IOLAN Electric Utility Terminal Server

- 8, 16 and 32 serial ports on RJ45 - software selectable RS232/422/485
- Advanced security features for NERC CIP critical cyberasset substation compliance
- Substation hardened for harsh electrical utility and industrial applications
- Universal high voltage power supply: nominal 125v DC / 250v DC or 115v AC / 230v AC
- Dual Feed low voltage power supply: nominal 24v DC /48v DC
- 10/100/1000 Ethernet.
- Available with **dual 10/100/1000 Ethernet** and Redundant Path Technology
- Built-in failsafe alarm relay

Electrical utility engineers and project managers that require a cost effective serial-to-Ethernet solution to help meet NERC-CIP compliance for the protection of critical cyberassets in substations must consider the **IOLAN SDS HV/LDC Terminal Server**. In addition to the most extensive security features available, these IOLAN's are designed to meet harsh environments associated with Power Substations with attributes such as support for substation AC and DC voltage ranges, extended operating temperatures and meeting emission, immunity and safety approvals associated with substation IT equipment.

Ideal for

- Electrical utility engineers and Project Managers requiring a high performance serial to Ethernet interface for serial RS232 or RS485 based devices such as SCADA based RTUs and protection relays.
- Environments that require a serial terminal server with unique environmental, form factor, or power inputs in harsh environments
- Substation Automation projects where using secured communications in remote connections is required.

Why IOLAN SDS HV/LDC Terminal Servers are the preferred choice:

- NERC CIP compliance features (EPCIP EU COM(2006)786);
    - TACACS+, RADIUS for centralized authentication, authorization and accounting
    - Support for alternate TACACS+ and RADIUS hosts
    - Two factor strong authentication such as RSA's SecureID
    - HTTPS, SSL/TLS, SSH (AES, 3DES) session encryption
    - Keystroke and data logging
    - Provides the ability to display a customizable "Appropriate Use" login banner upon user access
    - Secure dial-up
    - Enable only the serial ports you need
- Meets IEC 61850-3 and IEEE 1613 (IEEE C37 90) electrical substation EMI standards
- FIPS 140-2 – Cryptographic modules meet US Government NIST compliancy
- Universal High voltage: 88-300v DC or 85-265v AC – dual power models
- Dual Feed low voltage: 18 - 72v DC models
- Cisco RJ45 serial port pinout design enables connection to Cisco/Sun console ports using common serial "rolled" CAT5 cabling
- Encapsulate ModBus and DNP protocols over IP
- Modbus TCP to Modbus RTU/ASCII gateway
- High performance 400 Mhz, 750 MIPS, 32 bit processor with integrated hardware encryption processor for the best throughput on the market
- 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
- Java-free browser access to remote serial console ports via Telnet and SSH
- 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, 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 SDSC Electric Utility Terminal Servers

	SDS8C HV	SDS8C DHV	SDS16C HV	SDS16C DHV	SDS32C HV	SDS32C DHV	SDS8C LDC	SDS16C LDC	SDS32C LDC
Processor	MPC8349E, 400 Mhz, 750 MIPS								
Memory									
RAM MB	64	64	64	64	128	128	64	64	64
Flash MB	16	16	16	16	16	16	16	16	16
Interface Ports									
Number of Serial Ports	8	8	16	16	32	32	8	16	32
Serial Port Interface	Software selectable RS232 / RS485 / RS422 DTE on RJ45 - RS485: full and half duplex								
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, None								
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								
Failsafe Alarm Relay	3A@24v DC. Normally open contacts closed by IOLAN when active and opened upon alarm condition or power failure								
Power									
Power Supply	Terminal Block with screw terminals accommodating a #6 ring terminal for each power source. Protective cover provided						Plugable Terminal Blocks with screw terminals accommodating 28 - 12 AWG wire sizes		
Nominal Input Voltage	125V DC / 250V DC or 100V AC / 240V AC						24v DC / 48v DC		
Input Voltage Range	88-300V DC or 85-265V AC						18 - 72v DC		
AC Input Frequency	47-63Hz								
Current Consumption @ 125v DC (Amps)	0.06	0.07	0.08	0.08	0.13	0.13	N/A	N/A	N/A
Current Consumption @ 250v DC (Amps)	0.04	0.04	0.05	0.05	0.07	0.07	N/A	N/A	N/A
Current Consumption @ 115v AC (Amps)	0.13	0.15	0.07	0.2	0.26	0.28	N/A	N/A	N/A
Current Consumption @ 230v AC (Amps)	0.09	0.11	0.12	0.14	0.16	0.19	N/A	N/A	N/A
Current Consumption @ 18v DC (Amps)	N/A	N/A	N/A	N/A	N/A	N/A	0.4	0.55	0.85
Current Consumption @ 24v DC (Amps)	N/A	N/A	N/A	N/A	N/A	N/A	0.3	0.4	0.65
Current Consumption @ 48v DC (Amps)	N/A	N/A	N/A	N/A	N/A	N/A	0.2	0.25	0.35
Current Consumption @ 72v DC (Amps)	N/A	N/A	N/A	N/A	N/A	N/A	0.15	0.18	0.25

