

# One Stop Solution For Device Networking

External Device Servers  
Wireless Device Servers  
Embedded Device Servers  
Industrial Device Servers



DISTRIBUTED BY



1.720.870.4500 | sales@WestwardSales.com

**SENA**  
www.sena.com

# Network-Enable the World

**Sena Technologies** is a leading manufacturer of Device Server product line that includes external, embedded, wireless and industrial device servers and Industrial Bluetooth product line that includes Bluetooth serial adapters, OEM Bluetooth serial modules, Bluetooth Access Point and Bluetooth USB Adapter for device networking solution in the areas of IT/Telco, retail/POS, industrial automation, building automation, and medical automation. Our complete product lines allow customers to automatically collect, track, measure, monitor and control the device to build their business.



The value of Sena solutions is proven in millions of network-enabled devices around the world that add intelligence to business. Discover for yourself the benefits of Sena products. We provide a lifecycle of services to help you plan, design, implement, and operate your device network in today's rapidly changing environment.

Additional sales and product information are only moments away.

Visit us at [www.sena.com](http://www.sena.com)





### ***Systematic Quality Assurance***

To ensure the best quality of products, Sena maintains the utmost quality assurance system throughout the entire life cycle of products by conducting various types of tests in each stage of R&D, production, inspection, and technical support before product deployment.

### ***Technical Support***

With years of rich field experiences in various industries, Sena is committed to continuously provide the highest quality of pre-sales and post-sales support for VAR/SI's and end-users. Sena provides various channels for communication with customers through e-mail, telephone and online support system. At our website, we provide:

- Product manual and technical material
- Case studies and white papers
- The latest software / firmware
- FAQ regarding products and technology
- Knowledge database
- My Q&A section

Sena is dedicated to continuously develop all of its customer-support practices to enhance the latest technologies, and demands of its customers.

**SENA**  
www.sena.com



# Power up your Business with Sena Device Networking Solution

Sena specializes in device-networking solutions in the areas of Industrial Automation, Building Automation, Security and Access Control, Transportation, Retail/POS, IT/Telco, and Medical/Healthcare. Find out how Sena can help you.

## 1 Industrial Automation

As today's computing environment becomes increasingly complex and is subjected to on going change, managing the industrial devices at factory floor has become a burden. Optimization of the production chain demands intelligent IT applications and network-enabling solutions. The need to capture and analyze the data from industrial and manufacturing equipment and to integrate that machinery with the company's business network is quickly becoming a very real need.

Ethernet - or more importantly TCP/IP - is fast becoming the preferred solution for remote management of industrial devices at factory floor. Driven by manufacturing's desire to connect the factory floor with the rest of the enterprise, industrial devices connected to ethernet enablers are giving users new ways to view and control factory data.

## 2 Building Automation & Security

A Building Automation management system allows a facilities manager to better manage resources, improve building safety, and reduce energy costs.

Sena provides an integrated solution for building sub-systems such as RFIDs, security, HVAC, lighting, elevators and safety systems that enables managers to control everything from electrical and water metering to building access from a single terminal, and can even diagnose system problems remotely.

## 3 Medical / Healthcare

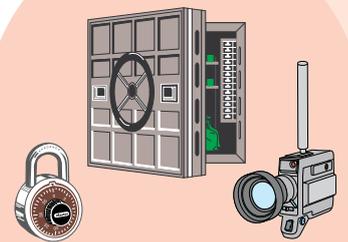
Healthcare environments such as hospitals, and laboratories rely mostly upon monitoring devices like blood analyzers, pulse oximeters, and liquid analyzers to efficiently diagnose and treat patients. By connecting these healthcare devices to Sena products, healthcare providers can take advantage of existing Ethernet equipment and cabling without reconfiguring the physical plant.

## 4 IT / Telco

The rapid development of network and telecommunication technologies have changed the related infrastructure to put more emphasis on efficiency and expandability through such traits as high availability, scalability, downsizing, clustering, server farms, distributing systems, etc. The number and hierarchy of the devices that need to be managed have also increased rapidly. Thus, a more systematic approach in solving the problems such as network crash or device down is required.

Utilizing various TCP/IP network paths such as ADSL, cable, modem or wireless LAN to manage console ports of various equipments used in the IT/Telco industry, Sena is providing a range of solutions to manage various IT/Telco equipments through remote access. In-band management using an intranet, as well as out-of-band management methods using Internet, telephone modems are also provided.

### Security



- Access Controls
- Emergency Alarms
- Fire control Panels
- Government Facilities
- Time and Attendance Clocks
- Surveillance Cameras

### Build

- HVAC C
- Automa
- Elevato
- Safety C

### Retail /



- POS Terminals
- POS Printers
- RFID Readers
- Card Readers/Barco
- Cash Registers
- Kiosks
- Vending Machines

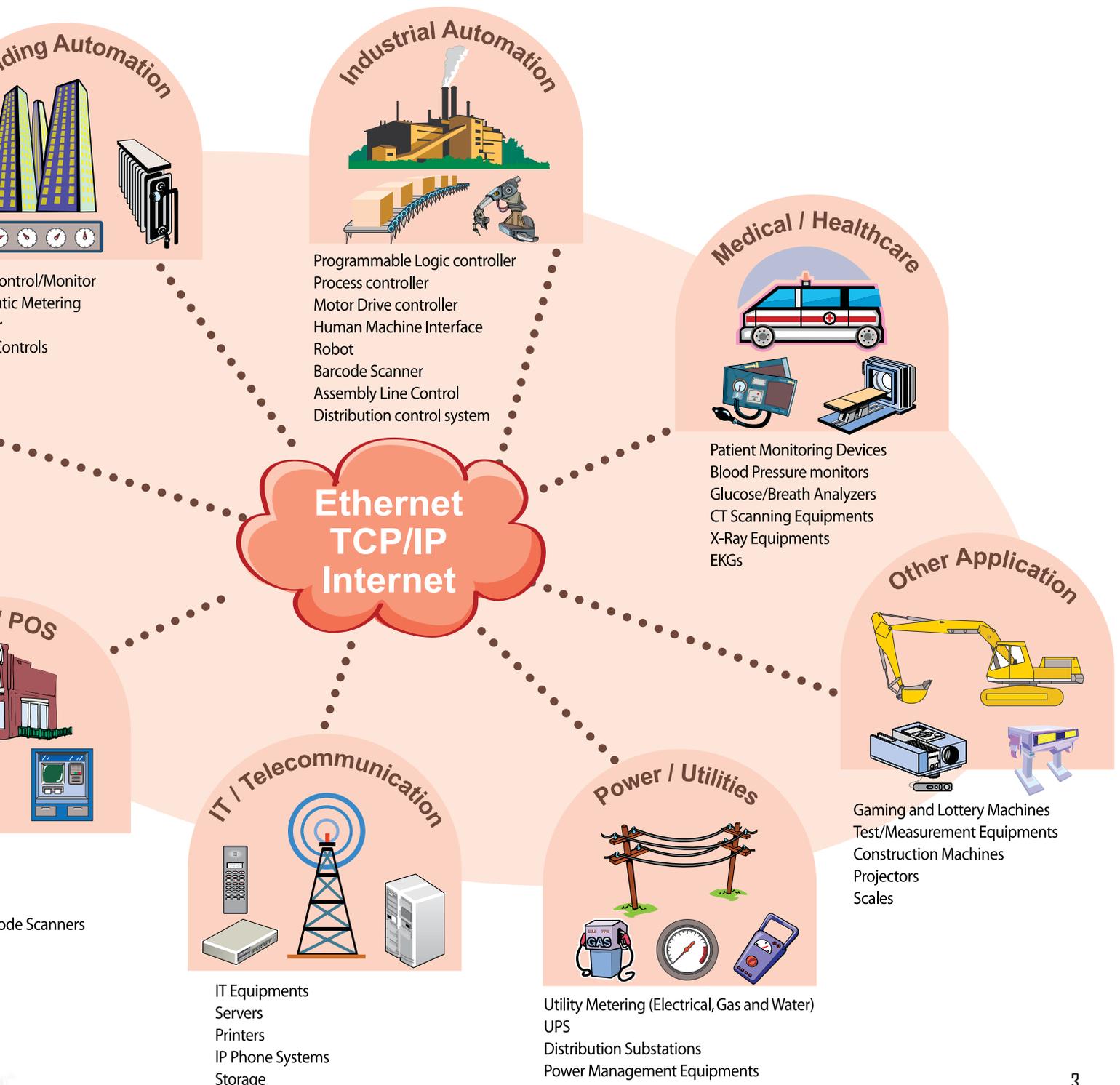
# One Stop Solution For Device Networking

## SENA

### 5 Retail / POS

With customers throughout the world, Sena has built its reputation on unique, customer focused Point-of-Sale/Retail solutions including ATM Connectivity, POS Terminals, POS Peripherals, Lottery, and PC Cash Registers and Hospitality POS Systems.

Benefits of choosing a Sena POS Retail Solution include: Reduced Transaction Processing Costs; Faster Transactions; Leverages Existing Equipment and Systems; and Greater Flexibility and Mobility.



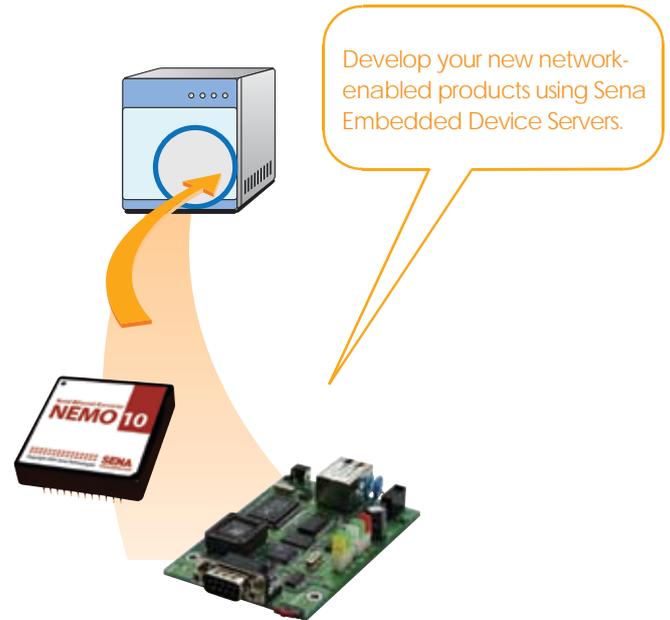
# Product Overview

## 1 Embedded Device Servers

### *Designed to Simplify Embedded Device Networking*

Looking for an embedded networking solution for your serial equipment? You've come to the right place. Sena recognizes the desire and showcases embedded device server products that provide integrated hardware and software solutions for manufacturers who want to add network device servers to their products.

- Compact and Low power consumption.
- DIL type Ethernet controller for on board installation.
- Board Type models for easier integration.



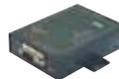
	<b>Nemo10</b>	<b>LS100B</b>	<b>PS110B</b>	<b>SS100B</b>
Product	 IC Type Device Server Module	 Board Type Embedded Device Server	 Board Type Embedded Device Server	 Board Type Embedded Device Server
Form Factor	IC Type Module	Board	Board	Board
Device Interface	UART	RS232 DB9	RS232/422/485 DB9	RS232/422/485 DB9
Network Interface	10Base-T	10Base-T	10/100Base-T	10/100Base-T
Security Level	ID/password	ID/password	ID/password, IP Filtering, SSL Data Encryption	ID/password, IP Filtering, SSL Data Encryption
Protocol	TCP/IP, DHCP, Telnet, PPPoE	TCP/IP, DHCP, Telnet, PPPoE	TCP/IP, DHCP, Telnet, SSH, SSL, DNS, Dynamic DNS, SNMP, HTTP/HTTPS, SMTP	TCP/IP, DHCP, Telnet, SSH, SSL, DNS, Dynamic DNS, SNMP, PPPoE, HTTP/HTTPS, SMTP, NTP

## 2 External Device Servers

Sena's serial device servers are available in a variety of configurations to fit your application needs. Choose between wired or wireless network connectivity, advanced security, customization, and multi-broadcasting for device networking solutions.

