1/2-Port RS-232/422/485 Secure Device Server

SN3401 / SN3402

1/2-Port RS-232/422/485 Secure Device Server with PoE

SN3401P / SN3402P

ATEN SN3400 series (SN3401 / SN3402 / SN3401P / SN3402P) Secure Device Servers are external IP-based network devices that securely connect legacy RS-232/422/485 serial devices to an Ethernet network to be accessed remotely from a computer located anywhere, allowing users to expand the number of serial ports for any host computer over a network.

The SN3400 series is especially suited for industrial process control applications, given the abundant use of the Supervisory Control and Data Acquisition (SCADA) systems across many industries for collecting data from PLCs, meters, and sensors via serial ports. The SN3400 series bi-directionally translates data between serial and Ethernet formats, and facilitates access to the data from all data collection instruments from local and remote sites through an Ethernet network.

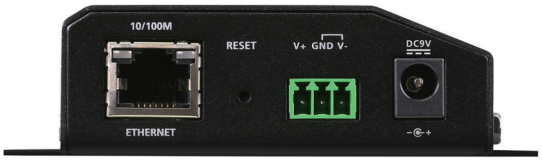
The SN3400 series has a number of useful operation modes. It supports secure TCP server / client, secure serial tunneling server / client, secure Real COM, and console management modes for security-critical applications, such as telecom, access control, and remote site management. Furthermore, its IEEE 802.3af-compliant models can be powered by a PoE PSE device without an additional power supply.

The SN3400 series can be used as standard Modbus gateway to convert between Modbus TCP and Modbus RTU / ASCII protocols. It can integrate Modbus serial slave devices seamlessly into an existing Modbus TCP network and thereby make them accessible to serial master devices.

SN3402P

SN3402P Front View

SN3402P Rear View



Features

Serial-to-Ethernet Connectivity

- 1 or 2 RS-232/422/485 serial ports for secured serial data over Ethernet transmission
- Software-configurable termination (120 Ω) and pull high/low resistor (1K ohms or 150K ohms) integrated to the RS-485 mode to avoid signal reflection
- Secured operation modes — Secure Real COM, Secure TCP Server / Client, Secure Serial Tunneling Server / Client, Console Management (SSH), and Console Management Direct (SSH)
- Standard operation modes — Real COM, TCP Server / Client, Serial Tunneling Server / Client, UDP, Console Management (Telnet), and Console Management Direct (Telnet)
- Real COM, Real TTY, and Fixed TTY drivers for Windows, Linux, and UNIX
- Convenient console management access via Java viewer (SSH / Telnet) or third-party clients such as PuTTY
- Easy console port access via Java viewer and Sun Solaris ready ("break-safe")
- Multiple users can simultaneously access the same port — up to 16 connections per port
- Support Modbus gateway to convert between Modbus TCP and Modbus RTU / ASCII protocols

Hardware

- Redundant power input (power jack and terminal block) for fail-safe power
- IEEE 802.3af-compliant PoE PD (powered device) equipment (SN3401P, SN3402P)
- Surge protection for serial, Ethernet, and power
- DIN-rail mounting, wall mounting, rack mounting, and desktop installation available
- Supports baud rates of 110, 134, 150, 300, 600, 1200, 1800, 2400, 4800, 7200, 9600, 19200, 38400, 57600, 115200, 230.4k, 460.8k, 921.6k bps

