

# IOLAN SDSC Rack Terminal Server

## Serial to Dual Ethernet Terminal Server



- 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

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.

### IOLAN SDSC Terminal Servers are 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.

### 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
- 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
- **Dynamic DNS** – Easy console management access from anywhere on the Internet
- Java-free browser access to remote serial console ports via Telnet and SSH
- Lifetime warranty – best investment protection available

## Software Features - IOLAN SDSC Dual Ethernet RS232 / RS485 / RS422 Terminal Server

### 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
- **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**

## Remote Access

|                      |                                                                                                                                                                                                                                                            |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dial, direct serial  | PPP, PAP/CHAP, SLIP                                                                                                                                                                                                                                        |
|                      | <b>HTTP tunneling</b> 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 <b>Automatic DNS update</b> support for details |

|                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>IPSEC VPN client/servers</b>                                                                                                                                                                                                                                                                                                                 | <ul style="list-style-type: none"> <li>• Microsoft L2TP/IPSEC VPN client ( native to Windows XP)</li> <li>• Microsoft IPSEC VPN Client ( native to Windows Vista )</li> <li>• Cisco routers with IPSEC VPN feature set</li> <li>• Perle IOLAN SDS/STS and SCS models</li> </ul> |
| <b>OA&amp;M ( Operations, Administration and Management )</b>                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>• SNMP V3 - read and write, Perle MIB</li> <li>• Syslog</li> <li>• Perle Device Manager - Windows based utility for large scale deployments</li> <li>• Configurable default configuration</li> <li>• <b>Installation Wizard</b></li> <li>• Set a Personalized Factory Default for your IOLANs</li> </ul> |                                                                                                                                                                                                                                                                                 |
| <b>Protocols</b>                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                 |
| 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                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                 |

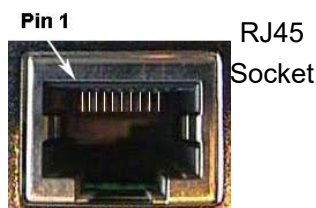
|                                                                                    |                                |                                                                                     |                       |                       |
|------------------------------------------------------------------------------------|--------------------------------|-------------------------------------------------------------------------------------|-----------------------|-----------------------|
| Specifications                                                                     |                                |                                                                                     |                       |                       |
| Lifetime limited warranty                                                          | Reach, RoHS and WEEE Compliant | HTSUS Number: 8517.62.0020                                                          | UNSPSC Code: 43222625 | ECCN: 5A992           |
|  |                                |  |                       | CCATS Number: G168387 |
| CPU                                                                                |                                |                                                                                     |                       |                       |
| Processor                                                                          |                                | MPC8349E, 400 Mhz, 750 MIPS                                                         |                       |                       |
| Memory                                                                             |                                |                                                                                     |                       |                       |
| RAM MB                                                                             |                                | IOLAN SDS8C<br>64                                                                   | IOLAN SDS16C<br>64    | IOLAN SDS32C<br>128   |