Sena Serial Device Servers provide the ability to control, monitor, diagnose and troubleshoot equipment over a network or the Internet, while preserving your equipment investments.

- Max. 230Kbps serial speed.
- 10/100 Mbps fast Ethernet interface.
- Flexible TCP/UDP host mode support.
- Multiple host connection/data transfer.
- Secure communication with SSL and TLS.
- Supports both wall and DIN-Rail style mounting.

Product	LS100  One port Serial to Ethernet Device Server	LS110  One port Serial to Ethernet Device Server	PS110/410/810  1/4/8 port(s) Serial to Ethernet Device Server	SS100  One port Serial to Ethernet Device Server	STS400/800/1600  4/8/16 ports Serial to Ethernet Device Server
Port	1	1	1/4/8	1	4/8/16
Serial Interface	RS232 DB9		RS232/422/485 DB9	RS232/422/485 DB9	RS232 RJ45
Network Interface	10Base-T RJ45		10/100 Base-T RJ45	10/100Base-T RJ45	10/100Base-T RJ45
PC Card	No		No	No	Yes (1 PCMCIA slot)
Surge Protector	No	Yes	Yes	Yes	Yes
RFC2217	No	Yes	Yes	Yes	Yes
Multiple host connection (TCP/UDP)	No		Yes Max. 8	Yes Max. 32	Yes Max. 32
Port Buffering	No		Yes	Yes	Yes
Port Event Handling	No		Yes	Yes	Yes
Backup Host	No		Yes	Yes	Yes
System logging	No		Yes	Yes	Yes
Locating Server	No		Yes	No	No
Security	ID/password	ID/password, IP filtering	ID/password, IP Filtering, SSH, SSL Data Encryption		
Protocol	ARP, IP/ICMP, TCP/IP, Telnet, DHCP client, PPPoE	ARP, IP/ICMP, TCP/IP, Telnet, DHCP client, DNS	ARP, IP/ICMP, TCP, UDP, Telnet/SSH, DNS, Dynamic DNS, HTTP, SMTP, DHCP, SNMP v1 & v2, SSL v3, RFC-2217	ARP, IP/ICMP, DNS, Dynamic DNS, SMTP with/without Authentication, pop-before SMTP, DHCP client, NTP, PPPoE, TCP, UDP, SSL v2 & v3, TLS v1, RFC-2217, SSH v1 & v2, Telnet, HTTP, HTTPS, SNMP v1 & v2	
	Serial Port Access protocol: Raw TCP	Serial Port Access protocol: Telnet, TCP, UDP, RFC-2217	Serial Port Access protocol: Telnet, TCP, UDP, SSL v3, RFC-2217	Serial Port Access Protocol: Telnet, TCP, UDP, SSL v2 & v3, TLS v1, RFC-2217	

# Product Overview

## 3 Wireless Device Servers

*Connect your Serial devices to a Wireless Network Instantly.*

Sena Device Server's family supports wireless communication with WiFi Interface.

The PS110W/PS210W are powerful Serial Device Servers that make your legacy serial devices manageable via industry standard WiFi network. In addition, available in 4, 8 and 16 port models, the HelloDevice STS Series product line is provided with a PC Card interface that enables users to access another network through 802.11b.



	PS110W/210W	STS400/800/1600
Product	 Built-in Wi-Fi Device Server	 WiFi PC Card support Device Server
Wireless Type	Built-In Wi-Fi	WiFi PC Card support
Port	1/2	4/8/16
Serial Interface	RS232 RJ45	RS232 RJ45
Ethernet Network Interface	802.11b/g WiFi 10/100Base-T RJ45	Wireless LAN Adapter 10/100Base-T RJ45
Security	64/128-bit WEP, WPA/WPA2/802.11i, ID/password, IP Filtering, SSH, SSL/TLS, 3DES/RC4	ID/password, IP Filtering, SSH, SSL Data Encryption
Protocol	ARP, IP/ICMP, TCP, UDP, Telnet/SSH, DNS, Dynamic DNS, HTTP, SMTP, DHCP, SNMP v1 & v2, SSL v3, RFC-2217  Serial Port Access Protocol: Telnet, TCP, UDP, SSL v3, RFC-2217	ARP, IP/ICMP, DNS, Dynamic DNS SMTP with/without Authentication, pop-before SMTP, DHCP client, NTP, PPPoE TCP, UDP, SSL v2 & v3, TLS v1, RFC-2217, SSH v1 & v2, Telnet HTTP, HTTPS, SNMP v1 & v2  Serial Port Access protocol: Telnet, TCP, UDP, SSL v2 & v3, TLS v1, RFC-2217

## 4 Industrial Device Servers

For application-specific requirements such as Industrial automation, UPS management and Industrial I/O device, Sena offers a full range of external device servers - UPSLink Series and Rhio10.

- Supports industry-standard SNMP MIB II and UPS MIB for UPS Management
- Ethernet-Digital I/O model with screw terminal block interface.



	<b>RHIO10</b>	<b>RHIO232</b>	<b>UPSLink100</b>
Product			
Description	An Ethernet I/O device server that enables remote monitoring and control of input output devices over the network	An Serial I/O Manager that enables SENA Device Servers to monitor and control I/O devices	An SNMP device server that allows UPS monitoring and management via Web browser or telnet connection.

# Software Support

## COM Port Redirector

Sena provides COM Port Redirector software for those users who want to use the existing application programs based on serial communication. This means that existing COM / TTY-based software can be preserved, without investing in additional software.

COM Port Redirector establishes a transparent connection between host and serial device by mapping the IP:Port of the Sena's device or terminal server port to a local COM/TTY port on the host computer. For Windows systems, Sena offers Serial/IP COM Port Redirector software and TTYredirector for Linux systems from Tactical Software.

### Serial / IP COM Port Redirector for Windows platform

When your solution includes software running on a Windows PC, and that software uses COM ports to communicate with devices, use COM port redirection solution.

The Serial/IP Redirector software runs at the kernel level to provide superior performance and low latency.

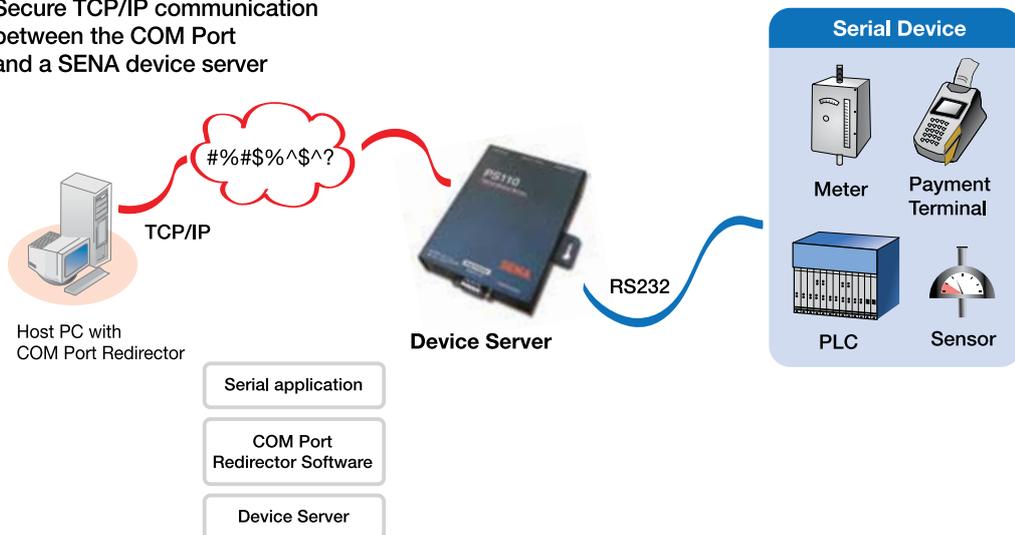
Features include: Up to 4,096 simultaneous connections; Selectable auto-reconnect option for "always-on" connections; Requires no other software for deployment, and Configuration Wizard automates and verifies settings.

### Serial/IP Application Scenario

#### COM Port Redirector with Encryption

Sena now takes COM Port Redirection a step further with encryption features, offering a secure Ethernet connection between the COM port and a Sena device server or terminal server. When working with the Serial/IP COM Port Redirector and OpenSSL Toolkit, the new SSL/TLS Security option offers a selection of five ciphers (including 3-DES and AES) and strengths up to 256 bits, sufficient to meet the tough security requirements encountered in the financial services industry.

Secure TCP/IP communication between the COM Port and a SENA device server



※ Applicable only to PS110/410/810, SS100, STS Series, PS110W/210W

# One Stop Solution For Device Networking

## SENA

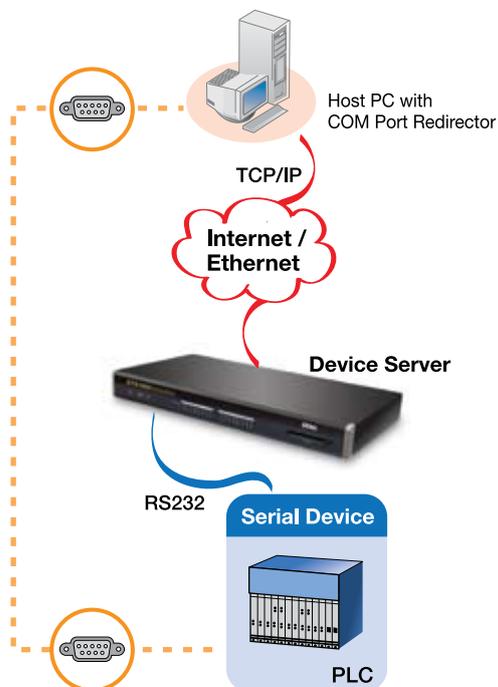
### COM Port Control protocol support

For some serial applications that require features provided by the COM Port Control protocol specified by IETF RFC 2217, Sena has a solution when working with the Serial/IP COM port redirector.

Sena's high-end device servers and terminal server product line support the COM Port Control protocol for those applications that must programmatically change serial port settings like baud rates and framing, and require serial line status signals.

※ Applicable only to LS110, PS110/410/810, SS100, STS Series, PS110W/210W

User can control serial parameters like baud rate, data bit and flow control options on the fly



### ◆ TTYredirector, COM Port Redirector for Linux platform

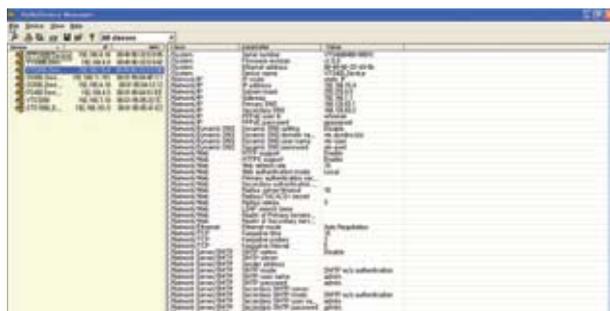
TTYredirector is a COM port redirector program that supports most versions of Linux O/S.

