SAN TELEQUIP

Connecting. Converting. Leading!

Seamless
Industrial
Communication

28 years
10000 Installations
1 million Interface Converters

NETWORKING & SURVEILLANCE SOLUTIONS

Media Converter

Ethernet to Fiber Optic Converters

- Fast Ethernet, Gigabit, PoE & SFP versions
- Auto MDI / MDIX, Store & forward Switching
- Link Fault Pass Through
- Built in 230V AC SMPS / 24 / 48 / 110 / 220V DC operated
- DIN Rail / 2U Rack
- IP20
- -10° to 65° C

Fiber Optic to Ethernet Media Converter

Media Converter 230V AC Powered

Media Converter with SFP Port

Multimode to Single Mode Converter

Rack Type Media Converter

Industrial Grade Media & PoE Converters

- Fast, Giga & PoE/PoE+ Converters
- Auto-Negotiation, Auto MDI / MDIX
- Store and forward Switching, Full and Half Duplex
- Link Fault Pass Through
- Reverse Power Polarity, Overload Current, EFT, ESD protection
- 9 to 48V DC
- DIN Rail
- IP30
- -40° to 85° C
- CE Approved

Industrial Grade Media Converter

Dual Port Industrial Grade
Media Converter

Industrial Grade PoE
Media Converter

Industrial Ethernet Switches

- Unmanaged, Managed & PoE Switches
- High & Low density ports
- Combination of 10/100 Base-TX, 100 Base FX, 1000 Base TX/SX/LX ports
- Fixed & SFP Fiber Ports
- DIN Rail & Rack types
- IP40
- DC, AC & Dual Supplies
- -40° to 85° C

5 Port slim type
Industrial Ethernet Switch

8 Port slim type
Industrial Ethernet Switch

8 Port Industrial
Ethernet Switch

8 Port Industrial Ethernet Switch
with 100FX or 1000FX ports

16 Port Industrial Ethernet
Switch with 4 Giga SFP's

16 Port Industrial Ethernet
Switch with 4 Giga Combo ports

16 Port Industrial
Ethernet Switch

28 Port Rack type Industrial Ethernet Switches
with upto 24 Copper Ports & upto 24 Fiber ports

PoE Injector / Extender / Surge Protector

PoE Injector

- Supply power to HD network surveillance cameras
- 2x 10/100M RJ45 ports
- IEEE 802.3af/at standard
- AC or DC Power input
- Power input port with lighting protection

PoE Injector

PoE Extender

- Ethernet and PoE connections restrict cable distances to 100 meters
- Connect PoE Extender for every extra 100 meters and extend every 100 meters depending on PDs power
- PoE Extender does not require any additional power supply

PoE Extender

PoE Surge Protector

- Support 100/1000Mbps
- Compliant with IEEE802.3af/at/PoE++ standard
- Differential mode surge voltage (8/20us) 4KV
- Common mode surge voltage(8/20us) 6KV
- 8 lines surge protection
- Response Time : ≤5ns

PoE Extender

Cellular Modems

2G / 3G / 4G Modem

- Low cost solution offering RS232 or RS485 port
- Supports AT command set with TCP / IP protocol stack
- IP20

2G / 3G / 4G
GSM / GPRS Modem

Intelligent Modem

- Auto connection without using AT command set
- RS232 / RS485 Port
- Battery backed RTC, Watchdog Timer
- Transparent mode allows remote serial devices to connect to Central SCADA

Intelligent Modem

Cellular Router

Cellular Router with VPN

- Support 1 Serial & 1 Ethernet Port
- Low-consumption sleep mode
- Auto recovery mechanism, including online detect, auto redial when offline to make router always online
- Enters into communication state automatically when powered ON
- Link disconnection when timeout
- TCP/IP, UDP, ICMP, SMTP, HTTP, POP3, OICQ, TELNET, FTP, SNMP, SSHD, etc
- DHCP Server and Client, Firewall, NAT, DMZ host , URL block, QoS, traffic statistics, Real time link speed statistics etc
- Multiple DDNS
- VPN client (PPTP, L2TP, OPEN VPN, IPSEC and GRE)
- IP30

Cellular VPN Router

Cellular Router with VPN, WAN & WiFi

- 1 Serial, 4 Ethernet, WAN & WiFi ports
- Standard WAN port & PPPoE protocol that can connect to ADSL directly
- Enter into communication state automatically when powered
- Double link back up between WCDMA & WAN
- VPN Server & Client (PPTP, L2TP, OPENVPN, IPSEC & GRE) (only for VPN version)
- Support multiple DDNS providers
- Support link disconnection when timeout
- DHCP server and client, Firewall, NAT, DMZ host, URL block, QoS, Traffic statistics, Real time link speed statistics etc
- Full protocol support, TCP/IP, UDP, ICMP, SMTP, HTTP, POP3, OICQ, TELNET, FTP, SNMP, SSHD, etc
- IP30

