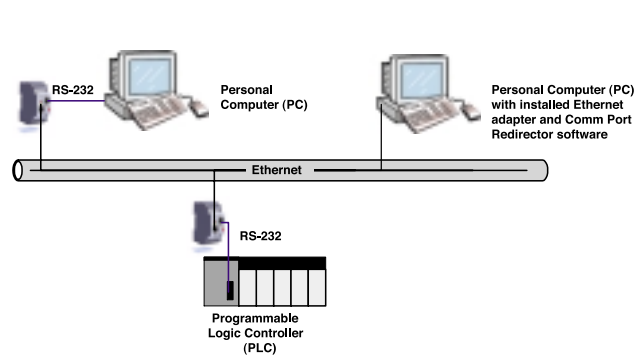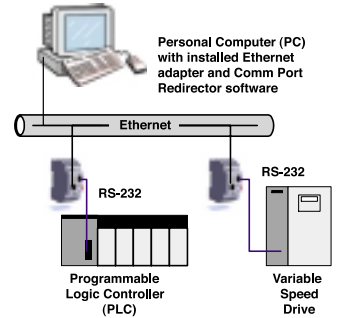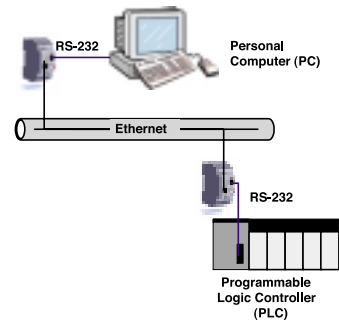
To implement Multi-Master functionality, the Device Server requires specific knowledge of the communication protocols involved. This knowledge is required to detect the framing of serial requests, their acknowledgement, the processing of responses and the proper queuing of requests.

From the user's perspective, Multi-Master support means that information in the connected device can be accessed anywhere a network connection is available.

Outgoing Message Mapping

For devices that support non-solicited requests, Outgoing Message Mapping (example D) allows these messages to be sent over the network to a remote device.

In each Device Server, a mapping table ensures proper message routing. Requests from the originating device can be directed to any other device on the network, facilitating peer-to-peer communications.

A

RS-232 · Personal Computer (PC)

Ethernet

RS-232

Programmable Logic Controller (PLC)

B

Personal Computer (PC) with installed Ethernet adapter and Comm Port Redirector software

Ethernet

RS-232 · RS-232

Programmable Logic Controller (PLC) · Variable Speed Drive

C

RS-232 · Personal Computer (PC)

Personal Computer (PC) with installed Ethernet adapter and Comm Port Redirector software

Ethernet

RS-232

Programmable Logic Controller (PLC)

D

2. The local Device Server maps the request to another Device Server on the network

3. The remote Device Server maps the request to the attached serial device

Ethernet

1. A serial request is generated by the attached serial device

RS-232 · RS-232

4. The serial device responds and the reply is routed back to the originating device

Programmable Logic Controller (PLC) · Programmable Logic Controller (PLC)

APS

For More Information:

For more information on this product and all of the products and services provided by Lantronix, please visit us at **www.lantronix.com**. For immediate needs, you may contact us directly at any of our corporate and regional headquarters. A complete listing of all our sales offices can be found at our web site.

Corporate Offices
15353 Barranca Parkway
Irvine, CA 92618
USA
949 453 3990
949 453 3995 fax
sales@lantronix.com

Europe, Middle East & Africa (EMEA)
Minervum 1707
4817 ZK Breda
The Netherlands
+31 (0) 76 565 8176
+31 (0) 76 565 8179 fax
eu_sales@lantronix.com

Pacific Rim
46 East Coast Road
East Gate #10-01
Singapore 428766
+65 447 4222
+65 344 0614 fax
asiapacsales@lantronix.com

LANTRONIX