Security

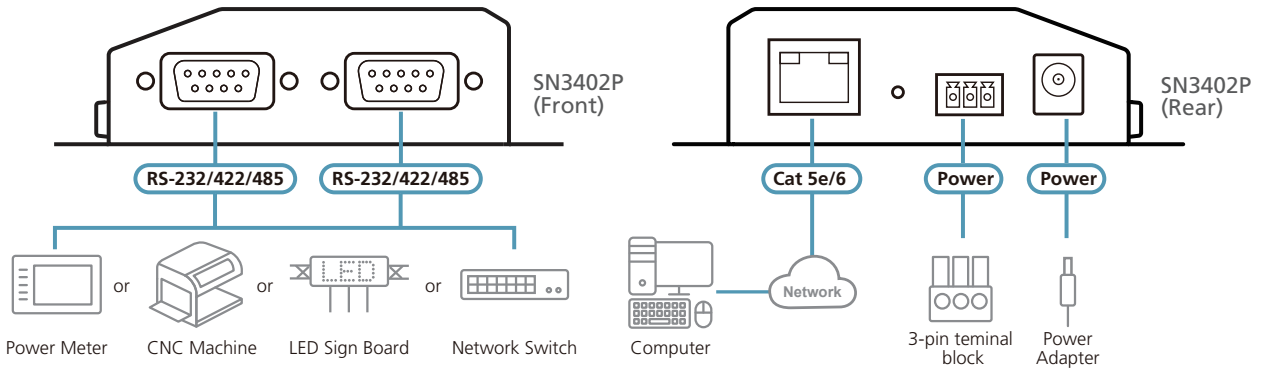
- Supports secured login from browsers with TLS 1.2 data encryption and RSA 2048-bit certificates
- Configurable user permissions for port access and control
- Local and remote authentication and login
- Third-party authentication (e.g. RADIUS)
- IP address filter for security protection

System Management

- Browser access with an intuitive GUI design
- Web-based quick setup wizard for fast configuration
- Terminal-based access with a menu-driven UI via Telnet / SSH
- Online / Offline detection of connected serial devices (including terminal blocks) — automatically sending event notifications when the devices are offline (e.g. power failure) for device status monitoring
- System event logs and port logs will be saved to an internal memory or Syslog server
- SNMP agent (v1 / v2c)
- Event notification — supports notification of SMTP email and SNMP Trap (v1 / v2c)
- Backup / Restore system configuration and upgradeable firmware
- 64 KB port buffer prevents data loss when the network is down
- NTP for time server synchronization
- Multi-language web-based GUI

Highlights

Serial-to-Ethernet Connectivity	The SN3400 series makes serial devices network-ready in an instant and can be deployed in a wide range of commercial applications and industrial process automation environments that require serial device connectivity, including industrial control, data acquisition, device management, environment monitoring, sensor monitoring, remote site management, and more.
Versatile Operation Modes	To meet a broad range of application requirements, the SN3400 series offers a wide range of secure operation modes, including Secure Real COM, Secure TCP Server / Client, Secure Serial Tunneling Server / Client, Console Management (SSH), and Console Management Direct (SSH), as well as standard operation modes, including Real COM, TCP Server / Client, Serial Tunneling Server / Client, UDP, Console Management (Telnet), and Console Management Direct (Telnet). SN3400 series assures that all serial data are securely transmitted over both private and public networks. Moreover, SN3400 series can be used as Modbus gateway to convert between Modbus TCP and Modbus RTU/ ASCII protocols.
Secure Data Transmission	In addition to transmitting serial data securely with secure operation modes, the SN3400 series can be managed via secure browser access (HTTPS) and secure console access (SSH). Moreover, IP address filtering can prevent malicious attacks for extra security protection.
Centralized Authentication and Authorization	In addition to internal user authentication, SN3400 devices are equipped with external user authentication methods to support third-party centralized authentication servers. Furthermore, SN3400 devices support port specific access rights. The administrator may set different port access rights to different users on a port-by-port basis.
Intuitive Management	The SN3400 series is straightforward and easy to set up and use. Browser access is supported via an intuitive GUI that facilitates a quick setup and control of the devices in a few easy steps. A web-based quick setup wizard is provided for fast configuration, while terminal-based access with a menu-driven UI via Telnet / SSH is also available.



