

SSH CONSOLE SWITCH

Securely control up to 32 RS232 devices via the Internet



- Linux Inside
- IPV6 Compatible

SERIMUX-S-16DP (Front and Back)

Features & Applications

The SERIMUX® Secure SSH Console Serial Switch delivers secure management of up to 32 serial devices via the internet, TCP/IP network, or dial-up modem connections. It combines the advanced security of Secure Shell v2 with unlimited access to remote network management.

- Operates on a hardened Linux system.
- Connect up to 32 devices with different baud rates, parity, and character length. Each switch also has one RJ45 connector for a local terminal.
- Eliminates the need to connect each device to an ASCII terminal or PC.
- Provides out-of-band access to network devices (servers, routers, network switches, and any other network devices allowing console operation using RS232).
- Connects to console serial ports using standard CAT5/5e/6 cables and cable adapters.
 - Maximum cable length is 304.8 meters.
- Dual Ethernet and optional dual power provide redundant connectivity and power.
- USB port provides expanded logging storage, configuration export and additional functionality.
- High quality, rugged steel construction with durable powder coat finish.
- Gain access to servers without interrupting service to end-users; maintain optimal up-time.
- Monitor environmental conditions.
 - Supports two sensors, including: temperature, humidity, and water detection.
 - When a sensor goes out of range of a configurable threshold, the system will notify you via email, LEDs, web page, and network management (SNMP).
- Power cycle without halting SUN host computer.
 - No inadvertent "break" signals are generated to cause unintentional rebooting of SUN computers.
- Powerful diagnostic and event management features (data capture, notification and scripting) assist in the quick location of the source of equipment failures and minimize downtime.
- Enhanced security features to protect the system—Secure Shell (SSH v2), individual port authentication, HTTPS.
- Switching is simplified with programmable device names and menu-driven device selection.
- Firmware upgradeable "in-field" through console port, Ethernet, or an attached USB Flash drive.
- 1RU case is standard. Includes rack mounting kit.

Specifications

Compatibility

- Supports most devices with an RS232 serial port.
- Supports any VT type terminal.

Serial Interface

- Female RJ45 EIA-232 serial port connectors.
- One female RJ45 EIA-232 console port connector.
- Each individual serial port is fully configurable.
- Data transfer rate: industry-standard baud rates ranging from 50 up to 115.2kbps.
 - Two ports can be at different baud rates.
- Flow control: Hardware (RTS/CTS), Software (XON, XOFF), both or none.
- Data format: 5, 6, 7 or 8 data bits with or without parity, 1 or 2 stop bits.
- Signals: RS232 CTS, DSR, RXD, GND, DCD, TXD, DTR, RTS
- Modem control: DTR/DSR and RTS/CTS

Regulatory Approvals

- CE, RoHS

Network Interface

- Two 10/100 Base-T Ethernet ports with RJ45 Ethernet connector
- Supports both static and dynamic IP addresses

Power

- Input Voltage: AC 100 to 240 V, 50 to 60 Hz
- Optional 48 VDC power
- Optional dual AC power or dual DC power available on all models

RJ45 Sensor Ports

- Two RJ45 modular jacks for connecting NTI temperature, humidity, temperature/humidity, and liquid detection sensors.

Internal Temperature Sensor

- Applications from 0°C to 40°C (32°F to 104°F).
- Accurate to within $\pm 0.75^\circ\text{C}$ ($\pm 1.35^\circ\text{F}$).

Memory

- 32MB Flash memory.
- Female USB 2.0 Type A connector for storage devices.

SSH CONSOLE SWITCH

Securely control up to 32 RS232 devices via the Internet

Specifications (Continued)

Protocols

- SSH V2, Telnet
- IPV4, IPV6
- TCP/IP, TFTP, DHCP, ICMP, UDP, ARP
- HTTP, HTTPS, SMTP, SNMP V1/V2c, SNTP
- IPMI v2, RMCP

Alerts

- Alerts are sent using email and/or SNMP traps when any monitored environmental condition exceeds a user-specified range.
 - Alerts are posted in message log, which is accessible through Web user interface. The log can be downloaded as a tab-delimited plain text file.
 - Sends notifications of alerts to multiple email addresses, and/or SNMP addresses. The users can configure the schedule when they will be alerted.

Control Methods

- HTTP/HTTPS Web Interface, Telnet/SSH, System console.
- Supports up to 32 users.
- Two user levels: User and Administrator.

LED Indicators

- Full featured status display via LED indicators:
 - CPU – power.
 - Console – device activity.
 - Ethernet – connection/speed/activity.
 - Each Serial Port – device activity.
 - "INT ALERT" – internal sensor goes out of range of a configurable threshold.
 - "EXT ALERT" – external sensor goes out of range of a configurable threshold.

