ORing

IDS-4312D+

Industrial 1 secure serial port to IEEE 802.11 b/g/n wireless device server

Features

- High Speed Air Connectivity: WLAN interface support up to 150 Mbps link speed
- Support 2x 10/100Base-T(x) Ethernet ports
- Support 1x DI and 1x DO
- Support **ORing Open Gateway** (protocol converter) software feature for user-friendly IIoT deployment
- Operating Modes: Virtual Com, Serial Tunnel, TCP Server, TCP Client, UDP
- Support **Modbus TCP/RTU** industrial protocols
- Support **MQTT/MQTT Sparkplug B/CoAP/LWM2M** Cloud protocols
- **PoE power input** available with 1kV isolation
- Security: SSL data encryption; secured management by HTTPS and SSH: IP Access: IP White List
- Event Warning by Syslog, Email, SNMP trap
- Configurable by Web-based and Windows utility (**DS-Tool**)
- Various Windows O.S. supported: Windows NT/2000/ XP/ 2003/VISTA(32/64bit)/ Windows 7(32/64bit)
- 1KV isolation for PoE PD port (**IDS-4312D+**)

b/g/n WiFi | RS-232/422/485 | OpenGateway | -25~70°C Temperature | PoE/PD | Redundant PWR | c(UL)us | CE | FC | CoAP | Modbus | Sparkplug MQTT Topic & Payload Definition

Introduction

   IDS-4312D+ is an innovative secure 1 port RS-232/422/485 to 802.11 b/g/n WLAN, up to 150 Mbps, and 2 port LAN 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-4312D+ can simultaneously transfer data up to 5 redundant host PCs to aovid Ethernet connection breakdown or any host PC fails.   Further, IDS-4312D+ features HTTPS, SSH, and SSL encryption to assure the security of critical data transmission.

   IDS-4312D+ supports RS-232/422/485 and provides dual redundant power inputs, 12~48 VDC, on terminal block to guarantee a non-stop operation. Further, IDS-4312+ features PoE PD (Power Device) function, compliant with IEEE802.3af standard, with 1kv isolation on the PoE port. With wide operating temperature, -25~70°C, and rugged IP-30 housing design, IDS-4312D+ series could operate in the harsh industrial environment. Therefore, IDS-4312D+ is the best solution to the high demand of secure serial to Ethernet critical data communication.
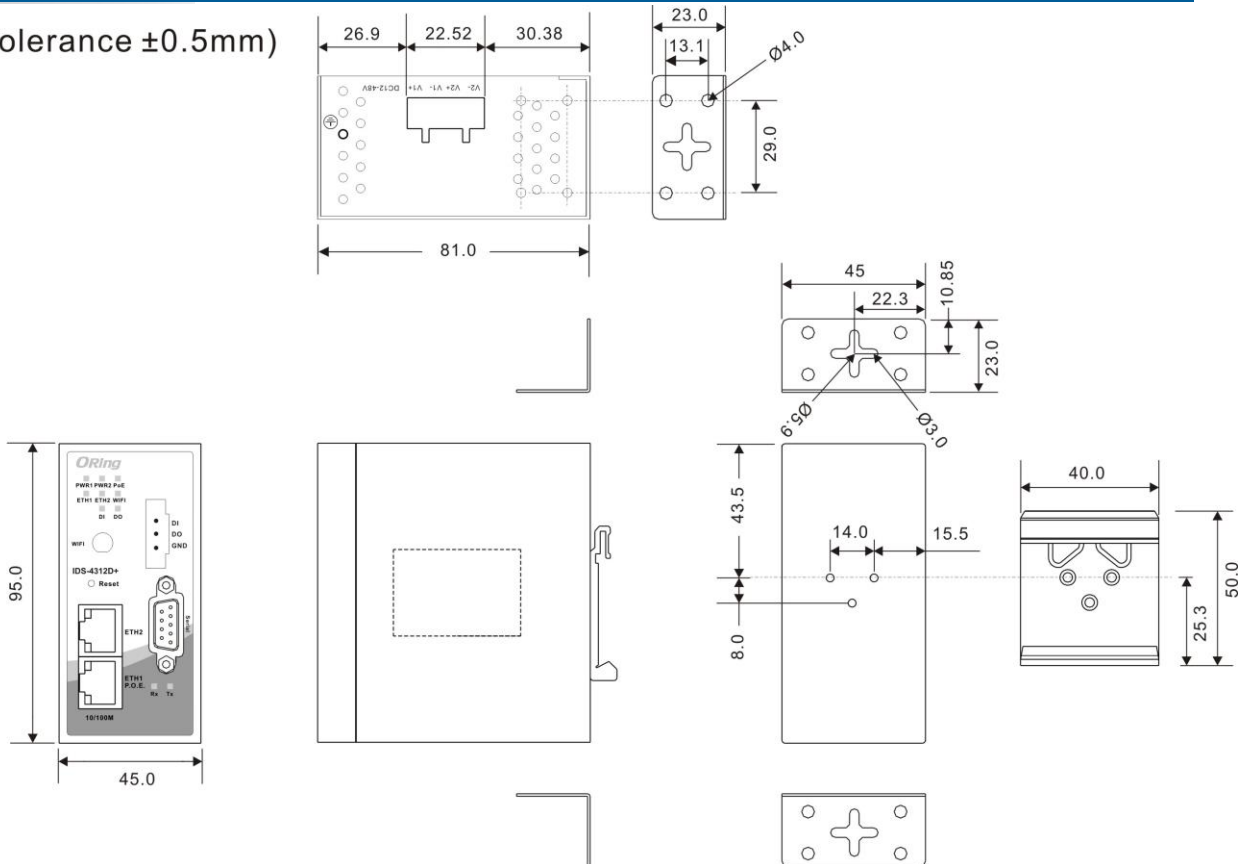
Pin Definition
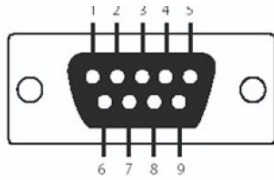
DB9 connector

