

One Stop Solution For Device Networking

Serial Device Servers
Terminal Servers
Console Servers
Embedded Device Servers



SENA Technologies, Inc.

Headquarter

211 Tanagerang, Gedung Sate 10118 Kota Pekanbaru RI
Sales Dept +62 8122 7124 sales@sena.com
Support Dept +62 8175 4432 support@sena.com
Fax +62 8175 7116

US Subsidiary

1000 South Main St, Milpitas, CA 95026, United States
Toll Free 1-877-CENETEL 800-45-5274 (800-457-7362)
Tel: +1 408-262-4702 Fax: +1 408-937-2706
1100 Morgan Road, Carroll, GA 30115 United States
Tel: +1 770-244-1407 Fax: +1 770-458-9276

EU office

35 rue de la Harpe
91100 Evry-Courcouronnes, France
Tel: +33 1 61 42 07 75 40 Fax: +33 1 61 42 07 75 44

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Network-Enable the World !

Sena Technologies is a leading manufacturer of device networking solution that connects almost any electronic device and equipment to the Internet or Ethernet network using open standard protocols.

Sena offers an extensive range of products ranging from Terminal Servers, External Device Servers, Embedded Device Servers, and Application-specific Device Servers for a broad range of applications across various industries including industrial automation, building automation, Retail/POS, IT/ITsec, 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



Systematic Quality Assurance and a 5-year Warranty

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. The 5-year warranty proves our commitment to the life-long service for all of our products.

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.

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Power up your Business with Sena's 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 manufacturers' desire to connect the factory floor with the rest of the enterprise, industrial devices connected to internet-enabled cell phones are giving users new ways to view and control factory data using M2M-enabled protocols.

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 EKG 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 coding 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 interoperability through such traits as high availability, scalability, densifying, sharing, 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.

Using various TCP/IP network paths such as ADSL, cable, modem or wireless LAN to manage remote parts 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 internet, as well as out-of-band management methods using Internet telephone protocols are also provided.

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5 Retail / POS

With customers throughout the world, Sena has built its reputation on unique, customer-focused Point-of-Sale/Retail systems 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, Leverage 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 associated 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.
- DR, type Ethernet controller for on board installation.
- Board Type models for easier integration.



2 Serial Device Servers & Terminal 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 full Ethernet interface.
- Flexible TCP/IP host needs support.
- Multiple host connections/data transfer.
- Secure communication with SSL and TLS.
- Supports both wall and DIN-Rail style mounting.



3 Wireless Device Servers

Connect your Serial devices to a Wireless Network Instantly

SENA Device Server and Terminal Server's family supports wireless communication with 802.11b W/F interface and the Parant family is a standalone Bluetooth-compatible solution for wireless RS-232 serial cable replacement.

• Wireless LAN Products

The LS100W is a cost-effective Serial Device Server that makes your legacy serial devices manageable via industry-standard W/F network. In addition, available in 1, 4, 8 and 16 port models, the HelloDevice Super Series and STS Series product lines are provided with a PC Card interface that enables users to access another network through 802.11b.

• Bluetooth Products

The Parant110 is a wireless serial adapter based on Bluetooth technology. It enables the RS232 serial devices to communicate without wire throughout the range of 250m - 1.2km. The Parant100 enables multiple Bluetooth devices to connect to the Ethernet network simultaneously when they are within the range and provides the ideal wireless solution to replace multi-port wired serial cards.



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4 Application-specific Device Servers

For application-specific requirements such as industrial automation, Retail/POS, and UPS management, SENA offers a full range of external device servers - ALINK Series, PCLink Series, UPSLink Series and Photo.

- Modbus/TCP for industrial-specific application needs.
- Supports industry standard SNMP MIB II and UPS MIB for UPS Management.
- Ethernet-Digital I/O model with screw terminal block interface.

	NEMO10	LS100	LS100W	Pro Series	Super Series	STS Series	IALink100
Serial Interface Connector / Port	Bulkier UART 34 pin Dual In Line Connector	RS232 DB9M, 1	RS232 DB9M, 1	RS232/422/485 DB9M, 1(2/4/8)	RS232/422/485 RJ45, 1/4/8	RS232 RJ45, 8/16	RS232/422/485 Terminal Block, 1
Data Rate	115 Kbps	115 Kbps	115 Kbps	230 Kbps	230 Kbps	230 Kbps	115 Kbps
Network Interface	10 Base-T	10 Base-T	10/11b	10/100 Base-T	10/100 Base-T	10/100 Base-T	10 Base-T
SSL Encryption	No	No	No	Yes	Yes	Yes	No
PC Card Slot	None	None	None	None	Yes	Yes	None
Surge Protector	No	No	No	Yes	Yes	Yes	Yes

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 SerialIP COM Port Redirector software from Tactical Software, and vty drivers for Linux systems.

