IOLAN STG Secure Terminal Servers

Serial to Ethernet Terminal Server



- 4 or 8 serial RS232 on RJ45 Ports
- 10/100/1000 Ethernet
- Small compact size
- Wall, desk or DIN Rail mounting
- Advanced security feature set

Engineers and Project Managers that require a cost effective 4 or 8 port serial **RS232-to-Ethernet** solution that maintains serial device protocol integrity across Ethernet must consider the IOLAN STG. Having the highest performance processor available along with the Perle's unique TrueSerialTM technology, the IOLAN STG will provide the most authentic serial connections across Ethernet. IOLAN STG4-P Serial Terminal Servers are also available with support for **Power over Ethernet (PoE)**.

IOLAN STG Secure Serial Terminal Servers are ideal for:

- Engineers and Project Managers requiring a high performance serial to Ethernet interface for up to 4 or 8 serial RS232 based devices. Connect to serial based applications over Ethernet
- Compact size offers the smallest 4 or 8 port serial to Ethernet solution on the market

Why IOLAN STG Secure Terminal Servers are the preferred choice:

- High performance processors for the best throughput available. Ideal for time sensitive applications
- Compact size offers the smallest 4 port serial to Ethernet solution 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
- **Clustering** – Provides a single view of all out of band console ports. Ideal for large data centers
- **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 STG Serial Terminal Servers

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
	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

Specifications

Lifetime limited warranty	**Reach, RoHS and WEEE Compliant**	**HTSUS Number:** 8517.62.0020	**UNSPSC Code:** 43222625	**ECCN:** 5A992





CPU

Processor	600 Mhz ARM processor

Memory

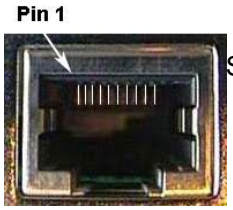
RAM	512 MB
Flash	4000 MB

Interface Ports	
Number of Serial Ports	4 or 8
Serial Port Interface	RS232 DTE on RJ45 (10 pin)
Sun / Solaris	Sun / Oracle ‘Solaris' Safe - no *“break signal”* sent during power cycle causing costly server re-boots or downtime
Serial Port Speeds	300bps to 230Kbps with customizable baud rate support
Data Bits	Configurable for 5,6,7 or 8-bit protocol support 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	• Network Autosensing 1000Base-T / 100Base-TX / 10Base-T Auto-MDIX • Software selectable Ethernet speed 10/100/1000 Auto • Software selectable Half/Full/Auto duplex
Ethernet Isolation	1.5Kv Magnetic Isolation
Power	
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, • 4 & 8 Port: Power IN over serial cable
Nominal Input Voltage	12v DC / 24v DC
Input Voltage Range	9-30v DC

Power IOLAN over Serial	• **4 Port:** 9-30v DC • **8 Port:** 9-30v DC
Power External Device via Serial Port	N/A
Typical Power Consumption @ 12v DC (Watts)	• **4 Port:** 2.0 • **8 Port:** 2.7
Indicators	
LEDs	• Power/System Ready • Network Link Activity • Serial: Transmit and Receive data per port
Environmental Specifications	
Heat Output (BTU/HR)	• **4 Port:** 16.38 • **8 Port:** 9.20
MTBF (Hours)	• **4 Port:** 259,560 Hours • **8 Port:** 171,852 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	• Wall mount - bracket included • DIN Rail bracket optional
Product Dimensions	
Weight	• **4 Port:** 0.35 kg (0.77 lbs) • **8 Port:** 0.55 kg (1.20 lbs)

