



Industrial Device Servers

- IDS Introduction & Features
- Industrial Device Servers
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IDS *Industrial Device Servers*

Introduction



SUNIX Serial over Ethernet Device Servers, IDS series, are designed to easily network your current RS-232/422/485 serial devices. It provides a convenient and economical solution not only to protect your current hardware investment, but also to ensure future network expandability. With IDS, you can centralize serial device and distribute the management hosts at the same time.

There are three types of Industrial Device Server for selection to match your application needs, including 4/2/1-port IDS. They provide a quick, simple and cost-effective way to allow you to access, manage, and configure remote facilities and equipment over the internet from anywhere in the world. The dual Ethernet ports provide networking redundancy.

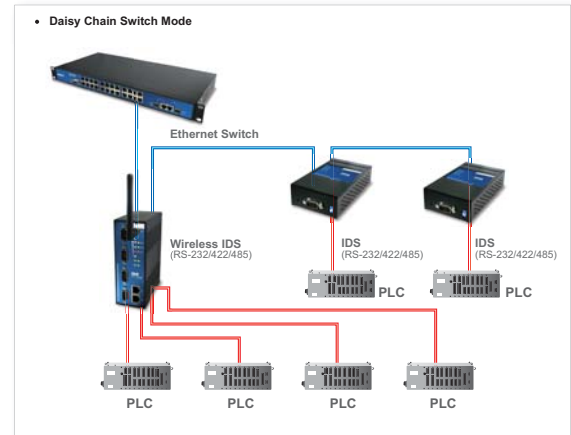
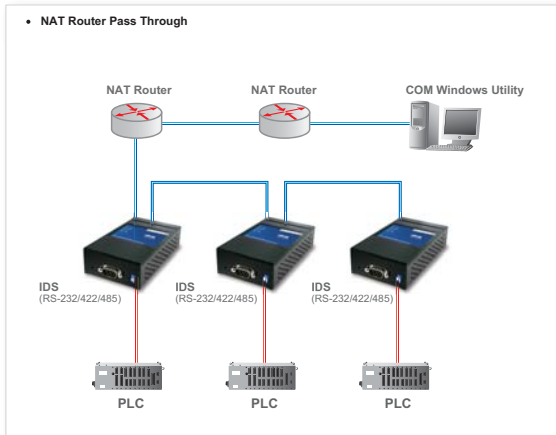
IDS Series serial device server can manage any type of serial devices such as card readers, measurement devices, or data acquisition terminals through serial consoles. IDS series device server eliminates the limitation of single host and transmission distance of traditional serial communications by creating access for multiple hosts over Ethernet. The compact size and various mounting options further create installation flexibility.

Features

- **Support Ethernet redundancy and recovery time < 10ms**
- **Virtual COM driver for Windows NT/2000/XP/2003/VISTA , TTY for Linux**
- **IDS Tool, Windows utility for auto discovery, multiple device setting and monitoring**
- **NAT-pass through: User can manage IDS through NAT router**
- **Versatile serial operation options: Virtual Com, Serial tunnel, TCP server, TCP client, and UDP**
- **Switch Mode, daisy chain, support to reduce usage of switch ports**
- **Provides extreme security features WEP / WPA / WPA2 / 802.1X / Radius / TKIP highly**
- **Fixed TTY driver for Linux**
- **Event Warning by Syslog, Email, SNMP trap, Relay and Beeper**
- **Redundant Power Inputs: 12~48VDC**



Application

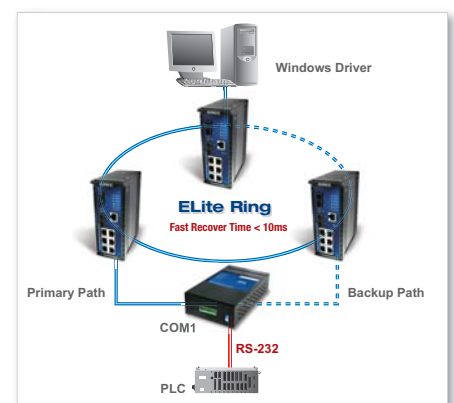
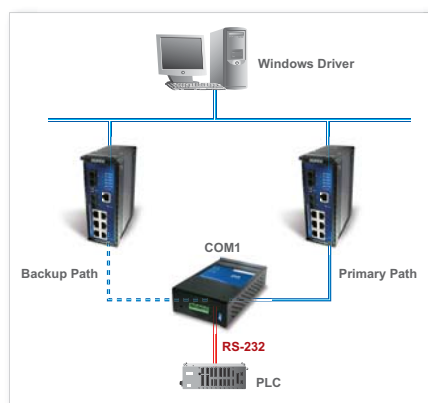
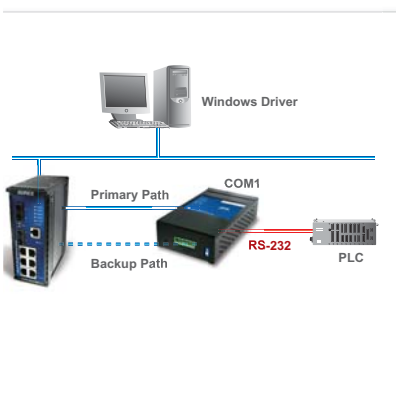