Power Consumption (Watts)	9	10	12	12.5	17	17.5	11	13	18
Chassis Ground	Grounding screw for a #10 ring terminal								

Indicators

LEDs	Power
	System Ready
	Network Link activity
	Serial: Transmit and Receive data per port

Environmental Specifications

Heat Output (BTU/HR)	30.7	34.12	40.9	42.7	58	59.7	37.6	44.4	61.5
MTBF (Hours)	144,323	126,121	117,779	105,368	89,711	82,325	126,302	105,495	82,402
Operating Temperature	-40C ambient for 16 hours and +70C ambient for 16 hours without use of fans								
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	3.20 kg	3.38 kg	3.22 kg	3.40 kg	3.40 kg	3.58 kg	3.16 kg	3.18 kg	3.36 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 9 (cm), 23 x 14 x 3.5 (in)								
Shipping Weight	4.00 kg	4.18 kg	4.20 kg	4.20 kg	4.20 kg	4.38 kg	3.96 kg	3.98 kg	4.16 kg

Regulatory Approvals

Emissions	Power Line conducted: IEC 61850-3 Sec 5.8, IEC 61000-6-4, CISPR 16-2-3, CISPR 22, FCC Part 15, Subpart B, Class B
	Telecom Line conducted: IEC 61000-6-4, CISPR 22
	Radiated: IEC 61850-3 Sec 5.8, IEC 61000-6-4, CISPR 16-2-3, CISPR 22, FCC Part 15, Subpart B, Class B
	IEC61000-3-2 Harmonic Current Emissions
	IEC61000-3-3 Flicker emissions
EMC Interface Immunity - IEC 61850-3 (substations) - IEEE 1613 (substations) (C37.90.x) *Applies to all ports, signal and power connections*	ESD: IEC61000-4-2, 8Kv Contact / 15Kv Air
	Radiated RFI: IEC61000-4-3, 20 V/m (80M-1G)
	Fast Transients / Burst: IEC61000-4-4, 4Kv Mains , I/O
	Surge : IEC61000-4-5 4Kv AC line to Gnd, 2Kv AC Line to Line, 2Kv DC line to Gnd, 1 Kv DC Line to Line, RS232 = balanced, ethernet = unbalanced
	Conducted RF: IEC61000-4-6, 10 Vrms
	Magnetic Field: IEC61000-4-8, 100 A/m, 1000 A/m (1 sec)
	Dips and Interrupts: IEC61000-4-11, Criteria A/B/C
	Oscillatory: EN61000-4-12, 2.5Kv common and differential mode
	Low Frequency conducted: EN61000-4-16, 30V 60s, 300V 1s,15Hz-150KHz @ level 3
Standard Safety Certifications	IEC 60950-1, First Edition (2001-10) and EN60950-1:2001, CB scheme.
	CAN/CSA-C22.2 No. 60950-1-03 and ANSI/UL 60950-1, First Edition April 1st 2003 (Recognized Component)
Other	RoHS - 2002/95/EC Directive
	WEEE - 2002/96/EC Directive
	CCATS - G052929
	ECCN - 5A992A

Serial Connector Pinout

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

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.
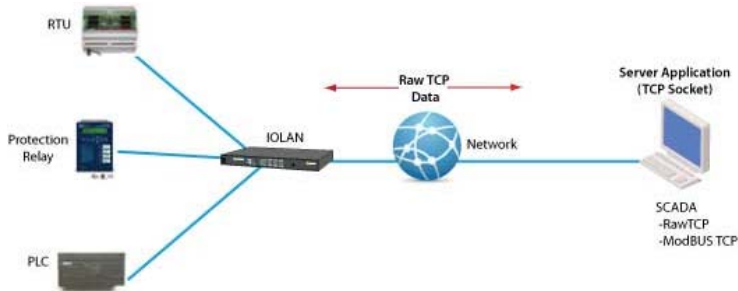
UDP