Cellular VPN Routers with
One SIM, WiFi & 2 Ethernet Ports

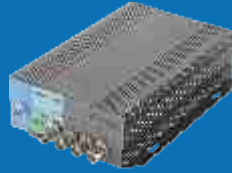Cellular VPN Routers with
Dual SIM, WiFi & 4 Ethernet Ports

Video Converters

- Transmit upto 16 channels of broadcast quality Video / PTZ / Audio / Ethernet / Telephone / Dry contact over Optical fiber
- 8 bit video signal digital sampling
- Automatic compatible to PAL, NTSC and SECAM
- RS485 data port for PTZ
- Audio / Ethernet / Phone
- Single mode, Single fiber Optical Port

1 Channel Video Converter

4 Channel Video Converter

Video Converters in Rack

IoT SOLUTIONS

Smart Alert Gateways

- Transfer the status of Alarms via SMS / pre recorded Voice message and Emails
- 10 landline or cellular numbers
- 4/6/8 DI's, 2/6/8 AI's, upto 6 DO's & Modbus RTU Inputs

4 Digital Input
2 Digital Output

2 Analog, 4 Digital and
Modbus Inputs,
6 Digital Outputs

8 Analog, 8 Digital
and Modbus Inputs
4 Digital Output

Alerts over Voice calls
and Emails from Modbus Input

IoT Gateways

Base & AD Models

- 2G/3G/4G Cellular, Ethernet/Wifi interface gateway
- Support Modbus RTU Master interface
- RS232/RS485 ports
- Connects by itself to the webserver
- IoT protocols: HTTP, MQTT
- Supports upto 8 AI,8 DI and 4 DO
- Battery backed RTC, Watchdog timer

Controller/PLC   **SAN IoT Gateway**   MQTT / HTTP   **Dash Board**

Ethernet /
Wi-Fi IoT Gateway

2G IoT Gateway

Cellular IoT Gateway

Cellular IoT gateway with
2AI,4DI, 1DO

Cellular IoT gateway with
8AI,8DI, 4DO

Cellular Routers with Multiple Serial Ports and IO's

- Upto 5 of Fast or Giga Ethernet ports
- Upto 6 Serial ports, RS232 or RS485 Port
- 2 DI, 1 DO, 1 Relay
- 802.11n/802.11ac and global 2.5G/3G/HSPA+/LTE options
- Supports Multiple Internet interfaces (Cellular, WAN, WiFi, Dual-SIM)
- Modbus RTU to Modbus TCP Conversion
- Wide operating temperature range
- Supports DIN Rail mounting
- IP30

Cellular VPN Router with
5 LAN and WAN Ports,
1 Serial Ports & Io's

Cellular VPN Router with
2 LAN and WAN Ports
and 4 Serial Ports

Cloud based Webserver software for Remote data monitoring

- Monitors Remote IOs and Modbus devices data
- Supports HTTP and MQTT protocols
- Displays current and history data
- Displays history trends for selected time period
- Historical data downloadable in CSV format
- Accessible from anywhere in the world