※ See more information at [www.sena.com](http://www.sena.com)

## Utilities and Tools

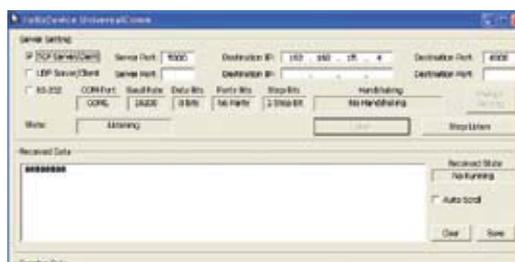
### ▶ HelloDevice Manager

HelloDevice Manager is a GUI-based software to configure and monitor a variety of Sena products through on-screen menus instead of the command line.



### ▶ HelloDevice UniversalComm

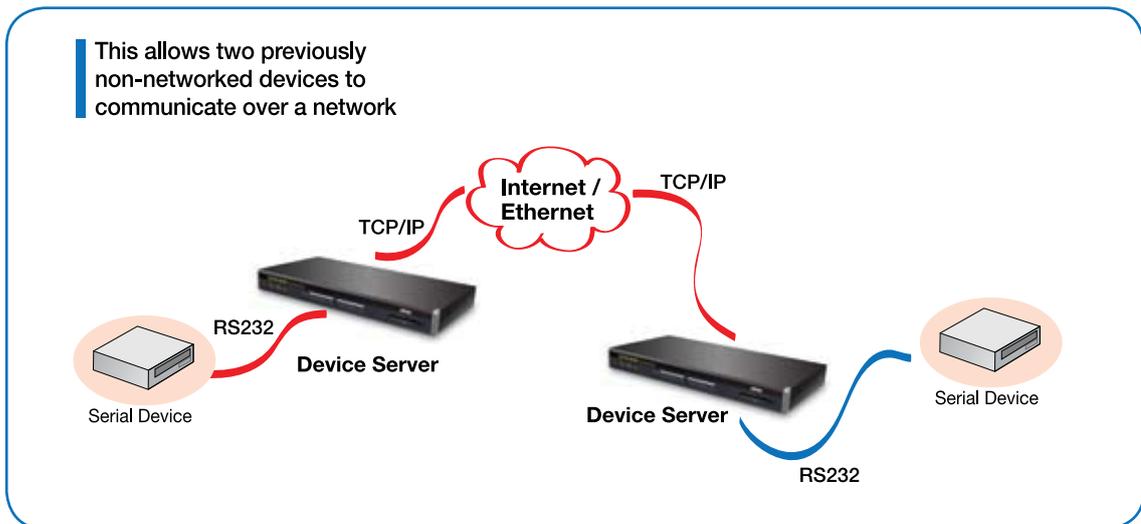
HelloDevice UniversalComm is a program that enables users to flexibly send or receive data through TCP or UDP or Serial RS232 connections. The purpose of using this program is to test the communication functions of Sena device and terminal servers.



# Typical Application Scenarios using Sena Device Servers

## Tunneling Mode

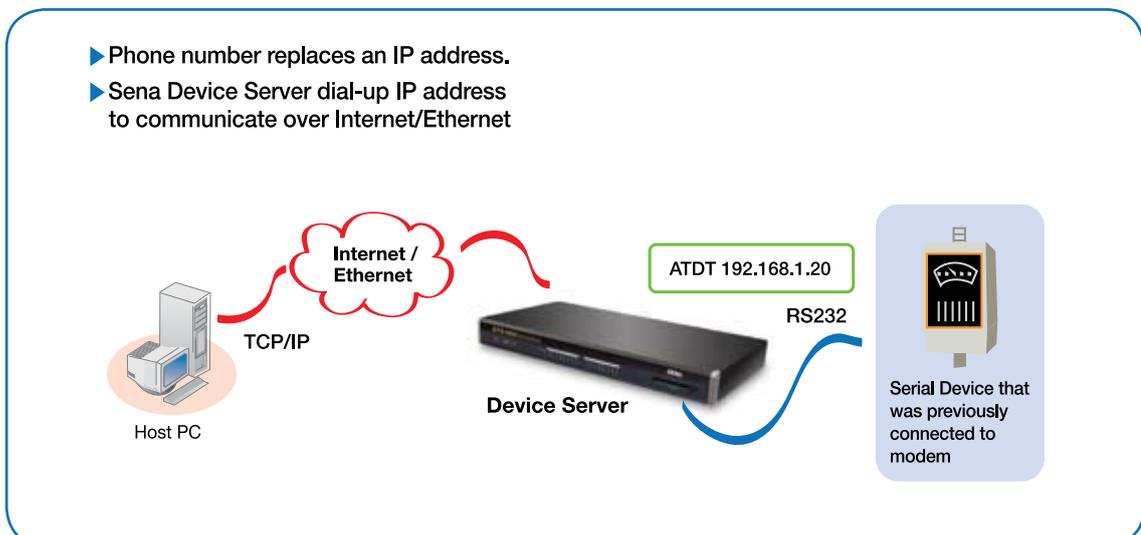
Serial tunneling occurs when two device servers are configured to work together to share or communicate their respective serial device's data. The serial tunnel is established by connecting one device server configured for Server/Client mode to a device collecting data and the other device server configured for Server/Client mode to the field device sending data. This allows two previously non-networked and isolated devices to communicate information and operate with existing installed software applications of devices on a network, instead of a long serial cable.



※ Applicable Models: All models

## Modem Emulation

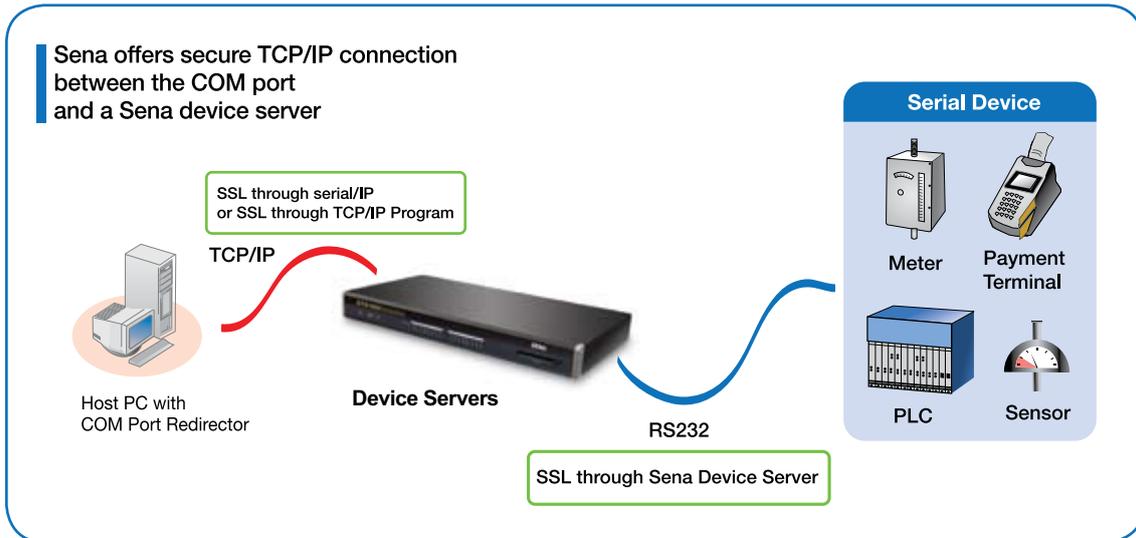
Modem emulation feature enables a networked Sena product to act as a modem to send and receive data over an IP network instead of a PSTN. Furthermore, Sena's high-end product lines, Super and STS Series supports Modem Emulation mode over SSL encryption. This unique feature provides secure serial modem emulation, accepting AT commands in an encrypted format to connect and communicate with Serial devices.



※ Applicable Models: All models except LS100

### Secure Communication

Sena products support Security features such as static key based 3DES data encryption, and SSL for secure connection between a client and a server, over which any amount of data can be sent securely. In addition, HTTPS for secure data transfer over the web, SCP for secure file transfer, and IP filtering controls the access to serial devices.



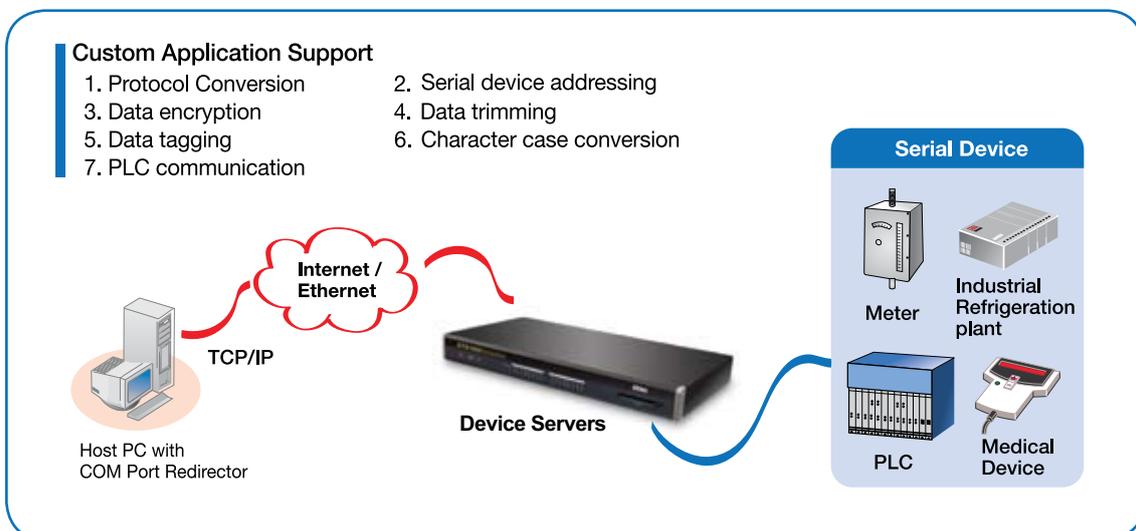
※ Applicable Models: PS110/410/810, SS100, STS400/800/1600, PS110W/210W

### Custom Application Support Deploy your own embedded Linux applications

One of the strengths of Sena's products is their flexibility. Since no two solutions are the same, STS Series product line has been designed to correctly facilitate the connection in any situation. The STS Series Device Server is intended for the deployment of your own embedded Linux applications.

Users can customize the web management interface, and integrate the programmed dynamic web pages to web menu. In addition, Users can manipulate the raw data stream between remote host and serial device by adding a filtering program. The user-defined filter program communicates with other programs that are reading/writing serial port and socket by using FIFO, and so users can easily manipulate the serial data without programming related to serial port and socket.

Sena is committed to open-source development and fully supporting its customers.

