

4 Port RS232/485/422 Secure Modbus Gateway : Model no's SC10E4NI MS Series



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

SC10E4 M S Modbus Gateway supports

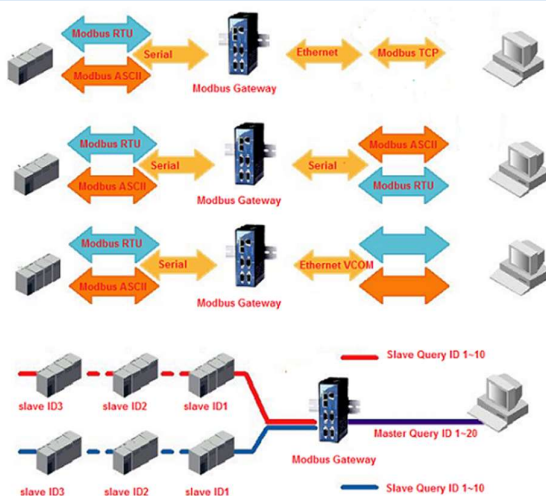
- ✓ 16 simultaneous TCP master and 32 simultaneous requests for each TCP Master
- ✓ RS232/RS485/422, Ethernet and Fiber (SFP) ports
- ✓ 4 Software-selectable RS232/RS485/RS422 Serial ports, up to 921kbps
- ✓ Each Serial port can be individually configured for Modbus RTU or Modbus ASCII, Master or Slave 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

Connection Architecture



1. Interfacing between Modbus/TCP over Ethernet network to Modbus RTU/ASCII Serial devices
2. Interfacing between Modbus RTU/ASCII Serial host to Modbus RTU/ASCII Serial devices. In this case COM1 can be Modbus RTU Master & COM2, 3, 4 can have Modbus Slaves. The communication is Serial to Serial only.
3. Interfacing between Modbus RTU/ASCII host connected through Virtual com port (VCOM) over Ethernet to Modbus RTU/ASCII Serial devices

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Specifications

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 upto 32 devices on each 485/422 port
Protection	: 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)	

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Mechanical

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

Environmental

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

REGULATORY APPROVALS (Designed and tested for these standards)

Safety UL61010-2-201
 EMC FCC Part 15, Subpart B, Class A
 EN 55032, EN 55024, EN 61000-3-2, EN 61000-3-3, EN 61000-6-2, EN 61000-6-4

Test	Item	Value	Level
IEC 61000-4-2	ESD Contact Discharge	±8Kv	4
	Air Discharge	±15Kv	4
IEC 61000-4-3	RS Radiated (enclosure)	10 V/m	3
IEC 61000-4-4	EFT AC Power Port	±2.0KV	3
	Signal Port	±2.0KV	4
IEC 61000-4-5	Surge AC Power Port Line-to Line	±1.0KV	3
	AC Power Port Line-to Earth	±2.0KV	3
	Signal Port Line-to Earth	±2.0KV	3
IEC 61000-4-6	CS Conducted (enclosure)	10 V rms	3
IEC 61000-4-8	PFMF Enclosure	10 A/m	3
IEC 61000-4-11	DIP Power Port	-	-
IEC 60068-2-27	Shock		
IEC 60068-2-32	Drop (Freefall)		
IEC 60068-2-64	Vibration		
RoHS II	Yes		

Ordering Information : SC10E4NI MS D/T P S

SC10E4 : 4 Port RS232/RS485/RS422 to-Dual Ethernet Gateway
 NI : Non Isolated
 MS : Secured Gateway with Modbus TCP Gateway
 D/T : D : DB9, T : Screw type Terminals
 P : PoE-af Port for Power Optional
 S : 2 SFP ports, 100/1000FX instead of 2 Ethernet RJ45 ports

Note : SFP's have to be purchased separately