|                        |                                                                                                                                                                                                                                                                                                                                     |                           |                           |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------|
| Flash MB               | <b>IOLAN SDS8C</b><br>16                                                                                                                                                                                                                                                                                                            | <b>IOLAN SDS16C</b><br>16 | <b>IOLAN SDS32C</b><br>16 |
| Interface Ports        |                                                                                                                                                                                                                                                                                                                                     |                           |                           |
| Number of Serial Ports | <b>IOLAN SDS8C</b><br>8                                                                                                                                                                                                                                                                                                             | <b>IOLAN SDS16C</b><br>16 | <b>IOLAN SDS32C</b><br>32 |
| Serial Port Interface  | Software selectable RS232 / RS485 / RS422 DTE on RJ45 - RS485: full and half duplex                                                                                                                                                                                                                                                 |                           |                           |
| Sun / Solaris          | Sun / Oracle 'Solaris' Safe - no “ <i>break signal</i> ” sent during power cycle causing costly server re-boots or downtime                                                                                                                                                                                                         |                           |                           |
| Serial Port Speeds     | 50bps to 230Kbps with customizable baud rate support                                                                                                                                                                                                                                                                                |                           |                           |
| Data Bits              | Configurable for 5,6,7 or 8-bit protocol support<br>Use TruePort to transparently pass 9-bit serial data                                                                                                                                                                                                                            |                           |                           |
| Parity                 | Odd, Even, Mark, Space, None                                                                                                                                                                                                                                                                                                        |                           |                           |
| Flow Control           | Hardware, Software, Both, None                                                                                                                                                                                                                                                                                                      |                           |                           |
| Serial Port Protection | 15Kv Electrostatic Discharge Protection (ESD)                                                                                                                                                                                                                                                                                       |                           |                           |
| Local Console Ports    | RS232 on RJ45 with DB9 adapter (provided)                                                                                                                                                                                                                                                                                           |                           |                           |
| Network                | <ul style="list-style-type: none"><li>• Dual 10/100/1000-base TX ethernet RJ45</li><li>• Software selectable Ethernet speed 10/100/1000, Auto</li><li>• Software selectable Half/Full/Auto duplex</li></ul>                                                                                                                         |                           |                           |
| Power                  |                                                                                                                                                                                                                                                                                                                                     |                           |                           |
| Power Supply           | <ul style="list-style-type: none"><li>• USA models - IEC320-C13 to NEMA 5-15P line cord</li><li>• UK models - IEC320-C13 to BS1363 line cord</li><li>• EU models - IEC320-C13 to CEE 7/7 Schuko</li><li>• South Africa Models - IEC320-C13 to BS546 line cord</li><li>• Australia models - IEC320-C13 to AS3112 line cord</li></ul> |                           |                           |
| Nominal Input Voltage  | 110/230v AC                                                                                                                                                                                                                                                                                                                         |                           |                           |

