

# IOLAN SDSM-Geräteserver

 [perle.com/products/iolan-sdsm-terminal-server.shtml](http://perle.com/products/iolan-sdsm-terminal-server.shtml)

## Geräteserver mit integriertem V.92-Modem

- 1 per Software wählbare serielle RS232/422/485-Schnittstelle
- Integriertes V.92-Modem - RJ11-Buchse
- 10/100-Ethernet
- Erweiterte Sicherheitsfunktionen für Datenverschlüsselung, Benutzeroauthentifizierung und Ereignisverwaltung



Für **sichere Seriell-zu-Ethernet**-Konnektivitätsanwendungen, die einen DFÜ- **Modemzugriff** erfordern, ist der **IOLAN SDSM Device Server** das fortschrittlichste kompakte Produkt, das heute auf dem Markt erhältlich ist. Ein **IOLAN SDSM mit integriertem V.92-Modem** bietet hohe Leistung in kompakter Größe und bietet umfassende Sicherheit, Flexibilität und IPv6-Technologie der nächsten Generation. Es ist ideal für Anwendungen, die Remote-Verwaltung von Geräten/Konsolen, Datenerfassung oder -überwachung über ein IP-Netzwerk oder eine DFÜ-Modemverbindung erfordern.

## Warum IOLAN SDSM Device Server die bevorzugte Wahl sind:

- Hochperformanter 66Mhz, 87 MIPS Prozessor für die beste Leistung auf dem Markt
- Der integrierte RJ11-Modemanschluss bietet eine sichere und zuverlässige Verbindung zum POTS-Netzwerk
- Die TrueSerial®-Pakettechnologie bietet die authentischsten seriellen Verbindungen über Ethernet für die Integrität des seriellen Protokolls
- Anzeigen für Netzwerk- und serielle Schnittstellen zur einfachen Fehlerbehebung
- Plug & Play-Installationsprogramm eliminiert Konfigurationsprobleme für alle IOLANs in Ihrem IP-Netzwerk
- TruePort – Der com/tty-Redirector von Perle für seriell basierte Anwendungen läuft unter Windows, Vista, Linux, Solaris, SCO und Unix
- FIPS 140-2 – Kryptografische Module erfüllen die NIST-Konformität der US-Regierung
- Power over Serial Cable eliminiert die Kosten einer separaten Strominstallation
- IP-Unterstützung der nächsten Generation (IPv6) für Investitionsschutz und Netzwerkkompatibilität
- Kompaktes und schützendes massives Stahlgehäuse für Tisch-, Wand- oder Hutschienenmontage
- Java-freier Browserzugriff auf serielle Remote-Konsolenports über Telnet und SSH
- Ping-Watchdog-Probes ermöglichen es Kunden, Geräte mit angeschlossenen RPS-Netzschaltern von Perle im Falle eines nicht reagierenden Netzwerkgeräts aus- und wieder einzuschalten

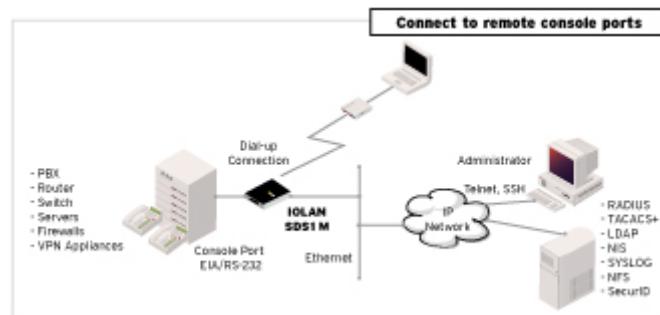
## Sichere Seriell-zu-Ethernet-Konnektivität

Der **IOLAN SDSM Device Server** ermöglicht Administratoren den sicheren Zugriff auf serielle Remote-Konsolen-Ports von Geräten wie PBX, Servern, Routern, Netzwerkspeichergeräten und Sicherheitsgeräten über ein IP-Netzwerk oder über das **integrierte V.92-DFÜ-Modem**.