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 SerialIP Redirector software runs at the kernel level to provide superior performance and low latency. Features include: Up to 256 simultaneous connections; Selectable auto-reconnect option for "always-on" connections; Requires no other software for deployment, and Configuration Wizard automates and verifies settings.

SerialIP Application Scenario

COM Port Redirector with Encryption

Sena now takes COM Port Redirector 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 SerialIP COM Port Redirector and OpenSSL Toolkit, the new SSL/TLS Security option offers a selection of five options (including 3DES and AES) and strength up to 256 bits, sufficient to meet the tough security requirements encountered in the financial services industry.



* Applicable only to PS110410810, Super and STS series

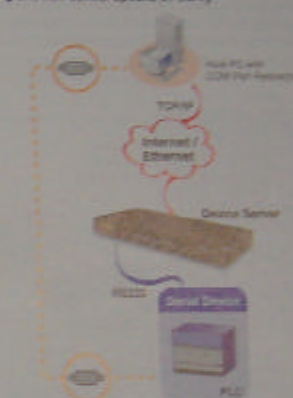
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COM Port Control protocol support

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 SerialIP 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.

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



* Applicable only to PS110410810, Super and STS series

TTYD COM Port Redirector for Linux/Unix platform

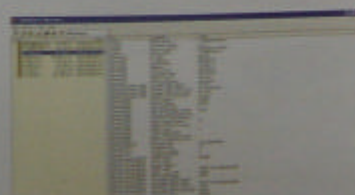
TTYD is a COM port redirector program that supports most versions of Unix including Linux, AIX, SCO, and BSD.

* See more information at www.sena.com

Utilities and Tools

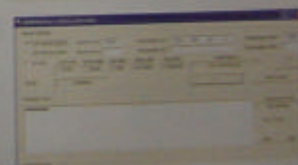
HelioDevice Manager

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



HelioDevice UniversalComm

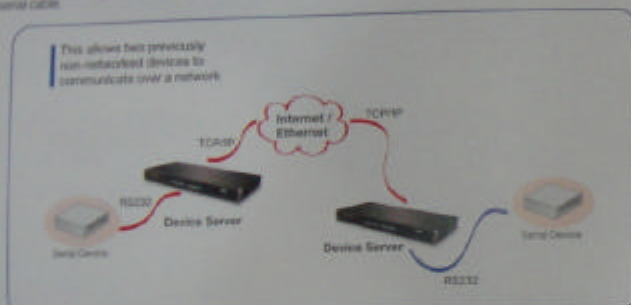
HelioDevice UniversalComm is a program that enables users to readily send or receive data through TCP or UDP or Serial RS232 connections. The purpose of using the program is to test the communication functions of Sena device and terminal servers.



Typical Application Scenarios using Sena Device Servers

Tunneling Mode

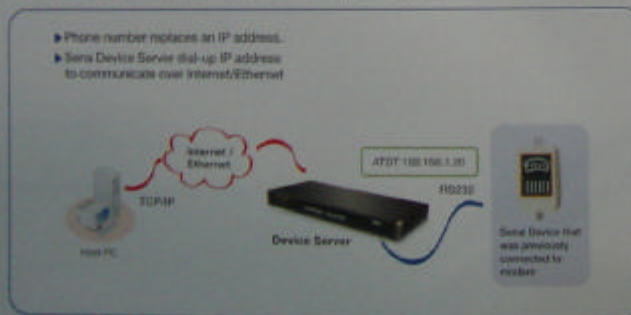
Serial tunneling occurs when two device servers are configured to work together to share or communicate their respective serial device's data. The serial tunnel is established by connecting one device server configured for Server/Client mode to a device collecting data and the other device server configured 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.