Sensors

Temperature, Humidity & Combination Sensor



ENVIROMUX-STS
ENVIROMUX-SHS
ENVIROMUX-STHS

- Temperature Sensor (ENVIROMUX-STS)
 - Applications from 0° to 50°C (32°F to 122°F).
 - Accurate to within $\pm 1^\circ\text{C}$ ($\pm 2^\circ\text{F}$).
- Humidity Sensor (ENVIROMUX-SHS)
 - 20% to 80% relative humidity, $\pm 5\%$
 - ◆ For applications from 0°C to 40°C (32°F to 104°F)
- Temperature/Humidity Sensor (ENVIROMUX-STHS)
 - Applications from 0°C to 50°C (32°F to 122°F)
 - Accurate to within $\pm 1^\circ\text{C}$ ($\pm 2^\circ\text{F}$)
 - ◆ 20% to 80% relative humidity, $\pm 5\%$
- RJ45 connector
- Supports CAT5/5e/6 cable up to 304.8m (not included).
- Regulatory approvals: CE, RoHS

Logging & Buffering

- System log, event-log of user activity and on-line data buffering.
- Data-logging with date and time-stamp, locally.

Environmental

- Operating temperature: 0°C to 40°C (32°F to 104°F)
- Storage temperature: -30°C to 60°C (-20°F to 140°F)
- Operating and Storage Relative Humidity: 17 to 90% non-condensing RH

Warranty

- Two years.

Security

- Local DB authentication.
- Remote authentication using RADIUS, LDAP, TACACS+, Active Directory and Kerberos protocols.
- TLS/SSL secure communications.
- SSH v1, SSH v2, SSL.
- AES, 3DES/DES, Blowfish, Twofish, RSA, EDH-RSA, Arcfour Encryptions.

Cables

- Use CAT5, CAT5e or CAT6 UTP straight through cable for TIA/EIA-568B wiring terminated with standard RJ45 connectors.
- One 6-foot CAT5 cable included.

Adapters

- Four cable adapters are included with the SERIMUX-S-x.
 - Male DB-25 console adapter.
 - Male DB-25 modem adapter.
 - Female DB-9 console adapter.
 - Female DB-25 console adapter.
- Additional adapters can be purchased.

Liquid Detection Sensor



ENVIROMUX-LDSx-y

- For warning of flooding.
- Detects liquid depth >0.25 cm.
- Minimum puddle: 1.53 cm diameter.
- 100% waterproof electronics.
- Detects any liquid, except deionized water.
- Supports CAT5/5e/6 cable up to 305 meters (not included).
- Supports water sensor cable lengths from 0.3 to 305 meters.
- Supports 2-wire cable lengths from 1.52 to 30.5 meters.
- Regulatory approvals: CE, RoHS



