# SPT

## SCADA Protocol Translation


### SPT4-NET

### SPT-PC

**Applied Systems Engineering, Inc.** is a leading supplier of Protocol Translation / Data Concentration and Front End processor solutions and continues its commitment to this product area with the SPT (SCADA Protocol Translator) family of products. The SPT product family includes a stand-alone embedded solution known as the SPT4-NET and a PC based solution (RCOM replacement), known as the SPT-PC. Both products utilize the same application software and configuration tool.

SPT4-NET is a four-serial / one-network channel, stand-alone protocol translator / data concentrator unit utilizing all solid-state memory and, with input power options of 24-160 VDC / 110 -120 VAC, is intended primarily for operation at remote sites. All four serial channels are RS-232, with two of them also configurable for RS-485.

SPT-PC operates as a Windows application on any Windows 2000/XP platform in a dedicated PC or with other applications in a shared PC. SPT-PC supports simultaneous communication on up to 32 serial channels and up to 48 network connections, and is intended primarily for use at a Master site.

To determine which product is best suited to a particular application, some key points should be considered:

- Preferred translator location (Remote or Master site)
- Total number of sites
- Total number of communication channels at each site
- Environmental issues, especially related to the presence of a rotating (disk) storage device

Both products support an extensive list of serial bit and byte protocols as well as the network based DNP3 LAN/WAN, Modbus TCP, and IEC 60870-5-104 protocols. A runtime configuration can simultaneously use multiple serial and network protocols. WEB browsing provides a real-time view for data values, communication statistics, and device status.

## FIELD PROVEN SOLUTIONS

The SPT supports a wide range of protocols, with SPT software currently operational in hundreds of locations around the world. The proven hardware design of the serial (bit and byte) BCOM8-56K PCI I/O communication board (used in the SPT-PC) has been re-deployed as an integral part of the SPT4-NET hardware.

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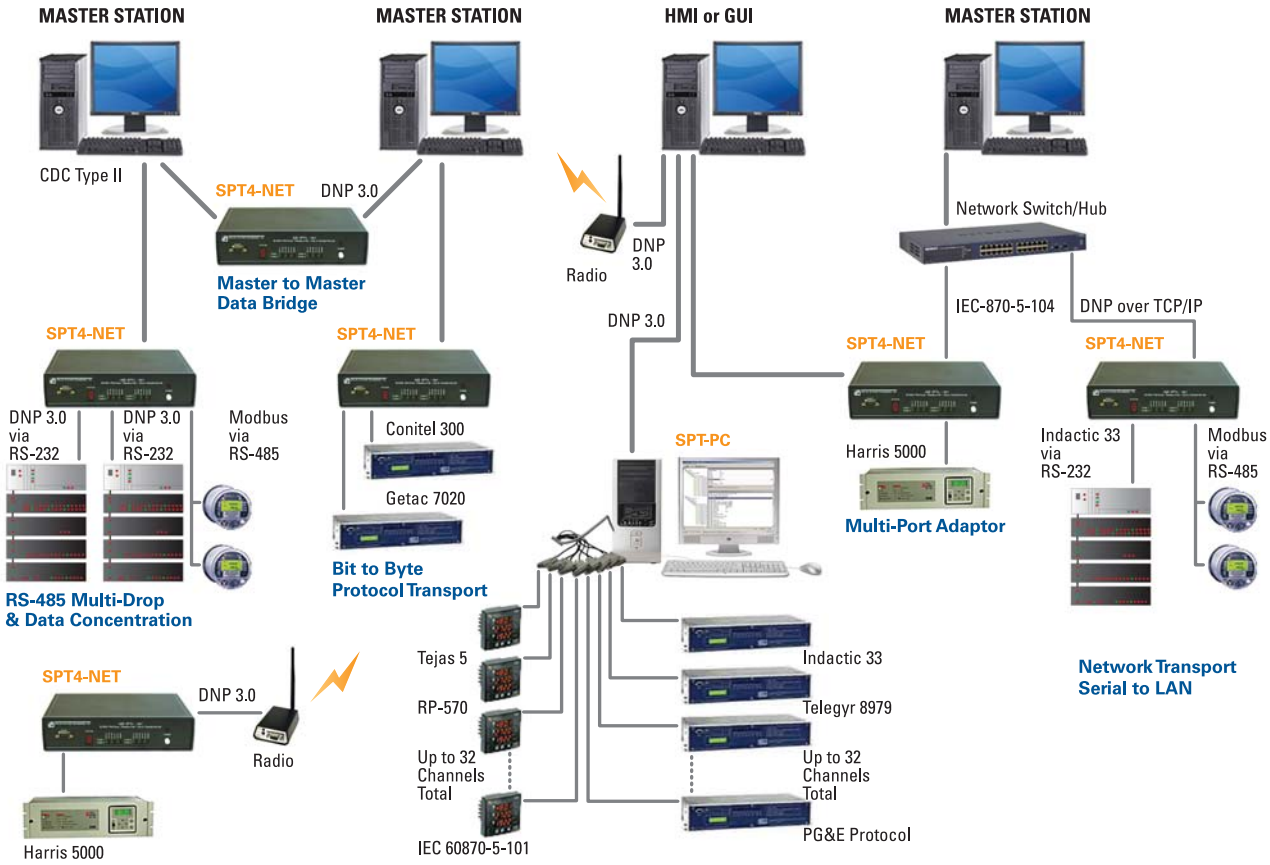