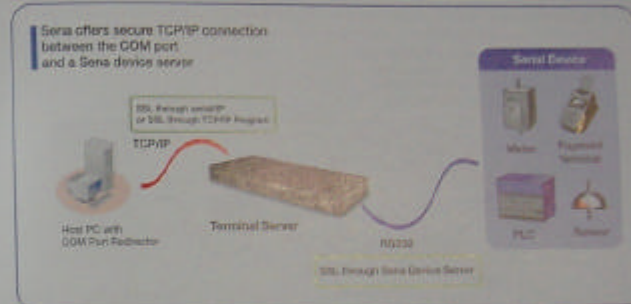


Applicable Models: All models except LS100/100W

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Secure Communication

Sena products support Security features such as static key based (DES) 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: PS110A/10B/10, SS100/110/400/600, STS800/1600

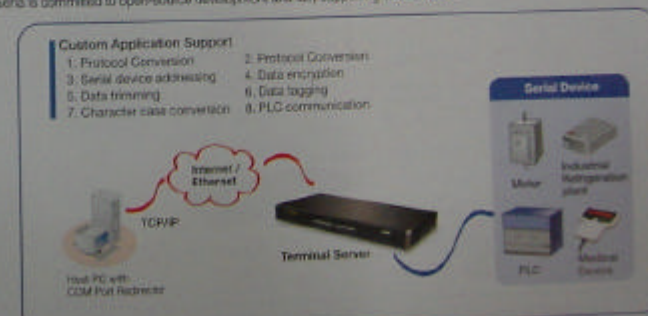
Custom Application Support

Deploy your own embedded Linux applications

One of the strengths of Sena's products is their flexibility. Since no two solutions are the same, Super Series product line has been designed to correctly facilitate the connection in any situation. The Super 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.

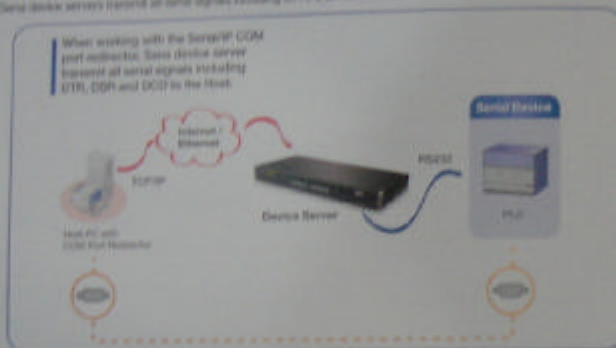


Applicable Models: SS100/110/400/600

Typical Application Scenarios using Sena Device Servers

Virtual COM Mode

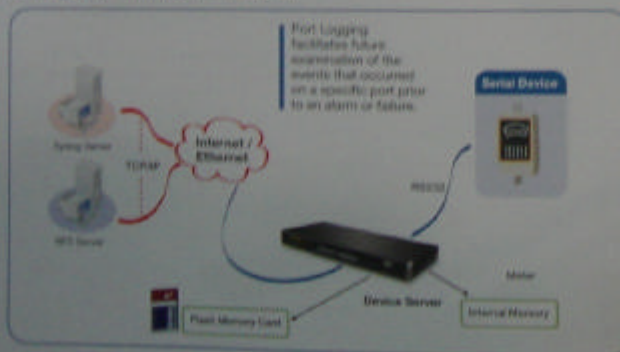
Virtual COM Mode of Sena device and terminal server uses a driver to create a "Virtual COM Port" so that the software thinks it's talking to a serial port, but it's really talking to a LAN. The serial port may be anywhere on the LAN. After connection, the LAN is transparent to the program and serial 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 SerialIP COM port redirector, Sena device servers forward all serial signals including DTR, DSR and DCD.



• Applicable Models: PS110410810, SS100110400800, ST58001600

Port Logging

Port Logging feature allows user to keep Serial and TCP data safely in data storage locations such as NFS Server, Spooling 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: PS110410810, SS100110400800, ST58001600

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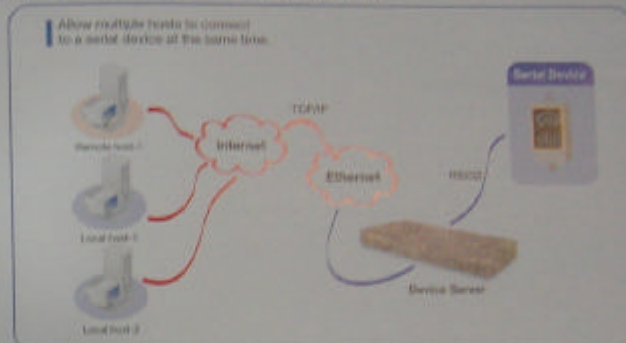
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Multiple Access for Port

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.