|                                   |                                                                                                                                                                                            |                                        |                                        |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|----------------------------------------|
| Input Voltage Range               | 100-240v AC                                                                                                                                                                                |                                        |                                        |
| AC Input Frequency                | 47-63Hz                                                                                                                                                                                    |                                        |                                        |
| Typical Power Consumption (Watts) | <b>IOLAN SDS8C</b><br>14.0                                                                                                                                                                 | <b>IOLAN SDS16C</b><br>15.0            | <b>IOLAN SDS32C</b><br>16.0            |
| Indicators                        |                                                                                                                                                                                            |                                        |                                        |
| LEDs                              | <ul style="list-style-type: none"><li>• Power</li><li>• System Ready</li><li>• Network Link activity for each ethernet port</li><li>• Serial: Transmit and Receive data per port</li></ul> |                                        |                                        |
| Environmental Specifications      |                                                                                                                                                                                            |                                        |                                        |
| Heat Output (BTU/HR)              | <b>IOLAN SDS8C</b><br>47.77                                                                                                                                                                | <b>IOLAN SDS16C</b><br>51.18           | <b>IOLAN SDS32C</b><br>54.59           |
| MTBF (Hours)                      | <b>IOLAN SDS8C</b><br>124,366 Hours                                                                                                                                                        | <b>IOLAN SDS16C</b><br>106,970 Hours   | <b>IOLAN SDS32C</b><br>87,003 Hours    |
|                                   | Calculation model based on MIL-HDBK-217-FN2 @ 30°C                                                                                                                                         |                                        |                                        |
| Operating Temperature             | 0°C to 55°C, 32°F to 131°F                                                                                                                                                                 |                                        |                                        |
| Storage Temperature               | -40°C to 85°C, (-40°F to 185°F)                                                                                                                                                            |                                        |                                        |
| 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                                                                                                                                   |                                        |                                        |
| Product Weight and Dimensions     |                                                                                                                                                                                            |                                        |                                        |
| Weight                            | <b>IOLAN SDS8C</b><br>3.0 Kg, 6.6 lbs                                                                                                                                                      | <b>IOLAN SDS16C</b><br>3.1 Kg, 6.8 lbs | <b>IOLAN SDS32C</b><br>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 Weight      | <b>IOLAN SDS8C</b><br>4.2 Kg, 9.2 lbs                                                                                                                                                                                                                                                                                                                                                                                  | <b>IOLAN SDS16C</b><br>4.3 Kg, 9.5 lbs | <b>IOLAN SDS32C</b><br>4.5 Kg, 9.9 lbs |
| Shipping Dimensions  | 59 x 36 x 9 (cm), 23 x 14 x 3.5 (in)                                                                                                                                                                                                                                                                                                                                                                                   |                                        |                                        |
| Regulatory Approvals |                                                                                                                                                                                                                                                                                                                                                                                                                        |                                        |                                        |
| Emissions            | <ul style="list-style-type: none"><li>• FCC Part 15, Subpart B, Class A</li><li>• CFR47:2003, Chapter 1, Part 15 Subpart B,(USA) Class A</li><li>• ICES-003, Issue 4, February 2004 (Canada)</li><li>• CISPR 32 / EN 55032</li><li>• EN55011 (CISPR11)</li><li>• EN61000-3-2 : 2010, Limits for Harmonic Current Emissions</li><li>• EN61000-3-3 : 2010, Limits of Voltage Fluctuations and Flicker</li></ul>          |                                        |                                        |
| Immunity             | <ul style="list-style-type: none"><li>• CISPR 35 / EN 55035</li><li>• EN61000-4-2: Electrostatic Discharge</li><li>• EN61000-4-3: RF Electromagnetic Field Modulated</li><li>• EN61000-4-4: Fast Transients</li><li>• EN61000-4-5: Surge</li><li>• EN61000-4-6: RF Continuous Conducted</li><li>• EN61000-4-8: Power-Frequency Magnetic Field</li><li>• EN61000-4-11: Voltage Dips and Voltage Interruptions</li></ul> |                                        |                                        |
| Safety               | <ul style="list-style-type: none"><li>• UL/EN/IEC 62368-1</li><li>• CAN/CSA C22.2 No. 62368-1</li><li>• IEC 60950-1(ed 2); am1, am2 and</li><li>• EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013</li><li>• CAN/CSA-C22.2 No. 60950-1-03 and ANSI/UL 60950-1, First Edition April 1st 2003 (Recognized Component)</li></ul>                                                                                          |                                        |                                        |

## IOLAN RJ45 Serial Connector Pinout



| Pinout | Direction | EIA-232 | EIA-422 | EIA-485 Full Duplex | EIA-485 Half Duplex |
|--------|-----------|---------|---------|---------------------|---------------------|
| 1      | out       | RTS     | TxD+    | TxD+                | DATA+               |
| 2      | out       | DTR     | N/A     | N/A                 | N/A                 |
| 3      | out       | TxD     | TxD-    | TxD-                | DATA-               |
| 4      | N/A       | GND     | GND     | GND                 | GND                 |
| 5      | N/A       | GND     | GND     | GND                 | GND                 |
| 6      | in        | RxD     | RxD+    | RxD+                | N/A                 |
| 7      | in        | DSR     | N/A     | N/A                 | N/A                 |
| 8      | in        | CTS     | RxD-    | RxD-                | N/A                 |

## Product List



**IOLAN SDS8C Secure Device Server ( Terminal Server ) - 8 x RJ45 connector with Sun/Cisco pinout**, 1U rack mount, software selectable RS232/422/485 interface, dual 10/100/1000 Ethernet, advanced data encryption, user authentication and event management security features included, IPv6, COM port redirector, 15kv ESD

### Power Cord & Part Number(s)

| USA      | UK       | EU       | SA       | AUS      |
|----------|----------|----------|----------|----------|
| 04031604 | 04031601 | 04031602 | 04031605 | 04031606 |



**IOLAN SDS16C Secure Device Server ( Terminal Server ) - 16 x RJ45 connector with Sun/Cisco pinout**, 1U rack mount, software selectable RS232/422/485 interface, dual 10/100/1000 Ethernet, advanced data encryption, user authentication and event management security features included, IPv6, COM port redirector, 15kv ESD