## SPT APPLICATIONS: (For either the SPT4-Net or SPT-PC)

**PROTOCOL TRANSLATOR** > Provide translation between Master Station and RTU/IEDs with incompatible protocols.

**NETWORK TRANSPORT** > Allow RTU/IED devices without a network interface to communicate over fiber, frame relay or other network media.

**DATA CONCENTRATOR** > Route data from multiple RTU/IED devices and channels, with possible different protocols, to a single master station channel. Allow a Master to access multiple substation devices as a single logical device.

**MULTI-PORT ADAPTOR** > Provide access by multiple, independent Master stations to a single RTU/IED device. Each Master channel, serial or network, can utilize its own protocol.

**BYTE-to-BYTE TRANSPORT** > Allow transport of older technology (bit) protocols over newer technology pathways or to otherwise incompatible computer equipment. Examples are communication over fiber, frame relay, radio, and other "byte only" media.

**MASTER-to-MASTER BRIDGE** > Allows for data exchange between two or more Master stations using standard SCADA protocols.

**SECURITY and ENCRYPTION** > Apply SSL (Secure Socket Layer) and TLS (Transport Layer Security) with 128-bit encryption to any DNP3 or IEC-60870-5-104 communications backbone. Supports private and public certificates.

**OPC XML INTERFACE** > Client and server access to external devices and master station(s).

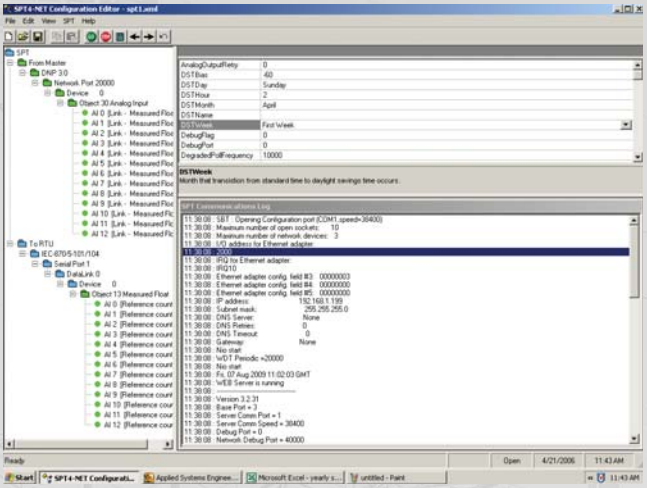
**WEB PAGE** > Web Browser accessible for display of data values, communication statistics, device status, and other analytical data.

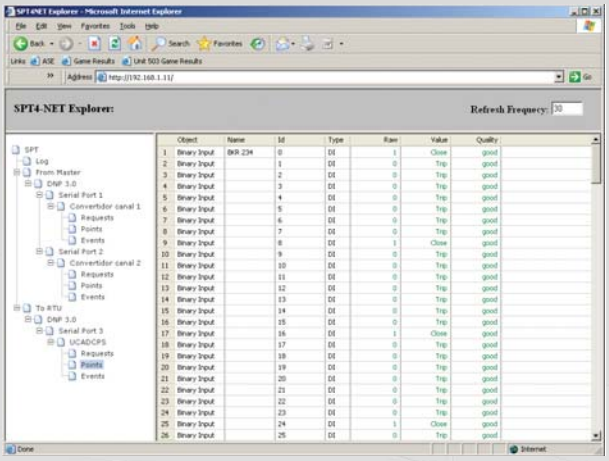
## COST EFFECTIVE SOLUTIONS

The SPT provides solutions to these and many other protocol communication applications. When you need to solve a protocol problem, why pay for more expensive equipment with additional capabilities you do not need? The SPT provides multiple communications solutions in one affordable package.

