

IOLAN SDSC Rack Dual Ethernet Terminal Server



perle.com/products/iolan-sdsc-rack-terminal-server.shtml

- 8, 16 and 32 software selectable RS232/422/485 serial port interfaces
- Dual 10/100/1000 Ethernet with Redundant Path Technology
- Advanced security features for data encryption, user authentication and event management
- AC and 48v DC model available



The **IOLAN SDSC Terminal Server** (also used as a Device Server or Console Server) is the most advanced product for **serial to Ethernet** applications.

Delivering the highest performance in a 1U form factor, an IOLAN SDSC offers robust security, reliability flexibility and next generation IP (IPv6) technology. It is ideal for applications that require remote serial device communication, data capture or device monitoring. With 8, 16 or 32 RJ45 ports, the IOLAN SDSC has the right fit for your serial to Ethernet application. The built-in dual Ethernet and Redundant Path Technology on the IOLAN SDSC provides dependable serial port access, making it the most reliable solution for connecting remote RS232, RS422 or RS485 equipment to Ethernet... all at the best price performance.

Ideal For

- Network engineers and Project Managers requiring a high performance **serial to Ethernet** interface for serial RS232 or RS485 based devices
- Environments where redundant network paths provided by Dual Ethernet interfaces are critical.
- Sites that require cost effective RS232/422/485 device connectivity in 48v DC environments

Why IOLAN SDSC Terminal Servers are the preferred choice:

- TrueSerial® delivers the most authentic serial connections across ethernet
- Universal, software selectable RS232/422/485 (EIA-232/422/485) serial ports prevents mechanical tampering in the field
- High performance 400 MHz, 750 MIPS, 32 bit processor with integrated hardware encryption processor for the best throughput
- Clustering – Provides a single view of all out of band console ports. Ideal for large data centers
- Intelligent Power cycling of equipment with Perle Remote Power Switches
- Next Generation IP support (IPv6) for investment protection and network compatibility
- Primary/Backup host functionality enables automatic connections to alternate hosts should the primary TCP connection go down
- RJ45 serial ports with Cisco pinouts for use with common CAT5 “rolled” cabling
- EasyPort Web – Access equipment serial console ports by using your java-enabled Internet

browser

- [FIPS 140-2](#) – Cryptographic modules meet US Government NIST compliancy
- [Dynamic DNS](#) – Easy console management access from anywhere on the Internet
- 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

PCI DSS Compliance: TLS v1.2, TLS v1.1, TLS v1.0, SSL v3.0, SSL v2.0

SSL Server and SSL client mode capability

SSL Peer authentication

[IPSec VPN : NAT Traversal, ESP authentication protocol](#)

SSH ciphers: AES-CTR, AES-GCM and ChaCha20-poly1305

SSL encryption: AES-GCM, key exchange ECDH-ECDSA, HMAC SHA256, SHA384

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

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, SNTP, Telnet, raw, reverse Telnet, LPD, RCP, DNS, Dynamic DNS, WINS, HTTP, HTTPS, SMTP, SNMPV3, PPP, PAP/CHAP, SLIP, CSLIP, RFC2217, MSCHAP

* Available on 2 and 4 port models

Hardware Specifications - IOLAN SDSC - dual ethernet RS232 / RS485 / RS422 Serial Device Server

	AC Hardware			48v DC Hardware		
	IOLAN SDS8C	IOLAN SDS16C	IOLAN SDS32C	IOLAN SDS8C DC	IOLAN SDS16C DC	IOLAN SDS32C DC
Processor	MPC8349E, 400 Mhz, 750 MIPS					
Memory						
RAM MB	64	64	128	64	64	128
Flash MB	16	16	16	16	16	16
Interface Ports						
Number of Serial Ports	8	16	32	8	16	32
Serial port interface	Software selectable RS232 / RS485 / RS422 DTE on RJ45 - RS485: full and half duplex					
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	Dual 10/100/1000-base TX ethernet RJ45					
	Software selectable Ethernet speed 10/100/1000, Auto					
	Software selectable Half/Full/Auto duplex					
Power						
Power Supply	USA - IEC320-C13 to NEMA 5-15P line cord UK - IEC320-C13 to BS1363 line cord EU - IEC320-C13 to CEE 7/7 Schuko South Africa - IEC320-C13 to BS546 line cord Australia - IEC320-C13 to AS3112 line cord			Terminal Blocks with screw terminals accommodating 28 - 12 AWG wire sizes. Dual DC Input : A / B		
Nominal Input Voltage	110/230v AC			48V DC		

Input Voltage Range	100-240v AC			36- 72V DC		
AC Input Frequency:	47-63Hz			-		
Typical power consumption (Watts)	14.0	15.0	16.0	12.0	13.0	14.0
Indicators						
LEDs	Power					
	System Ready					
	Network Link activity for each ethernet port					
	Serial: Transmit and Receive data per port					
Environmental Specifications						
Heat Output (BTU/HR)	47.77	51.18	54.59	40.94	44.36	47.77
MTBF(hours *)	124,366	106,970	87,003	117,887	102,142	83,782
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					
Case	SECC Zinc plated sheet metal (1 mm)					
Ingress Protection rating:	IP30					
Mounting	1U - 19" rack, front and rear mounting hardware included. DIN Rail mounting kit optional					
Product Weight and Dimensions						
Weight	3.0 Kg, 6.6 lbs	3.1 Kg, 6.8 lbs	3.2 Kg, 7.0 lbs	3.0 Kg, 6.6 lbs	3.1 Kg, 6.8 lbs	3.2 Kg, 7.0 lbs
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 9 (cm), 23 x 14 x 3.5 (in)					
Shipping weight:	4.2 Kg, 9.2 lbs	4.3 Kg, 9.5 lbs	4.5 Kg, 9.9 lbs	4.0 Kg, 8.8 lbs	4.1 Kg, 9.0 lbs	4.3 Kg, 9.5 lbs
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)					

	CISPR 32:2015/EN 55032:2015 (Class A)
	EN61000-3-2 : 2010, Limits for Harmonic Current Emissions
	EN61000-3-3 : 2010, Limits of Voltage Fluctuations and Flicker
Immunity	CISPR 24:2010/EN 55024:2010
	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
Standard Safety Certifications:	IEC 60950-1(ed 2); am1, am2 and EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013
	CAN/CSA-C22.2 No. 60950-1-03 and ANSI/UL 60950-1, First Edition April 1st 2003 (Recognized Component)
Other:	<u>Reach, RoHS and WEEE Compliant</u> Directive 2011/65/EU restriction of the use of certain hazardous substances in electrical and electronic equipment and meets the following standard:: EN 50581:2012
	CCATS - G168387
	ECCN - 5A992
	HTSUS Number: 8471.80.1000
	Perle Limited Lifetime Warranty

IOLAN DTE

Pin 1



RJ45 Socket

IOLAN RJ45 Socket	Direction	RS232	RS422	RS485 Full Duplex	RS485 Half Duplex
1	→	RTS	TXD+	TXD+	Data+
2	→	DTR			
3	→	TXD	TXD-	TXD-	Data-
4	---	GND	GND	GND	GND
5	---	GND	GND	GND	GND
6	←	RXD	RXD+	RXD+	
7	←	DSR			
8	←	CTS	RXD-	RXD-	

A "rolled" CAT5 cable will automatically perform DTE to DCE crossover

Optional Perle adapters for use with straight thru CAT5 cabling

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

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.