



IOLAN STS Rack



- 4, 8, 16 or 24 serial RS232 on RJ45 Ports
- 10/100/1000 Ethernet
- AC power or 48v DC power models
- Advanced security feature set

Engineers and Project Managers that require a cost effective **serial RS232-to-Ethernet** 1U rack solution that maintains serial device protocol integrity across Ethernet must consider the IOLAN STS Rack. Having the highest performance processor available along with Perle's unique TrueSerial™ technology, the IOLAN STS Rack will provide the most authentic serial connections across Ethernet.

Ideal for

- Engineers and Project Managers requiring a high performance serial to Ethernet interface for 4 to 24 serial RS232 based devices. Connect to serial based applications over Ethernet
- IT Professionals requiring a cost-effective **terminal server** or serial **console server** for out of band management of IT equipment located in smaller data centers or remote sites

Why IOLAN STS Rack models are the preferred choice:

- High performance 400 MHz, 750 MIPS, 32 bit processor with integrated hardware encryption processor for the best throughput
- Next Generation IP support (IPv6) for investment protection and network compatibility
- TrueSerial™ packet technology – the most authentic serial connections across Ethernet ensures serial protocol integrity
- Primary/Backup host functionality enables automatic connections to alternate hosts should the primary TCP connection go down
- EasyPort Web – Access equipment serial console ports by using your java-enabled Internet browser
- TruePort – Perle's com/tty redirector for serial based applications operates on Windows, Vista, Linux, Solaris, SCO and Unix
- Clustering – Provides a single view of all out of band console ports. Ideal for large data centers
- FIPS 140-2 – Cryptographic modules meet US Government NIST compliancy
- Dynamic DNS – Easy console management access from anywhere on the Internet 4, 8, 16 or 24 serial RS232 on RJ45 Ports
- Intelligent Power cycling of equipment with Perle Remote Power Switches
- Java-free browser access to remote serial console ports via Telnet and SSH
- Ping watchdog probes enable customers to power cycle equipment with attached Perle RPS power switches in the event of an unresponsive networking gear
- Lifetime warranty – best investment protection available

Serial Port Access

- Connect directly using Telnet / SSH by port and IP address
- Connect with EasyPort menu by Telnet / SSH
- Use an internet browser to access with HTTP or secure HTTPS via EasyPort Web menu
- Java-free browser access to remote serial console ports via Telnet and SSH
- Ports can be assigned a specific IP address (aliasing)
- Multisession capability enables multiple users to access ports simultaneously
- Multihost access enables multiple hosts/servers to share serial ports

Accessibility

- In-band (Ethernet) and out-of-band (dial-up modem) support
- Dynamic DNS enables users to find a console server from anywhere on the Internet
- Domain name control through DHCP option 81
- IPV6 and IPV4 addressing support

Availability

- Primary/Backup host functionality enables automatic connections to alternate host(s)

Security

- SSH v1 and v2
- SSL V3.0/TLS V1.0, SSL V2.0
- SSL Server and SSL client mode capability
- SSL Peer authentication
- IPSec VPN : NAT Traversal, ESP authentication protocol
- Encryption: AES (256/192/128), 3DES, DES, Blowfish, CAST128, ARCFOUR(RC4), ARCTWO(RC2)
- Hashing Algorithms: MD5, SHA-1, RIPEMD160, SHA1-96, and MD5-96
- Key exchange: RSA, EDH-RSA, EDH-DSS, ADH
- X.509 Certificate verification: RSA, DSA
- Certificate authority (CA) list
- Local database
- RADIUS Authentication, Authorization and Accounting
- TACACS+ Authentication, Authorization and Accounting
- LDAP, NIS, Kerberos Authentication
- RSA SecureID-agent or via RADIUS Authentication
- SNMP v3 Authentication and Encryption support
- IP Address filtering
- Disable unused daemons
- Active Directory via LDAP

Terminal Server

- Telnet
- SSH v1 and v2
- Rlogin
- Auto session login
- LPD, RCP printer
- MOTD - Message of the day

Serial machine to Ethernet

- Tunnel raw serial data across Ethernet - clear or encrypted
- Raw serial data over TCP/IP
- Raw serial data over UDP
- Serial data control of packetized data
- Share serial ports with multiple hosts/servers
- Virtual modem simulates a modem connection - assign IP address by AT phone number
- Virtual modem data can be sent over the Ethernet link with or without SSL encryption
- TruePort com/tty redirector for serial based applications on Windows, Vista, Linux, Solaris, SCO and HP UX. For latest drivers click [here](#)