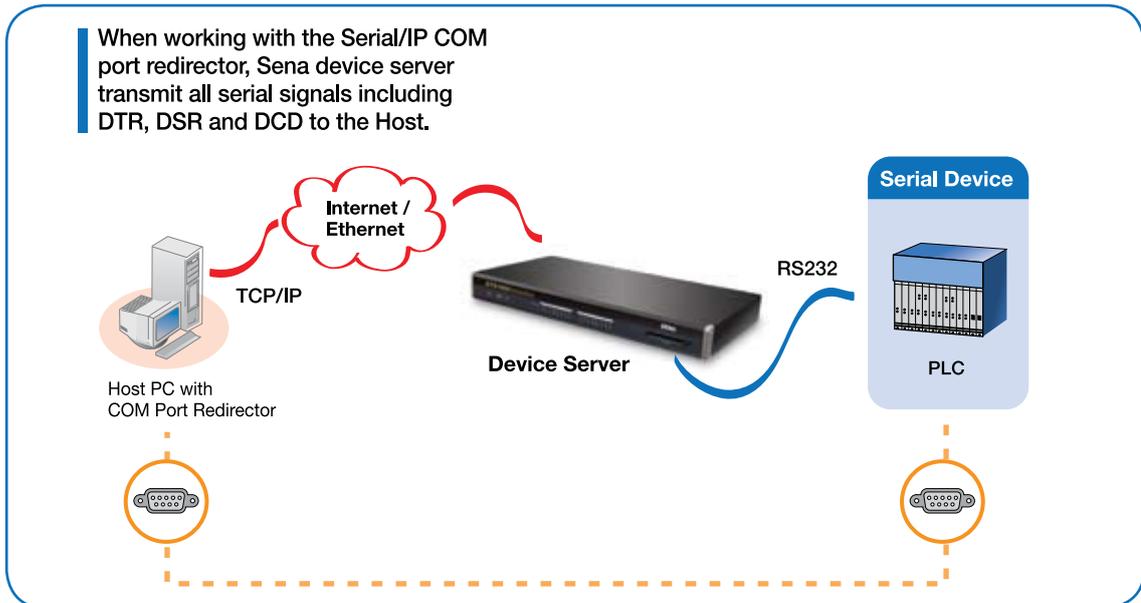


※ Applicable Models: STS400/800/1600

# Typical Application Scenarios using Sena Device Servers

## Virtual COM Mode

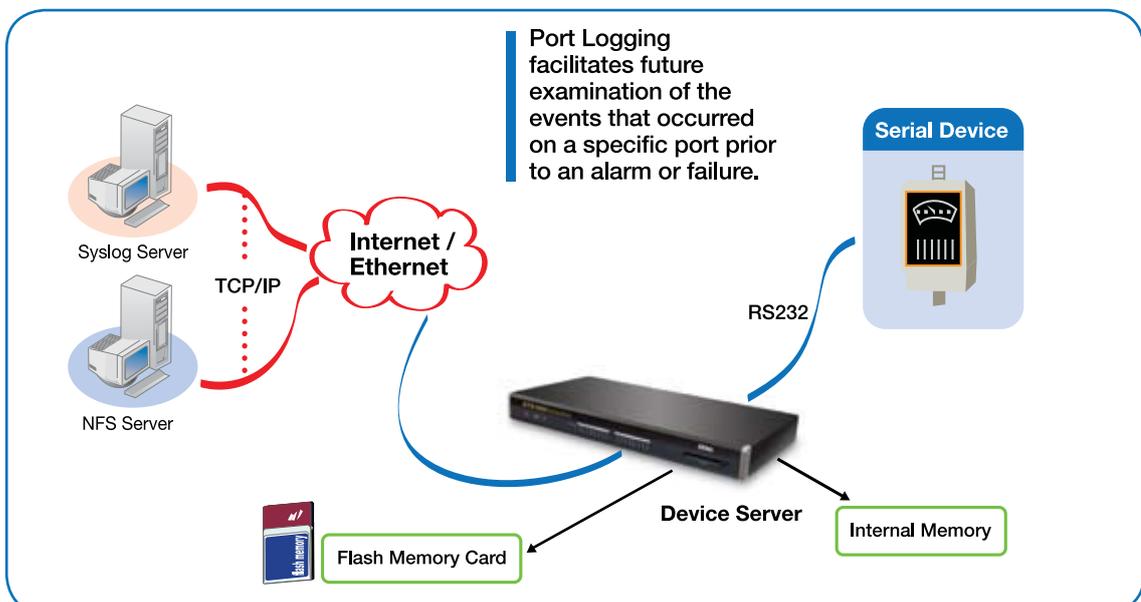
Virtual COM Mode of Sena device and terminal servers uses a driver to create a "Virtual COM Port" so that the software thinks it's talking to a serial port, but it's really talking to a LAN. The serial port may be anywhere on the LAN. After connection, the LAN is transparent to the program and serial device. Applications work just as if the serial device is connected directly to a physical COM port on the PC. In addition, when working with Serial/IP COM port redirector, Sena device servers transmit all serial signals including DTR, DSR and DCD.



※ Applicable Models: LS110, PS110/410/810, SS100, STS400/800/1600, PS110W/210W

## Port Logging

Port Logging feature allows user to keep Serial and TCP data safely in data storage locations such as NFS Server, Syslog server, Internal memory and PCMCIA Flash Memory card. This facilitates future examination of the events that occurred on a specific port prior to an alarm or failure.

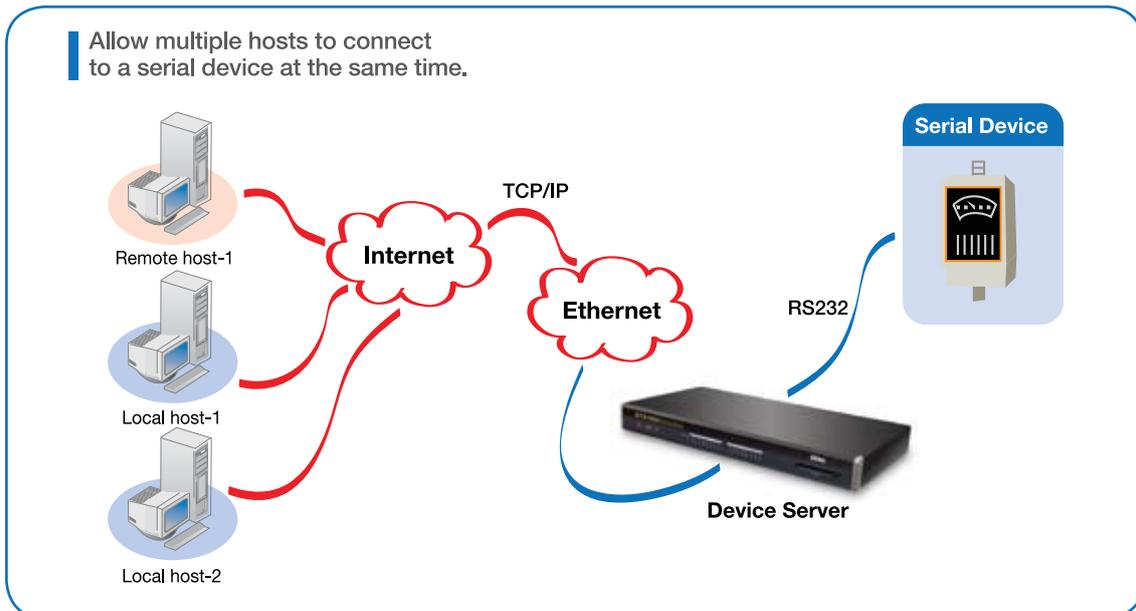


※ Applicable Models: PS110/410/810, SS100, STS400/800/1600, PS110W/210W

### Multiple Access for Port

Sena products support multiple sessions for a port that provides the ability for device servers or terminal servers to allow multiple hosts to connect to a serial device simultaneously.

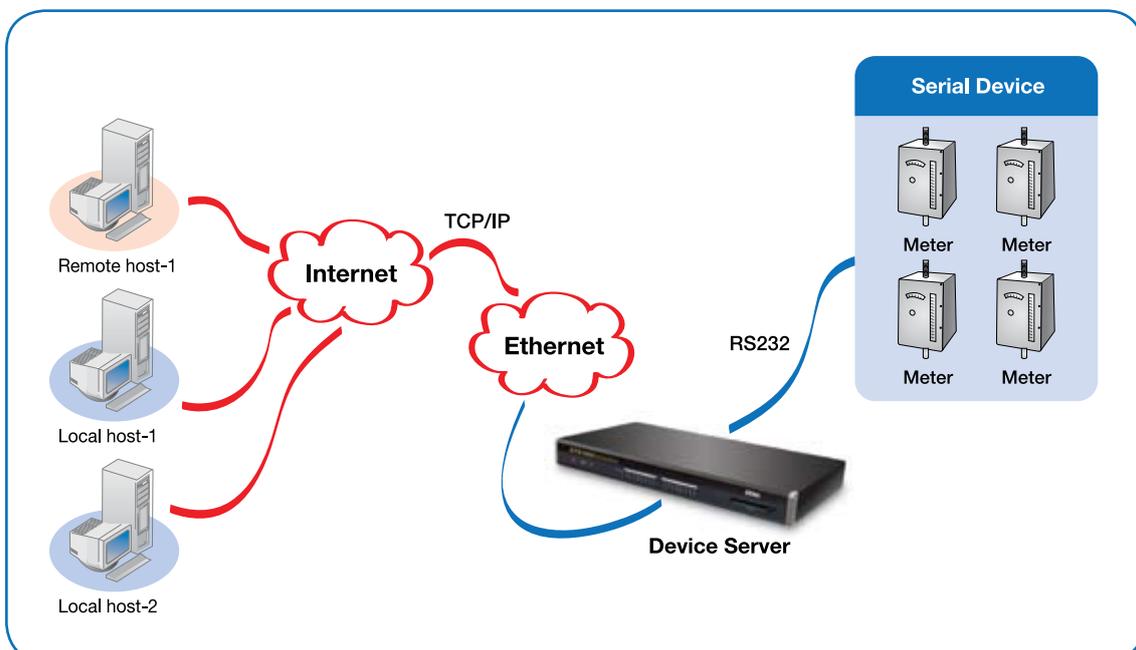
This feature is particularly useful in applications that require failover alternative connections and applications that need multiple accesses to share communications with a particular device.



※ Applicable Models: PS110/410/810, SS100, STS400/800/1600, PS110W/210W

### Multicasting

Sena products support an enhancement transmission method "TCP/UDP multicasting", which automatically broadcasts the same serial data to up to 32 remote destinations simultaneously by TCP packet or by UDP datagram. The device server transmits the data to the multiple host computers at the same time in the network data collection system. This feature is very useful in the applications where multiple management stations want to collect data from the same data acquisition system as if they may share it.



※ Applicable Models: PS110/410/810, SS100, STS400/800/1600, PS110W/210W

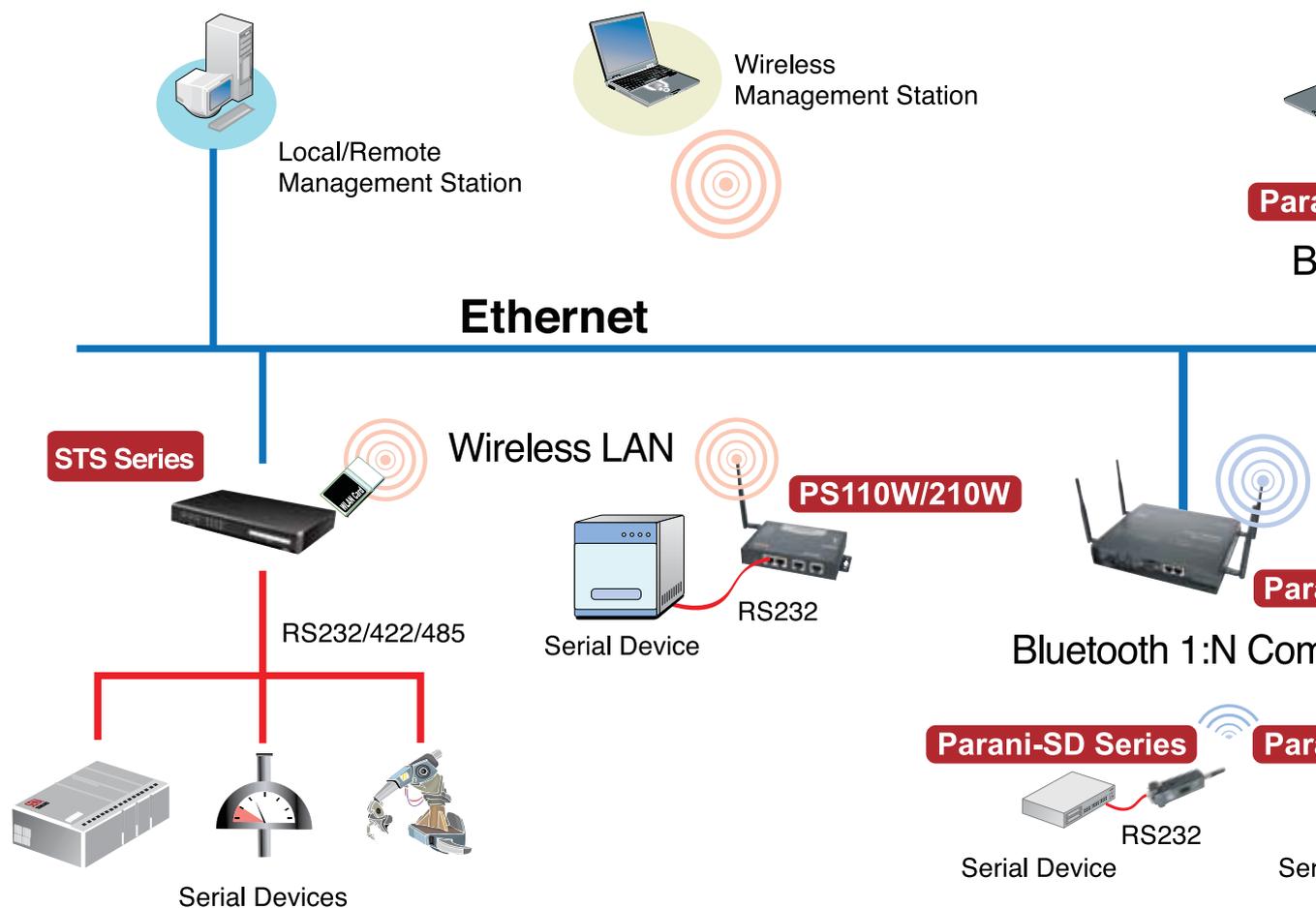
# Typical Application Scenarios using Sena Device Servers

