ORing IDS-342GT Industrial Secure Serial Port to Ethernet Device Server Installation Guide

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Contents

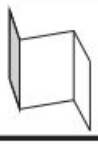
Introduction

IDS-342GT is an innovative secure 4 port RS-232/422/485 to 2 ports Gigabit Ethernet secure device server with standard features of device server, such like TCP/IP interface and versatile operation modes: Virtual Com, Serial Tunnel, TCP Server, TCP Client, and UDP. In addition, the Windows untility, DS-Tool, could configure multiple devices and set up the mappings of Virtual Com. On the other hand, IDS-342GT can simultaneously transfer data

up to 5 redundant host PCs to aovid Ethernet connection breakdown or any host PC fails. Further, IDS-342GT features HTTPS, SSH, and SSL encryption to assure the security of critical data transmission. IDS-342GT supports RS-232/422/485 and provides dual redundant power inputs, 12~48 VDC, on terminal block to guarantee a non-stop operation. With wide operating temperature, -40~70oC, and rugged IP-30 housing design, IDS-342GT series could operate in the harsh industrial environment. Therefore, IDS-342GT is the best solution to the high demand of secure serial to Ethernet critical data communication.

Package Contents

The device is shipped with the following items. If any of these items is missing or damaged, please contact your customer service representative for assistance.

Contents	Pictures	Number
IDS-342GT		X 1
DIN-rail Kit		X 1
Wall-mount Kit		X 1
QIG		X 1

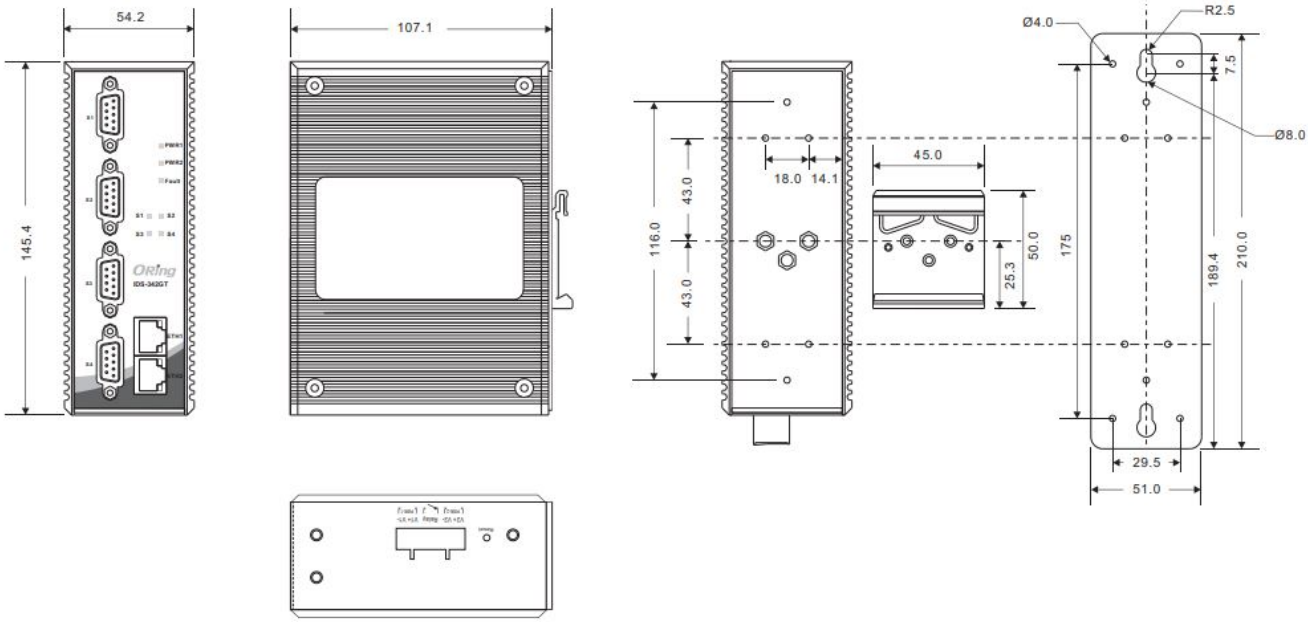
Preparation

Before you begin installing the device, make sure you have all of the package contents available and a PC with Microsoft Internet Explorer 6.0 or later, for using web-based system management tools.