Included Accessories

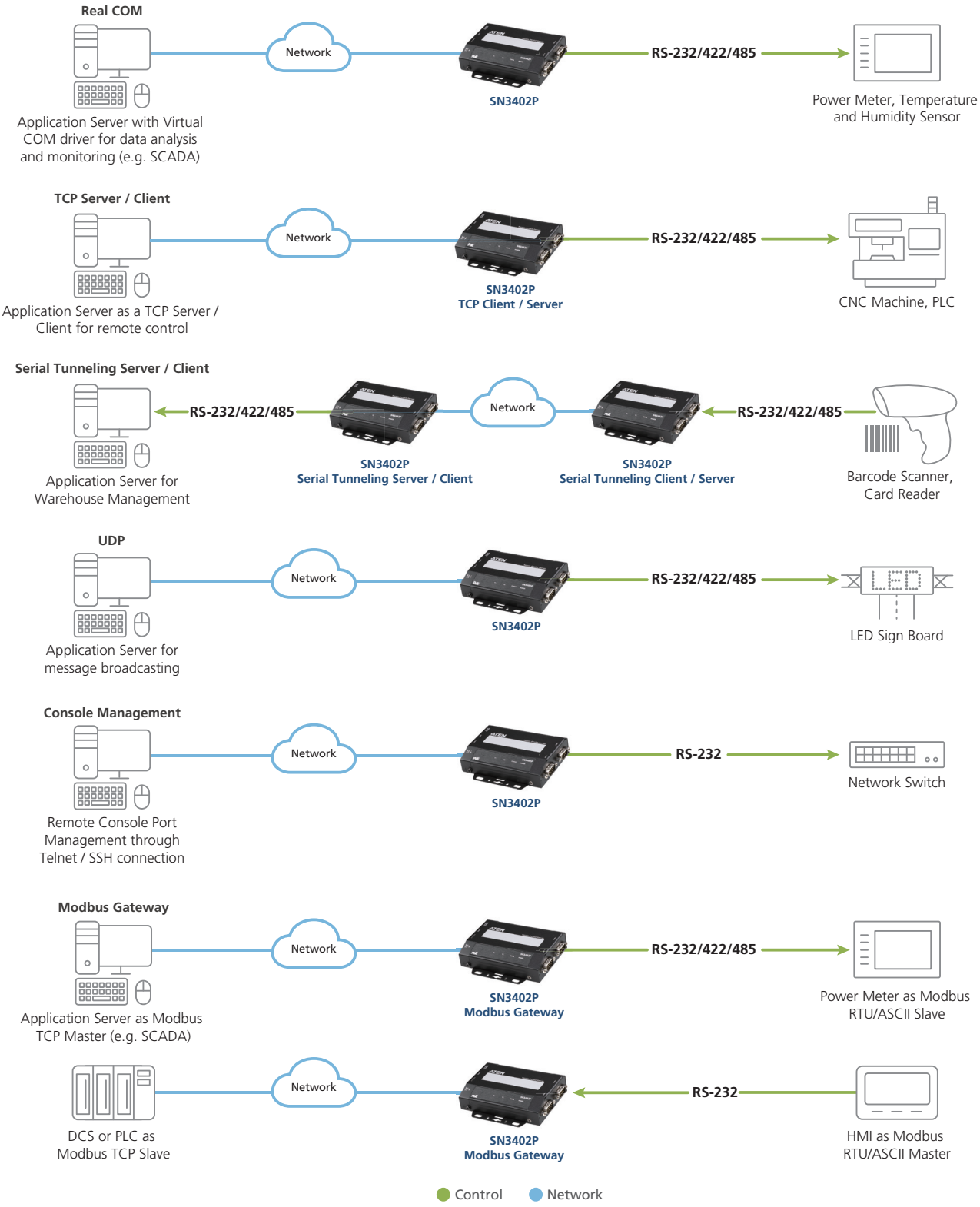
Item	SN3401	SN3402	SN3401P	SN3402P
Power Adapter	•	•	N/A	N/A
DC Terminal Connector	•	•	•	•
Foot Pad Set (4 pcs)	•	•	•	•
DIN Rail Mount Kit	•	•	•	•

Optional Accessories

Item	Description
2X-051G	DIN-Rail Mount Kit
VE-RMK1U	1U Extender Rack Mount Kit
Power Adapter	9 V DC, 100 – 240 V AC, 50 – 60 Hz, 0 – 40 °C operating temperature

Please contact your local dealer for the purchase.