Sensible Daten wie

Kreditkarteninhaberinformationen werden durch Standardverschlüsselungstools wie Secure Shell (SSH) und Secure Sockets Layer (SSL)

geschützt. Der Zugriff durch autorisierte Benutzer wird über Authentifizierungsschemata wie RADIUS, TACACS+, LDAP, Kerberos, NIS und die SecurID-Token von RSA Security sichergestellt.



Durch die Verwendung von Verschlüsselungstechnologien kann ein IOLAN sensible und vertrauliche Daten von einem seriellen Gerät wie einem Kreditkartenleser schützen, bevor sie über ein Firmen-Intranet oder öffentliches Internet gesendet werden. Für die Kompatibilität mit Peer-Verschlüsselungsgeräten werden alle wichtigen Verschlüsselungscodes wie AES, 3DES, RC4, RC2 und CAST128 vollständig unterstützt.

Der IPSec-Standard gilt als die sicherste Methode für die Kommunikation mit entfernten privaten Netzwerken über das Internet und bietet eine robuste Authentifizierung und Verschlüsselung von IP-Paketen auf der Netzwerkschicht des OSI-Modells. Als Standard ist es ideal für die Interoperation mit mehreren Anbietern innerhalb eines Netzwerks und bietet Flexibilität und die Möglichkeit, die richtige Lösung für eine bestimmte Anwendung zu finden.

## IOLAN-Geräteserver-Plug-ins

Wenn Sie sich für einen IOLAN-Geräteserver von Perle entscheiden, können Sie sicher sein, dass praktisch jedes Gerät mit einem seriellen COM-Port in Verbindung mit Ihrer gewünschten Anwendung genau so funktioniert, wie Sie es direkt angeschlossen hatten. Für den unwahrscheinlichen Fall, dass der IOLAN-Geräteserver von Perle dies nicht sofort aktiviert, wird *Perle dafür sorgen, dass es funktioniert*.

**IOLAN-Geräteserver von Perle** verwenden vom Kunden installierbare "[Geräte-Plug-ins](#)", um Geräte erfolgreich zu vernetzen, bei denen andere Lösungen versagt haben. [Fordern Sie jetzt eine kostenlose Ingenieurberatung an](#).

## Fortschrittliche IP-Technologie

With support for Next Generation IP (IPv6) the **IOLAN Serial to Ethernet Device Server** range provides organizations with investment protection to meet this rapidly growing standard.

Demand for IPv6, which is compatible with IPv4 addressing schemes, is driven by the need for more IP address. With the implementation and rollout of advanced cellular networks, a robust method is needed to handle the huge influx of new IP addressable devices on the Internet. In fact, the US Department of Defense has mandated that all equipment purchased be IPv6 compatible. In addition, all major Operating Systems such as Windows, Linux, Unix and Solaris, as well as routers, have built-in support for IPv6.

It is therefore important for end users and integrators to select networking equipment that incorporates the IPv6 standard. The IOLAN line with support for IPv6 already built in, is the best choice in serial to Ethernet technology.

## Flexible and Reliable Serial to Ethernet Connections

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An **IOLAN SDSM Device Server** is ideal for connecting serial based COM port, UDP or TCP socket based applications to remote devices. Perle's TruePort re-director provides fixed TTY or COM ports to serial based applications enabling communication with remote devices connected to Perle IOLAN's either in encrypted or clear text modes. You can also tunnel serial data between devices across an IP network.

Perle's Device Management software provides better centralized control of multiple units resulting in maximum uptime for your remote equipment.

All IOLAN SDSM models have added protection against electrostatic discharges and power surges with robust 15Kv ESD protection circuitry enabling organizations to utilize this solution in the field with confidence.

## Lifetime Warranty

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All **Perle IOLAN SDSM Serial to Ethernet Device Servers** are backed by the best service and support in the industry including Perle's unique lifetime warranty. Since 1976 Perle has been providing its customers with networking products that have the highest levels of performance, flexibility and quality.

