IOLAN DG1 and TG2 Device Servers

perle.com/products/iolan-dg-device-server.shtml

Serial to Ethernet Device Servers

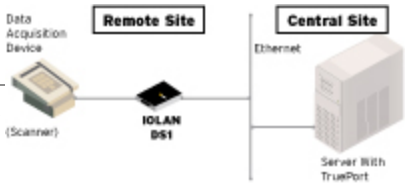
- 1 or 2 serial Ports
- Software selectable RS232/422/485 or fixed RS232 serial port interface
- 10/100 or 10/100/1000 Ethernet
- Extended temperature model available

The **IOLAN DG/TG Device Server** is the best choice for simple **serial to Ethernet** connectivity applications. Delivering a cost effective solution in a compact size, the IOLAN DG/TG offers flexibility and advanced TrueSerial® technology making it ideal for applications that require an authentic serial connection across an Ethernet network. **IOLAN DG1 Device Servers** are also available with support for Extended Temperature Ranges.

IOLAN Device Server Features and Benefits

- TrueSerial® delivers the most authentic serial connections across Ethernet
- Powerful processors for the best throughput and performance on the market
- Indicators for network and serial interfaces for easy troubleshooting
- Plug & Play installation utility eliminates configuration hassles for all IOLANs on you IP network
- TruePort software provides true remote serial ports over an Ethernet LAN
- Share a serial port with multiple TCP or UDP servers
- Software Development Kit available to develop powerful custom applications
- Power over serial cable models eliminate costs of a separate power installation
- Next Generation IP support (IPv6) for investment protection and network compatibility
- Compact and protective solid steel enclosure for tabletop, wall mount or DIN rail mounting

Flexible and Reliable Serial to Ethernet Connections



The IOLAN DG/TG 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 server based applications enabling communication with remote devices connected to Perle device servers. You can also tunnel serial data between devices across an IP network.

Easy to set up and manage, the IOLAN has a software selectable RS-232/422/485 interface capability which simplifies setup and eliminates mechanical tampering associated with DIP switch based products.

Perle's Device Management software, shipped as standard with the IOLAN DG/TG, provides better centralised control and management of multiple units resulting in maximum uptime for your remote equipment. Protection against electrostatic discharges and power surges is provided on the IOLAN DG/TG with its robust 15Kv ESD protection circuitry enabling organizations to utilize this solution with confidence.

IOLAN Device Server Plug-ins

Backed with the experience of connecting hundreds of thousands of different devices to Ethernet over the years, using a Perle Device Server you can rest assured that virtually any device with a serial COM port will operate in conjunction with your desired application exactly as it did when you had it directly connected. If the unlikely event occurs that the Perle Device Server does not enable this out of the box, *Perle will make it work*.

Perle IOLAN Device Servers utilize customer installable "Device Plug-ins" to successfully network devices where other solutions have failed. Request a free engineering consultation now.

Advanced IP Technology

With support for Next Generation IP (IPv6) the IOLAN 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.

Lifetime Warranty

The **Perle IOLAN DG/TG Device Server** is 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.

Software Features - IOLAN DG1 & TG2 Device Server

Serial Port Access

- Connect directly using Telnet and Reverse Telnet
- Multihost access enables multiple hosts/servers to share serial ports

Accessibility

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

IPV6 and IPV4 addressing support
Availability
Primary/Backup host functionality enables automatic connections to alternate host(s)
Security
Local database USERID/PASSWORD
Disable unused daemons
Terminal Server
Telnet
Auto session login
MOTD - Message of the day
Serial machine to Ethernet
Tunnel raw serial data across Ethernet
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
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 - 4K bytes circular per port
Console Management
Sun / Oracle Solaris Break Safe
Reverse Telnet
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, ARP, RARP, UDP, UDP Multicast, ICMP, BOOTP, DHCP, TFTP, Telnet, raw, reverse Telnet, WINS, HTTP, SNMPV3, RFC2217

Hardware Specifications - IOLAN DG1 & TG2 Device Servers

	IOLAN DG1	IOLAN TG2
Processor	600Mhz ARM Processor	
Memory		
RAM MB	512	
Flash MB	4000	
Interface Ports		
Number of Serial Ports	1	2
Serial Port Interface	Software selectable RS-232/422/485 on DB25F, DB9M or RJ45	RS-232 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 Port	RS232 on Serial Port	
Network	Autosensing 1000Base-T / 100Base-TX / 10Base-T Auto-MDIX	
	Software selectable Ethernet speed 10/100/1000	
	Software selectable Half/Full/Auto duplex	
Ethernet Isolation	1.5Kv Magnetic Isolation	
Power	**IOLAN DG1**	**IOLAN TG2**
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	YES	On Port #1
Nominal Input Voltage	12v DC / 24v DC	
Input Voltage Range	9-30v DC	
Typical Power Consumption @ 12v DC (Watts)	1.9	2
Indicators		
LEDs	Power / Ready	
	Network Link	
	Network Link activity	