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.
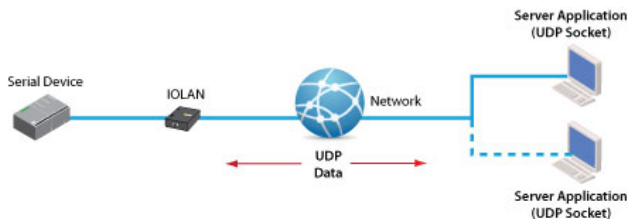
Console Server

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.
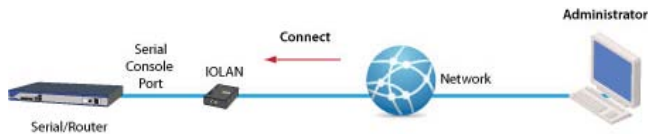
COM/TTY

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.
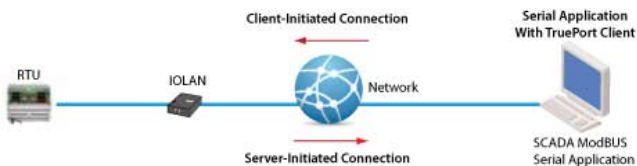
Tunneling

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
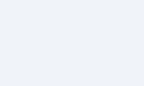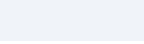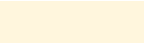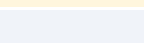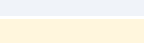
Virtual Modem (Ethernet Modem)

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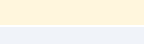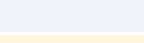 to another IOLAN serial-Ethernet adapter configured with a Virtual Modem serial port or to a host running a TCP application.
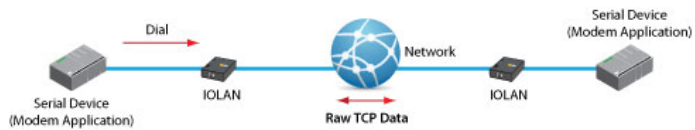
	Description	Power Cord	Product Part Number
	IOLAN SDS8C LDC Utility Terminal Server - 8 x RJ45 serial ports, 24/48 VDC power, 10/100/1000 Ethernet, 1U rack mount, Software selectable RS232/422/485 interface, Cisco/Sun Rj45 pinout, Advanced Features for NERC-CIP compliance, Meets IEC 61850-3, IEEE 1613 electric power substation environmental standard, Certified for NEBS Level 3	None	04032420
	IOLAN SDS8C HV Utility Terminal Server - 8 x RJ45 serial ports, Universal High Voltage AC/DC power, 10/100/1000 Ethernet, 1U rack mount, Software selectable RS232/422/485 interface, Cisco/Sun Rj45 pinout, Advanced Features for NERC-CIP compliance, Meets IEC 61850-3, IEEE 1613 electric power substation environmental standard	None	04032400
	IOLAN SDS8C DHV Utility Terminal Server - 8 x RJ45 serial ports, Dual Universal High Voltage AC/DC power, 10/100/1000 Ethernet, 1U rack mount, Software selectable RS232/422/485 interface, Cisco/Sun Rj45 pinout, Advanced Features for NERC-CIP compliance, Meets IEC 61850-3, IEEE 1613 electric power substation environmental standard	None	04032410
	IOLAN SDS16C LDC Utility Terminal Server - 16 x RJ45 serial ports, 24/48 VDC power, 10/100/1000 Ethernet, 1U rack mount, Software selectable RS232/422/485 interface, Cisco/Sun Rj45 pinout, Advanced Features for NERC-CIP compliance, Meets IEC 61850-3, IEEE 1613 electric power substation environmental standard, Certified for NEBS Level 3	None	04032430
	IOLAN SDS16C HV Utility Terminal Server - 16 x RJ45 serial ports, Universal High Voltage AC/DC power, 10/100/1000 Ethernet, 1U rack mount, Software selectable RS232/422/485 interface, Cisco/Sun Rj45 pinout, Advanced Features for NERC-CIP compliance, Meets IEC 61850-3, IEEE 1613 electric power substation environmental standard	None	04032450
	IOLAN SDS16C DHV Utility Terminal Server - 16 x RJ45 serial ports, Dual Universal High Voltage AC/DC power, 10/100/1000 Ethernet, 1U rack mount, Software selectable RS232/422/485 interface, Cisco/Sun Rj45 pinout, Advanced Features for NERC-CIP compliance, Meets IEC 61850-3, IEEE 1613 electric power substation environmental standard	None	04032440
	IOLAN SDS32C LDC Utility Terminal Server - 32 x RJ45 serial ports, 24/48 VDC power, 10/100/1000 Ethernet, 1U rack mount, Software selectable RS232/422/485 interface, Cisco/Sun Rj45 pinout, Advanced Features for NERC-CIP compliance, Meets IEC 61850-3, IEEE 1613 electric power substation environmental standard, Certified for NEBS Level 3	None	04032520
	IOLAN SDS32C HV Utility Terminal Server - 32 x RJ45 serial ports, Universal High Voltage AC/DC power, 10/100/1000 Ethernet, 1U rack mount, Software selectable RS232/422/485 interface, Cisco/Sun Rj45 pinout, Advanced Features for NERC-CIP compliance, Meets IEC 61850-3, IEEE 1613 electric power substation environmental standard	None	04032500
	IOLAN SDS32C DHV Utility Terminal Server - 32 x RJ45 serial ports, Dual Universal High Voltage AC/DC power, 10/100/1000 Ethernet, 1U rack mount, Software selectable RS232/422/485 interface, Cisco/Sun Rj45 pinout, Advanced Features for NERC-CIP compliance, Meets IEC 61850-3, IEEE 1613 electric power substation environmental standard	None	04032510