## Wireless Device Networking

Sena offers wireless networking options either 1:1 communication solution for simple cable replacement or for 1:N communication solution for more advanced applications. Users may choose one flexibly from the Wireless LAN or Bluetooth based solutions according to their needs.

Sena Device Server and Terminal Server's family supports wireless network interface either by PC Card interface or by built-in WiFi modules. The Parani family is a stand alone Bluetooth-compatible solution for wireless RS-232 serial cable replacement.

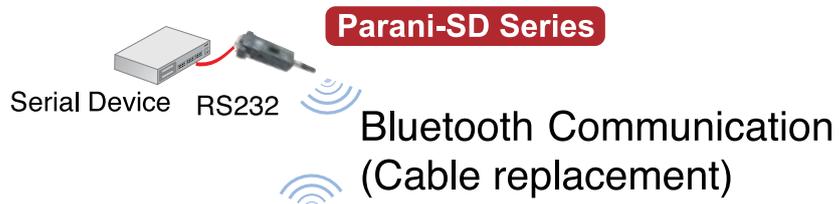
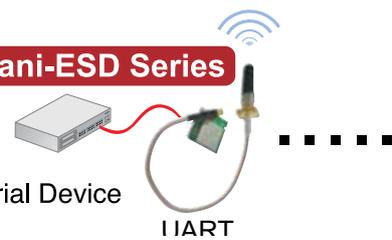
Sena's wireless device networking solution brings wireless networking capabilities to various equipments such as printers, scales, medical equipment, manufacturing machinery, barcode readers, card readers, RFID reader and other data collection devices.





Bluetooth Communication

Parani-MSP1000  
Communication



# Accessories

Sena offers accessories such as cable adapters, 19" Rack mount kit, DIN-rail mounts kit, Patch antenna and so on for Device Servers.

Accessories	Description	Applicable Models	
Cable Adapters	<p>Sena offers various cable adapters for user's convenience.</p>  <p>#G0401078      #G0401079      #G0401080</p> <p>#G0401081      #G0401082      #G0401083</p>	<p><b>#G0401078:</b> RJ45 - DB9 Female Cable Adapter, Crossover, Bundle of four  <b>#G0401079:</b> RJ45 - DB25 Female Cable Adapter, Crossover, Bundle of four  <b>#G0401080:</b> RJ45 - DB25 Male Cable Adapter, Crossover, Bundle of four  <b>#G0401081:</b> RJ45 - DB25 Male Cable Adapter, Straight, Bundle of four  <b>#G0401082:</b> RJ45 - DB9 Male Cable Adapter, Straight, Bundle of four  <b>#G0401083:</b> RJ45 - DB9 Female Cable Adapter, Straight, Bundle of four</p>	<p>STS400/800/1600 PS110W/PS210W</p>
19" Rack mount kit		<p><b>#G0200001:</b> User can attach applicable models to a rack using Sena's 19" rack mount kit.</p>	<p>STS400/800</p>
DIN-Rail mount kit		<p><b>#G0402011:</b> User can attach applicable models to almost all DIN-rail using Sena's Din-rail mount kit.</p>	<p>LS100, PS110/410 SS100</p>
Antennas	<p>Sena offers various antennas that extend wireless communication range.</p>  <p>Dipole Antenna</p>	<p><b>DAT-G01R:</b> 3 dBi Dipole Antenna - RP-SMA Plug Right-hand Thread  <b>DAT5-G01R:</b> 5 dBi Dipole Antenna - RP-SMA Plug Right-hand Thread</p>	<p>PS110W/PS210W</p>
	<p>The Default antenna type is Dipole. For long range wireless communications, transmit range can be extended using the optional patch antenna. Patch antenna includes an extension cable that is used to connect the Patch antenna and device.</p>  <p>PAT-G01R</p>	<p><b>PAT-G01R:</b> 9dBi Patch Antenna with RP-SMA Plug Right hand Thread Default Cable. (SMA Jack Right hand Thread w/o Default Cable)</p>	<p>PS110W/PS210W</p>
Antenna Extension Cables	<p>The antenna extension cables can be used to extend the length between a device and antenna.</p>  <p>RFC-G01R</p>	<p><b>RFC-G01R:</b> 1m Extension Cable (For PAT-G01R)</p>	<p>PS110W/PS210W</p>

# Serial Device Server, HelloDevice Lite Series, LS100/LS110



## Features

- Connects legacy serial devices to 10Base-T Ethernet network
- Supports RS232 based serial devices via its DB9 serial port
- Serial data transfer rate up to 115Kbps
- Reliable TCP/IP protocol stack
- Low-price model for lowest transition cost
- Configuration via Telnet or serial port
- Management software for configuration and administration included
- Supports both wall and DIN-Rail style mounting
- Surge protector included. (LS110 only)
- Supports RFC 2217, Telnet COM Port Control Protocol. (LS110 only)

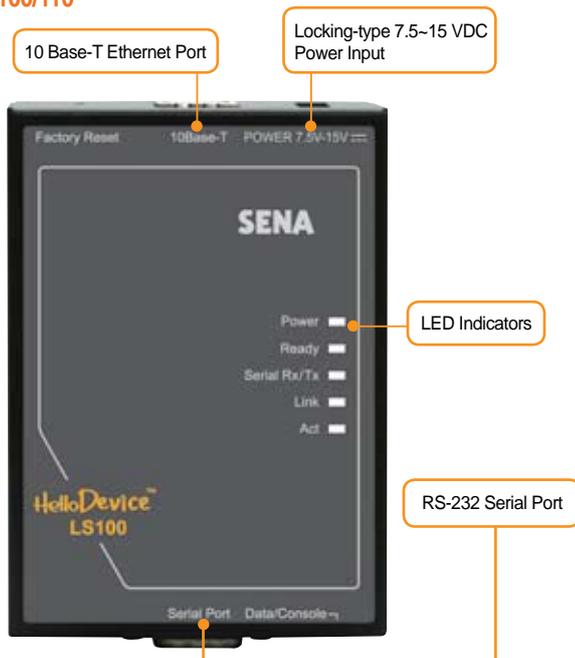
**The HelloDevice Lite Series, LS100/LS110** is a cost effective Serial Device Server that makes your legacy serial devices manageable via industry-standard 10Base-T Ethernet network. Based on open network protocols such as TCP/IP, it gives you ultimate flexibility to your serial devices. The unique hardware and software design enables you to connect RS232 serial devices to Ethernet network at a minimal transition cost. You could easily configure the HelloDevice LS100/LS110 by using Telnet or serial console port under the password protection support.

Typical application areas of the HelloDevice LS100/110 include :

- Industrial Automation
- Network management
- Retail/Point of Sale
- Remote metering
- Remote display
- Building automation
- Security/Access control System
- General data acquisition application
- Medical Automation

## Panel Layout

### LS100/110



# Serial Device Server, HelloDevice Lite Series, LS100/LS110

## Specifications

### Serial Interface

- Male DB9 serial port
- Serial speed 1200bps to 115Kbps
- Flow Control : Hardware
- Signals
  - LS100
    - RS232 : Rx, Tx, RTS, CTS, DTR, DSR, GND
  - LS110
    - RS232 : RS232 : Rx, Tx, RTS, CTS, DTR, DSR, GND, DCD

### Network Interfaces

- 10Base-T Ethernet

### Protocols

- LS100 : ARP, IP/ICMP, TCP/IP, Telnet, DHCP client, PPPoE
- LS110 : ARP, IP/ICMP, TCP/IP, Telnet, DHCP client, DNS

### Security

- User ID & Password
- IP Address filtering ( LS110 only)

### Management

- Serial console port
- Telnet
- HelloDevice Manager software,  
O/S support : Windows 98/Me/NT/2000/XP

### Diagnostic LED

- Ready
- Link and Act for Ethernet
- Serial Rx/Tx
- Power

### Power

- 7.5 ~ 15VDC, 300mA 7.5V

### Environmental

- Operating temperature : 0°C ~ 50°C
- Storage temperature : -20°C ~ 66°C
- Humidity : 90% Non-condensing

### Physical properties

- Dimension (L x W x H) and Weight
  - 100 x 72 x 25 (mm), 3.9 x 2.8 x 1.0 (in.), 240g

### Certification

- FCC (A), CE, MIC

### Warranty

- 5-year limited warranty

## Ordering Information

- LS100** HelloDevice Lite 100 single-port serial device server
- LS110** HelloDevice Lite 110 single-port serial device server

### Includes

- Quick Start Guide
- External 110V or 230V power supply
- Serial data cable
- CD-ROM

### Optional Accessories

- DIN-Rail mount kit

For more information,  
please visit us at <http://www.sena.com>

### U.S. / Canada / South America

Tel: 408-448-1997 Fax: 408-907-3738

Sales and Support Toll Free (US/Canada): 866-987-7362

General Information Toll Free (US/Canada): 866-887-7362

### EU / Africa

Tel: +33 (0)1 53 53 16 29 Fax: +33 (0)1 70 24 70 90

### Asia / Pacific

Tel: +82-2-571-8283 Fax: +82-2-573-7710

### Contact us via E-mail

General Information: [info@sena.com](mailto:info@sena.com)

Sales & Distribution: [sales@sena.com](mailto:sales@sena.com)

Technical Support: [support@sena.com](mailto:support@sena.com)

**SENA**  
[www.sena.com](http://www.sena.com)



# HelloDevice Pro Series, PS110/410/810



## Features

- Connects legacy serial devices to 10/100Base-T Ethernet network
- Supports surge protector for RS232/422/485 interface, up to 230Kbps speed
- Flexible TCP/UDP host mode support: Multiple host connection/data transfer
- Encryption key based algorithm support
- System logging & port logging
- Dynamic DNS protocol for broadband Internet connection
- Configuration via Web, Telnet/SSH, Windows Utility or console
- Supports both wall and DIN-Rail style mounting
- Supports RFC 2217, Telnet COM Port Control Protocol

**The Linux-based PS110/410/810** is a Universal 1/4/8 port device server that allows your legacy serial devices manageable by 10/100Mbps Ethernet network. Users can feel safe applying the PS110/410/810 in real world applications, since all models are equipped with surge protectors for serial ports.

