



# IDS-141A/181A

## Industrial 4-port/8-port slim type secure serial (RS-232) to Ethernet device server

### Features:

- Operating Modes : Virtual Com, Serial Tunnel, TCP Server, TCP Client, UDP and **Modbus Gateway**
- Multiple host devices : 5 host devices: Virtual COM, TCP Server, TCP Client mode;
- 4 IP ranges : UDP
- NAT Pass-Through : the user can manage IDS-181A/141A through NAT router
- Security : SSL data encryption; secured management by HTTPS and SSH IP Access : IP White List
- Update DNS Hostname : DDNS
- Event Warning by Syslog, Email, SNMP trap and Relay
- Configurable by Web-based and Windows utility (DS-Tool)
- Various Windows O.S. supported : Windows NT/ 2000 / XP / 2003 / VISTA(32/64-bit) / Windows 7(32/64-bit)



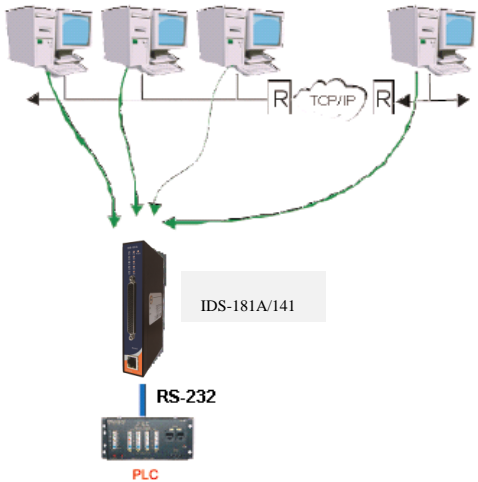
### Introduction

IDS-181A/141A is an innovative secure 8-port/4-port RS-232 to 1-port LAN serial to Ethernet device server featuring the standard features of device server, such like TCP/IP interface and versatile operation modes: Virtual Com, Serial Tunnel, TCP Server, TCP Client, UDP, Ethernet modem. In addition, the Windows utility, DS-Tool, could configure multiple devices and set up the mappings of Virtual Com. The features of NAT Router Pass-Through, and DDNS make it more convenient for administrators to configure ORing's device servers through NAT router from different IP domains or Internet via modem remotely. On the other hand, IDS-181A/141A can simultaneously transfer data up to 5 redundant host PCs to avoid Ethernet connection breakdown or any host PC fails. Further, IDS-181A/141A features HTTPS, SSH, and SSL encryption to assure the security of critical data transmission.

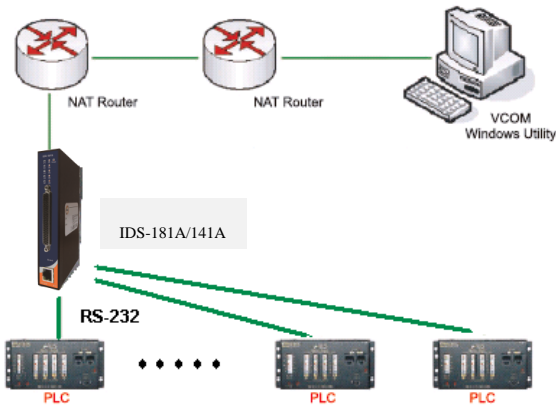
IDS-181A/141A provides dual redundant power inputs, 12~48VDC on terminal block and DC power jack to guarantee a non-stop operation. With wide operating temperature, -40~70°C, and rugged IP-30 housing design, IDS-181A/141A could operate in the harsh industrial environment. Therefore IDS-181A/141A is the best solution to the high demand of secure serial to Ethernet critical data communication.

## Practical Operation

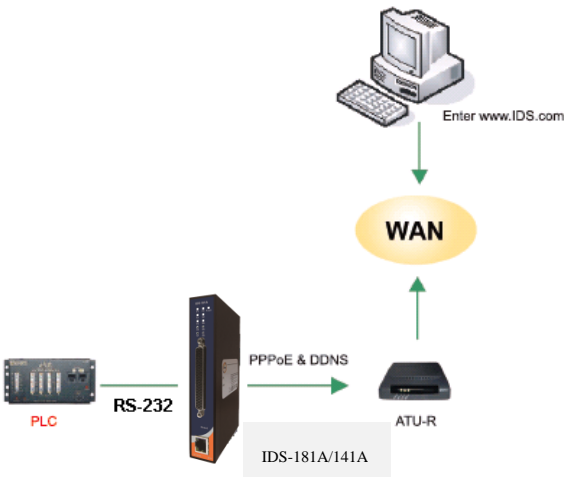
In practical operation of serial device servers, Windows utility (DS-Tool) is supported. This utility is very helpful for you to manage and monitor all of industrial device servers on the industrial network.