	Serial: Transmit and Receive data per port	
Environmental Specifications	**IOLAN DG1**	**IOLAN TG2**
Heat Output (BTU/HR)	6.8	8.9
MTBF (Hours)	267,483	254,834
	Calculation model based on MIL-HDBK-217-FN2 @ 30 °C	
Operating Temperature	0ºC to 55ºC (32ºF to 131ºF)	
Storage Temperature	-40ºC to 66ºC, (-40ºF to 150ºF)	
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	.23 KG (.51 lbs)	
Dimensions	90 x 64 x 22 (mm), 3.6 x 2.5 x 0.87 (in) case dimensions not including mounting tabs 90 x 89 x 24 (mm), 3.6 x 3.5 x 0.87 (in) includes mounting tabs.	
Packaging		
Shipping Dimensions	260 x 170 x 70 (mm), 10.2 x 6.7 x 2.8 (in)	
Shipping Weight	0.49 KG (1.1 lbs)	
Regulatory Approvals		
Emissions	CFR47 FCC Part 15 Subpart B:2015	
	ICES-003:2016 Issue 6:2016	
	CISPR 32:2015/EN 55032:2015 (Class A)	
	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 24:2010/EN 55024:2010
	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	IEC 62368-1 and EN 62368-1:2014
	CAN/CSA-C22.2 No. 62368-1-14 and UL 62368-1
Other	Reach, RoHS and WEEE Compliant
	ECCN - 5A991
	HTSUS Number: 8517.62.0020
	Perle Lifetime warranty

IOLAN DB9M Serial Connector Pinout

 DB9M Socket	Pinout	Direction	EIA-232	EIA-422 Full Duplex	EIA-485 Full Duplex	EIA-485 Full Duplex
	1	in	DCD			
	2	in	RxD	RxD+	RxD+	
	3	out	TxD	TxD+	TxD+	DATA+
	4	out	DTR			
	5		GND	GND	GND	GND
	6	in	DSR	RxD-	RxD-	

7	out	RTS			
8	in	CTS			
9			TxD-	TxD-	DATA-

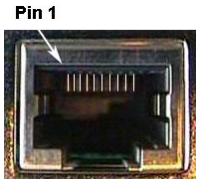
IOLAN DB25F Serial Connector Pinout

DB25F Socket

Pinout	Direction	EIA-232	EIA-422	EIA-485 Full Duplex	EIA-485 Half Duplex
1		Shield	Shield	Shield	Shield
2	in	RxD			
3	out	TxD			
4	in	CTS			
5	out	RTS			
6	out	DTR			
7		GND	GND	GND	GND
8	in	DCD			
9					
12		Power In (9-30V DC)	Power In (9-30V DC)	Power In (9-30V DC)	Power In (9-30V DC)
13			RTS-		
14			RxD+	RxD+	
15			RxD-	RxD-	
18			CTS+		
19			CTS-		
20	in	DSR			
21			TxD+	TxD+	DATA+
22			TxD-	TxD-	DATA-
25			RTS+		

IOLAN RJ45 Serial Connector Pinout for DG1

RJ45 Socket

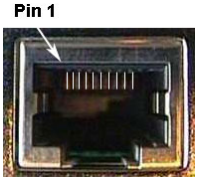


Pinout	Direction	EIA-232	EIA-422	EIA-485 Full Duplex	EIA-485 Half Duplex
1		Power In (9-30V DC)	Power In (9-30V DC)	Power In (9-30V DC)	Power In (9-30V DC)
2	in	DCD			
3	out	RTS	TxD+	TxD+	TxD+/RxD+
4	in	DSR			
5	out	TxD	TxD-	TxD-	TxD-/RxD-
6	in	RxD	RxD+	RxD+	
7		GND	GND	GND	GND
8	in	CTS	RxD-	RxD-	
9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

Optional Perle adapters for use with straight thru CAT5 cabling

IOLAN RJ45 Serial Connector Pinout for TG2

RJ45 Socket



Pinout 10-pin	Pinout 8-pin	Direction	EIA-232
1			Power In (9-30V DC)
2	1	in	DCD
3	2	out	RTS
4	3	in	DSR
5	4	out	TxD
6	5	in	RxD

