

## Fiber to RS232/485/422 Converter

P/N: ITT-SR-



1RS-1SC-B



### Features:

- Support full duplex, high speed converting, and no packet lost.
- Support DHCP, easy for IP management and solve IP confliction.
- Support DNS. It fulfills the need of access data server through domain name.
- Support up to 100 TCP connections communicate with network module meanwhile.



ITT-SR-1RS-1SC-B fiber serial device server is an industrial serial port to fiber converting device developed by Ittelecom. The device can realize transparent transmission between 1 channel RS232/RS485/RS422 data and fiber.

The ITT-SR-1RS-1SC-B fiber use single-mode single-fiber SC interface, using one fiber to transmit can save fiber cost in long distance transmission. The power input can be plug or 2 line terminal, provide 9~24V wide range input voltage. It has RS232/485/422 serial port, RS232 is common interface DB9, RS485/422 is terminal type, easy to install.

Different with normal serial to fiber product, ITT-SR-1RS-1SC-B is not simply converting serial level signal to fiber signal, but first converting serial data to TCP/IP signal, then transmitting on fiber. The ITT-SR-1RS-1SC-B fiber signal can directly connect to fiber switch, directly participate in the transmission and exchange of network-layer data.

## Usage

### ITT-SR-1RS-1SC-B use in pairs

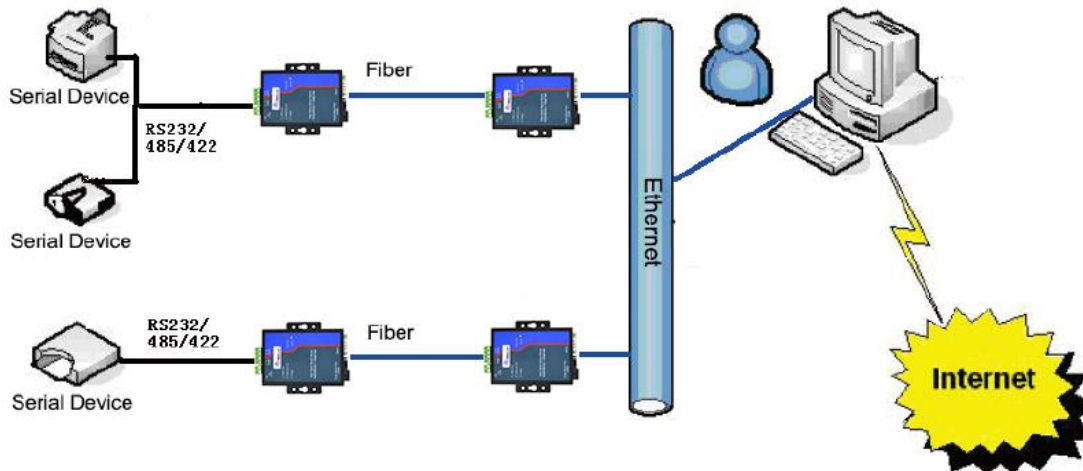
As the fiber interfaces of the 2 ITT-SR-1RS-1SC-B connect, it can realize RS485/RS232/RS422 signal extension through fiber, reaching a 20 km extension.

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## ITT-SR-1RS-1SC-B single use

Directly connect to fiber switch or first connect a fiber to Ethernet device then connect Ethernet switch. So ITT-SR-1RS-1SC-B can exchange data with any network device in the network. If communicating with computer, after installing virtual serial software Ittelecom in the computer, it can collect the ITT-SR-1RS-1SC-B serial data via virtual serial port.



## Features

- The fiber interface use SC pluggable interface, easy for user installing.
- Serial port provide RS232, RS485 and RS422 three type interface.
- Support full duplex, high speed converting, and no packet lost.
- Support TCP Server, TCP Client, UDP mode, and if communicating with Ittelecom, it automatically change to Real Com Driver Mode.
- Support band rate 1200~115200bps, data size 5~9bits, parity of None, Odd, Even, Mark, Space. Support CTS/RTS hardware flow control.
- Embedded 485/422 lightning protection function, suitable for outdoor 485/422 communication.
- Equipped freely with our Windows Virtual Serial & Device Management Tool Ittelecom. It supports virtual serial and searching device or modifying parameters with Ittelecom.
- Provide device management library (Window DLL library). It will help user to develop program with VC, VB, Delphi, C++
- Builder. User need only use read() or write() function to communicate with ITT-SR-1RS-1SC-B.
- The innovative disconnecting detecting method. Whether it running in TCP Server mode or TCP Client mode can automatically
- establish connection after network broken, to ensure the data real-time reaching.
- Suitable for Modbus network upgrading, support directly converting Modbus TCP to Modbus RTU.
- With build-in Web server, its parameters can be modified by web browser.
- Support DHCP, easy for IP management and solve IP confliction.
- Support DNS. It fulfills the need of access data server through domain name.
- Support up to 100 TCP connections communicate with network module meanwhile.
- Flexible serial data framing setting. It fulfills all kinds of serial data frame requirement.
- UDP mode support dynamic destination address mode. It helps for multi-user manage one serial server.
- Real Com Driver mode support using the 9-th bit to facilitate communication with milt-device. (the 9-th bit being 0 means data frame and 1 means address frame).

