8/16/32/48-Port Serial Console Server

SN0108CO / SN0116CO / SN0132CO / SN0148CO / SN9108CO / SN9116CO

ATEN SN01xxCO Series (SN0108CO / SN0116CO / SN0132CO / SN0148CO) and SN91xxCO Series (SN9108CO / SN9116CO) provide IT and network administrators secure, out-of-band access to serial devices located at data centers or remote sites (such as network switches allowing console operation using RS-232). With dual power / LAN in SN01xxCO models and single power / LAN in the SN91xxCO models, they both integrate cutting edge technologies to provide convenient installation, secure serial device access, easy management and comprehensive control for data centers.

The SN01xxCO and SN91xxCO Series features Cisco pin-outs and auto-sensing DTE / DCE function, providing a direct connection to Cisco network switches (and other compatible devices) without rollover cables for more time-saving IT infrastructure deployment. In addition, the SN01xxCO and SN91xxCO models support online detection of connected serial devices (including terminal blocks) for device status monitoring. An e-mail notification will be sent to the administrator when connected devices are offline.

With dual Ethernet ports and power supplies (AC), the SN01xxCO supports power redundancy as well as failover, or dual IP addresses access, ensuring 24 / 7 availability of access to serial devices. A DC power option is also available for each of the SN01xxCO model for more flexible implementation.*

Available in 8-, 16-, 32- and 48-port models, the SN01xxCO serial console servers offer both in-band and out-of-band (OOB) remote serial console access to servers and network devices via a direct Telnet / SSH client and Java viewer. The OOB management enables IT administrators to manage network devices (e.g. router, switch, UPS) in server rooms using management networks that are separated from the main / production networks. Where access difficulty occurs in the production network, the administrators can still access them via the console server. The serial console servers offer out-of-band access methods such as direct console connection from a local computer, USB console connection from a laptop, PSTN connection via modem, or hybrid network connection via the dual LAN ports (one connected to the production network and the other connected to the management network).

Implemented with various security technologies such as TLS 1.2 data encryption, RSA 2048-bit certificates, configurable user permissions for port access and control, local / remote / third-party authentication and authorization, IP / MAC address filter, and FIPS 140-2 certified cryptography, the SN01xxCO and SN91xxCO serial console servers assure administrators the security for easy and high-level access. For instance, access rights and privileges can be applied to 8 / 16 / 32 / 48 serial ports individually. Data encryption is provided to ensure that information and control are always protected. Logging and alerting of system events help to quickly resolve issues and mitigate risks. While secured by the above examples, the consolidated password authentication simplifies management.

The SN01xxCO and SN91xxCO Series are used to connect serial devices to an Ethernet network to allow access and control of demanding applications that manage industrial control, data acquisition, environment monitoring, remote facility operations and equipment management. Multiple operational modes are available to administrators including Console Management, Console Management Direct, Real COM Port, TCP Server / Client, UDP Server / Client, and Virtual Modem. Furthermore, the SN01xxCO Series works in tandem with ATEN's PDU remote power management systems. Both can be utilized through ATEN's CC2000 software to provide centralized serial device access and integrated power management.

With their comprehensive features, the SN01xxCO and SN91xxCO Series help to maximize IT productivity, increase scalability, as well as reduce installation and operational costs with easy and secure remote management of serial devices. The serial console servers save you time and money by allowing administrators to manage their data centers from practically anywhere – minimizing travel and MTTR (Mean Time to Repair) costs, and ensuring the highest availability for data center services.

Note: DC power models include SN0108COD, SN0116COD, SN0132COD, and SN0148COD.

![ATEN - Simply Better Connections]

SN0148CO Front View

SN0148CO Rear View

SN0148COD Front View

SN0148COD Rear View

SN9116CO Front View

SN9116CO Rear View

Features

System Accessibility and Availability

- Secure in-band and out-of-band remote serial console access
- Browser access with an intuitive GUI
- Terminal-based access with a menu-driven UI
- Modem dial-in / dial-back / dial-out access
- Front USB ports for storage[1]
- Laptop USB Console (LUC) port for local console access via laptop[1]
- Dual Ethernet ports allow fail control or dual IP address access[1]
- Dual power supply[1]

Serial Console Management

- Auto-sensing DTE / DCE feature supports a direct connection to Cisco network switches (and other compatible devices) without rollover cables for more convenient IT infrastructure deployment
- Online / Offline detection of connected serial devices (including terminal blocks) – automatically send event notifications when the devices are offline (e.g. power failure) for device status monitoring
- Response Check – checks the system status of the connected serial devices, and sents a notification if the check fails (e.g. system crash)
- Convenient and simple serial device access via selectable Telnet / SSH and third-party clients such as PuTTY
- Easy port access via selectable ActiveX or Java serial viewer
- Comprehensive viewer functions – copy / paste, logging, data import, macros, broadcasting and message board
- Sun Solaris ready – Sun "break-safe"
- Alert Strings – whenever one of the pre-defined strings matches the message sent from the serial devices, you will be informed by serial console server via SNMP Trap alert and / or an email
- Command filter – administrators can restrict users to execute only pre-defined commands
- Multiple users can simultaneously access the same port – up to 16 connections per port
- Modes for simultaneous access – Exclusive / Occupy / Share mode
- Integrates with ATEN PDU for power management of each port[1]