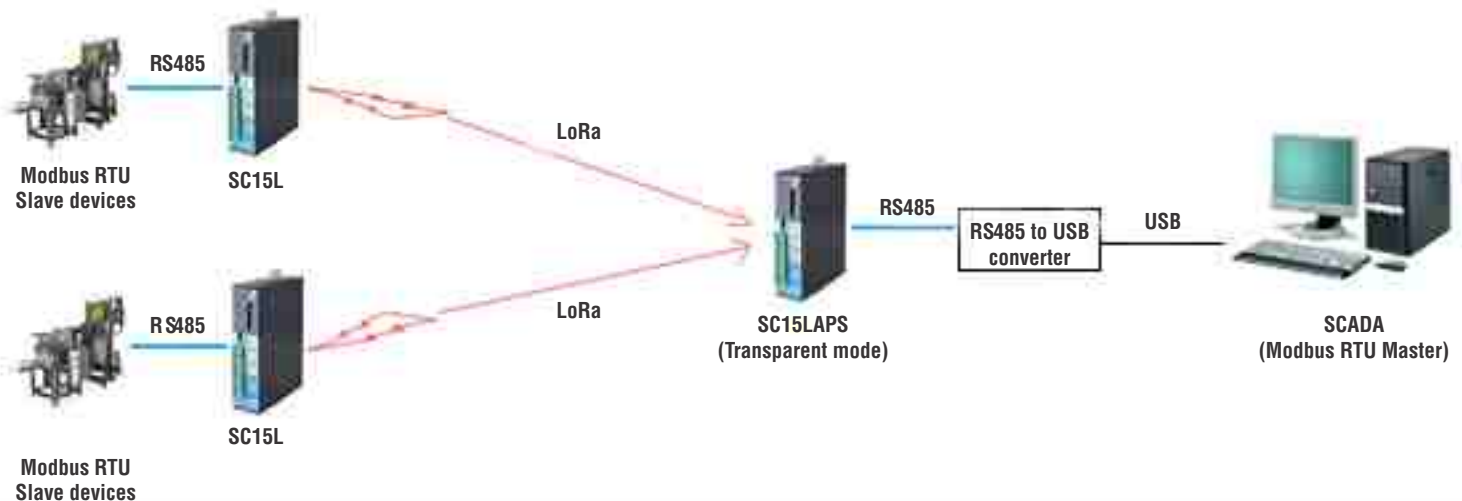### LoRa Gateway Models

- Supports LoRa interface using 433/867 MHZ frequency
- Range : upto 4 km
- Support RS232/RS485 port
- Upto 2AI, 4 DI & 1 DO
- Transparent mode to connect multiple locations to central location wirelessly
- Access point supports Modbus RTU slave interface

LoRa IoT Gateway

RS485

Modbus RTU
Slave devices

SC15L

LoRa

LoRa

RS485

Modbus RTU
Slave devices

SC15L

SC15LAPS
(Transparent mode)

RS485

RS485 to USB
converter

USB

SCADA
(Modbus RTU Master)

INDUSTRIAL GRADE TERMINAL SERVERS

- ◆ 4, 8, 16, 32, 48 Serial port Terminal Servers
- ◆ Isolated / Non Isolated Serial Ports
- ◆ Auto-detecting 10/100 Mbps Ethernet
- ◆ 10 / 100 / 1000 TX & 100 FX SFP Options
- ◆ 2 Ethernet Ports: Redundant & Dual Subnet mode
- ◆ Support TCP server / TCP client / UDP / Virtual COM
- ◆ Built-in Web server, Serial Console for Configuration
- ◆ Built-in 15KV ESD protection for all serial signals
- ◆ Redundant and Wide input voltage range, 48V DC / 230V AC / Mix of both
- ◆ IP30
- ◆ DIN Rail / Standard 19 - inch Rack mount

4 Port Isolated Terminal Server
with LCD & Fiber Ports

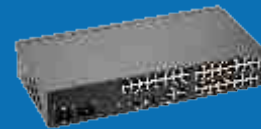4 Port Isolated / Non Isolated
Terminal Server

Isolated 8 port Terminal Server

16 Port Isolated / Non Isolated
Terminal Server

32 Port Isolated / Non Isolated
Terminal Server

48 Port
Terminal Server

PROTOCOL GATEWAYS

Protocol translation between Serial to Serial, Serial to Ethernet &
Ethernet to Ethernet Devices

Modbus RTU / TCP, BACnet MSTP / IP, LonWorks, Metasys N2,
SNMP, XML, Mbus, IEC 101/104 etc

Modbus RTU to
Modbus TCP

Dual Port Modbus RTU to
Modbus TCP Converter, AC Powered

Modbus TCP Gateways

- ◆ Support 4 Modbus modes, Modbus RTU/ASCII
  Master / Slave, Modbus TCP Master / Slave
- ◆ Support 8 TCP Masters & 32 TCP Slaves
  simultaneously
- ◆ Upto 2 of RS232/RS485/422 ports
- ◆ Isolated / Non Isolated
- ◆ Modbus TCP over WiFi
- ◆ Master / Master or Slave / Slave modes
- ◆ Data Concentrator can collect staggered data from
  Modbus Slaves, store & organise internally,
  & efficiently reply to Modbus TCP

Master-Master, Slave-Slave,
Data Concentrator

Serial to WiFi, Modbus RTU to
Modbus TCP over WiFi

Multiport Modbus TCP Gateways

- ◆ Convert Modbus RTU to Modbus TCP and support 16 simultaneous TCP master & 32 simultaneous requests for each TCP master
- ◆ Isolated and Non Isolated
- ◆ 2 Ethernet ports operates as Dual Subnet & Redundancy Mode
- ◆ Each RS232/485/422 serial port can be individually configured for Modbus RTU or Modbus ASCII, Master or Slave or even different baud rate
- ◆ CE Approved