Safety & Warnings

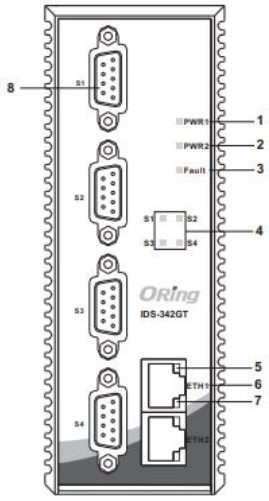
⚠ Elevated Operating Ambient: If installed in a closed environment, make sure the operating ambient temperature is compatible with the maximum ambient temperature (Tma) specified by the manufacturer.
⚠ Reduced Air Flow: Make sure the amount of air flow required for safe operation of the equipment is not compromised during installation.
⚠ Mechanical Loading: Make sure the mounting of the equipment is not in a hazardous condition due to uneven mechanical loading.
⚠ Circuit Overloading: Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

Dimension Unit =mm (Tolerance ±0.5mm)



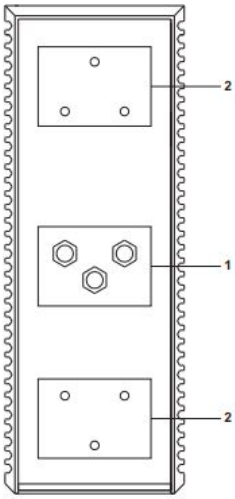
Panel Layouts

Front View



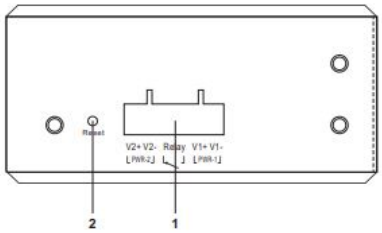
1. Power module 1 status indicator
2. Power module 2 status indicator
3. Faulty relay indicator
4. Indicator for serial data communications
5. Indicator for LAN port speed
6. LAN port
7. Indicator for LAN port connection status
8. Serial port

Rear View



1. Din-rail screw holes
2. Wall-mount screw holes

Bottom View



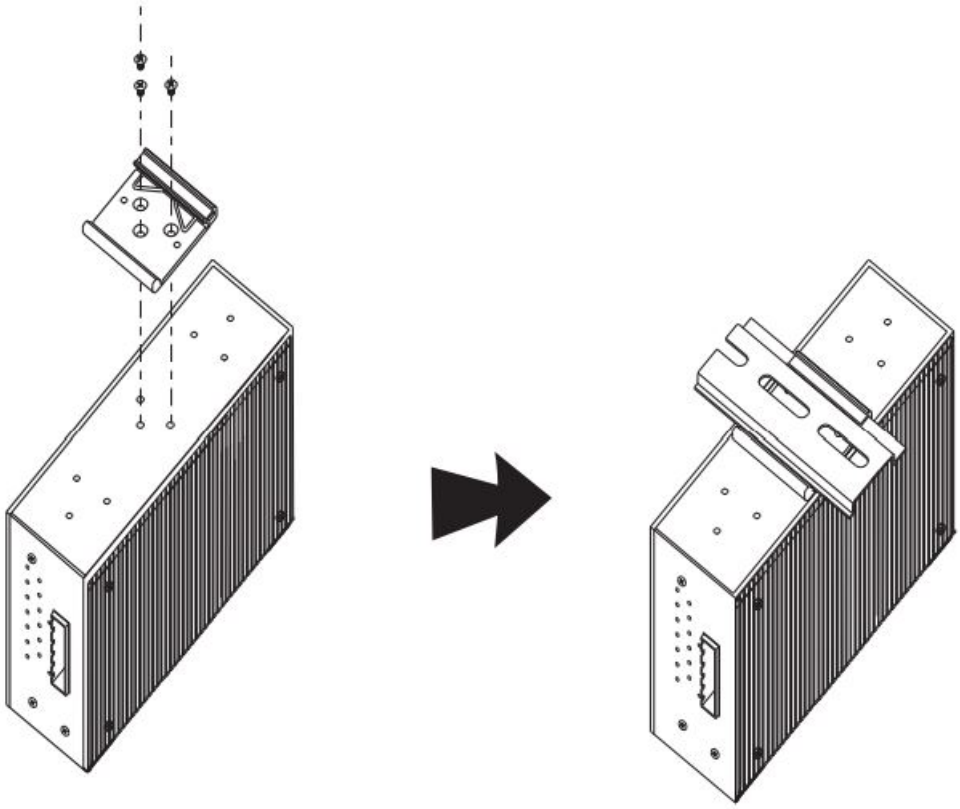
1. Terminal block with power connectors
2. Reset button