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- Support searching serial servers and modifying parameters through Internet remotely
- Support parameter modifying protection, preventing modifying by accident. Support running with default parameters.
- High protection of electromagnetic interference, with its high electromagnetic interference protection SECC external shell.

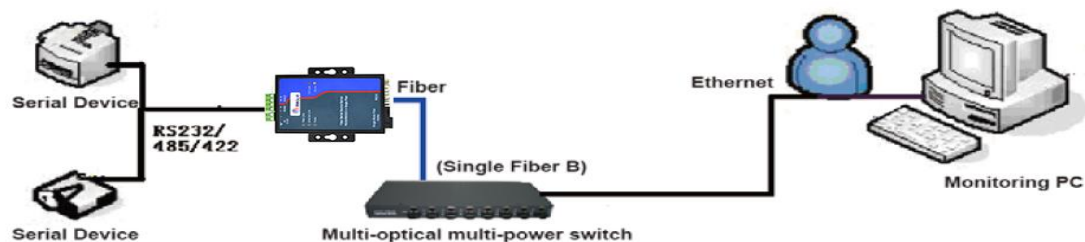
## Technical Parameters:

|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Figure</b>                   | <ul style="list-style-type: none"> <li>➤ Interface: 422: Terminal; 485: Terminal; 232: DB9; 9163: Optical SC pluggable interface</li> <li>➤ Power Supply: 5.5mm, Inside positive outside negative, standard outlet</li> <li>➤ Size: L x W x H =9.4cm×6.5cm×2.5cm</li> </ul>                                                                                                                                                         |
| <b>Communicate Interface</b>    | <ul style="list-style-type: none"> <li>➤ Ethernet: Not in use, for extension,</li> <li>➤ Optical Fiber (9163): Single-mode Single-fiber, double transferring</li> <li>➤ Serial: RS232/485/422×1: RXD, TXD, GND, CTS, RTS</li> </ul>                                                                                                                                                                                                 |
| <b>Serial Parameters</b>        | <ul style="list-style-type: none"> <li>➤ Baud rate: 1200~115200bps<br/>None, Odd, Even, Mark, Space</li> <li>➤ Data size: 5 ~ 9</li> <li>Flow Control: XON/XOFF, RTS/CTS, NONE</li> </ul>                                                                                                                                                                                                                                           |
| <b>Optical Fiber Parameters</b> | <ul style="list-style-type: none"> <li>➤ Sub-Model: <ul style="list-style-type: none"> <li>1. ITT-SR-1RS-1SC-B-3(A-end)<br/>Emission (TX) Wavelength: 1310nm Receiving (RX) Wavelength: 1550nm</li> <li>ITT-SR-1RS-1SC-B-5(B-end)<br/>Emission (TX) Wavelength: 1550nm Receiving (RX) Wavelength: 1310nm</li> </ul> </li> <li>➤ Optical Fiber Transmission Distance: 20Km</li> <li>➤ Optical Communication Interface: SC</li> </ul> |
| <b>Work Mode</b>                | ➤ TCP server, TCP client, UDP, Real Com Driver                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Power:</b>                   | ➤ 9 ~ 24V DC, 357mA@9V (9163)                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Environment</b>              | <ul style="list-style-type: none"> <li>➤ Running temperature: -40~85°C</li> <li>➤ Storage temp: -45~165°C</li> <li>➤ Humidity: 5~95%RH</li> </ul>                                                                                                                                                                                                                                                                                   |
| <b>Certifications:</b>          | ➤ CE, FCC, RoHS                                                                                                                                                                                                                                                                                                                                                                                                                     |

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## ITT-SR-1RS-1SC-B



ITT-SR-1RS-1SC-B usually is single-used, it can connect with fiber switch, the host monitoring software can directly access ITT-SR-1RS-1SC-B IP address to get data. ITT-SR-1RS-1SC-B cannot realize this type. ITT-SR-1RS-1SC-B actually convert RS232/485 data to TCP format, it's an serial device server but transmitting in fiber.

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