sales@ntigo.com



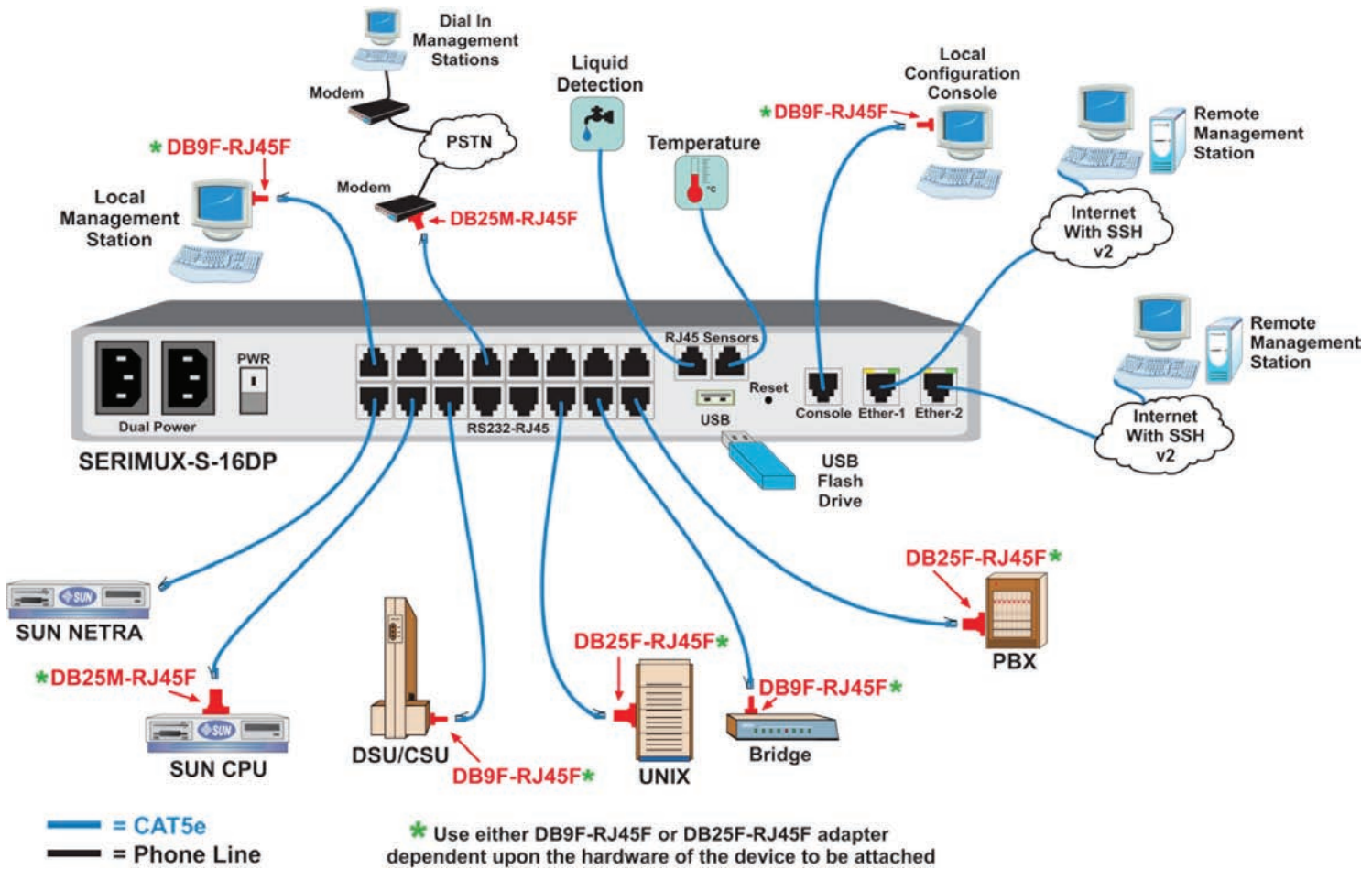
www.networktechinc.com

© 2009 NTI
All rights reserved

SERIMUX® SSH CONSOLE SWITCH

Securely control up to 32 RS232 devices via the Internet

Configuration and Cable Illustration



Secure SSH Console Switch with Environment Monitoring Models

| NTI Part# | # of Ports | Power | Desktop Size (WxDxH) (without supplied rackmount kit) | Rack Units | Rack Size (WxDxH) (with supplied rackmount kit) |
|--------------------|------------|------------|---|------------|---|
| SERIMUX-S-4 | 4 | AC | 411.5x228.6x44 | 1RU | 483x228.6x44 |
| SERIMUX-S-4DP | 4 | Dual AC | 411.5x228.6x44 | 1RU | 483x228.6x44 |
| SERIMUX-S-4-48V | 4 | 48VDC | 411.5x228.6x44 | 1RU | 483x228.6x44 |
| SERIMUX-S-4-48VDP | 4 | Dual 48VDC | 411.5x228.6x44 | 1RU | 483x228.6x44 |
| SERIMUX-S-8 | 8 | AC | 411.5x228.6x44 | 1RU | 483x228.6x44 |
| SERIMUX-S-8DP | 8 | Dual AC | 411.5x228.6x44 | 1RU | 483x228.6x44 |
| SERIMUX-S-8-48V | 8 | 48VDC | 411.5x228.6x44 | 1RU | 483x228.6x44 |
| SERIMUX-S-8-48VDP | 8 | Dual 48VDC | 411.5x228.6x44 | 1RU | 483x228.6x44 |
| SERIMUX-S-16 | 16 | AC | 411.5x228.6x44 | 1RU | 483x228.6x44 |
| SERIMUX-S-16DP | 16 | Dual AC | 411.5x228.6x44 | 1RU | 483x228.6x44 |
| SERIMUX-S-16-48V | 16 | 48VDC | 411.5x228.6x44 | 1RU | 483x228.6x44 |
| SERIMUX-S-16-48VDP | 16 | Dual 48VDC | 411.5x228.6x44 | 1RU | 483x228.6x44 |
| SERIMUX-S-24 | 24 | AC | 431.8x256.5x44 | 1RU | 483x256.5x44 |
| SERIMUX-S-24DP | 24 | Dual AC | 431.8x256.5x44 | 1RU | 483x256.5x44 |
| SERIMUX-S-24-48V | 24 | 48VDC | 431.8x256.5x44 | 1RU | 483x256.5x44 |
| SERIMUX-S-24-48VDP | 24 | Dual 48VDC | 431.8x256.5x44 | 1RU | 483x256.5x44 |
| SERIMUX-S-32 | 32 | AC | 431.8x256.5x44 | 1RU | 483x256.5x44 |
| SERIMUX-S-32DP | 32 | Dual AC | 431.8x256.5x44 | 1RU | 483x256.5x44 |
| SERIMUX-S-32-48V | 32 | 48VDC | 431.8x256.5x44 | 1RU | 483x256.5x44 |
| SERIMUX-S-32-48VDP | 32 | Dual 48VDC | 431.8x256.5x44 | 1RU | 483x256.5x44 |