## CONFIGURATION SOFTWARE

The **SPT Configuration Editor** is a graphical based tool for easy and convenient generation of configuration files. Device and point configuration information is specified through this Windows based utility. The Configuration Editor employs standard Windows procedures with convenient drag-n-drop for point linking and mapping. During online operation, it provides access to diagnostic and program status information.






## SCADA PROTOCOL TRANSLATOR (SPT) – Stand-alone – SPT4-NET

| MODEL | DESCRIPTION |
|---|---|
| SPT4-NET-I | 4 serial channel plus network communication unit with enclosure. Input power of 24 - 160VDC or 115/120VAC |
| SPT4-NET-X | 4 serial channel plus network communication unit without enclosure (board only). Requires regulated 5VDC input power. |

## SCADA PROTOCOL TRANSLATOR (SPT) – PC Based

| MODEL | DESCRIPTION |
|---|---|
| SPT-PC-4 | SPT software for up to 4 serial and 6 network connections (per-system license) |
| SPT-PC-8 | SPT software for up to 8 serial and 12 network connections (per-system license) |
| SPT-PC-32 | SPT software for up to 32 serial and 48 network connections (per-system license) |

### Protocol License

The SPT Protocol License ("License") is a one-time charge per protocol. Communications are defined either as Master (between the SPT4-NET and the RTU/IED ) or as Slave (between the SPT4-NET and a master station) protocol. Master and Slave licenses for the same protocol are licensed separately. Please visit **www.ase-systems.com** to find the latest information on Supported Protocols.


## HARDWARE OPTIONS

The SPT Software can run on any Windows XP/2000 based platform. OEM licensing terms are available for operation on third party hardware. Please contact **Applied System Engineering, Inc.** for details.

## SPT4-NET SPECIFICATIONS

| | | |
|---|---|---|
| COMMUNICATION | Serial | Four RS-232 ports, two of which can be used for RS-485 operation |
| | Network | Ethernet port |
| | Maintenance | Separate configuration and maintenance port |
| SOFTWARE | Configuration | Off-line creation via Windows utility, loaded through the network or serial channel |
| | Protocol | Selectable by channel |
| | Master/Slave Mode | Selectable by channel |
| | RTU Point Counts | Capacity for over 20,000 points and a large number devices |
| HARDWARE | Processor | AMD Élan microprocessor |
| | Power | 5VDC, 24 to 160 VDC or 110/120 VAC |
| | Temperature | 0° to 70°C operating, -20° to 70°C storage |
| | Watchdog Timer | Automatic restart in the event of a fatal hardware or software error |
| | Activity LEDs | Complete set of RS-232 and Ethernet signal LEDs plus one software controlled communication status LED per channel |
| | Dimensions | SPT4-NET-I (with enclosure)<br>10.25 in. Wide x 7.5 in. Deep x 2.7 in. High<br>SPT4-NET-X (without enclosure, board only)<br>9.25 in. Wide x 7 in. Deep x 1 in. High |

## SPT-PC SPECIFICATIONS

| | | |
|---|---|---|
| COMMUNICATION | Serial | Licensed in blocks of 4, 8, and 32 serial communication ports |
| | Network | Licensed as 6, 12, and 48 IP connections |
| SOFTWARE | Configuration | Off-line creation via Windows utility, loaded through the network or serial channel |
| | Protocol | Selectable by channel |
| | Master/Slave Mode | Selectable by channel |
| | RTU Point Counts | Capacity for over 20,000 points and a large number devices |
| HARDWARE | PC with 300Mhz or higher clock speed, with 128MB of RAM, and 100MB of hard drive space. Industry standard Network interface cards and serial I/O adaptors that operate with Windows XP/2000 will operate with SPT-PC. For bit-oriented protocols, ASE's BCOM 8-56K 8-channel synchronous/asynchronous card is available. | |

## CONTACT ASE


**Applied Systems Engineering, Inc.**

1671 Dell Avenue, Suite 200, Campbell, CA 95008-6900 phone: (408) 364-0500 fax: (408) 364-0550

email: sales@ase-systems.com www.ase-systems.com