



4 PORT RS232/RS485/RS422 SECURE MODBUS GATEWAY

DDSE SERIES



SYNOPSIS

- MODBUS IS AN INDUSTRY ADOPTED COMMUNICATION PROTOCOL BASED ON RTU, ASCII, AND TCP PROTOCOLS FOR VARIOUS APPLICATIONS.
- THESE THREE PROTOCOLS ARE COMMONLY USED BY VARIOUS EQUIPMENTS IN THE INDUSTRY SUCH AS DCS, PLC, HMI, POWER METERS, VARIOUS SENSOR ETC.

FEATURES

- 16 SIMULTANEOUS TCP MASTER AND 32 SIMULTANEOUS REQUESTS FOR EACH TCP MASTER
- RS232/RS485/422, ETHERNET AND FIBER (SFP) PORTS
- 4 SOFTWARE-SELECTABLE RS232/RS485/RS422 SERIAL PORTS, UP TO 921KBPS
- EACH SERIAL PORT CAN BE INDIVIDUALLY CONFIGURED FOR MODBUS RTU OR MODBUS ASCII, MASTER OR SLAVE OR EVEN DIFFERENT BAUD RATE
- CONVERSION OF ANY MODBUS PROTOCOLS BETWEEN MODBUS TCP, MODBUS RTU, AND MODBUS ASCII, VIRTUAL COM PORT
- ID ROUTING WHEN A MODBUS ID CONFLICT OCCURS
- FUNCTION CODES SUPPORTED: 1, 2, 3, 4, 5, 6, 15 & 16
- ALL THE 4 SERIAL PORTS CAN USE 502 AS TCP SYSTEM PORT FOR MODBUS TCP
- EMBEDDED SECURITY WITH PPTP, IPSEC OR OPENVPN (CLIENT/SERVER)
- SUPPORTS WIDE TEMPERATURE RANGE OF -40 TO 85°C
- THERE ARE 2 ETHERNET PORTS AND THEY OPERATES AS

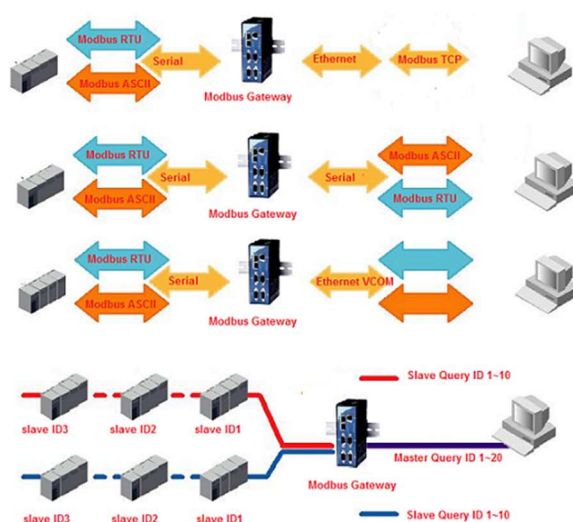
DUAL SUBNET MODE

TWO ETHERNET PORTS HAVE SEPARATE IP ADDRESSES AND SUBNETS

RSTP REDUNDANCY MODE

THE SYSTEM WILL USE ONLY ONE PORT FOR DATA TRANSFER. IF THE PORT IS DISCONNECTED, THE WHOLE SYSTEM WILL CHANGE TO ANOTHER PORT AUTOMATICALLY. RSTP CAN BE USED TO FORM A RING WITH AN EXISTING NETWORK

