



2 PORT RS232/485 TO DUAL ETHERNET SECURED GATEWAY

DDSE SERIES



- THE DDSE I MS 2 ME IS A HIGH-PERFORMANCE INDUSTRIAL MODBUS GATEWAY INTEGRATING 2× ETHERNET PORTS AND 2× RS232/485 SERIAL PORTS.
- IT SUPPORTS FULL MODBUS RTU/ASCII TO MODBUS TCP CONVERSION, RICH PROTOCOL OPTIONS,
- DUAL REDUNDANT POWER INPUTS AND OPERATES RELIABLY UNDER HARSH ENVIRONMENTAL CONDITIONS.
- THE DEVICE IS IDEAL FOR AUTOMATION, SMART ENERGY, TRANSPORTATION, MINING, AND SMART FACTORY DEPLOYMENTS.

FEATURES

- SUPPORT CONVERSION BETWEEN MODBUS RTU/ASCII AND MODBUS TCP PROTOCOLS, AND SUPPORT MODBUS RTU/ASCII OVER TCP TRANSPARENT TRANSMISSION
- SUPPORT MODBUS SLAVE READAHEAD, SINGLE PORT AUTOMATICALLY LEARNS UP TO 256 RTU OR 128 ASCII INSTRUCTIONS, AND PRE-READS DATA TO ACHIEVE FAST RESPONSE
- SUPPORT MODBUS ADDRESS MAPPING, MAPPING A SINGLE READ/WRITE INSTRUCTION WITH READ/WRITE INSTRUCTIONS OF MULTIPLE ADDRESSES, REALIZING BATCH READ/WRITE WITH A SINGLE INSTRUCTION
- SUPPORT SERIAL PORT FORWARDING, REALIZES TRANSPARENT TRANSMISSION OF DATA BETWEEN THE SERIAL PORT AND OTHER SERIAL PORTS, AND PROVIDES ONE-WAY FORWARDING/RECEIVING AND TWO-WAY FORWARDING DIRECTION CONTROL
- SUPPORT JSON FUNCTION, WHICH CAN CONVERT THE COLLECTED MODBUS SLAVE DEVICE DATA INTO JSON FORMAT AND SEND IT TO THE SERVER

ADDITIONAL FEATURES & BENEFITS

- High-performance CPU processing power, Cortex-A7 core, running frequency up to 800MHz
- Dual Ethernet ports can be configured as two independent network segments or cascade ports
- Support Pair Connection Master/Slave mode, devices can be used in pairs, easy to operate
- Support RealCOM_MCP/CCP/MW mode, maps the network to local COM, and seamlessly connects
- Support HTTPD Client mode and can perform GET or POST operations with HTTPD server
- Support WebSocket Client mode, enabling two-way communication with the WebSocket server
- Support multiple sub-packaging mechanisms, converts Serial port data into Ethernet data packets according to data length or time, to meet the real-time needs of different networks
- Support frame header and tail mode. The Serial port can filter data frames based on the start byte and end byte of the frame
- Support registration package and heartbeat package to realize connection verification and connection status detection
- Support Modbus virtual ID, mapping the real ID of the Modbus slave to a virtual ID for data communication to avoid duplication of slave IDs
- Support Serial port communication parameters, working mode, statistics of sent and received frames
- Support log Local storage, Network storage and Serial port log output
- Support Serial port/Device restart, Factory settings restoration, Device upgrade and NTP client

TECHNICAL SPECIFICATIONS

INTERFACE

100M Ethernet	2×10/100Base-T(X) adaptive RJ45 ports, supporting full/half duplex, auto MDI/MDI-X, and 1.5kV electromagnetic isolation protection
Serial Port	Serial port type : 2 RS232/485 Connection method : 3.81mm pitch 6 PIN terminal Block Baud rate : 300bps-460800bps Data bits : 7bit, 8bit Stop bit: 1bit, 2bit Check digit : None, Odd, Even Serial port isolation : 2kVAC/3kVDC isolation protection
Console	1 Console port, compliant with USB2.0 specification, using Micro-B USB2.0 socket
Button	Support one-click restart and factory settings restoration
Status LED	Power indicator, operation indicator, Ethernet interface SPEED/LINK indicator, serial port indicator