## Softwarefunktionen - IOLAN SDSM Device Server mit integriertem V.92 Modem

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### Zugriff auf den seriellen Port

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Verbinden Sie sich direkt über Telnet / SSH nach Port und IP-Adresse

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Verbinden Sie sich mit dem EasyPort-Menü über Telnet / SSH

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Use an internet browser to access with HTTP or secure HTTPS via EasyPort Web menu

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Java-free browser access to remote serial console ports via Telnet and SSH

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Ports can be assigned a specific IP address ( aliasing )

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Multisession capability enables multiple users to access ports simultaneously \*

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Multihost access enables multiple hosts/servers to share serial ports

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### Accessibility

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In-band ( Ethernet ) and out-of-band ( dial-up modem ) support

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Dynamic DNS enables users to find a console server from anywhere on the Internet

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Domain name control through DHCP option 81

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IPV6 and IPV4 addressing support

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## Availability

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

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## Security

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SSH v1 and v2

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

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SSL Server and SSL client mode capability

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SSL Peer authentication

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IPSec VPN : NAT Traversal, ESP authentication protocol

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

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

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Encryption: AES (256/192/128), 3DES, DES, Blowfish, CAST128, ARCFOUR(RC4), ARCTWO(RC2)

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Hashing Algorithms: MD5, SHA-1, RIPEMD160, SHA1-96, and MD5-96

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Key exchange: RSA, EDH-RSA, EDH-DSS, ADH

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X.509 Certificate verification: RSA, DSA

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Certificate authority (CA) list

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Local database

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RADIUS Authentication, Authorization and Accounting

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TACACS+ Authentication, Authorization and Accounting

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LDAP, NIS, Kerberos Authentication

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RSA SecureID-agent or via RADIUS Authentication

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SNMP v3 Authentication and Encryption support

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IP Address filtering

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Disable unused daemons

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Active Directory via LDAP

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## Terminal Server

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Telnet

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SSH v1 and v2

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Rlogin

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Auto session login

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LPD, RCP printer

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MOTD - Message of the day

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## **Serial machine to Ethernet**

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Tunnel raw serial data across Ethernet - clear or encrypted

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Raw serial data over TCP/IP

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Raw serial data over UDP

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Serial data control of packetized data

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Share serial ports with multiple hosts/servers

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Virtual modem simulates a modem connection - assign IP address by AT phone number

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Virtual modem data can be sent over the Ethernet link with or without SSL encryption

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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](#)

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

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

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Customizable or fixed serial baud rates

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

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Software Development Kit (SDK) available

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

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

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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

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## **Console Management**

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## Sun / Oracle Solaris Break Safe

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Local port buffer viewing - 256K bytes per port

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External port buffering via NFS, encrypted NFS and Syslog

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Event notification

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

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

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

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

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## **Remote Access**

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Dial, direct serial      PPP, PAP/CHAP, SLIP

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

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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 )

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Cisco routers with IPSEC VPN feature set

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Perle IOLAN SDS/STS and SCS models

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## **OA&M ( Operations, Administration and Management )**

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SNMP V3 - read and write, Perle MIB

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Syslog

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Perle Device Manager - Windows based utility for large scale deployments

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Configurable default configuration

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Installation Wizard

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Set a Personalized Factory Default for your IOLANS

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## Protocols

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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

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## Hardware Specifications - IOLAN SDSM Device Server with integrated V.92 Modem

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### IOLAN SDS1 M

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Processor MPC852T, 66 Mhz, 87 MIPS

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#### Memory

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RAM MB 32

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Flash MB 8

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#### Interface Ports

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Number of Serial Ports 1

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Serial Port Interface Software selectable EIA-232/422/485 on RJ45

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Modem Port RJ11 connector, V.92/V.90 standard

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Sun / Solaris Sun / Oracle 'Solaris' Safe - no "break signal" sent during power cycle causing costly server re-boots or downtime

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Serial Port Speeds 50bps to 230Kbps with customizable baud rate support

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Data Bits Configurable for 5,6,7 or 8-bit protocol support  
Use TruePort to transparently pass 9-bit serial data

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Parity Odd, Even, Mark, Space, None

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Flow Control Hardware, Software, Both, None