Setup



DIN Rail Mount Kit Installation Diagram

Perpendicular Installation

Parallel Installation

Specifications

	SN3401	SN3402	SN3401P	SN3402P
Connectors				
Serial	1 x DB-9 Male	2 x DB-9 Male	1 x DB-9 Male	2 x DB-9 Male
Network	1 x RJ-45 Female			
Power	1 x DC Jack; 1 x 3-pole Terminal Block		1 x DC Jack; 1 x 3-pole Terminal Block 1 x RJ-45 (PoE, IEEE 802.3af)	
Switches				
Reset	1 x Semi-recessed Pushbutton			
LEDs				
Power	1 (Green)			
Status	1 (Yellow Green / Red)			
10/100 Mbps	2 (Green / Orange)			
Ports	1 (Green / Orange)	2 (Green / Orange)	1 (Green / Orange)	2 (Green / Orange)
Input Voltage	DC Jack: 9 V DC (Power Adapter: 9 V DC 100-240 V AC 50~60 Hz) Terminal Block: 9-48 V DC		DC Jack: 9 V DC (Optional Power Adapter) Terminal Block: 9-48 V DC; PoE: 48 V DC	
Power Consumption	DC 9 V:1.18 W DC 48 V:1.30 W	DC 9 V:1.19 W DC 48 V:1.30 W	DC 9 V : 1.18 W DC 48 V:1.30 W POE:1.475 W	DC 9 V : 1.19 W DC 48 V:1.30 W POE:1.48 W
Interfaces				
Serial	RS-232: TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND RS-422: Tx+, Tx-, Rx+, Rx-, GND RS-485-4w: Tx+, Tx-, Rx+, Rx-, GND RS-485-2w: Data+, Data-, GND Pull High/Low Resistor for RS-485: 1 kilo-ohm, 150 kilo-ohms Baud Rate: 110, 134, 150, 300, 600, 1200, 1800, 2400, 4800, 7200, 9600, 19200, 38400, 57600, 115200, 230400, 460800, 921600 bps Data Bits: 5, 6, 7, 8 Parity: None, Even, Odd, Space, Mark Stop Bits: 1, 1.5, 2 Flow Control: RTS/CTS, DTR/DSR, XON/XOFF			
Network	10 / 100 Base TX; Built-in 1.5 kV Magnetic Isolation Protection			
Industrial Protocols	Ethernet: Modbus TCP Client (Master), Modbus TCP Server (Slave) Serial: Modbus RTU/ASCII Master, Modbus RTU/ASCII Slave Max. 16 connections under Modbus Master mode and 32 connections under Modbus Slave mode.			
Compliance	EMC: EN 55032/35 EMI: CISPR 32, FCC Part 15B Class A EMS: IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m IEC 61000-4-4 EFT: Power: 1 kV; Signal: 0.5 kV IEC 61000-4-5 Surge: Power: 2 kV (Power Adapter), 1kV (Terminal Block); Signal: 1 kV IEC 61000-4-6 CS: 150 kHz to 10 MHz: 3 V/m; 10 kHz to 30 MHz: 3 to 1 V/m; 30 kHz to 80 MHz: 1 V/m IEC 61000-4-8 PFMF IEC 61000-4-11 DIPs Safety: UL 60950-1 and UL 62368-1 standards compliant RoHS			
Environmental				
Operating Temperature	0 – 60 °C			
Storage Temperature	-40 – 75 °C			
Humidity	5 – 95% RH, Non-condensing			
Physical Properties				
Housing	Metal			
Weight	0.20 kg	0.21 kg	0.21 kg	0.22 kg
Dimensions (L x W x H)	9.80 x 11.70 x 2.60 cm			
Installation	Desktop, Wall Mounting, Din-Rail Mounting, Rack Mounting (with VE-RMK1U)* *Rack mounting kit (VE-RMK1U) is sold separately.			

ATEN International Co., Ltd.
3F., No.125, Sec. 2, Datung Rd., Sijhih District., New Taipei City 221, Taiwan
Phone: 886-2-8692-6789 Fax: 886-2-8692-6767
www.aten.com E-mail: marketing@aten.com

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