Isolated & Non Isolated
4 Port Modbus TCP Gateway

Isolated & Non Isolated
8 / 16 Port Modbus TCP Gateway,
Data Concentrator

BMS Gateways

Modbus RTU, Modbus TCP,
BACnet MSTP, BACnet IP, N2,
SNMP, XML

BACnet Router

2 port BACnet Router

MBus

MBus to Modbus RTU/TCP,
BacNet MSTP/IP

Lonworks

BACnet/Modbus/N2 to LON

Ethernet IP

Ethernet IP to
Modbus/BACnet

IEC 101/104

IEC 101/104 to Modbus

INTERFACE CONVERTERS

RS232 to RS485 Converters

- ◆ Truly 3 way Isolated
- ◆ 3KV Opto Isolation, 3 KV Galvanic Isolation, 15 KV ESD protection
- ◆ 4 KV Surge & 4 KV EFT protection
- ◆ 230V AC. 24 / 48 / 110 / 220V DC operated
- ◆ DIN Rail mounted

Universal AC / DC Powered

RS485 2 wire, 24V DC Powered

Isolator / Repeater

- ◆ Truly 3 way Isolated
- ◆ 3KV Opto Isolation, 3 KV Galvanic Isolation, 15 KV ESD protection
- ◆ 4 KV Surge & 4 KV EFT protection
- ◆ 230V AC. 24 / 48 / 110 / 220V DC operated
- ◆ DIN Rail mounted

RS232 Isolator, RS485 /
RS422 Isolator / Repeater

Serial to Fiber Convertor

- Need to be used in Pairs
- RS232 / RS485 / RS422 Auto selectable
- Upto 500 kbps
- Multi mode and Single mode
- 15KV ESD and 600W Surge Protection
- Built in 230V AC SMPS. 24 / 48 / 110 / 220V DC operated
- 4KV EFT Protection, 2KV Surge Protection
- DIN Rail / 2U Rack
- IP20
- -10° to 65° C

Serial to Fiber Converter DC Powered

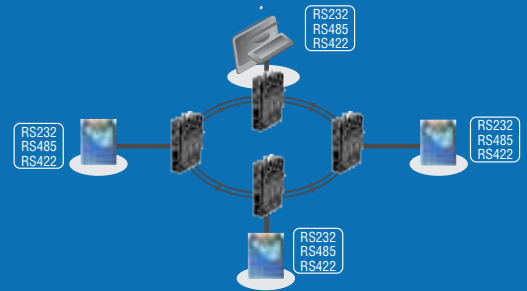Serial to Fiber Converter, 230V AC Powered

Serial to Fiber Rack

Fire Alarm Panels Converter

Self Healing Serial to Fiber Converter

- Industrial Grade
- Dual Full Duplex Fiber port forms a Redundant Optical Fiber ring
- No data loss in case of Fiber break
- Redundant Power Input
- Fiber Break and Power Failure Alarm
- IP40
- -20^{0} to $75^{0}C$
- CE Approved

Self Healing Serial to Fiber Converter

RS232 RS485 RS422

RS232 RS485 RS422

RS232 RS485 RS422

RS232 RS485 RS422

Profibus to Fiber Converters / Repeaters

- 1 & 2 fiber ports for Daisy Chaining & Redundant Ring
- Data rate up to 12M, Data latency rate as low as 120 nsec.
- Redundant power 9-30V DC, Relay output alarm
- Profibus HUB / Repeater support 3 independent channels of Profibus DP
- DIN rail mounting
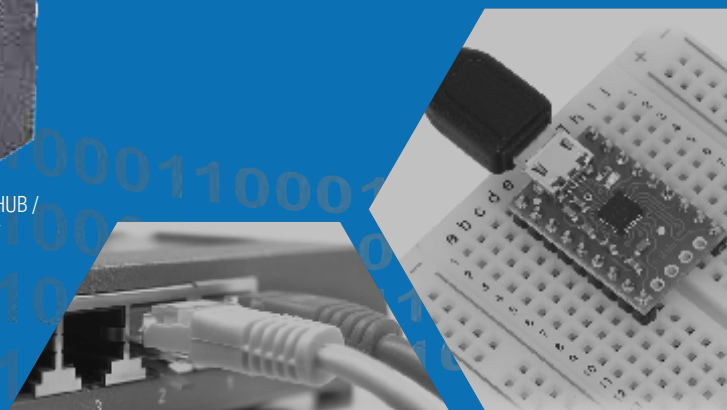- IP30