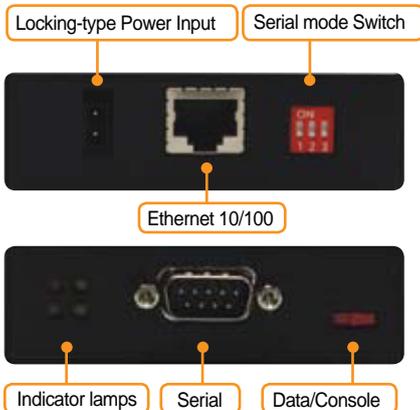
Included features are full-featured system management functionality of system status display, firmware upgrade, remote reset and system log display by using various accessibility options such as, telnet, serial console port or web. For critical applications of secure data communication, the PS110/410/810 supports SSL for data encryption.

It also supports telnet COM port control protocol, i.e. RFC2217 which enables user devices to deliver the pin status information to the serial application. In modem emulation mode, the unit accepts modem AT commands on the serial port and establishes a secure network connection to the end device, providing a cost-effective solution by eliminating dedicated modems and phone lines.

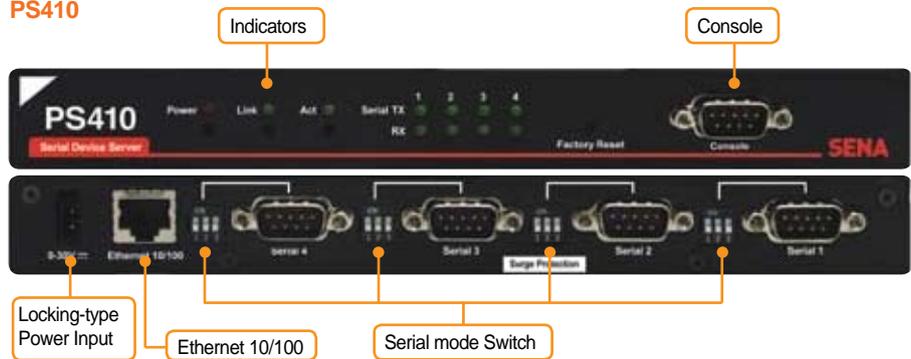
The PS110/410/810 is the ideal solution for the users who are looking for the cost-effective, most secure, scalable linux-based serial device servers for their RS232/422/485 serial devices.

## Panel Layout

### PS110



### PS410



### PS810





## Specifications

### Serial Interface

- Serial speeds 75bps to 230kbps
- DB9 connector
- Flow Control : H/W and S/W
- Signals : RS232 / Rx, Tx, RTS, CTS, DSR, DTR, DCD, GND  
RS422 / Tx+, Tx-, Rx+, Rx-, RTS+, RTS-, CTS+, CTS-  
RS485 / 2/4-wire
- Surge protector equipped for each serial port

### Network Interfaces

- 10/100 Base-T Ethernet with RJ45 Ethernet connector
- Supports static and dynamic IP address

### Protocols

- ARP, IP/ICMP, TCP, UDP
- Telnet/SSH
- DNS, Dynamic DNS, HTTP, SMTP, DHCP,
- SNMP v1 & v2, SSL v3
- Serial Port Access protocol : TCP, UDP, SSL v3, RFC-2217

### Ethernet modem

- Full AT command set support

### Security

- SSH, SSL, HTTPS
- IP address filtering
- Data Encryption

### Management

- Web, Console, Telnet / SSH
- HelloDevice Manager software
- O/S support : Windows 98/ME/NT/2000/XP

### Logging

- Versatile system logging support for all system events
- Serial port data logging

### Firmware

- Upgrade using console, telnet/SSH and web

### Diagnostic LED

- PS110 : Power, Link, Serial Rx/Tx for each serial port
- PS410 : Power, Link, Act, Serial Rx/Tx for each serial port
- PS810 : Power, Ready, Link, Act, Serial Rx/Tx for each serial port

### Power

- PS110 : 9~30VDC, 300mA@9VDC
- PS410 : 9~30VDC, 500mA@9VDC
- PS810 : 100~240VAC, 50/60Hz, 0.24A

### Environmental

- Operating temperature : 0°C to 50°C
- Storage temperature : -20°C to 66°C
- Humidity : 90% Non-condensing

### Physical properties

- PS110 : 114 x 82 x 26 (mm)  
4.48 x 3.22 x 1.02 ( in. ) / 300g
- PS410 : 119 x 227 x 27 (mm)  
4.68 x 8.94 x 1.06 ( in. ) / 750g
- PS810 : 119x 437 x 44 (mm)  
4.69 x 17.20 x 1.73 ( in. ) / 1.56kg  
19" rack mountable

### Certification

- FCC(A), CE, MIC

### Warranty

- 5-year limited warranty

## Ordering Information

- PS110** HelloDevice Pro 110 single-port serial device server
- PS410** HelloDevice Pro 410 4-port serial device server
- PS810** HelloDevice Pro 810 8-port serial device server

### Includes

- Quick Start Guide
- External 110V(or 230V) power supply or power cord
- Serial data cable
- CD-ROM

### Optional Accessories

- DIN-Rail mount kit for the PS110/410



### U.S. / Canada / South America

Tel: 408-448-1997 Fax: 408-907-3738

Sales and Support Toll Free (US/Canada): 866-9-US-SENA (866-987-7362)

General Information Toll Free (US/Canada): 866-8-US-SENA (866-887-7362)

### EU / Africa

Tel: +33 (0)1 53 53 16 29 Fax: +33 (0)1 70 24 70 90

### Asia / Pacific

Tel: +82-2-571-8283 Fax: +82-2-573-7710

### Contact us via E-mail

General Information: info@sena.com

Sales & Distribution: sales@sena.com

Technical Support: support@sena.com

For more information, please visit us at <http://www.sena.com>



# HelloDevice Pro Series, PS110W/210W



## Features

- Connects legacy serial devices to 802.11b/g Wi-Fi or 10/100Base-T Ethernet network.
- Supports surge protector for RS232 interface, up to 230Kbps speed.
- Flexible TCP/UDP host mode support: Multiple host connection/data transfer.
- Powerful security support, 64/128-bit WEP, WPA/WPA2 and SSL (Secure Socket Layer)
- Support versatile system logging & port logging
- Configuration via Web, Telnet/SSH, Windows Utility or console.
- Supports RFC 2217, Telnet COM Port Control Protocol.

## The Linux-based PS110W and PS210W are

Universal 1/2 port wireless device server that allows your legacy serial devices manageable by 802.11b/g or 10/100Mbps Ethernet network. Users can feel safe applying the PS110W and the PS210W in real world applications, since all models are equipped with surge protectors for serial ports.

Included features are full-featured system management functionality of system status display, firmware upgrade, remote reset and system log display by using various accessibility options such as, telnet, serial console port or web.

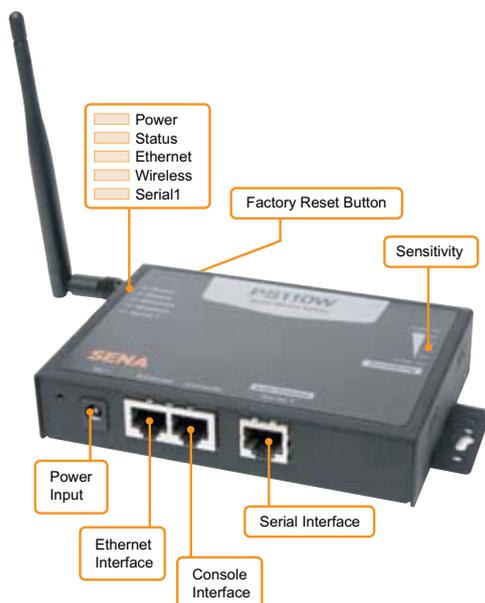
For critical applications of secure data communication, the PS110W and the PS210W support SSL/TLS for data encryption, HTTPS, SSH, and such wireless security protocols as 64/128-bit WEP, WPA/WPA2.

It also supports telnet COM port control protocol, i.e. RFC2217 which enables user devices to deliver the pin status information to the serial application. In modem emulation mode, the unit accepts modem AT commands on the serial port and establishes a secure network connection to the end device, providing a cost-effective solution by eliminating dedicated modems and phone lines.

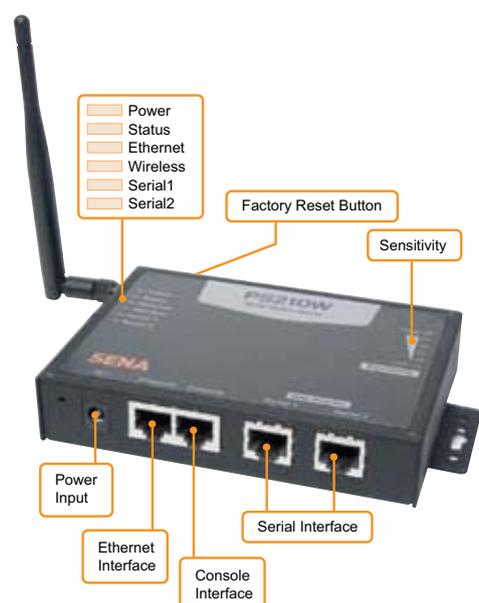
The PS110W and the PS210W are the ideal wireless M2M solution for the users who are looking for the cost-effective, most secure, scalable linux-based serial device servers for their RS232 serial devices.

## Panel Layout

### ► PS110W



### ► PS210W





## Specifications

### Serial Interface

- Serial speeds 300bps to 230kbps
- RJ45 connector
- Flow Control : H/W and S/W
- Signals : RS232 / Rx, Tx, RTS, CTS, DSR, DTR, DCD, GND
- Surge protector equipped for each serial port : IEC 6100-4-2(ESD) 15kV(air), 8kV(contact)

### Network Interface

- 802.11b/g Wi-Fi
- 10/100 Base-T Ethernet with RJ45 Ethernet connector
- Supports static and dynamic IP address

### Protocols

- ARP, IP/ICMP, TCP, UDP
- Telnet/SSH
- DNS, Dynamic DNS, HTTP, SMTP, DHCP
- SNMP v1 & v2, SSL v3
- Serial Port Access protocol : TCP, UDP, SSL v3, RFC-2217

### Ethernet modem

- Full AT command set support

### Security

- 64/128-bit WEP, WPA/WPA2
- SSH, SSL, HTTPS
- IP address filtering
- Data Encryption

### Management

- Web, Console, Telnet / SSH
- HelloDevice Manager software
- O/S support : Windows 98/ME/NT/2000/XP

### Logging

- Versatile system logging support for all system events
- Serial port data logging

### Firmware

- Upgrade using console, telnet/SSH and web

### Diagnostic LED

- PS110W : Power, Status, Ethernet, Wireless, Serial1
- PS210W : Power, Status, Ethernet, Wireless, Serial1, Serial2

### Power

- 5VDC, 0.90A@5VDC

### Environmental

- Operating temperature : 0°C to 50°C
- Storage temperature : -20°C to 66°C
- Humidity : 90% Non-condensing

### Physical properties

- PS110W : 92 x 128 x 26 (mm)  
3.62 x 5.04 x 1.02 ( in. ) / 390g
- PS210W : 92 x 128 x 26 (mm)  
3.62 x 5.04 x 1.02 ( in. ) / 400g