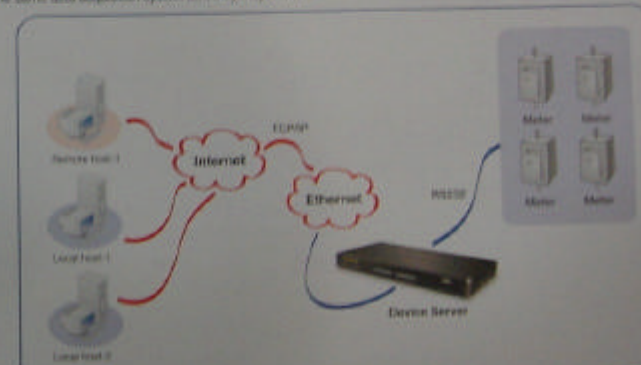
This feature is particularly useful in applications that require follow-up alternative connections and applications that need multiple accesses to share communications with a particular device.



• Applicable Models: PS110410810, SS100110400800, ST58001600

Multicasting

Sena products support an enhancement transmission method "TCP/UDP multicasting", which automatically broadcasts the same serial data to upto 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: PS110410810, SS100110400800, ST58001600

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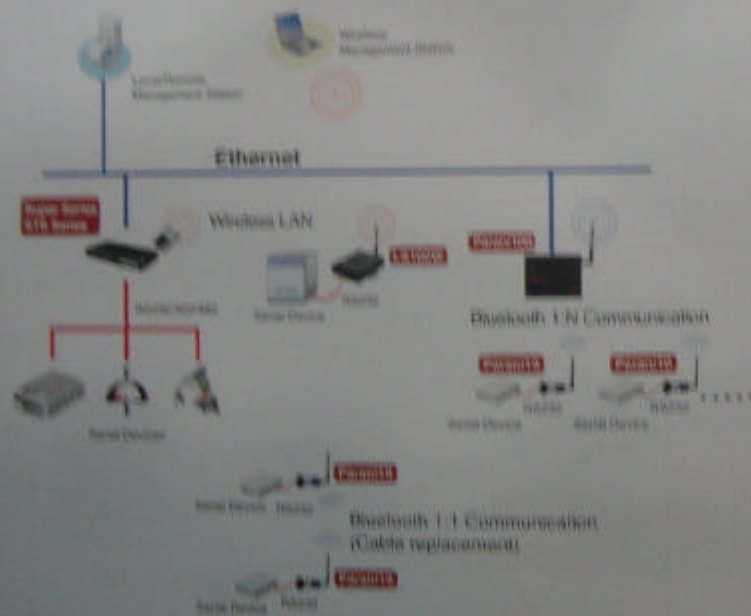
Typical Application Scenarios using Sena Device Servers

Wireless Device Networking

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

Sena Device Server and Terminal Server's family supports 802.11b network standard either by PC Card interface or by built in WiFi module. The former family is a standard Windows-compatible solution for various PC and some more applications.

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



Secure Terminal Server with PCMCIA,
STS Series, STS800/1600



The Linux-based Terminal Server, STS Series, STS800/1600 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.

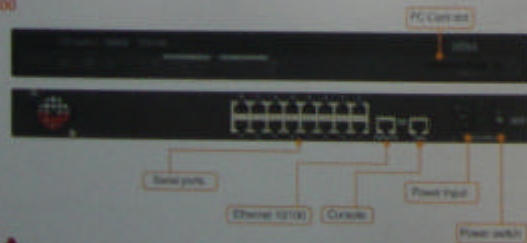
For secure data communication, the STS Series supports various data encryption protocols such as SSL, 3DES and RC4. In addition, IP address filtering function is provided for protecting unauthorised data streams to be transmitted to the STS Series.

Featuring PCMCIA slot for enhanced functionality, the STS Series supports PC cards such as 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 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.

Panel Layout

▶ STS1600



Features

- Connects legacy serial devices to 10/100Base-T Ethernet network
- Supports RS232 serial devices, Max. 230Kbps speed
- Supports PC cards such as ATA memory, modem and wireless LAN card
- Flexible TCP/UDP host mode support, Multiple host connections/data transfer
- Powerful security support, SSL/TLS and data encryption
- System logging & port buffering
- 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

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.