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Redundancy

Network redundancy is the “KEY” for any system which protects your network that is highly integrated and a failure in the link can result in disastrous consequences. Even a few seconds interruption in industrial communication can result in thousands of dollars lost. This “KEY” opens the door of reliability and safety of the network. IDS series device servers offer this “KEY” function to increase the communication reliability via dual Ethernet redundant ports. When the primary path is down, the back up will recover the Ethernet connection within **10ms**.

IDS provides a device end redundant link solution by connecting two Ethernet ports to the same switch with two separate uplinks or two switches with different links.



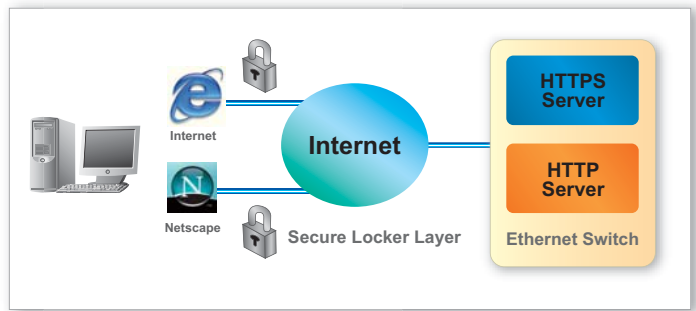
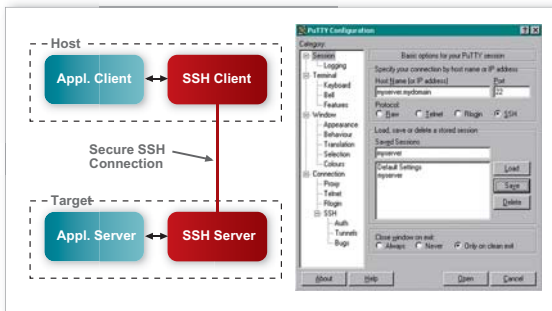
Network Security

Protection of networks and their services from unauthorized modification, destruction, or disclosure, and provision of assurance that the network performs its critical functions correctly and there are no harmful side-effects. Network security includes providing for data integrity. There are couple of methods that provide maximum security to a network, such as SSL, SSH, WEP / WPA / WPA2 / 802.1X / Radius / TKIP.

HTTPS (Hypertext Transfer Protocol over Secure Socket Layer or HTTP over SSL) is a Web protocol built into browser that encrypts and decrypts user's page requests as well as the pages that are returned by the Web server. It is a security protocol that provides communication privacy over the Internet. By adapting HTTPS technology, encrypted data packets can be transmitted safely between the IDS and PC web browser, preventing unauthorized access.

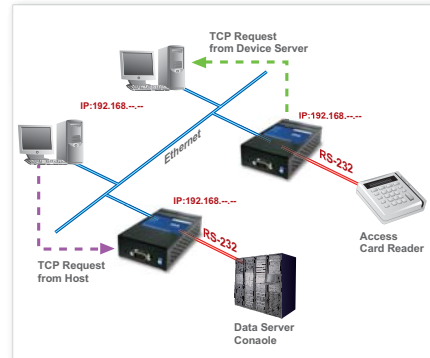
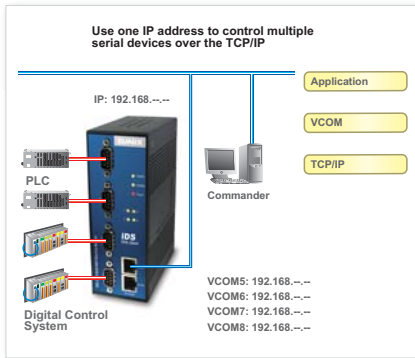
The SSH technology enables users to securely login to remote host computers; it uses a client/server architecture to provide secure communications between two non-trusted ends.

A SSH server can accept or reject incoming connection attempts from local client sides via a secure authentication mechanism with data encryption.