#### Power Cord & Part Number(s)

| USA      | UK       | EU       | SA       | AUS      |
|----------|----------|----------|----------|----------|
| 04031614 | 04031611 | 04031612 | 04031615 | 04031616 |



**IOLAN SDS32C Secure Device Server ( Terminal Server ) - 32 x RJ45 connector with Sun/Cisco pinout**, 1U rack mount, software selectable RS232/422/485 interface, dual 10/100/1000 Ethernet, advanced data encryption, user authentication and event management security features included, IPv6, COM port redirector, 15kv ESD

#### Power Cord & Part Number(s)

| USA      | UK       | EU       | SA       | AUS      |
|----------|----------|----------|----------|----------|
| 04031624 | 04031621 | 04031622 | 04031625 | 04031626 |

### Related Accessories

#### Cable Accessories



3 meter RJ45 to RJ45 CAT5 Straight-thru cable #1100360-10

**04005120**



3 meter RJ45 to RJ45 CAT5 Rolled (crossover) cable #1100370-10. For use with Perle

**04005130**



DBA0010C - RJ-45F to DB-25F crossover (DTE) adapter #1100270-10 for IOLAN.

**04007010**



DBA0011C - RJ-45F to DB-25M crossover (DTE) adapter #1100280-10 for IOLAN.

**04007020**



DBA0013C - RJ-45F to DB-25M straight-thru (DCE) adapter #1100290-10 for modems on IOLAN.

**04007030**



DBA0020C - RJ-45F to DB-9F crossover (DTE) adapter #1100300-10 for Perle serial console

**04007040**



DBA0021C - RJ-45F to DB-9M crossover (DTE) adapter #1100310-10 for IOLAN.

**04007050**



DBA0031C - RJ-45m to RJ-45F SUN/Cisco crossover adapter #1100320-10 for

**04007060**



C Model Kit Includes: (1) RJ-45 to DB-25 DTE Male adapter, (1) RJ-45 to DB-25 DCE Male adapter,

**04007070**



DBA0023C - RJ-45F to DB-9M straight-thru (DCE) adapter #1100350-11 for modems on IOLAN

**04007210**



DBA0031C 8pck - 8 pack of #04007060 RJ45M to RJ45F Sun/Cisco crossover adapter for IOLAN.

**04031290**



DBA0010C 8pck - 8 pack of # 04007010 RJ45F to DB-25F (DTE) crossover adapter for IOLAN.

**04031300**



DBA0011C 8pck - 8 pack of #04007020 RJ45F to DB25M (DTE) crossover adapter for IOLAN.

**04031310**



DBA0020C 8pck - 8 pack of #04007040 RJ45F to DB9F (DTE) crossover adapter for IOLAN.

**04031320**



DBA0021C 8pck - 8 pack of #04007050 RJ45F to DB9M (DTE) crossover adapter for IOLAN.

**04031330**



DBA0013C 8pck - 8 pack of #04007030 RJ45F to DB25M Straight-thru adapter for modems on IOLAN.

**04031340**

## Accessories



DIN Rail Mounting Kit for select IOLAN Rack models

**04032490**

## Maintenance agreements - Console Server / Device Server / Terminal Server



8 Port  
Terminal/Device/Console  
Servers - Express  
Replacement 1 Year  
Maintenance Contract

**SERNSS08**



8 Port  
Terminal/Device/Console  
Servers - Express  
Replacement 1 Year  
Maintenance Contract,

**SERNSS08F**



16 to 18 Port  
Terminal/Device/Console  
Servers - Express  
Replacement 1 Year  
Maintenance Contract

**SERNSS16**



16 to 18 Port  
Terminal/Device/Console  
Servers - Express  
Replacement 1 Year  
Maintenance Contract,

**SERNSS16F**



32 to 34 Port Terminal/Device/Console Servers - Express  
Replacement 1 Year Maintenance Contract

**SERNSS32**



32 to 34 Port Terminal/Device/Console Servers - Express  
Replacement 1 Year Maintenance Contract, French

**SERNSS32F**