### MTBF

- PS110W : 31.12 years
- PS210W : 30.42 years

### Certification

- FCC(A), CE(A), Telec

### Warranty

- 5-year limited warranty

## Ordering Information

- PS110W** HelloDevice Pro110W single-port wireless device server  
**PS210W** HelloDevice Pro210W 2-port wireless device server

### Includes

- DC Power Adapter
- Dipole Antenna
- Ethernet straight cable(PS110W : 1EA, PS210W : 2EA)
- RJ45-DB9 female adapter(cross-over)
- RJ45-DB9 male adapter(straight) (PS110W : 1EA, PS210W : 2EA)
- Quick Start Guide
- CD-ROM

### Optional Accessories

- DIN-Rail mount kit



- PAT-G01R : 9dBi Patch Antenna with RP-SMA Plug Right hand Thread Default Cable. (SMA Jack Right hand Thread w/o Default Cable)
- SEC-G01R : 15cm Extension Cable (For SAT-G01R / DAT-G01R / DAT5-G01R)
- RFC-G01R : 1m Extension Cable (For PAT-G01R)

### U.S. / Canada / South America

Tel: 408-448-1997 Fax: 408-907-3738

Sales and Support Toll Free (US/Canada): 8669-US-SENA (866-987-7362)  
General Information Toll Free (US/Canada): 8668-US-SENA (866-887-7362)

### EU / Africa

Tel: +33 (0)1 53 53 16 29 Fax: +33 (0)1 70 24 70 90

### Asia / Pacific

Tel: +82-2-571-8283 Fax: +82-2-573-7710

### Contact us via E-mail

General Information: info@sena.com  
Sales & Distribution: sales@sena.com  
Technical Support: support@sena.comFor more information, please visit us at <http://www.sena.com>



# Secure Terminal Server with PCMCIA, STS Series, **STS400/800/1600**



## The Linux-based Terminal Server, STS Series, STS400/800/1600

is a universal Secure Terminal Server that makes your legacy serial devices manageable via industry standard Ethernet network. Based on open network protocols such as TCP/IP and UDP, allows you ultimate flexibility to your serial devices.

For secure data communication, the STS Series supports various data encryption protocols such as SSL, 3DES and RC4. In addition, IP address filtering function is provided for protecting unintentional data streams to be transmitted to the STS Series.

Customization support features enable users to easily customize the box on-the-fly with minimal effort. The network/serial port access and serial protocol translation are provided using the free user space, Linux shell script and the library support.

Featuring PCMCIA slot for enhanced functionality, the STS Series supports PC cards such as Wired/Wireless LAN card to access another network for back up purpose, Phone-line modem card for out-of-band access to the STS Series with an external modem, and ATA Fixed Disk card to keep the system log and port log data safely.

With PPPoE(PPP-over-Ethernet) connection feature of the STS Series, the RS232 serial devices could be managed over DSL-based broadband network. With the rich broadband network connectivity protocols such as DHCP, PPPoE and Dynamic DNS, you could easily manage the legacy serial devices over broadband Internet by

### Features

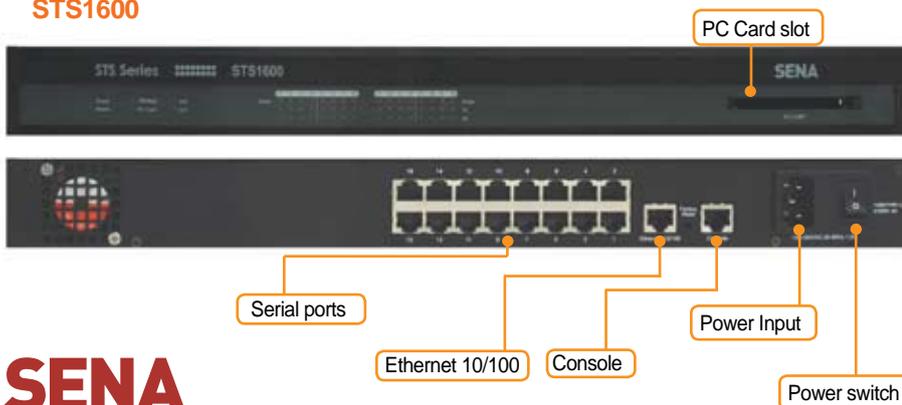
- Connects legacy serial devices to 10/100Base-T Ethernet network.
- Supports RS232 based serial devices, up to 230Kbps speed.
- Supports PC cards such as ATA memory, modem and wired/wireless LAN card
- Flexible TCP/UDP host mode support : Multiple host connections/data transfer.
- Powerful security support, SSL/TLS and data encryption
- Easy-To-Use customization support
- System logging & port logging.
- Dynamic DNS and PPPoE protocol for DSL connection to broadband Internet.
- Configuration via Web, Telnet/SSH or serial port.
- Management software for configuration and administration included.
- Surge protector included.
- Supports RFC 2217, Telnet COM Port Control Protocol

using DSL or cable modem connection. The built-in Dynamic DNS protocol of the STS Series enables you to access serial devices using custom domain names.

The STS also provides you with easy-to-use system management functionality of system status display, firmware upgrade and remote reset by using various accessibility options such as, telnet/SSH, serial console port or web. The powerful system logging feature enables users to store/send the system/port log data to the NFS, SYSLOG server and the ATA Flash fixed disk PC card.

### Panel Layout

#### STS1600





Secure Terminal Server with PCMCIA,

# STS Series, STS400/800/1600

## Specifications

### Serial Interface

- Serial speeds 75bps to 230Kbps
- RJ45 connector
- Flow Control : Hardware, Software
- Signals : RS232 Rx, Tx, RTS, CTS, DTR, DSR, DCD, GND
- Surge protector equipped for each serial port

### Network Interfaces

- 10/100 Base-TX Ethernet with RJ45 Ethernet connector
- Supports static and dynamic IP address

### Network Protocols

- ARP, IP/ICMP, DNS, Dynamic DNS
- SMTP with/without Authentication, pop-before SMTP
- DHCP client, NTP, PPPoE
- TCP, UDP, SSL v2 & v3, TLS v1, RFC-2217
- SSH v1 & v2, Telnet
- HTTP, HTTPS, SNMP v1 & v2
- Serial Port Access protocol : TCP, UDP, SSL v2 & v3, TLS v1, RFC-2217

### PCMCIA

- ATA flash memory card
- 10/100 Base-TX LAN card
- Wireless LAN card
- PSTN modem card

### Ethernet modem

- Full support for AT commands

### Security

- SSH
- Data Encryption
- IP address filtering
- HTTPS

### Management

- Web
- Serial console port
- Telnet or SSH
- HelloDevice Manager software
- O/S support : Windows 98/ME/NT/2000/XP
- System log delivery : email or SYSLOG server or flash memory card
- Firmware : Stored in Flash memory and downloadable via serial console or telnet or web

### Diagnostic LED

- Power
- Ready
- 10/100 Base Link, Act
- Serial InUse/Rx/Tx for each serial port
- PC card

### Power

- STS400/800 : 5VDC, 1.5A @ 5VDC
- STS1600 : 100~240 VAC, 50/60 Hz, 1.2A

### Environmental

- Operating temperature : 0°C to 50°C
- Storage temperature : -20°C to 66°C
- Humidity : 90% Non-condensing

### Physical properties

- STS400/800  
245 x 153 x 30 (mm)  
9.6 x 6 x 1.2 ( in.)  
1.5kg
- STS1600  
435 x 186x 43 (mm)  
17 x 7.6 x 1.75 ( in.)  
2.5 kg
- 19" Rack Mountable

**Certification** : FCC(A), CE, MIC

**Warranty** : 5-year limited warranty

## Ordering Information

- STS400** STS 4-Port Terminal Server with PCMCIA
- STS800** STS 8-Port Terminal Server with PCMCIA
- STS1600** STS 16-Port Terminal Server with PCMCIA

### Includes

- Quick Start Guide
- External 110V (or 230V) power supply or power cord
- Cable kit
- CD-ROM

### Optional Accessories

- RJ45-DB9M X adapter bundle (4 units)
- RJ45-DB25F X adapter bundle (4 units)
- RJ45-DB25M X adapter bundle (4 units)
- RJ45-DB25M S adapter bundle (4 units)
- 19" Rack mount kit for STS400/800

For more information, please visit us at <http://www.sena.com>

### U.S. / Canada / South America

Tel: 408-448-1997 Fax: 408-907-3738

Sales and Support Toll Free (US/Canada): 866-9-US-SENA (866-987-7362)  
General Information Toll Free (US/Canada): 866-8-US-SENA (866-887-7362)

### EU / Africa

Tel: +33 (0)1 53 53 16 29 Fax: +33 (0)1 70 24 70 90

### Asia / Pacific

Tel: +82-2-571-8283 Fax: +82-2-573-7710

### Contact us via E-mail

General Information: [info@sena.com](mailto:info@sena.com)  
Sales & Distribution: [sales@sena.com](mailto:sales@sena.com)  
Technical Support: [support@sena.com](mailto:support@sena.com)

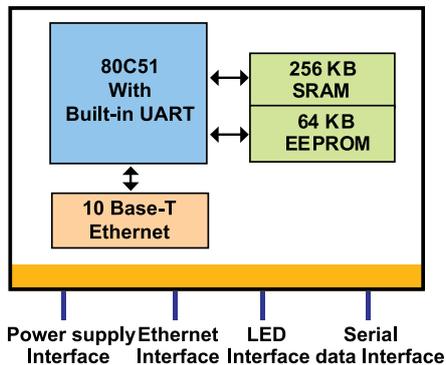
**SENA**  
[www.sena.com](http://www.sena.com)

# Embedded Device Server with built-in UART, NEMO10



## Features

- Single-chip DIL type network enabler for on-board installation
- Compact size, 45mm x 45mm x 18.5mm
- Built-in UART for device interface, data transfer rate up to 115Kbps
- Supports 10Base-T Ethernet interface
- Supports ARP, IP/ICMP, TCP, Telnet, DHCP and PPPoE
- Management by Telnet or console port or HelloDevice Manager
- +5V input, 0.3W low power consumption



**The NEMO10** is a cost-effective and easy-to-use single-chip network enabler module for system integrators and manufacturers who need a way to rapidly make their devices network-ready at a minimal transition cost. The NEMO10 is designed for integration into user devices by on-board installation. On one end, the NEMO10 is connected to the device via built-in UART interface. On the other end, it is connected to the Ethernet RJ45 connector on the board. Within the single-chip DIL package, the NEMO10 has its own TCP/IP-Ready microprocessor, UART for serial interface and built-in 10Base-T Ethernet controller that handle the entire communication between devices over Ethernet.

Bundled with Serial/IP, COM Port redirector from Tactical Software, the NEMO10 supports reliable serial-TCP communication with users' devices for existing users' serial applications. The Windows-based configuration software, HelloDevice Manager, simplifies initial installation and management.

