3onedata
Reliable Connections



IGW1111/IGW1112/IGW1114 Series

DIN-Rail Mounting

1/2/4 RS-232/485/422 + 2 100M Ethernet Ports Modbus Gateway

- Support 1/2/4 3IN1 serial ports and 2 10/100Base-T(X) self-adaptive Ethernet interfaces
- Support conversion between Modbus RTU/ASCII and Modbus TCP protocol
- Support RTU Master, RTU Slave, ASCII Master, ASCII Slave and other operating modes
- Support virtual and real ID mapping to achieve flexible access between Master and Slave devices
- Support network modes such as redundant mode, switching mode and dual IP mode to meet the needs of various network environments
- Support 12~48VDC dual power supply inputs
- Support -40~75℃ wide operating temperature range

RPS

Industrial Grade

CONNECTING FOR A BETTER FUTURE

3onedata Co.,Ltd.

Introduction

IGW1111/IGW1112/IGW1114 series are Modbus gateways designed for integrating Modbus RTU/ASCII and Modbus TCP networks; they can achieve the conversion between Modbus RTU/ASCII and Modbus TCP protocols. This series provide 3 types of products and support 1/2/4 3IN1 serial ports and 2 100M Ethernet copper ports. They adopt DIN-Rail mounting to meet the requirements of different application scenes.

Modbus gateway supports multiple network protocols, such as Modbus, TCP, IP, UDP, TELNET, ARP, ICMP, HTTP, HTTPS, SNMP, SSH，SMTP, SNTP，DNS and DHCP protocols. It possesses complete management function, and supports access control, rapid configuration, online upgrading, etc. RTU Master, RTU Slave, ASCII Master, ASCII Slave and other operating modes are supported; it supports up to 256 Modbus TCP client (master) accesses and connects up to 128 Modbus TCP server (slave) devices. TELNET, WEB, SSHD and other access modes are also supported. It can provide users with good experience with friendly design of network management system interface, simple and convenient operation.

RESET button or DIP switch can achieve restoring factory defaults of the device. Each serial port of the device with single-port isolation is equipped with an exclusive isolation component, which can effectively avoid the impact of electromagnetic interference. Hardware adopts fanless, low power consumption, wide temperature and voltage design and has passed rigorous industrial standard tests, which can suit for the industrial scene environment with harsh requirements for EMC. It can be widely used in PLC control and management, Building Automation System, Health Care Automation System, measuring instrument and environmental forces monitoring system.

Features and Benefits

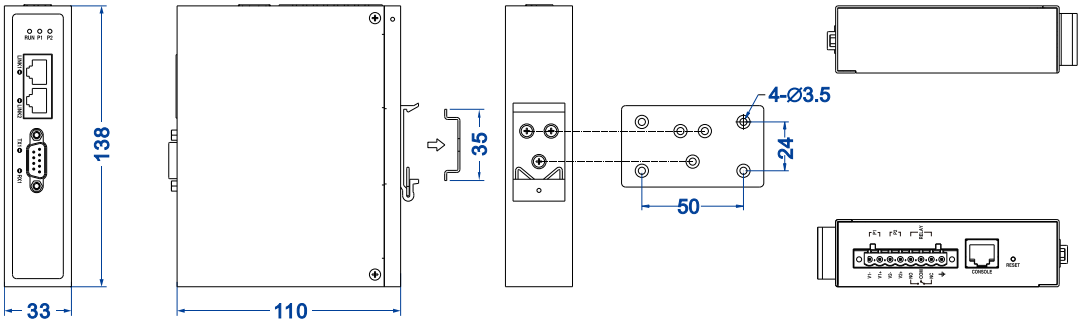
- Support 2 10/100Base-T(X) self-adaptive Ethernet interfaces and provide dual IP and MAC addresses to meet the requirements of multi-network management or network backup
- Support 110bps-115200bps (customizable 921600bps) line speed and non-blocking communication
- Support RTS/CTS, DTR/DSR and XON/XOFF flow control
- Support response timeout setting of characters
- Support RTU Master, RTU Slave, ASCII Master, ASCII Slave and other operating modes
- Support up to 256 Modbus TCP client (master) accesses and connect up to 128 Modbus TCP server (slave) devices
- Support virtual and real ID mapping to achieve flexible access between Master and Slave devices
- Support IP address and MAC address filtering, which can achieve accurate access control easily