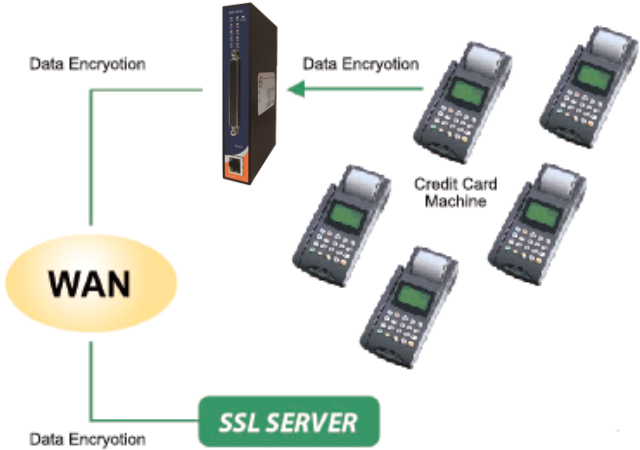
Multiple Host PCs



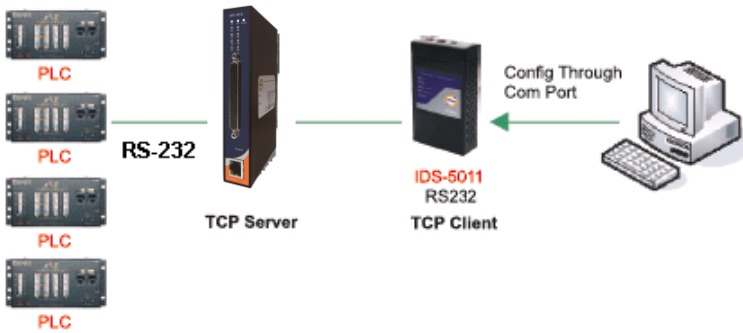
NAT Router Pass Through



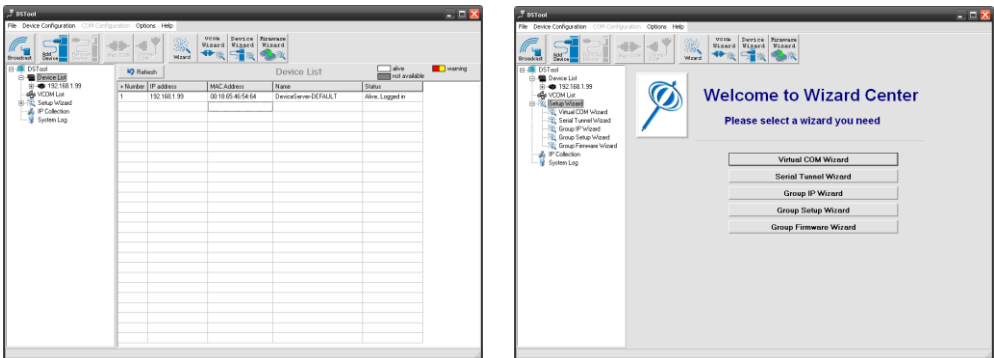
PPPoE and DDNS