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Serial Port Protection 15Kv Electrostatic Discharge Protection (ESD )

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Local Console Port RS232 on Serial Port

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Network 10-base T / 100-base TX Ethernet RJ45

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	Software selectable Ethernet speed 10/100 Auto
	Software selectable Half/Full/Auto duplex
Ethernet Isolation	1.5Kv Magnetic Isolation
<b>Power</b>	
Power Supply	120 V AC (USA), 230V AC (International) Wall Power Adaptor included
Power Supply Options	Power via External power 9-30v DC, 4.8 Watts uses standard 5.5mm x 9.5mm x 2.1mm barrel socket, Power IN over serial cable
Nominal Input Voltage	12v DC
Input Voltage Range	9-30v DC
Power External Device via Serial Port	+5v DC regulated, 1W max
Typical Power Consumption @ 12v DC (Watts)	1.7 (does not include power for devices connected to serial port)
<b>Indicators</b>	
LEDs	Power/Ready
	Network Link
	Network Link activity
	Serial: Transmit and Receive data per port
<b>Environmental Specifications</b>	
Heat Output (BTU/HR )	5.8
MTBF (Hours )	414,649
	Calculation model based on MIL-HDBK-217-FN2 @ 30 °C
Operating Temperature	0C to 55C, 32F to 131F

Storage Temperature	-40C to 66C, -40F to 150F
Humidity	5 to 95% (non condensing) for both storage and operation.
Case	SECC Zinc plated sheet metal (1 mm)
Ingress Protection Rating	IP40
Mounting	Wall or Panel mounting, DIN Rail mounting kit optional

### **Product Weight and Dimensions**

Weight	0.23 Kg (0.5 lbs)
Dimensions	91 x 64 x 24 (mm), 3.6 x 2.5 x 0.92 (in) not including mounting tabs, 91 x 89 x 24 (mm), 3.6 x 3.5 x 0.92 (in) includes mounting tabs

### **Packaging**

Shipping Dimensions	25.5 x 16.5 x 6.5 (cm), 10 x 6.5 x 2.6 (in)
Shipping weight	0.75 Kg including Power Adaptor

### **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)  EN55011 (CISPR11)  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
Safety	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: 8517.62.0020
	Perle Limited Lifetime Warranty

### IOLAN RJ45 Serial Connector Pinout

RJ45 Socket	Pinout	Direction	EIA-232	EIA-422	EIA-485 Full Duplex	EIA-485 Half Duplex
	1		Power In (9-30V DC)	Power In (9-30V DC)	Power In (9-30V DC)	Power In (9-30V DC)
	2	in	DCD			
	3	out	RTS	TxD+	TxD+	TxD+/RxD+
	4	in	DSR			
	5	out	TxD	TxD-	TxD-	TxD-/RxD-
	6	in	RxD	RxD+	RxD+	
	7		GND	GND	GND	GND
	8	in	CTS	RxD-	RxD-	
	9	out	DTR			
	10		Power out	Power out	Power out	Power out

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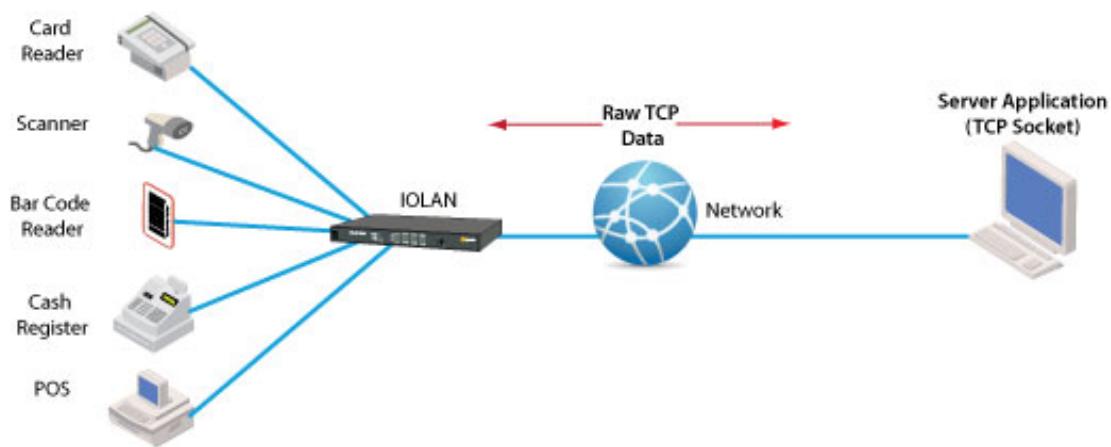
## Optional Perle adapters for use with straight thru CAT5 cabling