Up to 5 Simultaneous Connections

IDS series provides up to five simultaneous Virtual COM, TCP Server, TCP Client, TCP Tunnel and UDP connections. All the services are developed over the TCP/IP protocol stacks. You can easily connect to the serial devices over Ethernet and plan your serial to Ethernet applications.



Fiber Optics for Bandwidth, Distance Extension And Total Immunity

Implementing fiber optics to LAN allows not only distance extension but for harsh environments it provides total immunity against EMI/RFI interferences and enhanced security along with higher communication bandwidth. Thus device server with fiber optics can be used without risk in hazardous environments with no EMC emission, no ground loops, and immunity against lightning and high voltage. To enhance the communication solution, deployment of fiber optic is best choice.

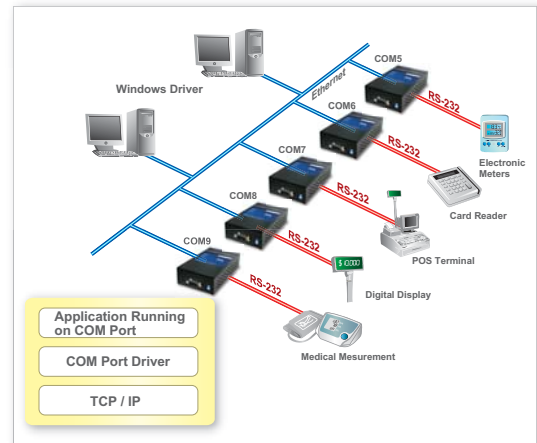


Windows Virtual COM

After installing IDS Tools Windows utility, the serial port on the IDS can be accessed by the Windows as the virtual COM port. Users do not have to modify the existing program to upgrade the latency serial communications into serial over IP application.

Ease to Configure Different Mode at Each Port

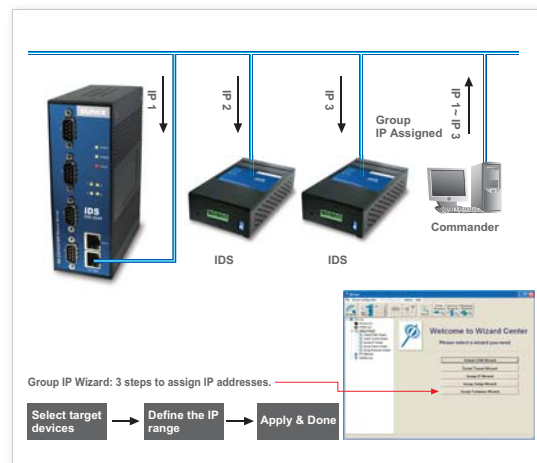
There are models of IDS series with four serial ports, and all of the serial ports can be configured with different serial interface type, such as RS-232, RS-422, 2-wire RS-485, or 4-wire RS-485. Not only this but each of the port can also be configured with different service modes, e.g. Virtual COM mode, TCP server, Client or UDP mode. All serials ports have independent settings and can work smoothly simultaneously.



Easy-to-Use Windows Utility and Smart Wizards

IDS Tool is known for its abundant features, user-friendly interface and smart setup wizards. The group setup wizard includes Virtual COM Wizard, Group Setup Wizard, Group Firmware Wizard, Serial Tunnel Wizard and Group IP Wizard.

- **Virtual COM Wizard: Three steps to configure all Virtual Com ports**
- **Group Setup Wizard: Copy specific configurations from one to other devices**
- **Group Firmware Wizard: Group update firmware to multiple device(s)**
- **Serial Tunnel Wizard: Couple devices to serial tunnels**
- **Group IP Wizard: Configure IP to multiple device(s)**






TCP / UDP Socket

You can also use TCP/UDP socket programs to control IDS serial port. IDS can be configured as TCP Server, to listen to TCP connection request, or as TCP Client, to actively request TCP connection to send data, or as UDP mode for multiple destination transmission.

Flexible Installation




IDS series have flexible mechanical design that helps users to install them either on DIN Rail or wall. It provides more convenience to users to fit the product according to their application requirements.