Accessories:

	Accessories		
	3m Cbl-Straighthru	3 meter RJ45 to RJ45 CAT5 Straight-thru cable #1100360-10	04005120
	IOLAN C Model Wiring Starter Kit	C Model Kit Includes: (1) RJ-45 to DB-25 DTE Male adapter, (1) RJ-45 to DB-25 DCE Male adapter, (1) RJ-45 to DB-25 DTE Female adapter, (1) RJ-45 to DB-9Male DTE adapter, (1) RJ-45 to DB-9 Female DTE adapter and (1) RJ45M-RJ45F Sun/Cisco crossover adapter.	04007070
	IOLAN RACK DIN RAIL	DIN Rail Mounting Kit for all IOLAN Rack models	04032490

Cable Accessories			
Please click here to see what adapters you may need			
	3m Cbl-Rolled	3 meter RJ45 to RJ45 CAT5 Rolled (crossover) cable #1100370-10 for use with IOLAN C models	04005130
	DBA0010C	DBA0010C - RJ-45F to DB-25F crossover (DTE) adapter for for IOLAN #1100270-10	04007010
	DBA0010C 8pck	DBA0010C 8pck - 8 pack of # 04007010 RJ45F to DB-25F (DTE) crossover adapter for IOLAN	04031300
	DBA0011C	DBA0011C - RJ-45F to DB-25M crossover (DTE) adapter for IOLAN #1100280-10	04007020
	DBA0011C 8pck	DBA0011C 8pck - 8 pack of #04007020 RJ45F to DB25M (DTE) crossover adapter for IOLAN	04031310
	DBA0013C	DBA0013C - RJ-45F to DB-25M straight-thru (DCE) adapter for modems on IOLAN #1100290-10	04007030

	DBA0013C 8pck	DBA0013C 8pck - 8 pack of #04007030 RJ45F to DB25M Straight-thru adapter for modems on IOLAN	04031340
	DBA0020C	DBA0020C - RJ-45F to DB-9F crossover (DTE) adapter for MCR-MGT serial console port and IOLAN with Sun/Cisco pinout #1100300-10	04007040
	DBA0020C 8pck	DBA0020C 8pck - 8 pack of #04007040 RJ45F to DB9F (DTE) crossover adapter for IOLAN	04031320
	DBA0021C	DBA0021C - RJ-45F to DB-9M crossover (DTE) adapter for IOLAN #1100310-10	04007050
	DBA0021C 8pck	DBA0021C 8pck - 8 pack of #04007050 RJ45F to DB9M (DTE) crossover adapter for IOLAN	04031330
	DBA0023C	DBA0023C - RJ-45F to DB-9M straight-thru (DCE) adapter for modems on IOLAN with Sun/Cisco pinout	04007210
	DBA0031C	DBA0031C - RJ-45m to RJ-45F SUN/Cisco crossover adapter for IOLAN #1100320-10	04007060
	DBA0031C 8pck	DBA0031C 8pck - 8 pack of #04007060 RJ45M to RJ45F Sun/Cisco crossover adapter for IOLAN	04031290
	Maintenance agreements - Console Server / Device Server / Terminal Server Please click here to check for maintenance availability in your region		
	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-32 portEXPRESSREP	32 Port Terminal/Device/Console Servers - Express Replacement	SERNSS32
	NSS-32 PortONSITE5x7	32 Port Terminal/Device/Console Serversr - On-site Mon-Fri, 9am-5pm	SOS5NSS32
	NSS-32 PortONSITE7X24	32 Port Terminal/Device/Console Servers - On-site 7x24	SOS7NSS32
	NSS-32 PortXPRESSREPF	32 Port Terminal/Device/Console Servers - Express Replacement French	SERNSS32F