Security

- Supports secure 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 via RADIUS, TACACS+, LDAP / AD and Kerberos
- IP and MAC address filter for enhanced security protection
- High security grade – supports FIPS 140-2 level 1 security standards that use an embedded FIPS 140-2 certified OpenSSL cryptographic module (Certificate #1747, #2398, #2473)
- Supports security level configuration – High, Medium-high, Medium or Custom, to ensure a fine granularity of network access control

System Management

• System configuration via web browser, Telnet / SSH client and local console
• System log and event login
• Event Destination – Event logs will be saved to Log server, Syslog server, and USB drive[1]
• SNMP agent v1/v2c/v3
• Event notification – supports notification of SMTP email, SNMP Trap, and SMS (with additional mobile devices)
• Backup / Restore system configuration and upgradeable firmware
• Multi-browser support – Internet Explorer, Chrome, Firefox
• NTP for time server synchronization
• IPv4 / IPv6 support
• LLDP support
• Integrates into CC2000 software for centralized data center management
• Integrates into CCVSR software for user session recording

Serial Device Management

• Serial operation modes – Console Management, Console Management Direct, Real COM Port, TCP Server / Client, UDP Server / Client, and Virtual Modem
• Real COM driver for Windows 2000 or higher and Windows Server 2003 / 2008
• Real TTY driver for Linux
• Fixed TTY driver for UNIX[2]
• Supports baud rates of 300, 600, 1200, 1800, 2400, 4800, 9600, 19200, 28800, 38400, 57600, 115200, 230400 bps
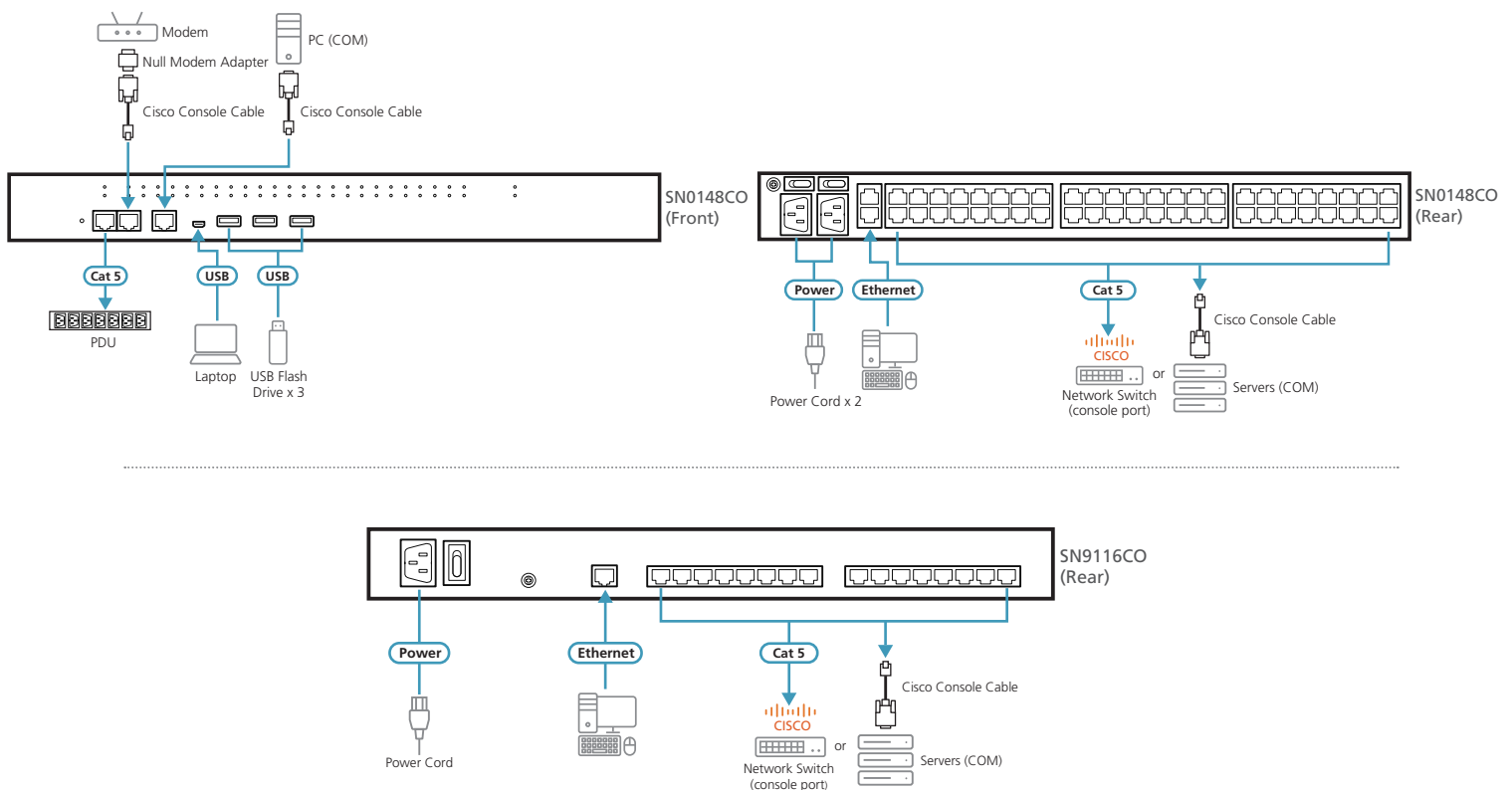
Language