Industrial Device Server

Model		IDS-1011	IDS-2011	IDS-3010 (M/S)
Product				
Description		1-port RS-232 to 1-port 10/100TX LAN Device Server	1-port RS-422/485 to 1-port 10/100TX LAN Device Server	1-port RS-232/422/485 to 1-port 100FX (FIBER) LAN Device Server
Serial Communication	Number & Port Types	1 x RS-232	1 x RS-422/485	1 x RS-232/422/485
	Connector	DB9 M	5-pin terminal block	DB9 M
	Speed	110bps ~ 460.8Kbps		
	Serial Parameters	Data Bits: 5,6,7,8 Parity: odd, even, none, mark, space Stop Bits: 1, 1.5, 2		
	Flow Control	XON/XOFF, RTS/CTS, DTR/DSR		
	RS-232 Signals	TxD,RxD,RTS,CTS,DTR, DSR, DCD, RI, GND	—	TxD,RxD,RTS,CTS,DTR, DSR, DCD, RI, GND
	RS-422 Signals	—	TxD+, TxD-, RxD+, RxD-, GND	
	RS-485 (4-wire) Signals	—	TxD+, TxD-, RxD+, RxD-, GND	
	RS-485 (2-wire) Signals	—	Data+, Data-, GND	
	ESD	15KV Protection		
	Isolation	—		
LAN	10/100M Ports	1 x RJ-45 10/100Mbps (auto-negotiation)		
	100FX Fiber	—		Single / Multi Mode
	Protection	1.5KV Magnetic Isolation		
Software	Operation Mode	Virtual COM, TCP Server, TCP Client, UDP, Serial Tunnel		
	Protocols	ICMP, IP, TCP, UDP, DHCP, BootP, ARP / RARP, DNS, SNMP MIB II, HTTPS, SSL, SSH		
	COM Drivers	Windows NT / 2000 / XP / 2003 / Vista TTY Drivers For Linux		
	Configuration	Web Console, Serial Console, IDS Utility for Windows		
	Event Warning	Syslog, E-mail, SNMP trap, Beeper		
Power	Redundancy	Dual Power Inputs (Terminal Block & DC Jack type)		
	Connectors	3-pin Removable Terminal Block + DC Jack		
	Protection	Reverse		
	Consumption	7 Watts maximum		
	Input	12~48 VDC (12VDC)		
	Alarm Contact	—		
Certifications	EMI	FCC Part 15, CISPR (EN55022) Class A		
	EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge) Level 3, EN61000-4-6 (CS) Level 3		
	Shock	IEC60068-2-27		
	Freefall	IEC60068-2-32		
	Vibration	IEC60068-2-6		
Environment	Operating Temperature	-10°C to 55°C		
	Operating Humidity	5% ~ 95%RH		
	Storage Temperature	-20°C ~ 85°C		
Mechanical	Dimensions	72 x 31 x 125 mm (W x D x H) (without connectors)		
	Enclosure	Metal (IP30 protection)		
	Mounting	DIN Rail and Wall Mount		
WARRANTY		5 years		



Note : All models are supplied without power adaptor



Model		IDS-3011	IDS-3012	IDS-3042
Product				
Description		1-port RS-232 to 1-port 10/100TX LAN Device Server	1-port RS-422/485 to 1-port 10/100TX LAN Device Server	1-port RS-232/422/485 to 1-port 100FX (FIBER) LAN Device Server
Serial Communication	Number & Port Types	1 x RS-232/422/485	1 x RS-232/422/485	4 x RS-232/422/485
	Connector	DB9 M	DB9 M	DB9 M
	Speed	110bps ~ 460.8Kbps		
	Serial Parameters	Data Bits: 5,6,7,8 Parity: odd, even, none, mark, space Stop Bits: 1, 1.5, 2		
	Flow Control	XON/XOFF, RTS/CTS, DTR/DSR		
	RS-232 Signals	TxD,RxD,RTS,CTS,DTR, DSR, DCD, RI, GND		
	RS-422 Signals	TxD+, TxD-, RxD+, RxD-, GND		
	RS-485 (4-wire) Signals	TxD+, TxD-, RxD+, RxD-, GND		
	RS-485 (2-wire) Signals	Data+, Data-, GND		
ESD	15KV Protection			
LAN	10/100M Ports	1 x RJ-45	2 x RJ-45 10/100Mbps (auto-negotiation)	
	Redundancy	—	10ms (Redundant Dual LAN Ports)	
	Protection	1.5KV Magnetic Isolation		
Software	Operation Mode	Virtual COM, TCP Server, TCP Client, UDP, Serial Tunnel		
	Protocols	ICMP, IP, TCP, UDP, DHCP, BootP, ARP / RARP, DNS, SNMP MIB II, HTTPS, SSL, SSH		
	COM Drivers	Windows NT / 2000 / XP / 2003 / Vista TTY Drivers For Linux		
	Configuration	Web Console, Serial Console, IDS Utility for Windows		
	Event Warning	Syslog, E-mail, SNMP trap, Beeper		Syslog, E-mail, SNMP trap, Beeper, Relay
Power	Redundancy	Dual Power Inputs (Terminal Block & DC Jack type)		
	Connectors	3-pin Removable Terminal Block + DC Jack	6-pin Removable Terminal Block	
	Protection	Reverse		
	Consumption	7 Watts maximum		
	Input	12~48 VDC (12VDC)		
	Alarm Contact	—	1 x Configurable Relay Output	
Certifications	EMI	FCC Part 15, CISPR (EN55022) Class A		
	EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge) Level 3, EN61000-4-6 (CS) Level 3		
	Shock	IEC60068-2-27		
	Freefall	IEC60068-2-32		
	Vibration	IEC60068-2-6		
Environment	Operating Temperature	-10°C to 55°C		
	Operating Humidity	5% ~ 95%RH		
	Storage Temperature	-20°C ~ 85°C		
Mechanical	Dimensions	72 x 31 x 125 mm (W x D x H) (without connectors)		52 x 106 x 144 mm (Wx DxH) (without connectors)
	Enclosure	Metal (IP30 protection)		
	Mounting	DIN Rail and Wall Mount		
WARRANTY		5 years		