Profibus to Fiber

Genius to Fiber

Profibus Redundant Ring Converter

Profibus DP HUB / Repeater

Serial to Ethernet Converters

- ◆ 10 / 100M Auto negotiable speed
- ◆ 1/2/4 Serial Port Device Server, Supports High Speed CPU
- ◆ Support Virtual Com Ports
- ◆ Serial Port with 600W Surge, Over current and 15KV ESD protection
- ◆ 230V AC, 24 / 48 / 110 / 220V DC operated

Serial to Ethernet Converter,
AC Powered

Dual RS485 Device Server,
AC Powered

Four Port Isolated / Non Isolated Device Server

Serial To USB Convertor

- ◆ Supports 1 & 4 Serial Ports, 3KV Isolated versions
- ◆ USB 1.0, 1.1, 2.0, Full speed 12 Mbps
- ◆ Full signal RS232 & RS485/422
- ◆ Surge Protection on RS422 and RS485 lines
- ◆ ESD Protection on all lines
- ◆ Support Uninterrupted large data transfers
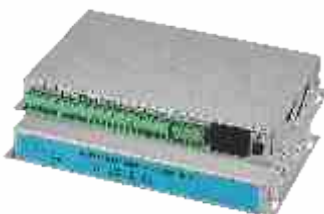
RS232 or RS485 to
USB Converter

Isolated RS232/RS485/RS422
to USB Converter

Isolated 4 port RS232/RS485/
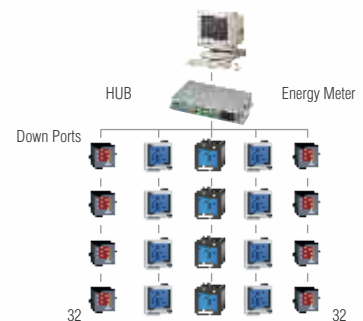RS422 to USB Converter

RS485 Hub

- ◆ 4 and 8 Port RS485 Hub
- ◆ Connect as many as 256 no's of RS485 devices
- ◆ Optically Isolated, Short Circuit, Surge & ESD protected
- ◆ Dual power input : 230 V AC / External Adaptor

4 Port RS485 Hub

8 Port RS485/RS422 Hub

HUB   Energy Meter

Down Ports

32   32

Serial Switching Converters

- ◆ Protocol Independent
- ◆ Connect 2 Masters to 1 Slave or Redundant Slaves to 1 Master
- ◆ Combination of RS232 & RS485 / RS422 ports
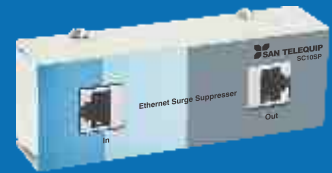- ◆ AC & DC Supplies

Serial Sharing Switch

Serial Redundancy Switch

Surge Supressors

- ◆ Protect Serial ports from lightening & transients
- ◆ Transient Voltage Suppression : 600W
- ◆ DC Spark Over Voltage: 72 to 102V DC
- ◆ Impulse Spark Over Voltage: <450V at 100V / μsec, < 800V at 1 KV / μsec

RS485 / RS422
Surge Supressor

Ethernet Surge Suppressor

Analog to Serial Convertor

- ◆ Sensors are used to continuously monitor and control various process parameters
- ◆ These measurements help improving processes for adhereing to product specifications & improve product
- ◆ Monitoring and controlling temperature, pressure, level, flow etc are common occurances for any process
- ◆ IO Converters convert the Analog & Digital data from Sensors to Modbus to be taken to SCADA for further processing

4 Channel Analog to Modbus

8 Channel Analog to Modbus

Analog / Digital Input
& Digital Output to Modbus

P R O F I L E

Powered by research, designed to perfection, produced and delivered to perform and lead, our solutions in data connectivity fit the needs of a large spectrum of automation applications.
As India's largest manufacturers of Interface Converters, we have a wide reach in IT, Telecom, Security, Industrial Automation and Building Automation.

Over the past three decades, SAN Telequip has moved from being the pioneers of Interface Converters to developing most advanced wireless data communication solutions. The company has evolved keeping pace with its customer needs and offering them the most sophisticated products. Various industries including Building Automation, Security & Surveillance, Telecom, Power, Renewable Energy, Oil & Gas rely on SAN Telequip's products, service and support across India. A wide range of solutions includes Networking & Surveillance Solutions, IIoT Solutions, Industrial Grade Terminal Servers, Protocol Gateways, Interface Converters, Wireless Converters.

Advantages
- Cutting edge technology but competitively priced
- Excellent Post Sales Services
- Tailor-made solutions
- Large installation base across India
- Products and systems for all your data needs

SAN TELEQUIP
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