## Dimensions and Pin Assignment Information

Pin No.	Description
1	GND
2	Reset
3	LED (Ethernet Tx)
4	LED (Ethernet Rx)
5	LED (Ethernet Link/Collision)
6	Ethernet Tx-
7	Ethernet Tx+
8	Ethernet Rx+
9	Ethernet Rx-
10	Vcc
11	LED (Ready)
12	LED (Ethernet Act)

Pin No.	Description
13	Vcc
14	Console/Data switch
15	Serial DSR
16	Serial CTS
17	Serial DTR
18	Serial RTS
19	Serial Rx
20	Serial Tx
21	Factory Reset switch
22	GND
23	LED (Serial Tx)
24	LED (Serial Rx)



(45mm x 45mm x 18.5mm, 24 pin DIL package, 2.54 mm pitch)

# Embedded Device Server with built-in UART, NEMO10

## Specifications

### Hardware

- 8-bit microprocessor
- 32KB SRAM, 64KB EEPROM

### External Interface pins

- 24-pin Dual In Line Interface for UART, Ethernet, LED and Power

### Serial Interface

- Built-in UART
- Serial speeds 1200bps to 115Kbps
- Flow Control : Hardware RTS/CTS
- Signals : Rx, Tx, RTS, CTS, DTR, DSR, GND
- Parameters
  - Parity : None, Even, Odd
  - Data Bits : 7, 8
  - Stop Bits : 1, 2

### Network Interfaces

- 10 Base-T Ethernet
- Supports static and dynamic IP address

### Protocols

- ARP, IP/ICMP, TCP server and client, Telnet, DHCP client, PPPoE

### Security

- User ID & Password

### Management

- Telnet or HelloDevice™ Manager or Serial Console

### Power

- 5V DC±10%, 60mA@5VDC

### Environmental

- Operating temperature : 0°C ~ 50°C
- Storage temperature : -20°C ~ 66°C
- Humidity : 90% Non-condensing

### Physical properties

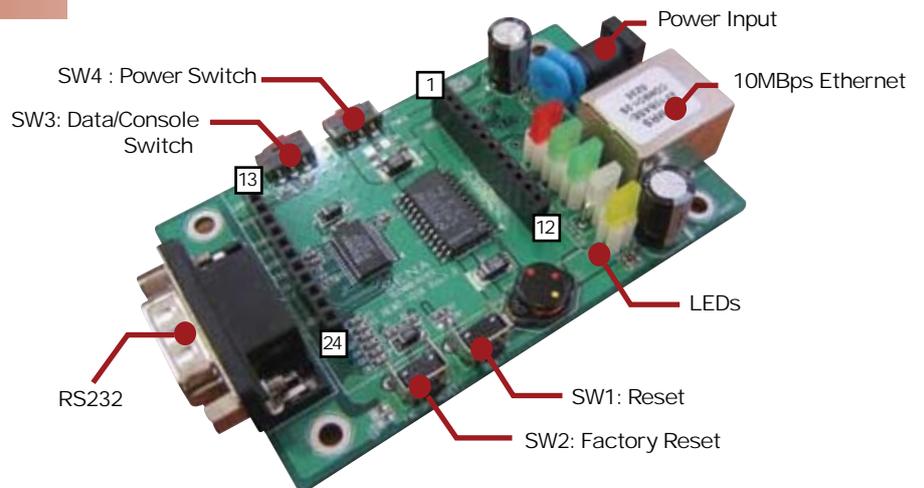
- Dimension (L x W x H)
  - 45 x 45 x 18.5 (mm)
  - 1.8 x 1.8 x 0.7 (in.)
- Weight : 20g

### Warranty

- 1-year limited warranty

## NEMO10 Starter Kit

The NEMO10 Starter Kit includes the evaluation board with the sample circuitry for the NEMO10 interface, power, Ethernet, LED, switches for user device development.



## Ordering Information

<b>NEMO10</b>	10Base-T serial device server module
<b>NEMO10-SK</b>	Starter kit for the NEMO10

### Includes

- NEMO10 module
- Demo board
- External 110V or 230V power supply
- Serial console/data cable
- CD-ROM

For more information, please visit us at <http://www.sena.com>

### U.S. / Canada / South America

Tel: 408-448-1997 Fax: 408-907-3738

Sales and Support Toll Free (US/Canada): 8669-US-SENA (866-987-7362)

General Information Toll Free (US/Canada): 8668-US-SENA (866-887-7362)

### EU / Africa

Tel: +33 (0)1 53 53 16 29 Fax: +33 (0)1 70 24 70 90

### Asia / Pacific

Tel: +82-2-571-8283 Fax: +82-2-573-7710

### Contact us via E-mail

General Information: [info@sena.com](mailto:info@sena.com)

Sales & Distribution: [sales@sena.com](mailto:sales@sena.com)

Technical Support: [support@sena.com](mailto:support@sena.com)

**SENA**  
[www.sena.com](http://www.sena.com)

# Remote I/O Manager, RHIO10



## Features

- Supports 10Base-T Ethernet network connection
- 12 optically isolated digital inputs (0 ~ 24V)
- 10 digital relay outputs, Max. 220V level
- 4 channel 10-bit resolution analog inputs for basic data acquisition
- Basic programmable logic output functions such as AND, OR, NOT and Delay
- Supports both wall and DIN-Rail style mounting
- Management using easy-to-use Windows utility
- Windows DLL support for the easier integration with user program

## Windows Utility, Rhio manager



**The Rhio10**, Remote I/O Manager is simple and easy-to-use Ethernet Data Acquisition System that communicates with PCs and other computers over Ethernet and Internet networks. They utilize the open systems environment of Ethernet to acquire data from any number of remote locations.

The Rhio10 provides 12 optically isolated digital inputs (0 ~ 24V), 10 digital relay outputs of max. 220V level, 4 channel 10-bit resolution analog inputs for basic data acquisition. The digital output operation can be set up with basic programmable logic such as AND, OR, NOT and delay function. The analog inputs are configured either as alarm detection using threshold mechanism or general data acquisition. The input system operates in event-driven mode that allows the unit to send data based on change-of-state or alarm conditions. All the inputs and outputs are protected from damage under power on/off conditions.

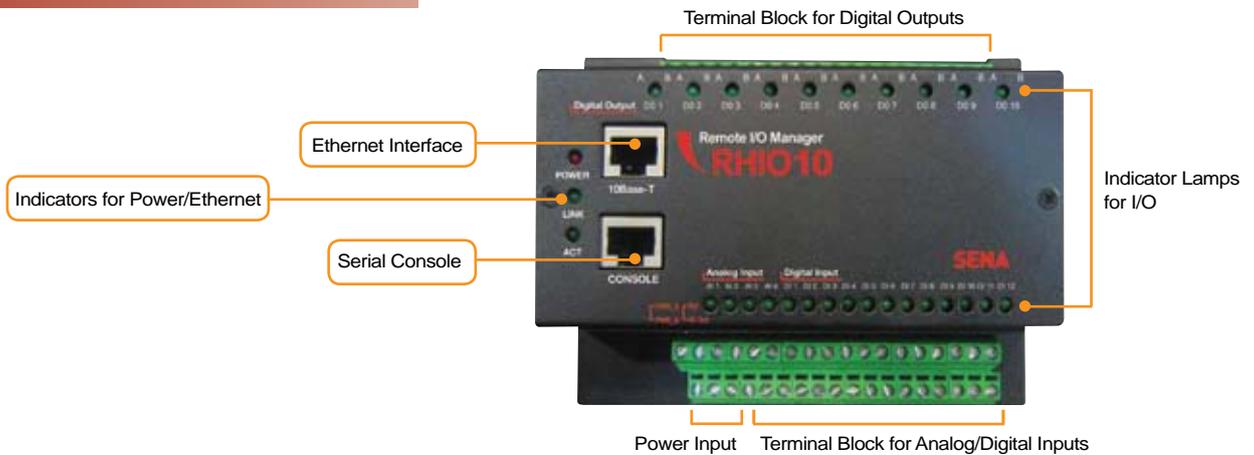
Users may configure the Rhio10 by using easy-to-use Windows-based utility software or by using telnet or serial console. The Rhio Manager, Windows utility also enables users to perform the basic I/O control and monitoring for test purpose. Users may easily write their own application program to communicate with Rhio10 with the help of free MFC libraries for Windows.

Typical application areas include :

- Remote Data Acquisition Systems
- Remote Data Acquisition
- Remote Distributed I/O Systems
- Automated Machine Monitoring
- Industrial Instrumentation
- Discrete Control
- Distributed Data Acquisition System

# Remote I/O Manager, RHIO10

## Panel Layout



## Specifications

### Network Interface

- 10 Base-T Ethernet with RJ45 connector
- Supports static and dynamic IP address

### Digital Input

- Number of channels : 12
- Input type : Voltage
- Input circuitry : Optically isolated photo-coupler
- Input range : 0V ~ ±24V  
OFF : 0V ~ ±1.2V  
ON : ±3.3V ~ ±24V
- Sampling rate : 20ms
- Isolation voltage : 5KV

### Digital Output

- Number of channels : 10
- Output type : Relay
- Rated load : 3A/240VAC
- Insulation resistance : 1000Min(DC500V)
- Electrical life expectancy : 100,000 operations
- Isolation voltage (coil and contact) : 4KV
- Reaction within 10ms

### Analog Input

- Number of channels : 4
- Effective resolution : 10-bit
- Input type : Voltage, Direct coupling
- Input range : 0V ~ Aref (Analog reference voltage, 2~5V)
- Sampling rate : 1000 samples/sec

### Protocols

- ARP, IP/ICMP, TCP
- telnet, DHCP client

### Management

- Rhio Manager Windows Utility, Serial Console or Telnet

### Software Support

- Windows MFC DLL library
- I/O configuration, I/O status monitoring/control

### Diagnostic LED

- Power, Link, Act
- Digital Output, 1~10
- Digital Input, 1~12
- Analog Input, 1~4

### Power

- 9V ~ 48VDC, Max. 5W

### Environmental

- Operating temperature : 0°C to 50°C
- Storage temperature : -20°C to 66°C
- Humidity : 90% Non-condensing

### Physical properties

- Dimension (L x W x H)  
137 x 111 x 58 (mm)  
5.4 x 4.4 x 2.3 (in.)
- Weight : 730g

### Certification

- FCC, CE, MIC

### Warranty

- 5-year limited warranty

## Ordering Information

**Rhio10** Remote Ethernet I/O Manager

### Includes

- Console Cable
- RJ-45 - DB9 Female Straight Cable Adapter
- DIN-rail Mount Bracket
- CD-ROM



For more information, please visit us at <http://www.sena.com>

### U.S. / Canada / South America

Tel: 408-448-1997 Fax: 408-907-3738

Sales and Support Toll Free (US/Canada): 8669-US-SENA (866-987-7362)

General Information Toll Free (US/Canada): 8668-US-SENA (866-887-7362)

### EU / Africa

Tel: +33 (0)1 53 53 16 29 Fax: +33 (0)1 70 24 70 90

### Asia / Pacific

Tel: +82-2-571-8283 Fax: +82-2-573-7710

### Contact us via E-mail

General Information: [info@sena.com](mailto:info@sena.com)

Sales & Distribution: [sales@sena.com](mailto:sales@sena.com)

Technical Support: [support@sena.com](mailto:support@sena.com)

**SENA**  
[www.sena.com](http://www.sena.com)



**U.S. / Canada / South America**

3150 Almaden Expressway, Suite 233, San Jose, CA 95118, United States  
Tel: 408-448-1997 Fax: 408-907-3738  
Sales and Support Toll Free (US/Canada): 8669-US-SENA (866-987-7362)  
General Information Toll Free (US/Canada): 8668-US-SENA (866-887-7362)

**EU / Africa**

12-14 Rond Point des Champs Elysées  
75008 Paris France  
Tel: +33 (0)1 53 53 16 29 Fax: +33 (0)1 70 24 70 90

**Asia / Pacific**

210 Yangjae-dong, Seocho-gu  
Seoul 137-130 Korea (Republic of)  
Tel: +82-2-571-8283 Fax: +82-2-573-7710

**Contact us via E-mail**

General Information: [info@sena.com](mailto:info@sena.com)  
Sales & Distribution: [sales@sena.com](mailto:sales@sena.com)  
Technical Support: [support@sena.com](mailto:support@sena.com)

**Sena Technologies, Inc.**

**SENA**  
[www.sena.com](http://www.sena.com)

DISTRIBUTED BY



1.720.870.4500 | [sales@WestwardSales.com](mailto:sales@WestwardSales.com)