SOFTWARE

Network Protocol	IP, TCP, UDP, DNS, ARP, SNMP Trap, SSH, ICMP, HTTP, HTTPS, DHCP Client, RFC2217, NTP, SMTP, TELNET
IP Acquisition Method	Static IP/DHCP
DNS	Support
Configuration	Web page configuration/Console port simple network parameter configuration
Transparent Transmission	UDP/ UDP Multicast/ TCP Client/ TCP Server/ RealCOM/ Pair Connection
Modbus	Modbus RTU /ASCII to Modbus TCP
Serial Port Package	The time and length can be set; the maximum packaging length is 1460 bytes
Data Encryption	DES/3DES/AES/RC2/RC4/RC5/BlowFish
SSL Encryption	TLS1.0/TLS1.1/TLS1.2
TCP Server Connection	Single serial port Support up to 32 TCP Client connections
TCP Client Connection	A single serial port Support up to 16 TCP Server connections
Network Cache	Send: 16Kbyte; receive: 16Kbyte
Serial Cache	Send: 16Kbyte; receive: 16Kbyte
Heartbeat Package	Support TCP Keep-alive mechanism and customize heartbeat packet content

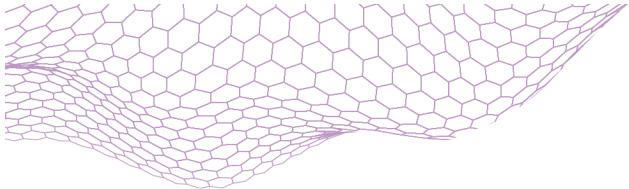
Registration Package	Customized registration package content
RFC2217	Support
Serial Port Forwarding	Users can select data forwarding rules between the current serial port and other serial ports.
Modbus Address Mapping	This function only takes effect in Modbus RTU Slave and Modbus ASCII Slave modes and is mutually exclusive with Modbus slave pre-reading and Modbus slave address mapping functions.
HTTPD Client	Support
WebSocket Client	Support
MQTT	Support
JSON	Support JSON function in HTTPD Client, WebSocket Client, and MQTT modes
RealCOM	Support
Average Transmission Delay	<10ms
Software Supporting	Network management configuration tools, virtual serial port software

APPROVALS & STANDARDS TESTED FOR

IEC 61000-4-2	Electrostatic Discharge: level 3 Air discharge: $\pm 8\text{kV}$ Contact discharge: $\pm 8\text{kV}$
IEC 61000-4-4	Electrical Fast Transient: Level 4 Power supply: $\pm 4\text{kV}$ Signal: $\pm 2\text{kV}$
IEC 61000-4-5	Surge Immunity Power supply: common mode $\pm 4\text{kV}$, differential mode $\pm 2\text{kV}$ Network Port: common mode $\pm 6\text{kV}$, differential mode $\pm 2\text{kV}$
Certification Tested for	CE, FC, RoHS

POWER

Power supply	DC 9 to 60V, dual power supply redundancy
Power Consumption	<1.8W@DC24V (full load)
Connection	5.08mm pitch 5 PIN terminal block
Protection	No polarity



MECHANICAL

Dimension	140×35×100 (mm) (DIN rail mounting clip excluded)
Installation	DIN rail Installation
Enclosure	IP40
Weight	About 0.45kg

ENVIRONMENT

Operating temperature	-40 to 75°C
Storage temperature	-40 to 85°C
Relative humidity	5% to 95% (no condensation)

ORDERING CODE

DDSE I MS 2 ME

DDSE	Databridge Dynamic Base model for Serial to Ethernet
I	I: Isolated
MS	Secured Modbus RTU to Modbus TCP
2	2 Port * RS232/485
ME	Fixed

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