SSL Encryption



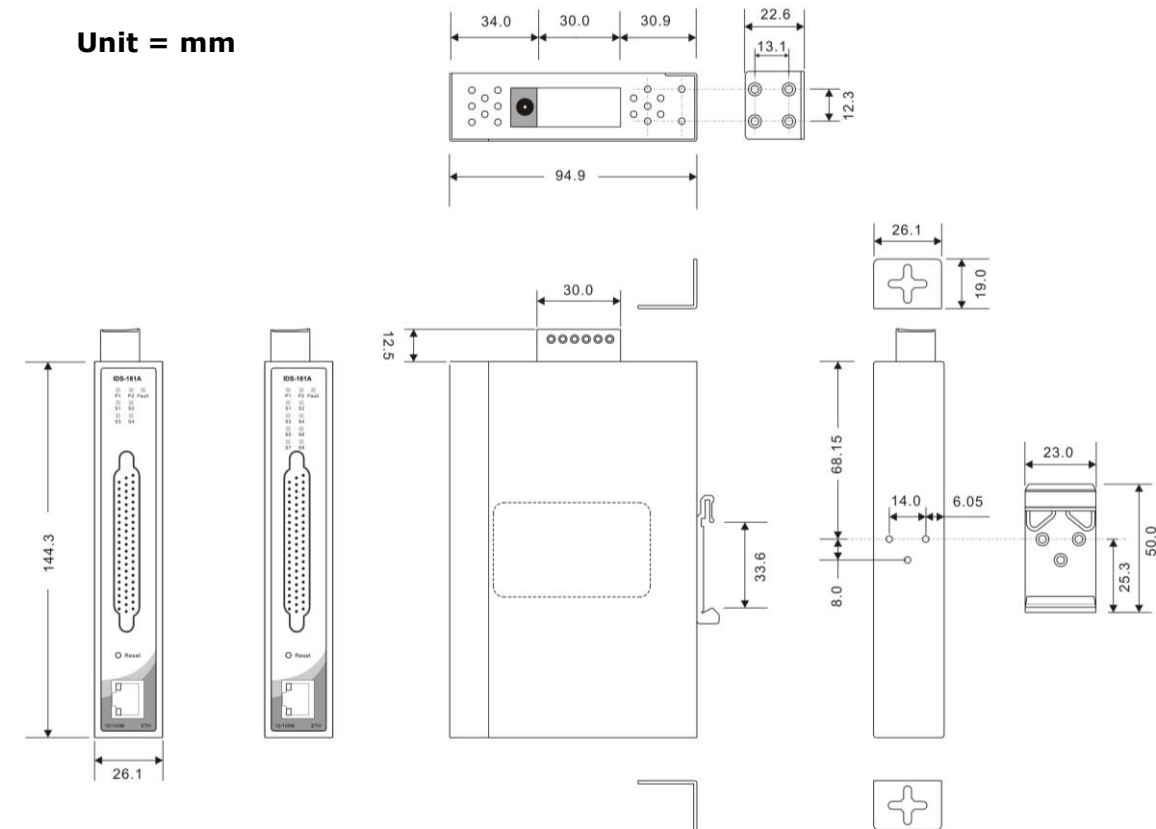
TCP Server/Client Mode



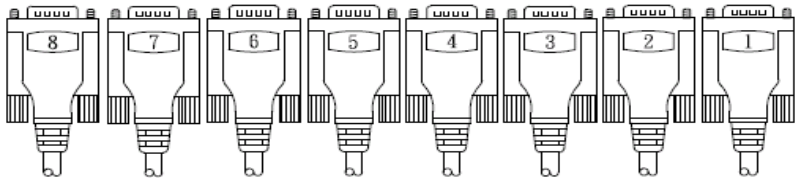
DS-Tool (Windows Utility): Monitoring and Configuration

