

# Perle Systems

 [perle.com/products/iolan-ds.shtml](http://perle.com/products/iolan-ds.shtml)

## IOLAN DS1 and TS2 Device Servers

### Serial to Ethernet Device Servers

- 1 or 2 serial Ports
- Software selectable RS232/422/485 or fixed RS232 serial port interface
- 10/100 Ethernet
- 0°C to 55°C or -40°C to 74°C operating temperatures



### Hardware Specifications - IOLAN DS1 & TS2 Device Servers

	IOLAN DS1	IOLAN DS1T	IOLAN TS2
Processor	MPC852T, 66 Mhz, 87 MIPS		
<b>Memory</b>			
RAM MB	16		
Flash MB	4		
<b>Interface Ports</b>			
Number of Serial Ports	1	1	2
Serial Port Interface	Software selectable RS-232/422/485 on DB25M, DB25F, DB9M or RJ45	Software selectable RS-232/422/485 on DB9M	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	50bps 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	10Base-T / 100Base-TX ethernet RJ45		
	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	Supplied with wired Barrell Connector 610 mm (24 in) long	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 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	No	On Port #2
Nominal Input Voltage	12v DC / 24v DC		
Input Voltage Range	9-30v DC		
Typical Power Consumption @ 12v DC (Watts)	1.7		
<b>Indicators</b>			
LEDs	Power / Ready		
	Network Link		
	Network Link activity		
	Serial: Transmit and Receive data per port		

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## Environmental Specifications

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Heat Output (BTU/HR) 5.8

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MTBF (Hours) 124,004 474,231 299,680  
Calculation model based on MIL-HDBK-217-FN2 @ 30 °C

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Operating Temperature 0°C to 55°C (32°F to 131°F) -40°C to 74°C (-40°F to 165°F) 0°C to 55°C (32°F to 131°F)

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Storage Temperature -40°C to 66°C, (-40°F to 150°F) -40°C to 74°C (-40°F to 165°F) -40°C to 66°C, (-40°F to 150°F)

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Humidity 5 to 95% (non condensing) for both storage and operation.

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Case SECC Zinc plated sheet metal (1 mm)

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Ingress Protection Rating IP40

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Mounting Wall or Panel mounting . DIN Rail mounting kit optional

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## Product Weight and Dimensions

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Weight .23 KG (.51 lbs)

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Dimensions 90 x 64 x 22 (mm), 3.6 x 2.5 x 0.87 (in) case dimensions not including mounting tabs,

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90 x 89 x 24 (mm), 3.6 x 3.5 x 0.87 (in) includes mounting tabs.

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## Packaging

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Shipping Dimensions 260 x 170 x 70 (mm), 10.2 x 6.7 x 2.8 (in)

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Shipping Weight 0.49 KG (1.1 lbs)

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## Regulatory Approvals

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Emissions CFR47:2003, Chapter 1, Part 15 Subpart B,(USA) Class A

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ICES-003, Issue 4, February 2004 (Canada)

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CISPR 32:2015/EN 55032:2015 (Class A)

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EN55011 (CISPR11)

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EN61000-3-2 : 2010, Limits for Harmonic Current Emissions

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	EN61000-3-3 : 2010, 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
	Safety
CAN/CSA-C22.2 No. 60950-1-03 and ANSI/UL 60950-1, Second Edition	
Other	<u>Reach, RoHS and WEEE Compliant</u>
	ECCN - 5A991
	HTSUS Number: 8517.62.0020
	Perle Lifetime warranty

### IOLAN DB9M Serial Connector Pinout

DB  
9M  
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

D  
B2  
5F  
Socket



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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 DB25M Serial Connector Pinout

D  
B2  
5

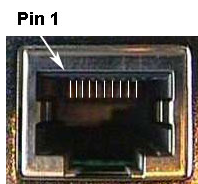


Pinout	Direction	EIA-232	EIA-422	EIA-485 Full Duplex	EIA-485 Half Duplex
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M Socket

1		Shield	Shield	Shield	Shield
2	out	TxD			
3	in	RxD			
4	out	RTS			
5	in	CTS			
6	in	DSR			
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			CTS-		
14			TxD+	TxD+	DATA+
15			TxD-	TxD-	DATA-
18			RTS+		
19			RTS-		
20	out	DTR			
21			RxD+	RxD+	
22			RxD-	RxD-	
25			CTS-		

IOLAN RJ45 Serial Connector Pinout for DS1



RJ45 Socket

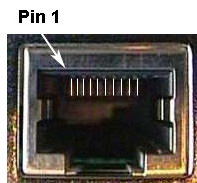
Pinout	Direction	EIA-232	EIA-422	EIA-485 Full Duplex	EIA-485 Half Duplex
1		Power In (9-30V DC)	Power In (9-30V DC)	Power In (9-30V DC)	Power In (9-30V DC)
2	in	DCD			
3	out	RTS	TxD+	TxD+	TxD+/RxD+

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 TS2

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

## Software Features - IOLAN DS1 & TS2 Device Server

### Serial Port Access

Connect directly using Telnet and Reverse Telnet

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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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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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Local database USERID/PASSWORD

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Disable unused daemons

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## **Terminal Server**

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Telnet

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Auto session login

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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

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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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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 - 4K bytes circular per port

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## **Console Management**

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Sun / Oracle Solaris Break Safe

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Reverse Telnet

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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, ARP, RARP, UDP, UDP Multicast, ICMP, BOOTP, DHCP, TFTP, Telnet, raw, reverse Telnet, WINS, HTTP, SNMPV3, RFC2217