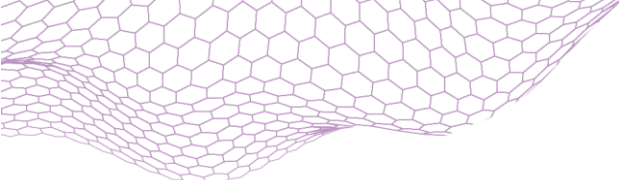


16 PORT RS232/485 TO 2 ETHERNET PORTS MODBUS INDUSTRIAL GATEWAY

DDSER GIGA SERIES





SYNOPSIS

- THE DDSER NI MS 16 2GC S ME IS A RACK MOUNTED INDUSTRIAL GIGA ETHERNET MODBUS GATEWAY
- THIS DEVICE FEATURES 2 × GIGABIT COMBO PORTS AND 16 × RS232/RS485 SERIAL PORTS
- THE DEVICE PROVIDES ONE-CLICK SYSTEM RESTART AND FACTORY RESET OPTIONS FOR USER CONVENIENCE AND MAINTENANCE EFFICIENCY

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, 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
- 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 DDP/DC mode, encapsulate serial port data through DDP/DC protocol to achieve communication with DDP/DC server
- Support Modbus virtual ID, mapping Modbus slave real ID to virtual ID for data communication, to avoid slave ID duplication
- 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, USB flash drive storage and serial port log output

TECHNICAL SPECIFICATIONS

SOFTWARE

Network Protocol	IP, TCP/UDP, ARP, ICMP, DHCP Client, DNS, HTTP, RFC2217, NTP, TELNET, SNMP, TFTP
IP Obtaining Method	Static IP/DHCP
DNS Resolution	Support
User Configuration	Web/console page configuration
Simple Transparent	UDP / UDP Multicast / TCP Client / TCP Server / RealCOM / Pair Connection
Modbus	Modbus RTU /ASCII to Modbus TCP
Serial Port Data Packaging	Time and length can be set; the maximum pack length is 1460 bytes
Data Encryption	DES / 3DES / AES / RC2 / RC4 / RC5 / Blowfish
SSL Encryption	TLS1.0 / TLS1.1 / TLS1.2
TCP Server Connection	The single Serial port supports up to 8* TCP Client connections
Network Cache	Send: 16 Kbyte; receive: 16 Kbyte
Serial Port Cache	Send: 2 Kbyte; receive: 2 Kbyte
Heartbeat Package	Support TCP Keep alive, custom heartbeat package content
Registration Package	Customize the registration package content
RFC2217	Support
HTTPD Client	Support
WebSocket Client	Support
MQTT	Support
Serial to Serial Data Forwarding	Support (prohibit, bidirectional forwarding, unidirectional forwarding, unidirectional receiving)
Transmission Delay (Average)	<10ms
Supporting Software	Virtualcom software

INTERFACE

1G Combo Port	2 * 1G combo ports, 10/100/1000 Base-T(X) Auto-sensing RJ45 port or 1000Base-X SFP port optional, RJ45 ports support full/half duplex, Auto MDI/ MDI-X
Serial Port	Serial port type: 16 * RS232 or RS485 is optional Connectors: 5 pin 5.08mm pitch Terminal block Baud rate : 300bps to 460800bps Data bit : 5bit, 6bit, 7bit, 8bit Stop Bit : 1bit, 2bit Check bit : None, Odd, Even, Mark, Space
USB	1 Type-A USB 2.0 interface
Console Port	1 port console port, RS232 signal RJ45 port
Button	One-click restart or restore the factory Settings
Status LED	Power indicator, operation indicator, Ethernet interface SPEED/LINK indicator, Serial port indicator

POWER

Input Voltage	2* 48 VDC OR 1 * AC85 to 264V OR DC110 to 370V
Power Consumption (full load)	<6.5W@AC220V
Connection	AC socket with Switch for AC Supply 3 or 5 pin screw type Terminal for Single/Dual DC Input

MECHANICAL

Ingress Protection	IP40
Installation	19-inch 1U rack mount installation
Dimension	482.6×44×210 mm (include mounting clips)

ENVIRONMENT

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

APPROVALS & STANDARDS TESTED FOR

IEC 61000-4-2	Electrostatic Discharge: $\pm 8\text{kV}$ (contact), $\pm 15\text{kV}$ (air)
IEC 61000-4-4	Electrical Fast Transient Power supply: $\pm 4\text{kV}$; communication port: $\pm 2\text{kV}$
IEC 61000-4-5	Surge Immunity Power supply: co-mode $\pm 4\text{kV}$, difference mode $\pm 2\text{kV}$ RS485: co-mode $\pm 4\text{kV}$, difference mode $\pm 2\text{kV}$ Copper port: co-mode $\pm 6\text{kV}$, difference mode $\pm 2\text{kV}$

ORDERING CODE

DDSER NI MS 16 2GC 232/485 XXX ME

DDSER	Serial to Giga Ethernet Rack Type Converter
NI	Non-Isolated ports
MS	Secured, Modbus RTU to Modbus TCP
16	16 Serial Port (16* RS232 or 485)
2GC	2 * 1G combo ports, 10/100/1000 Base-T(X) / SFP ports
232/485	232: RS232 485: RS485
XXX	48 : Dual 48VDC 110 : 1 * 110 to 370V DC 230 : 1 * 85 to 264V AC
ME	Fixed