Note : All models are supplied without power adaptor

Industrial Device Server With POE (Power Over Ethernet) Function

Model		IDS-2042P-I	IDS-3042P
Product			
Description		4-port RS-422/485 with 2.5KV Isolation to 2-port 10/100TX LAN Redundant PoE (PD in ETH2) Device Server	4-port RS-232/422/485 to 2-port 10/100TX LAN Redundant PoE (PD in ETH2) Device Server
Serial Communication	Number & Port Types	4 x RS-422/485	4 x RS-232/422/485
	Connector	5-pin terminal block	DB9 M
	Speed	110bps ~ 460.8Kbps	
	Serial Parameters	Data Bits: 5,6,7,8 Parity: odd, even, none, mark, space Stop Bits: 1, 1.5, 2	
	Flow Control	XON/XOFF, RTS/CTS, DTR/DSR	
	RS-232 Signals	—	TxD,RxD,RTS,CTS,DTR, DSR, DCD, RI, GND
	RS-422 Signals	TxD+, TxD-, RxD+, RxD-, GND	
	RS-485 (4-wire) Signals	TxD+, TxD-, RxD+, RxD-, GND	
	RS-485 (2-wire) Signals	Data+, Data-, GND	
	ESD	15KV Protection	
LAN	Isolation	2.5KV	
	10/100M Ports	2 x RJ45 10/100Mbps (auto-negotiation)	
	Redundancy	10ms (Redundant Dual LAN Ports)	
Power Over Ethernet	Protection	1.5KV Magnetic Isolation	
	PoE Port	ETH 2	
	Standard	IEEE802.3af compliant PD	
	Power Consumption	8 Watts maximum	
	Protection	Overload & Short Circuit	
Software	Isolation Voltage	1000 VDC min	
	Isolation Resistance	100000000 ohms min	
	Operation Mode	Virtual COM, TCP Server, TCP Client, UDP, Serial Tunnel	
	Protocols	ICMP, IP, TCP, UDP, DHCP, BootP, ARP / RARP, DNS, SNMP MIB II, HTTPS, SSL, SSH	
	COM Drivers	Windows NT / 2000 / XP / 2003 / Vista TTY Drivers For Linux	
Power	Configuration	Web Console, Serial Console, IDS Utility for Windows	
	Event Warning	Syslog, E-mail, SNMP trap, Beeper, Relay	
	Redundancy	Dual Power Inputs (Terminal Block)	
	Connectors	6-pin Removable Terminal Block	
	Protection	Reverse	
Certifications	Consumption	7 Watts maximum	
	Input	12~48 VDC (12VDC)	
	Alarm Contact	1 x Configurable Relay Output	
	EMI	FCC Part 15, CISPR (EN55022) Class A	
	EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge) Level 3, EN61000-4-6 (CS) Level 3	
Environment	Shock	IEC60068-2-27	
	Free-fall	IEC60068-2-32	
	Vibration	IEC60068-2-6	
Mechanical	Operating Temperature	-10°C to 55°C	
	Operating Humidity	5% ~ 95%RH	
	Storage Temperature	-20°C ~ 85°C	
WARRANTY	Dimensions	52 x 106 x 144 mm (Wx DxH) (without connectors)	
	Enclosure	Metal (IP30 protection)	
	Mounting	DIN Rail and Wall Mount	
WARRANTY		5 years	

Note : All models are supplied without power adaptor