7	6		GND
8	7	in	CTS
9	8	out	DTR
10			not used

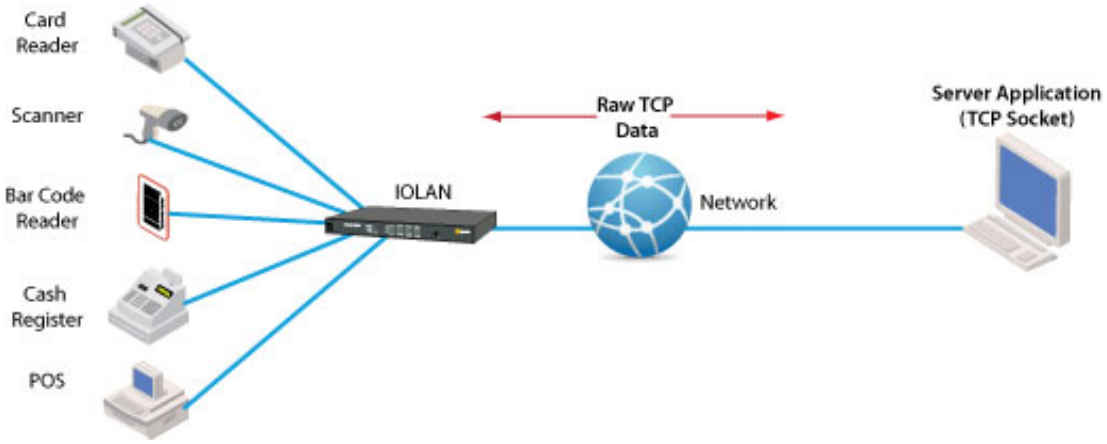
Optional Perle adapters for use with straight thru CAT5 cabling

Find IOLAN DS1 or TS2

TCP

Using RAW TCP Sockets

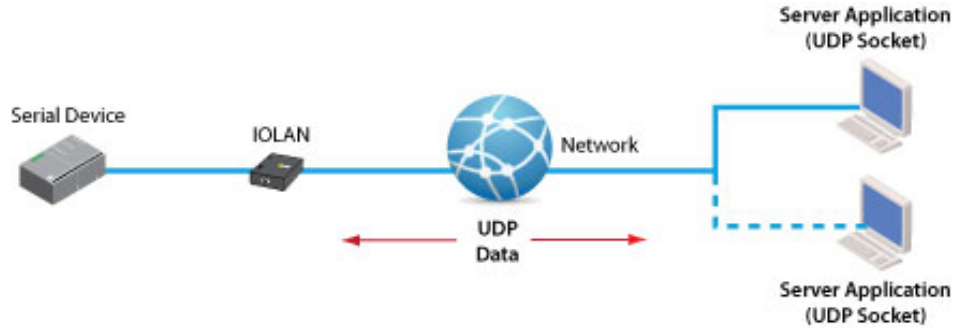
A raw TCP socket connection which can be initiated from the serial-Ethernet device or from the remote host/server. This can either be on a point to point or shared basis where a serial device can be shared amongst multiple devices. TCP sessions can be initiated either from the TCP server application or from thePerle IOLAN **serial-Ethernet** adapter.



UDP

Using Raw UDP Sockets

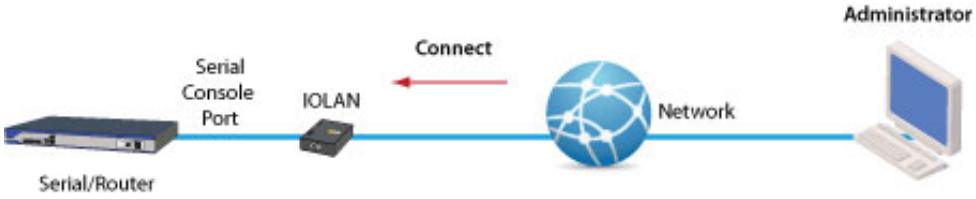
For use with UDP based applications, Perle IOLANs can convert serial equipment data for transport across UDP packets either on a point to point basis or shared across multiple devices.



Console Server

Console Management

For access to remote console ports on routers, switches,etc, Perle IOLAN's enable administrators secure access to these RS232 ports via inband Reverse Telnet / SSH or out of band with dial-up modems. Perle IOLAN models with integrated modems are available.



COM/TTY

Connect Serial-based Applications with a COM/TTY Port Driver

Serial ports can be connected to network servers or workstations running Perle's TruePort software operating as a virtual COM port. Sessions can be initiated either from the Perle IOLAN or from TruePort.

Tunneling

Serial Tunneling between two Serial Devices

Serial Tunneling enables you to establish a link across Ethernet to a serial port on another IOLAN. Both IOLAN serial ports must be configured for Serial Tunneling (typically one serial port is configured as a Tunnel Server and the other serial port as a Tunnel Client).

Virtual Modem

Virtual Modem

Enables the serial-Ethernet adapter to simulate a modem connection. When connected to the IOLAN and initiates a modem connection, the IOLAN starts up a TCP connection to another IOLAN serial-Ethernet adapter configured with a Virtual Modem serial port or to a host running a TCP application.