Dimension

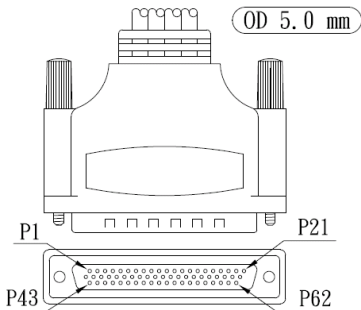
Unit = mm



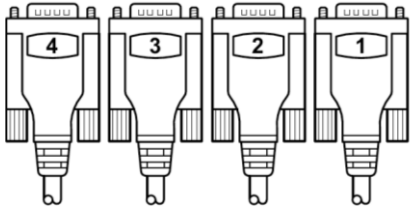
Pin Definitions



8-port DB9 Male connector

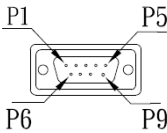


DB62 Male with 4/8-port RS-232 connector

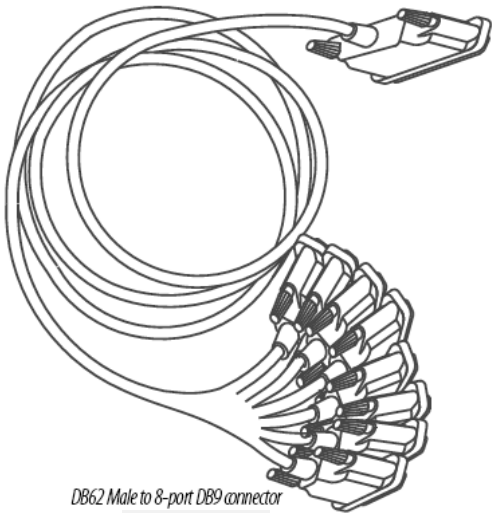


4-port DB9 Male connector

DB9 Male Pin Assignment

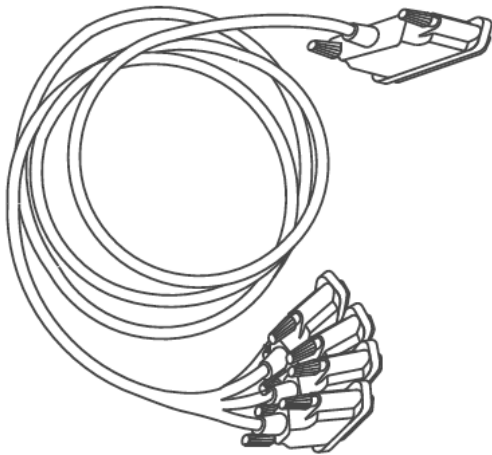


| Pin #                  | RS 232 |
|------------------------|--------|
| 1                      | DCD    |
| 2                      | RXD    |
| 3                      | TXD    |
| 4                      | DTR    |
| 5                      | GND    |
| 6                      | DSR    |
| 7                      | RTS    |
| 8                      | CTS    |
| 9                      | N.C.   |
| RS 232 mode act as DTE |        |



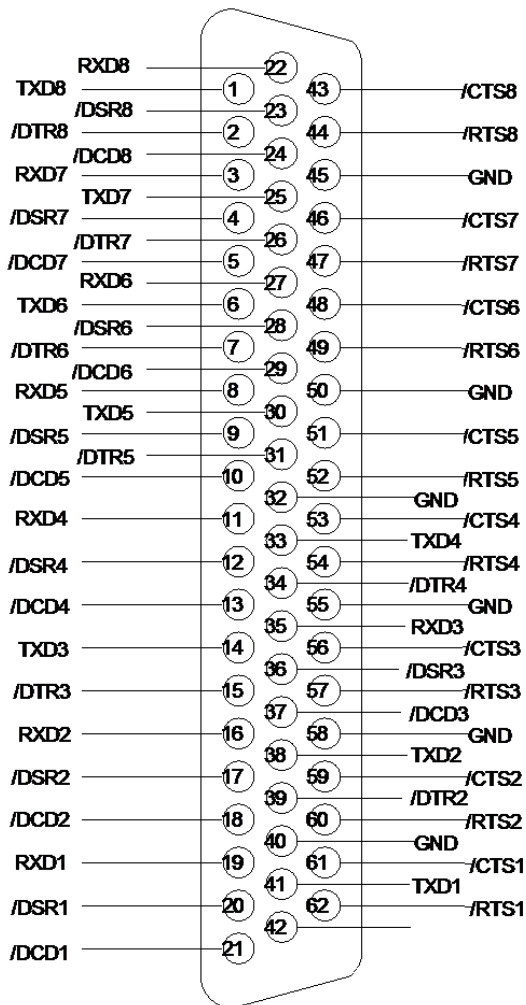
DB62 Male to 8-port DB9 connector

For IDS-181A



DB62 Male to 4-port DB9 connector

For IDS-141A



| Pin # | RS 232 | Pin # | RS 232 |
|-------|--------|-------|--------|
| 1     | TXD8   | 32    | GND    |
| 2     | DTR8   | 33    | TXD4   |
| 3     | RXD7   | 34    | DTR4   |
| 4     | DSR7   | 35    | RXD3   |
| 5     | DCD7   | 36    | DSR3   |
| 6     | TXD6   | 37    | DCD3   |
| 7     | DTR6   | 38    | TXD7   |
| 8     | RXD5   | 39    | DTR2   |
| 9     | DSR5   | 40    | GND    |
| 10    | DCD5   | 41    | TXD1   |
| 11    | RXD4   | 42    | DTR1   |
| 12    | DSR4   | 43    | CTS8   |
| 13    | DCD4   | 44    | RTS8   |
| 14    | TXD3   | 45    | GND    |
| 15    | DTR3   | 46    | CTS7   |
| 16    | RXD2   | 47    | RTS7   |
| 17    | DSR2   | 48    | CTS6   |
| 18    | DCD2   | 49    | RTS6   |
| 19    | RXD1   | 50    | GND    |
| 20    | DSR1   | 51    | CTS5   |
| 21    | DCD1   | 52    | RTS5   |
| 22    | RXD8   | 53    | CTS4   |
| 23    | DSR8   | 54    | RTS4   |
| 24    | DCD8   | 55    | GND    |
| 25    | TXD7   | 56    | CTS3   |
| 26    | DTR7   | 57    | RTS3   |
| 27    | RXD6   | 58    | GND    |
| 28    | DSR6   | 59    | CTS2   |
| 29    | DCD6   | 60    | RTS2   |
| 30    | TXD5   | 61    | CTS1   |
| 31    | DTR5   | 62    | RTS1   |