Secure Device Server with PCMCIA,
HelloDevice Super Series, SS100/110/400/800



The Linux-based HelloDevice Super Series, is a universal Secure Device Server that allows your legacy serial devices manageable via industry standard Ethernet network. Based on open network protocols such as TCP/IP and UDP, it gives you ultimate flexibility to your serial devices.

For secure data communication, the HelloDevice Super Series supports various data encryption protocols such as SSL/TLS and data encryption. In addition, IP address filtering function is provided for protecting unauthorised data streams to be transmitted to the HelloDevice Super Series.

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

Featuring PCMCIA slot for enhanced functionality, the HelloDevice Super Series supports PC cards such as Wireless LAN card to access another network for back up purpose, Phone-line modem card for out-of-band access to the Super 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 HelloDevice Super Series, the RS232/422/485 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 using DSL or cable modem connection. The built-in Dynamic DNS protocol of the HelloDevice Super Series enables you to access serial devices using custom domain names.

The HelloDevice Super Series 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.

- Typical application areas of the HelloDevice Super Series include:
- Building automation
 - Network management
 - Retail Point of Sale
 - Remote metering
 - Remote display
 - Security/Access control Systems
 - General data acquisition application
 - Medical Automation

Features

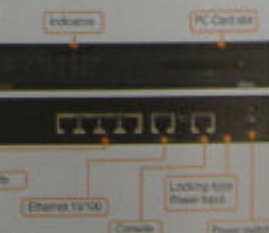
- Connects serial devices to 10/100Base-T Ethernet
- Supports RS232/422/485 based serial devices, up to 230Kbps speed
- Supports PC cards such as ATA memory, modem and wireless LAN card
- Multiple host connections/data transfer
- Powerful security support, SSL/TLS and data encryption
- Easy-To-Use customization support
- System logging & port buffering
- Dynamic DNS and PPPoE protocol for DSL connection to broadband Internet
- Configuration via Web, Telnet/SSH or serial port
- Surge protector included
- Supports both wall and DIN-Rail style mounting

Panel Layout

▶ SS110



▶ SS400



Bluetooth Serial Adapter, Parani10

Features

- Provides Extended Bluetooth serial cable replacement
- Supports Bluetooth Serial Port Profile and Serial Access Profile (Bluetooth Class 2)
- Compliant with FCC, CE, RoHS etc.
- Remote status monitoring, Alerts, up to 128KB using serial memory
- Easy to use Windows configuration tool available
- No external drivers required



Panel Layout



Parani10 is a wireless serial adapter based on Bluetooth technology. It enables the PC/IT serial devices to communicate wirelessly throughout the range of 300m - 1.2km.

It supports both point-to-point connections and point-to-multipoint connections. Users may configure the Parani10 by using an easy-to-use Windows-based utility software or by using standard AT command set.

Its various power supply configurations allow users to choose which option suits their best, i.e. Power by DC power cable, Power by external DC adapter, Power by USB power cable, Power by pin 4 of RS485 connector.

Typical application areas of the Parani10 include:

- Wireless cable replacement
- Truck/Bus monitoring system
- Car Diagnostics
- Wireless POS system
- Wireless Factory monitoring
- PLC programming
- Wireless machine health/condition/telemetry monitoring
- Wireless Pricing
- Wireless Logistics

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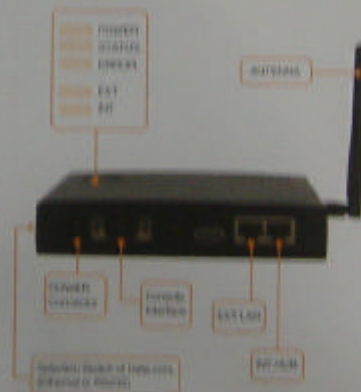
Bluetooth/IP Gateway for multi-port wireless connections, Parani100

Features

- Connects Bluetooth devices to WiFi/Wireless Ethernet network (Bluetooth Class 2)
- Supports point-to-point connectivity up to 7 points
- Supports data rate of 100Kbps, 100Mbps with greater than 100m range
- Supports Bluetooth profiles for Serial Port, LAN Access, PAN and Open up Networking
- Most wireless option to the requirements of the wired multi-port serial cable
- Supports serial port modes for TCP/IP, Bluetooth and serial connection
- Supports HTTP/TFTP/FTP/SSH/SMTP/POP3/RADIUS Authentication/VPN
- Easy to use Windows configuration tool available



Panel Layout



The Parani100 enables multiple Bluetooth devices to connect to the Ethernet network simultaneously and without delay when they are within range. The Parani100 provides Class 2 Bluetooth wireless connectivity to Ethernet/Wireless Ethernet. It supports all Bluetooth modules compatible with the Bluetooth Profile for the Serial Port, LAN Access Networking, LAN Access and PAN. Along with the Serial Port Profile support, the Parani100 is the ideal solution for the replacement of the wired serial port application.