- Support graded user management to implement humanized authority management
- Support serial port status and parameters monitoring, ensuring the communication status is easy to read
- Support multiple configuration forms and access controls like Windows configuration tool, TELNET, SSHD and WEB
- File management is convenient for the device rapid configuration and online upgrading
- SSHD and HTTPS can guarantee the access security of data
- Conduct network diagnosis and troubleshooting via Ping and Traceroute
- Support multiple alarm methods, including e-mail alarm, log alarm and SNMP Trap alarm

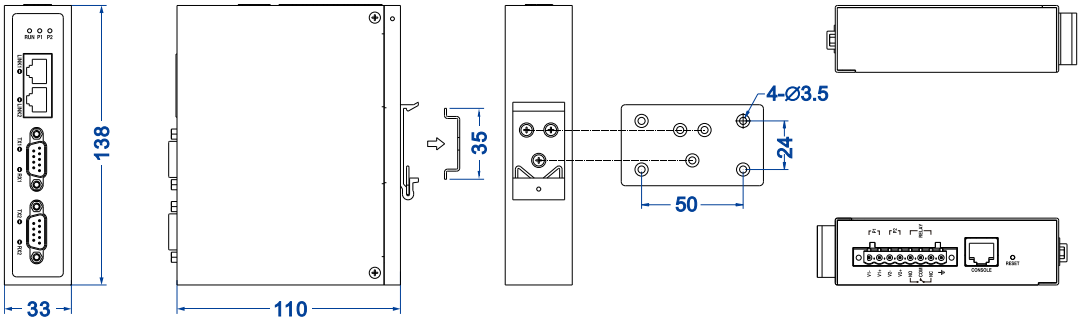
Dimension

Unit: mm

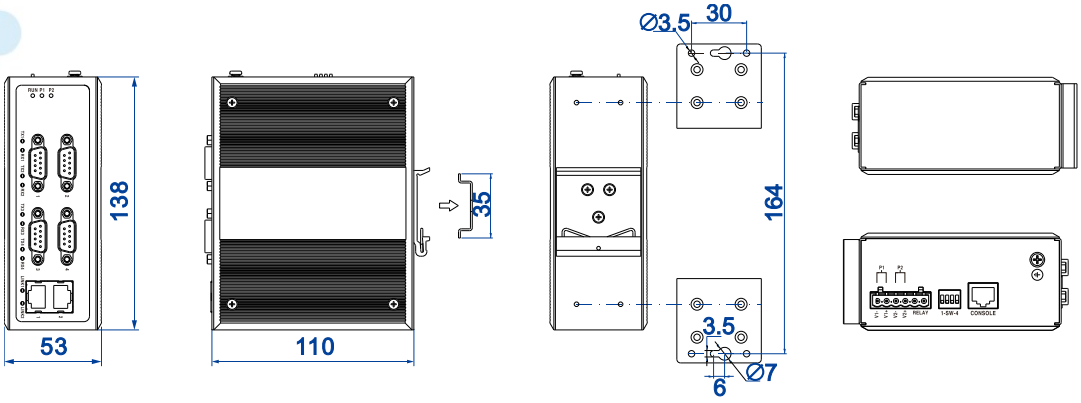
- IGW1111-1DI(3IN1)-DB



- IGW1112-2DI(3IN1)-DB



- IGW1114-4DI(3IN1)-DB



Specification

Ethernet	Standard: 10Base-T, 100Base-TX Protocol: Modbus TCP, TCP, IP, UDP, ARP, HTTP, TELNET, SNMP, ICMP, DHCP, DNS Rate: 10/100M Automatic Flow Control, MDI/MDI-X Autotunning Interface quantity: 2 Interface form: RJ45 Duplex mode: Full/Half Duplex Mode Self-adaption
Serial Port	Standard: EIA RS-232C, RS-485, RS-422 Protocol: Modbus RTU/ASCII Quantity of serial port: 1/2/4 3IN1 serial ports RS-232 signal: DCD, DSR, RTS, GND, TXD, RXD, CTS, DTR RS-485 signal: D+, D-, GND RS-422 signal: T+, T-, GND, R+, R- Baud rate: 110bps-15200bps (customizable110bps-921600bps) Data bit: 7bit, 8bit Parity bit: None, Even, Odd, Space, Mark Stop bit: 1bit, 2bit Interface form: DB9(Male) Directional control: RS-485 direction adopts Automatic Data Direction Control technology Pull high/low resistor for RS-485: 4.7kΩ Electromagnetic isolation strength: 3KVDC/2KVrms Operating mode: RTU Master, RTU Slave, ASCII Master and ASCII Slave Connection quantity: support up to 256 Modbus TCP client (master) accesses and connect up to 128 Modbus TCP server (slave) devices.
Configuration Method	WEB configuration management, TELNET configuration, Windows configuration tool, SSHD configuration
Security	User right classification, IP address filtering, MAC address filtering,