CONNECTON ARCHITECTURE



Ethernet	2 no's. 2 MAC id's, 10/100M Fast-Ethernet, Auto-detection or 2 no's 100/1000 SFP	
Standards	IEEE 802.3 10BaseT, IEEE 802.3u 100BaseT(X), IEEE 802.3u for 100Base-X IEEE 802.3z for 1000Base-X (SFP version only), IEEE 802.3af for Power over Ethernet (PD)	
Network Protocol	ICMP, TCP, IPv4, UDP, Modbus TCP/ASCII/RTU, HTTP, ARP, SNMP v1, v2 & v3, NTP, DHCP Client, DNS, Telnet, RFC2217. Security via PPTP, OpenVPN Client/Server or IPsec (peer-to-peer or peer-to-side) with up to 37.9 Mbps VPN throughput, SMTP/TLS	
Modes	Modbus RTU, Modbus ASCII and Modbus TCP in Master / Slave modes 16 simultaneous TCP Masters & 32 simultaneous request per TCP Master	
	TCP Client	Single destination or Virtual COM
	TCP Server	4 Connections; Virtual COM or reverse Telnet
	UDP	Up to 4 Ranges IP
	Virtual COM	Windows/Linux redirection software
Serial Interface	RS232/RS422/485 software selectable We can multidrop up to 32 devices on each 485/422 port	
Protection	3 KV Galvanic Isolation (in IM Model only) 15KV ESD Protection, 800W Surge Suppression	
Date Rate	1200 bps to 921 Kbps, Support user define baud rate	
Data Bits	7, 8	
Parity Check	None, Even, Odd, Space, Mark	
Stop Bits	1, 2	
Flow Control	None, XON/XOFF, RTS/CTS	
Alerts	Emails, Traps, Syslog	
Diagnostics	Data log, Syslog	
Watch Dog Timer	60-second software auto-reset. 1 second real-time clock built-in	
Configuration	Web Browser, Windows-based Utility, Telnet	
MTBF	188251 hours / 21.5 years	
Connector	4 * DB9 for RS232/422/485	
	4 x 5.08mm 5 Pin TB for RS232/422/485	
	4 x 5.08mm 5 Pin TB for RS232/422/485 for Isolated Version	
USB Interface	1x USB A Type connector (USB 2.0)	

POWER

Power Input	Dual DC 12 to 48V, 7-pin Screw type Terminal, Reverse Polarity Protection 8W Max, 0.65A @ 12V DC
Redundancy	Yes
PoE Power	For PoE-af version
Relay Output 1A @ 30 VDC (normal open)	

MECHANICAL

Dimension (W x H x D) mm	55 x 145 x 113
Mounting	DIN-Rail
Classification	IP30
Weight	1000g

ENVIRONMENT

Working Temperature	-40°C to 85°C
Storage Temperature	-40°C to 85°C
Humidity	5% to 95% non-condensing

APPROVALS & STANDARDS TESTED FOR

IEC 61000-4-2	Electrostatic Discharge: ±8kV (contact), ±15kV (air)
IEC 61000-4-3	RF Immunity :10V/m (80 to 1000MHz)
IEC 61000-4-4	Electrical Fast Transient AC Power Port: ±2.0KV Data Port: ±2.0KV
IEC 61000-4-5	Surge Immunity AC Power Port: Line-to Line: ±1.0KV AC Power Port: Line-to Earth±2.0KV Signal Port: Line-to Earth±2.0KV
IEC 61000-4-6	Conducted RF immunity: 10 V rms Continuous Conducted Disturbance
IEC 61000-4-8	PFMF Enclosure :10 A/m
IEC 61000-4-11	DIP Power Port
IEC 60068-2-27	Shock
IEC 60068-2-32	Drop (Freefall)
IEC 60068-2-64	Vibration

OTHERS

EN Standards	EN 55032, EN 55024, EN 61000-3-2, EN 61000-3-3, EN 61000-6-2, EN 61000-6-4
RoHS II	Yes
EMC	EMC FCC Part 15, Subpart B, Class A

ORDERING INFORMATION

DDSE I/NI MS 4 T/D A1

DDSE	Databridge Dynamic Base model for Serial to Ethernet
I/NI	I : Isolated version-3 KV Isolated NI : Non-Isolated
MS	Secured Gateway with Modbus TCP Gateway
4	4 Port RS232/RS485/RS422 to-Dual Ethernet Gateway
T/D	T: Screw type Terminals D : DB9 Connector
A1	Fixed

DATA BRIDGE
D Y N A M I C