"TrueSerial packet technology provides the most authentic serial connections across Ethernet ensuring serial protocol integrity"

RFC 2217 standard for transport of serial data and RS232 control signals

Customizable or fixed serial baud rates

Plug-ins allow customer or Perle provided plug-ins for special applications

Software Development Kit (SDK) available

Serial encapsulation of industrial protocols such as ModBus, DNP3 and IEC-870-5-101

ModBus TCP gateway enables serial Modbus ASCII/RTU device connection to ModBus TCP

Data logging will store serial data received when no active TCP session and forward to network peer once session re-established - 32K bytes circular per port

Console Management

Sun Break Safe

Local port buffer viewing - 256K bytes per port

External port buffering via NFS, encrypted NFS and Syslog

Event notification

Manage AC power of external equipment using Perle RPS power management products

Clustering - central console server enables access ports across multiple console servers

Windows Server 2003/2008 EMS - SAC support GUI access to text-based Special Administrative Console

Ping watchdog probes enable customers to power cycle equipment with attached Perle RPS power switches in the event of an unresponsive networking gear

Remote Access

Dial, direct serial PPP, PAP/CHAP, SLIP

HTTP tunneling enables firewall-safe access to remote serial devices across the internet

Automatic DNS Update Utilize DHCP Opt 81 to set IOLAN domain name for easy name management and with Dynamic DNS support , users on the Internet can access the device server by name without having to know its IP address. See Automatic DNS update support for details

IPSEC VPN client/servers Microsoft L2TP/IPSEC VPN client (native to Windows XP)
 Microsoft IPSEC VPN Client (native to Windows Vista)
 Cisco routers with IPSEC VPN feature set
 Perle IOLAN SDS/STS and SCS models

OA&M (Operations, Administration and Management)

SNMP V3 - read and write, Perle MIB

Syslog

Perle Device Manager - Windows based utility for large scale deployments

Configurable default configuration

Installation Wizard


Set a Personalized Factory Default for your IOLANs

Protocols

IPv6, IPv4, TCP/IP, Reverse SSH, SSH, SSL, IPsec/IPv4, IPsec/IPv6, L2TP/IPsec, CIDR, RIPv2/MD5, ARP, RARP, UDP, UDP Multicast, ICMP, BOOTP, DHCP, TFTP, SFTP, SNMP, Telnet, raw, reverse Telnet, LPD, RCP, DNS, Dynamic DNS, WINS, HTTP, HTTPS, SMTP, SNMPV3, PPP, PAP/CHAP, SLIP, CSLIP, RFC2217, MSCHAP

Hardware Specifications - IOLAN STS - AC Rack, RS232 Models

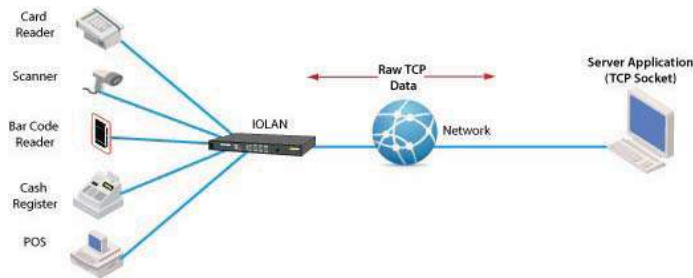
	IOLAN STS4	IOLAN STS8	IOLAN STS16	IOLAN STS24
Processor	MPC8349E, 400 Mhz, 750 MIPS			
Memory				
RAM MB	32	64	64	128
Flash MB	16	16	16	16
Interface Ports				
Number of Serial Ports	4	8	16	24
Serial Port Interface	RS232 DTE on RJ45			
Sun / Solaris	Sun break safe			
Serial Port Speeds	50bps to 230Kbps with customizable baud rate support			
Data Bits	5,6,7,8, 9-bit protocol support			
Parity	Odd, Even, Mark, Space, None			
Flow Control	Hardware, Software, Both			
Serial Port Protection	15Kv Electrostatic Discharge Protection (ESD)			
Local Console Port	RS232 on RJ45 with DB9 adapter (provided)			
Network	10/100/1000-base TX Ethernet RJ45			
	Software selectable Ethernet speed 10/100/1000, Auto			
	Software selectable Half/Full/Auto duplex			
Ethernet Isolation	1.5Kv Magnetic Isolation			
Power				
Power Supply	USA models	IEC320-C13 to NEMA 5-15P line cord		
	UK models	IEC320-C13 to BS1363 line cord		
	EU models	IEC320-C13 to CEE 7/7 Schuko		
	South Africa Models	IEC320-C13 to BS546 line cord		
	Australia models	IEC320-C13 to AS3112 line cord		
Nominal Input Voltage	110/230v AC			
Input Voltage Range	100-240v AC			
AC Input Frequency	47-63Hz			
Current Consumption @ 100v (Amps)	0.11	0.11	0.12	0.12
Current Consumption @ 240v (Amps)	0.05	0.05	0.06	0.06
Typical Power Consumption (Watts)	11	11	12	12
Power Line Protection	Fast transients: 1 KV (EN61000-4-4 Criteria B)			
	Surge: 2KV (EN61000-4-5 common mode), 1KV (EN61000-4-5 differential and common modes)			
Indicators				
LEDs	Power			
	System Ready			
	Network Link activity			
	Serial: Transmit and Receive data per port			
Environmental Specifications				
Heat Output (BTU/HR)	38	38	42	42
MTBF (Hours)	179425	174418	160992	130470
Operating Temperature	0C to 55C, 32F to 131F			
Storage Temperature	-40C to 85C, -40F to 185F			
Humidity	5 to 95% (non condensing) for both storage and operation.			
Ingress Protection Rating	IP30			
Mounting	1U - 19" rack, front and rear mounting hardware included			
Product Weight and Dimensions				
Weight	2.8 kg	3 kg	3.1 kg	3.1 kg
Dimensions	1U Rack form factor - 26.4 x 43.4 x 4.4 (cm), 10.38 x 17.1 x 1.75 (in)			