	SNMP/ Mail /System Log alarm, HTTP/HTTPS/SSHD/TELNET access control
Indicator	Power supply indicator, running indicator, Ethernet port indicator, serial port indicator
Power Supply	12~48VDC, 6-pin or 8-pin 5.08mm pitch terminal blocks, power supply occupies 4 pins in the left Power supply nonpolarity, dual power supply redundancy
Power Consumption	

Available Models	No-load (high temperature)	Full-load (high temperature)
IGW1111-1DI(3IN1)-DB	1.3W@12V	1.6W@12V
IGW1112-2DI(3IN1)-DB	1.7W@12V	2.0W@12V
IGW1114-4DI(3IN1)-DB	1.9W@12V	2.4W@12V

Working Environment	Operating temperature: -40~75℃ Storage temperature: -40~85℃ Relative humidity: 5%~5%(no condensation)
Physical Characteristic	Housing: IP40 protection, metal Installation: DIN-Rail mounting IGW1111/IGW1112 Series ● Dimension (W x H x D): 33mm×138mm×110mm ● Weight：≤ 500g IGW1114 Series ● Dimension (W x H x D): 53mm×138mm×110mm ● Weight: ≤ 640g
Industrial Standard	IEC 61000-4-2 (ESD, electrostatic discharge), Level 3 ● Air discharge: ±8kV ● Contact discharge: ±6kV IEC 61000-4-4 (EFT, electrical fast transient pulses), Level 3 ● Power supply: ±2kV ● Signal: ±1kV IEC 61000-4-5 (Surge), Level 3 ● Power supply: common mode±2kV, differential mode±1kV ● Signal: common mode ±1kV, differential mode ±1kV Shock: IEC 60068-2-27 Free fall: IEC 60068-2-32

	Vibration: IEC 60068-2-6
Authentication	CE, FCC, RoHS
Warranty	3 years

Ordering Information

Available Models	100M Copper Port	3IN1 (RS-232/485/422)	Power Supply
IGW1111-1DI(3IN1)-DB	2	1	12~48VDC dual power supply
IGW1112-2DI(3IN1)-DB	2	2	
IGW1114-4DI(3IN1)-DB	2	4	

Address: 3/B, Zone 1, Baiwangxin High Technology Industrial Park, Song Bai Road, Nanshan District, Shenzhen, 518108, China
TEL.: +86-755-26702668 ext 835 FAX: +86-755-26703485
E-mail: ics@3onedata.com
Website: www.3onedata.com

◄ Please scan our QR code for more details

*Product pictures and technical data in this datasheet are only for reference. Updates are subject to change without prior notice. The final interpretation right is reserved by 3onedata.