The Parani100 supports versatile host modes for various user applications, i.e. TCP Server and Client modes for TCP/IP/Bluetooth relay applications, Server mode for monitoring, Diagnostic mode, Serial LAN mode and RS485 mode.

The Parani100 runs on embedded Linux operating system, with flash memory for easy software upgrades, and built-in Web server and Web interface for quick installation, and remote configuration and management. The Parani100 uses the RADIUS protocol for user authentication.

Typical application areas of the Parani100 include:

- Truck/Bus monitoring system
- Car Diagnostics
- Wireless POS system
- Wireless Factory monitoring/PLC programming
- Wireless machine health/condition/telemetry monitoring
- Wireless Pricing
- Wireless Logistics

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Serial Device Server, HelloDevice Pro Series, PS100/200/400



Features

- Connects legacy serial devices to 10/100Base-T Ethernet network
- Supports RS232C/485 based serial device via its DB9 serial port
- Serial data transfer rate up to 115200
- PPPoE protocol for DSL connection to broadband internet
- Supports powerful Ethernet modem function
- Encryption key based algorithm support
- Configuration via Telnet or serial port
- Management software for configuration and administration included
- Supports both web and DHCP style mounting

The HelloDevice Pro Series is a versatile Serial-Ethernet communication device that allows your legacy serial devices manageable via industry-standard Ethernet network. Based on open network protocols such as TCP/IP and UDP, it gives you ultimate flexibility to your serial devices. With PPPoE(PPP-over-Ethernet) connection feature of the HelloDevice Pro Series, the RS232C/485 serial devices could be managed over DSL-based broadband network.

You could easily configure and administrate the HelloDevice Pro Series, with the full-featured management functions such as: status monitor, remote reset, error log monitor and firmware upgrade by using Telnet and serial console port under the password protection support. In addition, IP address filtering function is provided to protect unintentional data streams to be transmitted to the HelloDevice Pro Series and static key based data encryption to promise secure data communication.

Typical application areas of the HelloDevice Pro Series include:

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

The HelloDevice Pro Series gives you ideal remote management capability of control, monitoring, diagnosis and data gathering for RS232C/485 serial devices over the internet.

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Serial Device Server, HelloDevice Pro Series, PS110/410/810



Features

- Connects legacy serial devices to 10/100Base-T Ethernet network
- Supports surge protection for RS232C/485 interface, up to 2000psi speed
- Flexible TCP/UDP host mode support Multiple host connection/data transfer
- Encryption key based algorithm support
- System logging & port buffering
- Dynamic DNS and PPPoE protocol for broadband internet connection
- Configuration via Web, Telnet/SSH, Windows Utility or console
- Supports both web and DHCP style mounting

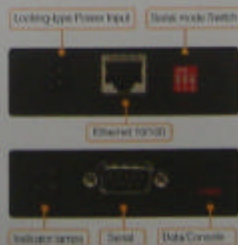
The Linux-based PS110/410/810 is a Linux-based 14-bit port device server that allows your legacy serial devices manageable by 10/100Mbps Ethernet network. Users can feel safe applying the PS110/410/810 serial device applications, since all models are equipped with surge protection for serial ports.

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 and TLS for data encryption. It also supports telnet COM port control protocol, i.e. RFC2217 which enables user devices to deliver the port 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.

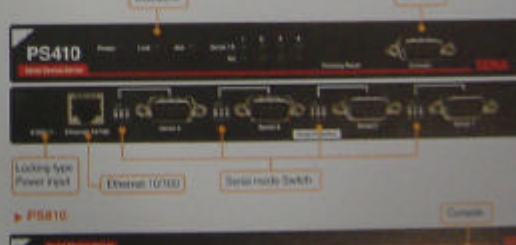
The PS110/410/810 is the ideal solution for the users who are looking for the cost-effective, most secure, scalable Linux-based serial device servers for their RS232C/485 serial devices.