Packaging																														
Shipping Dimensions	59 x 36 x 9cm																													
Shipping weight	3.96 kg	3.98 kg	4.0 kg	4.2 kg																										
Regulatory Approvals																														
Emissions	FCC Part 15, Subpart B, Class A																													
	CFR47:2003, Chapter 1, Part 15 Subpart B,(USA) Class A																													
	ICES-003, Issue 4, February 2004 (Canada)																													
	EN55022:1998 + A1:2000 + A2:2003 Class A																													
	EN61000-3-2 : 1995, Limits for Harmonic Current Emissions																													
Immunity	EN61000-3-3 : 1995, Limits of Voltage Fluctuations and Flicker																													
	EN55024:1998 + A1:2001 + A2:2003																													
	EN61000-4-2: Electrostatic Discharge																													
	EN61000-4-3: RF Electromagnetic Field Modulated																													
	EN61000-4-4: Fast Transients																													
	EN61000-4-5: Surge																													
	EN61000-4-6: RF Continuous Conducted																													
	EN61000-4-8: Power-Frequency Magnetic Field																													
Safety	EN61000-4-11: Voltage Dips and Voltage Interruptions																													
	IEC 60950-1 : 2005 (2nd Edition) + A1 : 2009 and EN 60950-1 : 2006 + A11 : 2009																													
Other	CAN/CSA-C22.2 No. 60950-1-03 and ANSI/UL 60950-1, First Edition April 1st 2003 (Recognized Component)																													
	RoHS - 2002/95/EC Directive																													
	WEEE - 2002/96/EC Directive																													
	CCATS - G052929																													
	ECCN - 5A992A																													
 <p>IOLAN DTE Pin 1 RJ45 Socket</p>	<table border="1"> <thead> <tr> <th>IOLAN RJ45 Socket</th> <th>Function</th> <th>Direction</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>DCD</td> <td>←</td> </tr> <tr> <td>2</td> <td>RTS</td> <td>→</td> </tr> <tr> <td>3</td> <td>DSR</td> <td>←</td> </tr> <tr> <td>4</td> <td>TXD</td> <td>→</td> </tr> <tr> <td>5</td> <td>RXD</td> <td>←</td> </tr> <tr> <td>6</td> <td>GND</td> <td>—</td> </tr> <tr> <td>7</td> <td>CTS</td> <td>←</td> </tr> <tr> <td>8</td> <td>DTR</td> <td>→</td> </tr> </tbody> </table>			IOLAN RJ45 Socket	Function	Direction	1	DCD	←	2	RTS	→	3	DSR	←	4	TXD	→	5	RXD	←	6	GND	—	7	CTS	←	8	DTR	→
	IOLAN RJ45 Socket	Function	Direction																											
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HTSUS Number: 8471.80.1000																														
Perle Lifetime warranty																														
<p>Optional Perle adapters for use with straight thru CAT5 cabling</p> <p>Make your own cables</p>																														