### TCP

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#### 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.



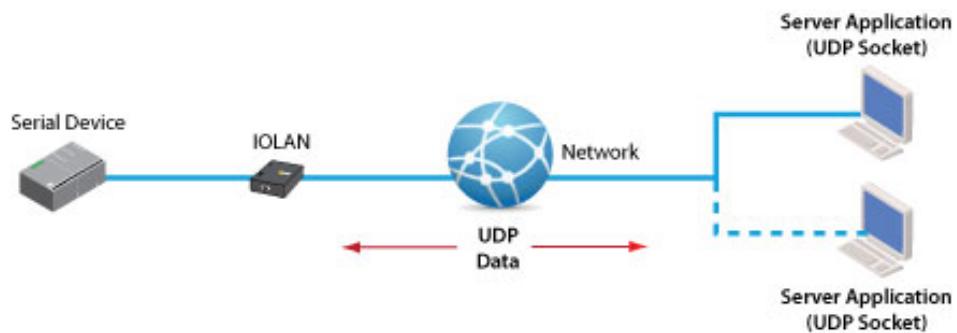
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### UDP

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#### 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.



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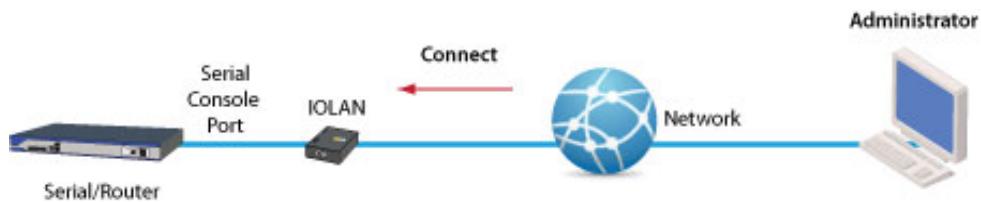
### Console Server

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## 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.

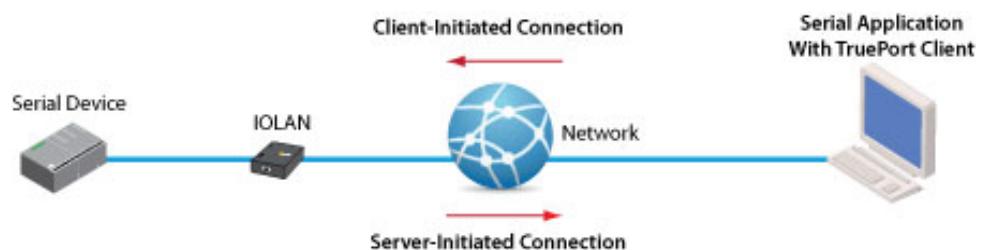


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## COM/TTY

### 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.



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## 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).



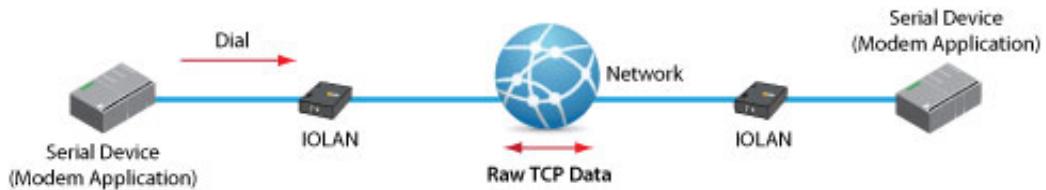
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## Virtual Modem

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## 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.



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