(S5~S8 only available for IDS-181A)

Table 3-2 Pin assignment

## Specifications

| ORing Device Server Model                       | IDS-181A   | IDS-141A  |
|---|--|---|
| Feature   |  |   |
| 10/100 Base-T(X) Ports in RJ45<br>Auto MDI/MDIX | 1  |   |
| Serial Ports                                    |  |   |
| RS-232 Serial port number                       | 8  | 4   |
| Connector                                       | DB62 Female (provide DB62 to 8 ports DB9 cable)  | DB62 Female (provide DB62 to 4 ports DB9 cable) |
| Operation Mode                                  | RS-232   |   |
| Serial Baud Rate                                | 1200 bps to 460.8Kbps  |   |
| Data Bits                                       | 7, 8   |   |
| Parity  | odd, even, none, mark, space   |   |
| Stop Bits                                       | 1, 1.5, 2  |   |
| RS-232  | TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND   |   |
| Flow Control                                    | XON/XOFF, RTS/CTS, DTR/DSR   |   |
| Network Features                                |  |   |
| Network Protocols                               | ICMP, IP, TCP, UDP, DHCP, BOOTP, SSH, DNS, SNMP V1/V2c, HTTPS, SMTP  |   |
| LED indicators                                  |  |   |
| Power indicator                                 | PWR 1(2) / Ready:<br>Green On: Power is on and functioning Normally.<br>Green Blinking: Located by Administrator.        |   |
| 10/100TX RJ45 port indicator                    | Left LED : Amber for port Link speed at 100Mbps<br>Right LED : Green for port Active                                     |   |
| Serial TX / RX LEDs:                            | Red: Serial port is receiving data<br>Green: Serial port is transmitting data  |   |
| Power   |  |   |
| Redundant Input power                           | Dual DC inputs. 12-48VDC on 6-pin terminal block and power jack  |   |
| Power consumption (Typ.)                        | 4.5 Watts  | 3.7 Watts                                       |
| Overload current protection                     | Present  |   |
| Reverse polarity protection                     | Present on terminal block  |   |
| Physical Characteristic                         |  |   |
| Enclosure                                       | IP-30  |   |
| Dimension (W x D x H)                           | 94.9 x 23 x 144.3 (mm)   |   |
| Weight (g)                                      | 358 g  | 355 g   |
| Environmental                                   |  |   |
| Storage Temperature                             | -40 to 85°C (-40 to 185°F)   |   |
| Operating Temperature                           | -10 to 60°C (14 to 140°F)  |   |
| Operating Humidity                              | 5% to 95% Non-condensing   |   |
| Regulatory approvals                            |  |   |
| 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), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 |   |
| Shock   | IEC60068-2-27  |   |
| Free Fall                                       | IEC60068-2-32  |   |
| Vibration                                       | IEC60068-2-6   |   |
| Safety  | EN60950-1  |   |
| Warranty  | 5 years  |   |

Ordering Information

IDS-1ABA

| Code Definition | Serial Port Number           | 10/100Mbps Ethernet Port Number |
|-----------------|------------------------------|---------------------------------|
| Option          | - 4: 4 ports<br>- 8: 8 ports | - 1: 1 ports                    |

| Available Model | Model Name  | Description   |
|-----------------|-------------|---|
|                 | IDS-181A_US | Industrial 8-port slim type secure serial to Ethernet device server with 8xRS-232 and 1x10/100Base-T(X), DB62 connector, US adapter |
|                 | IDS-181A_EU | Industrial 8-port slim type secure serial to Ethernet device server with 8xRS-232 and 1x10/100Base-T(X), DB62 connector, EU adapter |
|                 | IDS-141A_US | Industrial 4-port slim type secure serial to Ethernet device server with 4xRS-232 and 1x10/100Base-T(X), DB62 connector, US adapter |
|                 | IDS-141A_EU | Industrial 4-port slim type secure serial to Ethernet device server with 4xRS-232 and 1x10/100Base-T(X), DB62 connector, EU adapter |

Packing List

- IDS-141A/181A x 1
- CD x 1
- Quick Installation Guide x 1

Optional Accessories

- DR-45 series : 45 Watts power supply
- DR-75 series : 75 Watts power supply
- DR-120 series : 120 Watts power supply
- PAA-121000, 12VDC/1000mA 12W Power Adapter, US plug
- PAE-121000, 12VDC/1000mA 12W Power Adapter, EU plug

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