Panel Layout

PS110



PS410



PS810



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Serial Device Server, HelloDevice Lite Series, LS100/100W



The HelloDevice Lite Series, LS100/100W is a cost-effective Serial Device Server that makes your legacy serial devices manageable via industry-standard 10Base-T Ethernet or WiFi 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 LS100/100W by using Telnet or serial console port under the password protection support.

Typical application areas of the HelloDevice LS100/100W include:

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

Features

- Connects legacy serial devices to 10Base-T Ethernet or IEEE 802.11b/WiFi network
- Supports RS232 based serial devices via its DB9 serial port
- Serial data transfer rate up to 115200bps
- Features 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

Panel Layout

LS100



LS100W



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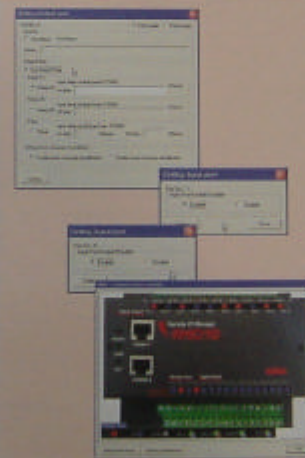
Remote I/O Manager, RHIO10



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 off/hold 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 the 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

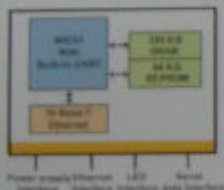
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Embedded Device Server with built-in UART, NEMO10



Features

- Single-chip OS, type network enabler for embedded installation
- Compact size, 40mm x 40mm x 16.5mm
- Built-in UART for device interface, data transfer rate up to 115200bps
- Supports 10/100-T Ethernet interface
- Supports ARP, ICMP, TCP, Telnet, DHCP and SNMP
- 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 iteration 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. With the single-chip OS package, the NEMO10 has its own TCP/IP-ready microprocessor, UART for serial interface and built-in 10/100-T Ethernet controller that handles the entire communication between devices over Ethernet.

Bundled with HelloIP, COM Port add-on for 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	Pin No.	Description
1	GND	13	Vcc
2	Power	14	Control/Data switch
3	LED (Ethernet Tx)	15	Serial DSR
4	LED (Ethernet Rx)	16	Serial CTS
5	LED (Ethernet Link/Carrier)	17	Serial DTR
6	Ethernet Tx	18	Serial RTS
7	Ethernet Rx	19	Serial Rx
8	Ethernet Pin	20	Serial Tx
9	Ethernet Pin	21	Factory Power switch
10	Vcc	22	GND
11	LED (Power)	23	LED (Serial Tx)
12	LED (Ethernet Act)	24	LED (Serial Rx)



40mm x 40mm x 16.5mm, 24 pin DL package, 254 mm pitch

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Embedded Device Server with built-in UART, NEMO10

Specifications

Hardware

- 80C51 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 115200bps
- Flow Control: Hardware RTS/CTS
- Signals: Rx, Tx, RTD, CTS, DTR, DSR, GND
- Parameters: Parity: None, Even, Odd; Data: 8bit; 7.5; Stop bit: 1, 2

Network interfaces

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

Protocols

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

Security

- Password protection

Management

- Telnet or HelloDevice™ Manager or Serial Console

Power

- 5V DC \pm 10%, 60mA@5VDC

Environmental

- Operating temperature: 0°C to 50°C
- Storage temperature: -40°C to 80°C

Physical properties

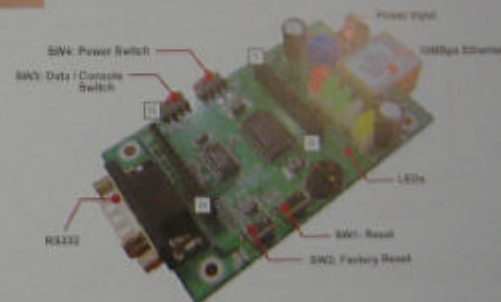
- Dimension (L x W x H): 40 x 40 x 16.5 (mm)
- Weight: 25g

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

NEMO10 Nemo 10/100-T serial device server module
NEMO10-SK Starter kit for the NEMO10

Includes:

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

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

Corporate

210 Yangpyeong Street, Gyeongju
Seoul 137-130 Korea
info@sena.com

Sales

phone +82-2-579-7024 sales@sena.com

Support

phone +82-2-579-5422 support@sena.com

SENA
www.sena.com