

IOLAN STS Rack

 perle.com/products/iolan-sts-terminal-server.shtml



- 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, Linux, Solaris, SCO, HP UX, NCR UNIX and AIX. For a complete list of all the 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 / Oracle Solaris 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
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[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
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IPSEC VPN client/servers	Microsoft L2TP/IPSEC VPN client (native to Windows XP)
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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, SNTP, 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 Serial Terminal Server

	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 Interfase	RS232 DTE on RJ45			
Sun / Solaris	Sun / Oracle 'Solaris' Safe - no "break signal" sent during power cycle causing costly server re-boots or downtime			
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, None			
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			
	EN61000-3-3 : 1995, Limits of Voltage Fluctuations and Flicker			
Immunity	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

EN61000-4-11: Voltage Dips and Voltage Interruptions

Safety

IEC 60950-1 : 2005 (2nd Edition) + A1 : 2009 and
EN 60950-1 : 2006 + A11 : 2009

CAN/CSA-C22.2 No. 60950-1-03 and ANSI/UL 60950-1,
First Edition April 1st 2003 (Recognized Component)

Other

[Reach, RoHS and WEEE Compliant](#)

CCATS - G052929

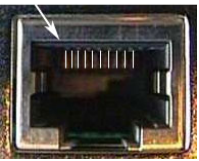
ECCN - 5A992A

HTSUS Number: 8471.80.1000

Perle Limited Lifetime Warranty

IOLAN DTE

Pin 1



RJ45 Socket

IOLAN RJ45 Socket	Function	Direction
1	DCD	←
2	RTS	→
3	DSR	←
4	TXD	→
5	RXD	←
6	GND	—
7	CTS	←
8	DTR	→

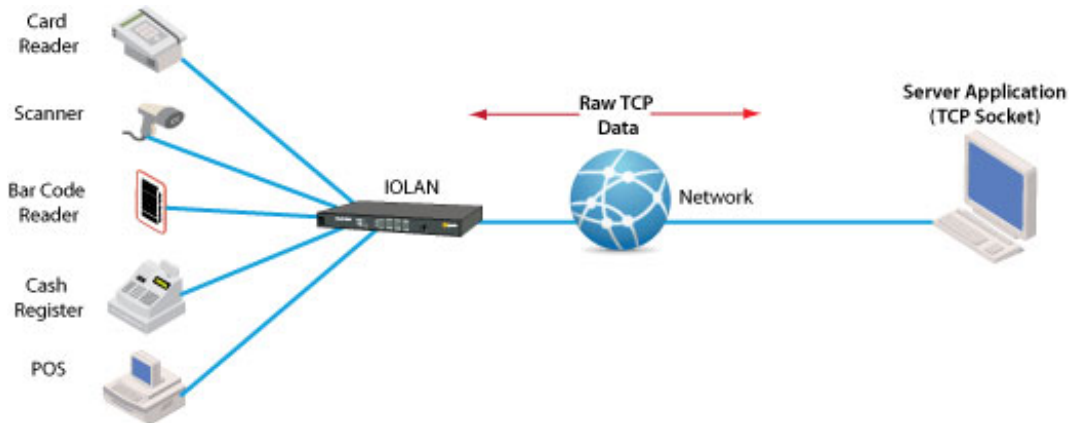
[Optional Perle adapters for use with straight thru CAT5 cabling](#)

[Make your own cables](#)

*Calculation model based on MIL-HDBK-217-FN2 @ 30 °C

Using RAW TCP Sockets

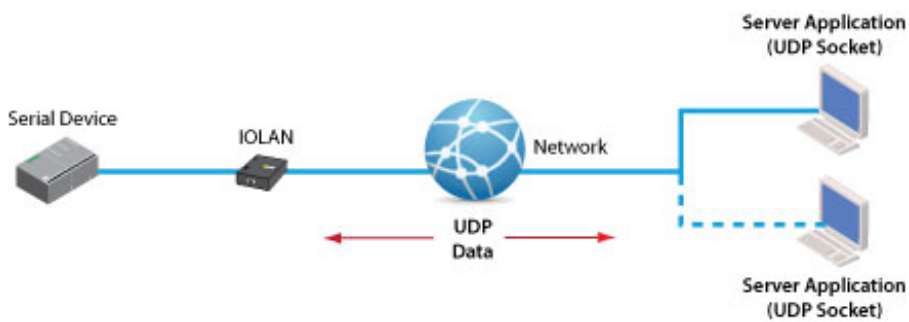
A raw TCP socket connection which can be initiated from the serial-Ethernet device or from the remote host/server. This can either be on a point to point or shared basis where a serial device can be shared amongst multiple devices. TCP sessions can be initiated either from the TCP server application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

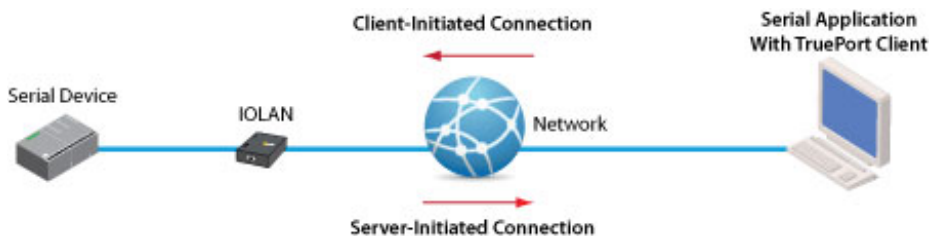
For access to remote console ports on routers, switches, etc, Perle IOLAN's enable administrators secure access to these RS232 ports via inband Reverse Telnet / SSH or out of band with dial-up modems. Perle IOLAN models with integrated modems are available.



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.