Installation

Use the mounting kits attached with the package and follow the steps below to install the switch to a rail or to the wall.

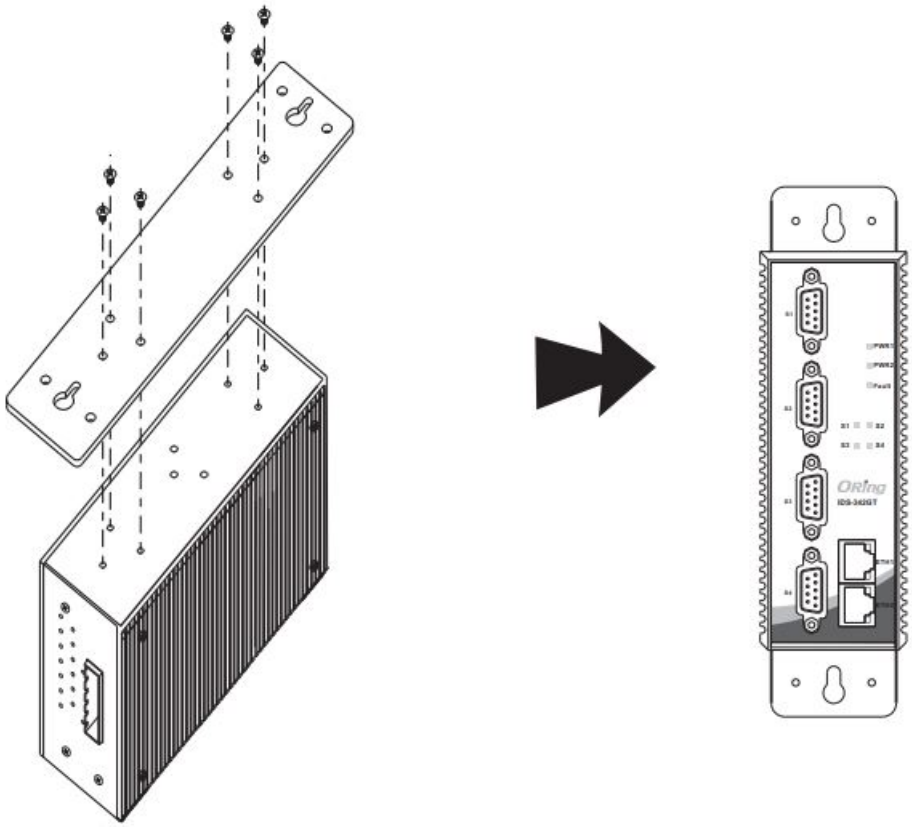
DIN-rail Installation

Step 1: Slant the switch and screw the Din-rail kit onto the back of the switch, right in the middle of the back panel.
Step 2: Slide the switch onto a DIN-rail from the Din-rail kit and make sure the switch clicks into the rail firmly.