TCP

Using RAW TCP Sockets

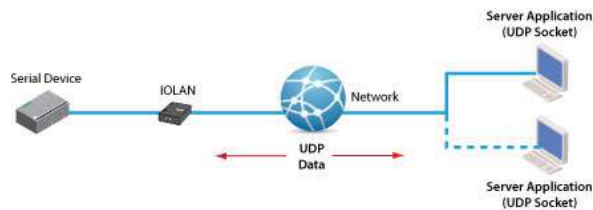
A raw TCP socket connection which can be initiated from the serial-Ethernet device or from the remote host/server. This can either be on a point to point or shared basis where a serial device can be shared amongst multiple devices. TCP sessions can be initiated either from the TCP server application or from the Perle IOLAN **serial-Ethernet** adapter.



UDP

Using Raw UDP Sockets

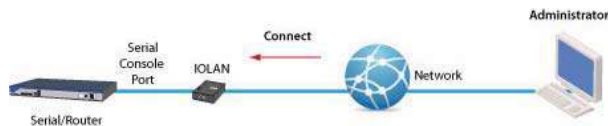
For use with UDP based applications, Perle IOLANs can convert serial equipment data for transport across UDP packets either on a point to point basis or shared across multiple devices.



Console Server

Console Management

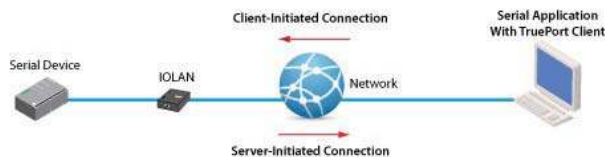
For access to remote console ports on routers, switches, etc, Perle IOLAN's enable administrators secure access to these RS232 ports via inband Reverse Telnet / SSH or out of band with dial-up modems. Perle IOLAN models with integrated modems are available.



COM/TTY

Connect Serial-based Applications with a COM/TTY Port Driver

Serial ports can be connected to network servers or workstations running Perle's TruePort software operating as a virtual COM port. Sessions can be initiated either from the Perle IOLAN or from TruePort.



Tunneling

Serial Tunneling between two Serial Devices

Serial Tunneling enables you to establish a link across Ethernet to a serial port on another IOLAN. Both IOLAN serial ports must be configured for Serial Tunneling (typically one serial port is configured as a Tunnel Server and the other serial port as a Tunnel Client).




Virtual Modem

Virtual Modem

Enables the serial-Ethernet adapter to simulate a modem connection. When connected to the IOLAN and initiates a modem connection, the IOLAN starts up a TCP connection to another IOLAN serial-Ethernet adapter configured with a Virtual Modem serial port or to a host running a TCP application.



	Description	Power Cord	Product Part Number
 IOLAN STS24 - 24 x RJ45 serial ports, 10/100/1000 Ethernet, 1U rack mount, RS232 interface, advanced feature set		USA	 04030464
		UK	 04030461
		EU	 04030462
		SA	 04030465
		AUS	 04030466
 IOLAN STS16 - 16 x RJ45 serial ports, 10/100/1000 Ethernet, 1U rack mount, RS232 interface, advanced feature set		USA	 04030444
		UK	 04030441
		EU	 04030442
		SA	 04030445
		AUS	 04030446
 IOLAN STS8 - 8 x RJ45 serial ports, 10/100/1000 Ethernet, 1U rack mount, RS232 interface, advanced feature set		USA	 04030414
		UK	 04030411
		EU	 04030412
		SA	 04030415
		AUS	 04030416
 IOLAN STS4 - 4 x RJ45 serial ports, 10/100/1000 Ethernet, 1U rack mount, RS232 interface, advanced feature set		USA	 04030404
		UK	 04030401
		EU	 04030402
		AUS	 04030406
		SA	 04030405

Accessories:

Accessories			
	3m Cbl-Straigththru	3 meter RJ45 to RJ45 CAT5 Straight-thru cable #1100360-10	 04005120
	IOLAN RACK DIN RAIL	DIN Rail Mounting Kit for all IOLAN Rack models	 04032490
	Starter Kit (8-wire)	IOLAN Starter Kit (8-wire): 1x RJ-45 to DB-25 DTE Male adapter, 1x RJ-45 to DB-25 DCE Male adapter, 1x RJ-45 to DB-25 DTE Female adapter, 1x RJ-45 to DB-9 Male DTE adapter, 1x RJ-45 to DB-9 Female DTE adapter and 1x RJ45M-RJ45F Sun/Cisco crossover adapter	 04007000
Cable Accessories			
Please click here to see what adapters you may need			
	3m Cbl-Sun/Cisco Prl	3m Cbl-Sun/Cisco Prl - RJ45-RJ45 IOLAN DS to Sun/Cisco 3m Cable	 04030070
	DBA0010	DBA0010 - RJ-45F to DB-25F crossover (DTE) adapter for console port #1100220-10	 04006950
	DBA0010 8pck	DBA0010 8pck - 8 pack of #04006950 IOLAN-RJ45F to DB25F (DTE) crossover adapter	 04031240
	DBA0011	DBA0011 - RJ-45F to DB-25M crossover (DTE) adapter for console ports. #1100230-10	 04006960
	DBA0011 8pck	DBA0011 8pck - 8 pack of #04006960 IOLAN-RJ45F to DB25M (DTE) crossover adapter	 04031250
	DBA0013	DBA0013 - RJ-45F to DB-25M straight-thru (DCE) adapter for modems #1100260-10	 04006990
	DBA0013 8pck	DBA0013 8pck - 8 pack of #04006990 IOLAN-RJ45F to DB25M Straight-thru adapter for modems	 04031280
	DBA0020	DBA0020 - RJ-45F to DB-9F crossover (DTE) adapter for console ports. #1100240-10	 04006970
	DBA0020 8pck	DBA0020 8pck - 8 pack of #04006970 IOLAN-RJ45F to DB9F (DTE) crossover adapter	 04031260
	DBA0021	DBA0021 - RJ-45F to DB-9M crossover (DTE) adapter for console ports. #1100250-10	 04006980
	DBA0021 8pck	DBA0021 8pck - 8 pack of #04006980 IOLAN-RJ45F to DB9M (DTE) crossover adapter	 04031270
	DBA0023	DBA0023 - RJ-45F to DB-9M straight-thru (DCE) adapter for modems #1100340-10	 04007200
	DBA0031	DBA0031 - IOLAN - RJ45M to RJ45F Sun/Cisco crossover adapter #1100219-10	 04030080
	DBA0031 8pck	DBA0031 8pck - 8 pack of #04030080 IOLAN-RJ45M to RJ45F Sun/Cisco crossover adapter	 04031230

Maintenance agreements - Console Server / Device Server / Terminal Server
[Please click here to check for maintenance availability in your region](#)

NSS- 4 PortXPRESSREP	4 Port Terminal/Device/Console Servers - Express Replacement	 SERNSS04
NSS- 4 PortXPRESSREPF	4 Port Terminal/Device/Console Servers - Express Replacement French	 SERNSS04F
NSS- 8 PortONSITE5x7	8 Port Terminal/Device/Console Servers - On Site Mon-Fri 9am - 5pm	 SOS5NSS08
NSS- 8 PortONSITE7X24	8 Port Terminal/Device/Console Servers - On-Site 7x24	 SOS7NSS08
NSS- 8 PortXPRESSREP	8 Port Terminal/Device/Console Servers - Express Replacement	 SERNSS08
NSS- 8 PortXPRESSREPF	8 Port Terminal/Device/Console Servers - Express Replacement French	 SERNSS08F
NSS-16 PortONSITE5x7	16 Port Terminal/Device/Console Servers - On-site Mon-Fri - 9am - 5pm	 SOS5NSS16
NSS-16 PortONSITE7X24	16 Port Terminal/Device/Console Servers - On-site 7x24	 SOS7NSS16
NSS-16 PortZPRESSREP	16 Port Terminal/Device/Console Servers - Express Replacement	 SERNSS16
NSS-16 PortZPRESSREPF	16 Port Terminal/Device/Console Servers - Express Replacement French	 SERNSS16F
NSS-24 PortONSITE5x7	24 Port Terminal/Device/Console Servers - On-site Mon-Fri, 9am - 5pm	 SOS5NSS24
NSS-24 PortONSITE7X24	24 Port Terminal/Device/Console Servers - On-site 7x24	 SOS7NSS24
NSS-24 PortXPRESSREP	24 Port Terminal/Device/Console Servers - Express Replacement	 SERNSS24
NSS-24 PortXPRESSREPF	24 Port Terminal/Device/Console Servers - Express Replacement French	 SERNSS24F