• Multi-language web-based GUI – available in English, German, Japanese, Korean, Russian, Simplified Chinese and Traditional Chinese

Note: 1.SN01xxCO / SN01xxCOD only
　　　　2.Fixed TTY Driver supports:
　　　　　- OpenServer (Sco Unix)
　　　　　- UnixWare 7, SVR 5
　　　　　- UnixWare 2.1, SVR 4.2
　　　　　- QNX 4.25, QNX 6
　　　　　- FreeBSD
　　　　　- Solaris 10
　　　　　- AIX 5.x
　　　　　- HP-UX 11i

Diagram

Specifications

	SN0108CO	SN0116CO	SN0132CO	SN0148CO	SN9108CO	SN9116CO
Connection	8	16	32	48	8	16
Connectors						
Serial	8 x RJ-45 Female	16 x RJ-45 Female	32 x RJ-45 Female	48 x RJ-45 Female	8 x RJ-45 Female	16 x RJ-45 Female
LAN Ports	2 x RJ-45 Female				1 x RJ-45 Female	
Power	AC Model (SN0108CO): 2 x IEC 60320/C14 DC Model (SN0108COD): 2 x 2-pin Terminal Block (Green)	AC Model (SN0116CO): 2 x IEC 60320/C14 DC Model (SN0116COD): 2 x 2-pin Terminal Block (Green)	AC Model (SN0132CO): 2 x IEC 60320/C14 DC Model (SN0132COD): 2 x 2-pin Terminal Block (Green)	AC Model (SN0148CO): 2 x IEC 60320/C14 DC Model (SN0148COD): 2 x 2-pin Terminal Block (Green)	1 x IEC60320/C14	
PON	1 x RJ-45 Female (Reserved)				N/A	
Modem	1 x RJ-45 Female				N/A	
Local Console	1 x RJ-45 Female				N/A	
Laptop USB Console (LUC) Port	1 x Mini USB				N/A	
USB Port	3 x USB Type-A Female				N/A	
Switches						
Power	2 x Rocker Switch				1 x Rocker Switch	
Reset	1 x Recessed Pushbutton					
Maximum Input Power Rating	100 - 240 V~, 1.8 A, 50 / 60 Hz		100 - 240 V~, 1.8 A, 50 / 60 Hz		100 - 240 V~, 1.8 A, 50 / 60 Hz	
Power Consumption	AC 110 V:5.3 W AC 220 V:5.2 W	AC 110 V:5.5 W AC 220 V:5.5 W	AC 110 V:9.8 W AC 220 V:9.7 W	AC 110 V:10.3 W AC 220 V:10.2 W	AC 110 V:4.9 W AC 220 V:4.8 W	AC 110 V:5.5 W AC 220 V:5.4 W
LEDs						
Serial	8 (Green)	16 (Green)	32 (Green)	48 (Green)	8 (Green)	16 (Green)
10/100/1000 Mbps	2 (Red / Orange / Green)				1 (Red / Orange / Green)	
Power	2 (Blue)				1 (Blue)	
Mode of Operation	Console Management, Console Management Direct, Real COM Port, TCP Server / Client, UDP Server / Client, Virtual Modem					
Environmental						
Operating Temperature	0˚ - 40˚ C					
Storage Temperature	-20˚ - 60˚ C					
Humidity	0 - 80% RH, Non-condensing					
Physical Properties						
Housing	Metal					
Weight	4.35 kg	4.38 kg	4.55 kg	4.61 kg	3.12 kg	3.16 kg
Dimensions (L x W x H)	43.72 x 32.98 x 4.40 cm		43.84 x 32.77 x 4.40 cm		43.72 x 21.76 x 4.40 cm	