

San Telequip (P) Ltd.,
 504, 505 Deron Heights, Baner Road
 Pune 411 045, India
 Phone : +91-20-27293455, 9764027070, 8390069393
 email : info@santelequip.com



Connecting. Converting. Leading !

4 Port RS232/485/422 Secure Modbus Gateway : SC10E4 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 and measuring instruments

SC10E4 M S Modbus Gateway supports

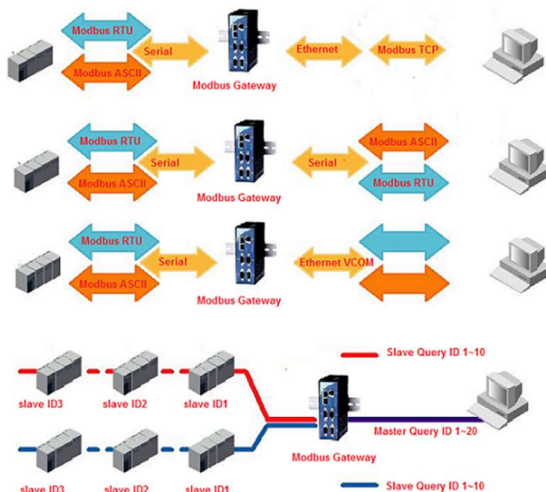
- ✓ 16 simultaneous TCP master and 32 simultaneous requests for each TCP Master
- ✓ RS232/RS485/422, Ethernet, and Fiber (SFP) ports
- ✓ 4 Software-selectable RS232/RS485/RS422 serial ports, up to 921kbps
- ✓ Each Serial port can be individually configured for Modbus RTU or Modbus ASCII, Master or Slave 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
- ✓ 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	: 3 KV Optical 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	: 4x DB9 RS232/422/485 software selectable for Non Isolated version or : 4x 5.08mm 5 Pin Terminal block RS232/422/485 software selectable 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/I MS D/T P S

SC10E4 : 4 Port RS232/RS485/RS422 to-Dual Ethernet Gateway
 NI / I : Non Isolated / 3 KV Isolated
 MS : Secured Gateway with Modbus TCP Gateway
 D/T : DB9 (Non Isolated Version) / Screw type Terminals (Isolated Version)
 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