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	GND
6	DSR			
7	RTS			
8	CTS			
9	RI			

Dimension

Unit =mm (Tolerance ±0.5mm)

Specifications

ORing Device Server Model	IDS-4312D+
Physical Ports	
10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX	2
P.O.E.	P.O.E.Present at ETH1 Power Device (IEEE 802.3af): 　IEEE 802.3af compliant input interface 　Over load & short circuit protection 　Isolation Voltage: 1000 VDC min. 　Isolation Resistance : 10^8 ohms min
DI/DO(Dry Contact)	DI x 1, DO x 1 (DI :Logic level 1: 5V~30V, Logic level 0: 0V~2V DO :Maximum Voltage is 30V, Maximum Current is 20mA)
WLAN feature	
Operation Mode	Client
Antenna and Connector	1 x External reverse SMA-type antenna connector
Radio Frequency Type	DSSS, OFDM
Modulation	IEEE802.11b: CCK, DQPSK, DBPSK IEEE802.11g/n: OFDM with BPSK, QPSK, 16QAM, 64QAM
Frequency Band	America / FCC: 2.412~2.462 GHz (11 channels) Europe CE / ETSI: 2.412~2.472 GHz (13 channels)
Transmission Rate	802.11b: 1/2/5.5/11 Mbps 802.11g: 6/9/12/18/24/36/48/54 Mbps 802.11n(40MHz): UP to 150 Mbps
Transmit Power	802.11b: 13.5dBm ± 1.5dBm 802.11g: 13.5dBm ± 1.5dBm 802.11n(2.4G@20MHz): 13.5dBm ± 1.5dBm 802.11n(2.4G@40MHz): 13.5dBm ± 1.5dBm
Receive Sensitivity	802.11b: -90dBm ± 2dBm@1Mbps 802.11g: -72dBm ± 2dBm@54Mbps 802.11n(2.4G@40MHz,MCS7): -68dBm ± 2dBm
Encryption Security	WEP: (64-bit, 128-bit key supported) WPA/WPA2:802.11i (WEP and AES encryption) WPA-PSK (256-bit key pre-shared key supported) 802.1X Authentication supported
Serial Ports	
Connector	DB9 x 1
Operation Mode	RS-232/422/485
Serial Baud Rate	110 bps to 460.8 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, SMTP
LED indicators	
Power indicator	3 x LEDs, PWR 1(2)(PoE): 　Green On: Power is on
10/100TX RJ45 port indicator	Green for port Link/Act at 100Mbps.
Serial TX / RX LEDs:	Red: Serial port is receiving data Green: Serial port is transmitting data
WLAN LED	WLAN Link /ACT: Green: Blinking