Dimensions	• **4 Port:** 112 x 82 x 28 (mm), 4.4 x 3.2 x 1.1 (in) • **8 Port:** 112 x 156 x 28 (mm), 4.4 x 6.1 x 1.1 (in)
Packaging	
Shipping weight	• **4 Port:** 0.66 kg (1.5 lbs) • **8 Port:** 1.30 kg (2.9 lbs)
Shipping Dimensions	260 x 170 x 70 (mm), 10.2 x 6.7 x 2.8 (in)
Regulatory Approvals	
Emissions	• CFR47 FCC Part 15 Subpart B:2015 • ICES-003:2016 Issue 6:2016 • CISPR 32 / EN 55032 • EN55011 (CISPR11) • CISPR 16-2-3:2010/A2:2014 • EN61000-3-2:2014, Limited for Harmonic Current Emissions • EN61000-3-3:2013, Limits of Voltage Fluctuations and Flicker
Immunity	• CISPR 35 / EN 55035 • EN61000-4-2: 2009 Electrostatic Discharge • EN61000-4-3: 2006/A2:2010: RF Electromagnetic Field Modulated • EN61000-4-4: 2004 Fast Transients • EN61000-4-5: 2006 Surge • EN61000-4-6: 2009 RF Continuous Conducted • EN61000-4-8: Power-Frequency Magnetic Field • EN61000-4-11: Voltage Dips and Voltage Interruptions
Safety	• UL/EN/IEC 62368-1 (previously 60950-1) • CAN/CSA C22.2 No. 62368-1

IOLAN RJ45 Serial Connector Pinout



Pinout	Direction	EIA-232
1	N/A	Power In (9-30V DC)
2	in	DCD
3	out	RTS
4	in	DSR
5	out	TxD
6	in	RxD
7	N/A	GND
8	in	CTS
9	out	DTR
10	N/A	Power Out

Find IOLAN STS4-D or STS8-D

Product List



IOLAN STG4 Terminal Server: 4 x RJ45 connectors with RS232 interface, **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	AUS	None
04031904	04031901	04031902	04031906	04031908



IOLAN STG8 Terminal Server: 8 x RJ45 connectors with RS232 interface, **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	AUS	None
04031894	04031891	04031892	04031896	04031898

Related Accessories

Cable Accessories



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

04005120



Cvtr-PC DB25 Prl - RJ45-DB25 converter for IOLAN to PC DB25 Female.

04006930



Cvtr-PC DB9 Prl - RJ45-DB9 converter for IOLAN to PC DB9 Female.

04006931



Cvtr-Print DB25 Prl - RJ45-DB25 converter for IOLAN to Printer DB25 Male.

04006933



DBA0010 - RJ-45F to DB-25F crossover (DTE) adapter #1100220-10 for console port.

04006950



DBA0011 - RJ-45F to DB-25M crossover (DTE) adapter #1100230-10 for console ports.

04006960



DBA0020 - RJ-45F to DB-9F crossover (DTE) adapter #1100240-10 for console ports.

04006970



DBA0021 - RJ-45F to DB-9M crossover (DTE) adapter #1100250-10 for console ports.

04006980



DBA0013 - RJ-45F to DB-25M straight-thru (DCE) adapter #1100260-10 for modems.

04006990



IOLAN Starter Kit (8-wire): 1x RJ-45 to DB-25 DTE Male adapter, 1x RJ-45 to DB-25 DCE Male

04007000



DBA0023 - RJ-45F to DB-9M straight-thru (DCE) adapter #1100340-10 for modems.

04007200



3m Cbl-Sun/Cisco Prl - RJ45-RJ45 IOLAN DS to Sun/Cisco 3m Cable

04030070



DBA0031 - IOLAN - RJ45M to RJ45F Sun/Cisco crossover adapter #1100219-10.

04030080



DBA0031 8pck - 8 pack of #04030080 IOLAN-RJ45M to RJ45F Sun/Cisco crossover adapter.

04031230



DBA0010 8pck - 8 pack of #04006950 IOLAN-RJ45F to DB25F (DTE) crossover adapter.

04031240



DBA0011 8pck - 8 pack of #04006960 IOLAN-RJ45F to DB25M (DTE) crossover adapter.

04031250



DBA0020 8pck - 8 pack of #04006970 IOLAN-RJ45F to DB9F (DTE) crossover adapter.

04031260



DBA0021 8pck - 8 pack of #04006980 IOLAN-RJ45F to DB9M (DTE) crossover adapter.

04031270



DBA0013 8pck - 8 pack of #04006990 IOLAN-RJ45F to DB25M Straight-thru adapter for modems.

04031280

Accessories



DIN Rail Mounting Kit for 4 & 8 port IOLAN desktop models, all Stand-Alone Media Converters and all Stand-alone Ethernet Extenders. Two of these brackets are required for the 8 port STS8-D model.

04030840

Maintenance agreements - Console Server / Device Server / Terminal Server



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

SERNSS04



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

SERNSS04F



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