Wall-mounting

Step 1: Screw the wall-mount kit (in the package) onto the back of the switch. A total of six screws are required, as shown below. Step 2: Use the switch, with wall mount plates attached, as a guide to mark the correct locations of the wall-mounting screws. Step 3: Insert a screw head through the large part of the keyhole-shaped aperture on the plate, and then slide the switch downwards. Tighten the screw for added stability.



⚠ Instead of screwing the screws in all the way, it is advised to leave a space of about 2mm to allow room for sliding the switch between the wall and the screws.

Network Connection

The series have standard Ethernet ports. Depending on the link type, the switch uses CAT 3, 4, 5, 5e UTP cables to connect to network devices (PCs, servers, switches, routers, or hubs). Please refer to the following table for cable specifications.

Cable Types and Specifications:

Cable	Type	Max. Length	Connector
10Base-T	Cat. 3, 4, 5 100-ohm	UTP 100 m (328 ft)	RJ-45
100Base-TX	Cat. 5 100-ohm UTP	UTP 100 m (328 ft)	RJ-45
1000Base-T	Cat. 5/Cat 5e 100-ohm UTP	UTP 100 m (328 ft)	RJ-45

For pin assignments for different types of cables, please refer to the following tables.

10/100 Base-T(X) RJ-45	
Pin Number	**Assignment**
1	TD+
2	TD-
3	RD+
4	Not used
5	Not used
6	RD-
7	Not used
8	Not used

1000Base-T RJ-45 port	
Pin Number	**Assignment**
#1	BI_DA+
#2	BI_DA-
#3	BI_DB+
#4	BI_DC+
#5	BI_DC-
#6	BI_DB-
#7	BI_DD+
#8	BI_DD-

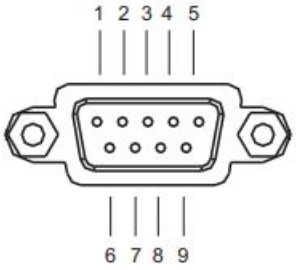
10/100 Base-T(X) MDI/MDI-X		
Pin Number	**MDI port**	**MDI-X port**
1	TD+(transmit)	RD+(receive)
2	TD-(transmit)	RD-(receive)
3	RD+(receive)	TD+(transmit)
4	Not used	Not used
5	Not used	Not used
6	RD-(receive)	TD-(transmit)
7	Not used	Not used
8	Not used	Not used

1000Base-T RJ-45		
Pin Number	**MDI port**	**MDI-X port**
1	BI_DA+	BI_DB+
2	BI_DA-	BI_DB-
3	BI_DB+	BI_DA+
4	BI_DC+	BI_DD+
5	BI_DC-	BI_DD-
6	BI_DB-	BI_DA-
7	BI_DD+	BI_DC+
8	BI_DD-	BI_DC-

Note: "+" and "-" signs represent the polarity of the wires that make up each wire pair.

DB9 serial port

The device can be connected to a serial device using a DB9 cable. The DB9 connector supports RS232 / RS422 / RS485 operation modes. Please refer to the following table for the pin assignments of the DB9 connector.

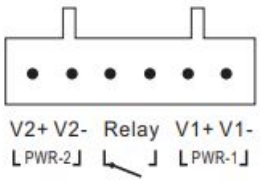


DB9 connector

Pin #	RS-232	RS-422	RS-485 (4 wire)	RS-485 (2 wire)
1	DCD	TX-	TX-	DATA -
2	RXD	TX+	TX+	DATA +
3	TXD	RX+	RX+	
4	DTR	RX-	RX-	
5	GND	GND	GND	
6	DSR			
7	RTS			
8	CTS			
9	RI			

Wiring

Power inputs The device has two sets of DC power inputs on a 6-pin terminal block located on bottom of the device. Follow the steps below to wire the power input on the terminal block.



