



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

Specifications		
Lifetime limited warranty	Reach, RoHS and WEEE Compliant	HTSUS Number: 8517.62.0020 UNSPSC Code: 43222625 ECCN: 5A991
		
CPU		
Processor	MPC852T, 66 Mhz, 87 MIPS	
Memory		
RAM MB	16	
Flash MB	4	
Interface Ports		
Number of Serial Ports	IOLAN DS1 1	IOLAN TS2 2
Serial Port Interface	IOLAN DS1 Software selectable RS-232/422/485 on DB25M, DB25F, DB9M or RJ45	IOLAN TS2 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 Ports	RS232 on Serial Port	
Network	<ul style="list-style-type: none"> • 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	
Power		
Power Supply	IOLAN DS1 120 V AC (USA), 230V AC (International) Wall Power Adaptor included	IOLAN TS2 120 V AC (USA), 230V AC (International) Wall Power Adaptor included
Power Supply Options	IOLAN DS1 Power via External power 9-30v DC, 4.8 Watts uses standard 5.5mm x 9.5mm x 2.1mm barrel socket	IOLAN TS2 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	IOLAN DS1 YES	IOLAN TS2 On Port #2
Nominal Input Voltage	12v DC / 24v DC	
Input Voltage Range	9-30v DC	
Typical Power Consumption @ 12v DC (Watts)	1.7	

Indicators		
LEDs	<ul style="list-style-type: none"> • Power / Ready • Network Link • Network Link Activity • Serial: Transmit and Receive data per port 	
Environmental Specifications		
Heat Output (BTU/HR)	5.8	
MTBF (Hours)	IOLAN DS1 124,004 Hours	IOLAN TS2 299,680 Hours
	<i>Calculation model based on MIL-HDBK-217-FN2 @ 30°C</i>	
Operating Temperature	IOLAN DS1 0°C to 55°C (32°F to 131°F)	IOLAN TS2 0°C to 55°C (32°F to 131°F)
Storage Temperature	IOLAN DS1 -40°C to 66°C, (-40°F to 150°F)	IOLAN TS2 -40°C to 66°C, (-40°F to 150°F)
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	0.23 KG (0.51 lbs)	
Dimensions not including mounting tabs	90 x 64 x 22 (mm), 3.6 x 2.5 x 0.87 (in) case	
Dimensions includes mounting tabs	90 x 89 x 24 (mm), 3.6 x 3.5 x 0.87 (in)	
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	<ul style="list-style-type: none"> • CFR47:2003, Chapter 1, Part 15 Subpart B,(USA) Class A • ICES-003, Issue 4, February 2004 (Canada) • CISPR 32 / EN 55032 • EN55011 (CISPR11) • EN61000-3-2 : 2010, Limits for Harmonic Current Emissions • EN61000-3-3 : 2010, Limits of Voltage Fluctuations and Flicker
Immunity	<ul style="list-style-type: none"> • 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
Safety	<ul style="list-style-type: none"> • UL/EN/IEC 62368-1 • CAN/CSA C22.2 No. 62368-1 • IEC 60950-1 (ed 2); am1 am2 and EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011 +A2:2013 • CAN/CSA-C22.2 No. 60950-1-03 and ANSI/UL 60950-1, Second Edition

IOLAN DB9M Serial Connector Pinout



DB9M
Socket

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

IOLAN DB25F Serial Connector Pinout



DB25F
Socket

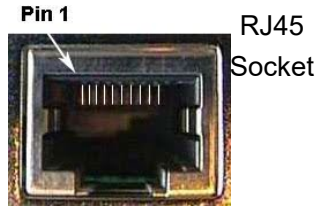
Pinout	Direction	EIA-232	EIA-422	EIA-485 Full Duplex	EIA-485 Half Duplex
		Shield	Shield		
1	N/A	RxD	N/A	Shield	Shield
2	in	TxD	N/A	N/A	N/A
3	out	CTS	N/A	N/A	N/A
4	in	RTS	N/A	N/A	N/A
5	out	DTR	N/A	N/A	N/A
6	out	GND	GND	N/A	N/A
7	N/A	DCD	N/A	GND	GND
8	in	N/A	N/A	N/A	N/A
9	N/A	Power In (9-30V DC)	Power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

IOLAN DB25M Serial Connector Pinout



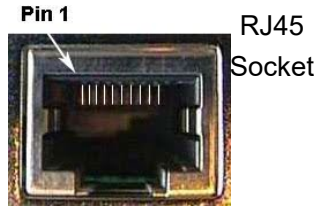
Pinout	Direction	EIA-232	EIA-422	EIA-485 Full Duplex	EIA-485 Half Duplex
		Shield	Shield		
1	N/A	TxD	N/A	Shield	Shield
2	out	RxD	N/A	N/A	N/A
3	in	RTS	N/A	N/A	N/A
4	out	CTS	N/A	N/A	N/A
5	in	DSR	N/A	N/A	N/A
6	in	GND	GND	N/A	N/A
7	N/A	DCD	N/A	GND	GND
8	in	N/A	N/A	N/A	N/A
9	N/A	Power In (9-30V DC)	Power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

IOLAN RJ45 Serial Connector Pinout for DS1



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

IOLAN RJ45 Serial Connector Pinout for TS2



Pinout 10-pin	Pinout 8-pin	Direction	EIA-232
1	N/A	N/A	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	N/A	GND
8	7	in	CTS
9	8	out	DTR
10	N/A	N/A	not used

Software Features - IOLAN DS1 & TS2 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

Part Number: 04030112

OLAN DS1 Serial Device Server: 1 x RJ45 10 pin connector with software selectable RS232/422/485 interface, 10/100 Ethernet, IPv6, COM port redirector, 15kv ESD

Power Cord: EU -- CEE 7/7 Schuko (Type E/F) for use in Europe, South America, and South Korea.



Related Accessories

Accessories



DIN Rail Mounting Kit for 1 or 2 port IOLAN DS, TS, SDS, and eR-S1110 Ethernet Repeater

04030030

Cable Accessories



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

04005120



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

04006930



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

04006931



Cvtr-Print DB25 Pri -
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 adapter, 1x RJ-45 to DB-25 DTE Female adapter.

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

Maintenance agreements - Console Server / Device Server / Terminal Server



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

SERNSS01