STEP 1: Insert the negative/positive wires into the V-/V+ terminals, respectively.
STEP 2: To keep the wires from pulling loose, use a small flat-blade screwdriver to tighten the wire-clamp screws on the front of the connector.

Configurations

After installing the switch, the green power LED should turn on. Please refer to the following tablet for LED indication.

LED	Color	Status	Description
PWR1/2	Green	On	Power is on and function normally
Fault	Amber	On	Faulty relay (power failure or port disconnected)
10/100/1000Base-T(X) Ethernet ports			
LNK/ACT	Green	On	Port is connected
	Green	Blinking	Transmitting data
Speed	Green	On	Port running at 1000Mbps.
	Amber	On	Port running at 100Mbps.
	Green/ Amber	Off	Port running at 10Mbps.
Serial ports			
S1~S4	Red	On	Receiving data
	Green	On	Transmitting data

Follow the steps to set up the card:

1. Launch the Internet Explorer and type in IP address of the switch. The default static IP address is 192.168.10.2

2. Log in with default user name and password (both are admin). After logging in, you should see the following screen. For more information on configurations, please refer to the user manual. For information on operating the device using Oring's Open-Vision management utility, please go to ORing website.

Resetting

To restore the switch configurations back to the factory defaults, press the Reset button for 5 seconds.

Specifications

ORing Device Server Model	IDS-342GT
Physical Ports	
10/100/1000Base-T(X) Ports in Auto MDI/MDIX	2
Serial Ports	
Connector	DB9 x 4
Operation Mode	RS-232/422/485
Serial Baud Rate	110 bps to 921.6 Kbps
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, RI, GND
Flow Control	XON/XOFF, RTS/CTS, DTR/DSR
Network Protocol	
Protocol	ICMP, IP, TCP, UDP, DHCP, BOOTP, SSH, DNS, SNMP, V1/V2c, HTTPS
Jumbo frame	Up to 9.6K Bytes
Power	
Redundant Input power	Dual DC inputs. 12~48VDC on 6 pin terminal block
Power Consumption(Typ.)	6.96W
Overload current protection	Present
Reverse polarity protection	Present on terminal block
Physical Characteristic	
Enclosure	IP-30 Aluminum
Dimension (W x D x H)	54.2(W)x 107.1(D)x 145.4(H) mm (2.13x4.22x5.72 inch.)
Weight (g)	740g
Environmental	
Storage Temperature	-40 to 85°C (-40 to 185°F)
Operating Temperature	-40 to 70°C (-40 to 158°F)
Operating Humidity	5% to 95% Non-condensing
Regulatory Approvals	
EMC	CE EMC (EN 55024, EN 55032), FCC Part 15 B
EMI	EN 55032, CISPR32, EN 61000-3-2, EN 61000-3-3, FCC Part 15 B class A
EMS	EN 55024 (IEC/EN 61000-4-2 (ESD), IEC/EN61000-4-3 (RS), IEC/EN61000-4-4 (EFT), IEC/EN 61000-4-5 (Surge), IEC/EN 61000-4-6 (CS), IEC/EN 61000-4-8(PFMF), IEC/EN 61000-4-11(DIP))
Shock	IEC60068-2-27
Free Fall	IEC60068-2-31
Vibration	IEC60068-2-6
Safety	EN60950-1
MTBF	560362.4721 hrs
Warranty	5 years

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Documents / Resources

	ORing IDS-342GT Industrial Secure Serial Port to Ethernet Device Server [pdf] Installation Guide IDS-342GT Industrial Secure Serial Port to Ethernet Device Server, IDS-342GT, Industrial Secure Serial Port to Ethernet Device Server, Ethernet Device Server, Device Server, Server

References

- ORing Industrial Networking