

USB - RS485 Converter - Industrial Grade

Sunrom Part#
1438

Installs virtual serial port on PC and converts to RS485(2-Wire) only.
Industrial Grade design with ESD/EFT/TVS/Lightning protection.
Nonisolated version. Can act as Modbus master.

User's Manual

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<http://www.sunrom.com/m/1438>

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Introduction

Our USB-RS485 converters have been designed to convert bidirectional USB to RS485 interface.

It can act as Modbus master for industrial communication and control implementation.

A virtual serial port is created in the PC to access the serial line.



Figure 1 After connecting, “a virtual serial port” is created in your PC. Within the system it acts like a standard serial COM port.

Features

- ARM 32-bit controller for 24x7 Stable Industrial Operation
- Powered from USB, No external power is needed
- ESD Protection from USB
- Lightning and Surge Protection
- 1200 meters range in RS485 network twisted pair cable
- Easy to use with standard software which works with serial ports
- Automatically Data switching from transmit to receive without any delay
- Zero Configuration - Adapts serial port settings from PC software automatically.
- Ground Output for wire shielding

Applications

- Communication with RS485 device and a PC
- Modbus Master
- Industrial Sensor Interfacing
- Meter Reading
- Machine Interface

Details

USB to RS485 Converter is an intelligent module which connects to a PC USB port providing a high-speed asynchronous RS-485 serial port. The USB-485 Converter provides easy connectivity between the PC and standard communication ports, not requiring any PC reconfiguration, assignment of IRQs or jumper settings.

The USB to RS485 module is a cost-effective way to convert RS485 industrial buses to a USB interface. When connected to a PC USB port the USB to RS485 module is automatically detected and is installed as a native COM port which is compatible with any existing serial communication application. Multiple modules can be installed when using USB hubs thus allowing a hassle-free configuration of a multi serial system.

Specifications

Parameter	Value
Working Voltage	5V DC from USB Port
Current Consumption	125 mA
Max. Data Transfer	500 kbps (All standard baud rate supported)
Controller Chipset	ARM 32 Bit
USB Driver	Single Driver supports Windows 32-64 bit OS like XP/NT/Vista/7/8/10 (No driver required on Linux)
Transmit/Receive	Automatically Data switching without delay
Temperature range	-40 to +85 °C (-40 to 185 F)
Configuration	No configuration needed. Unit automatically configured baud rate and settings as per PC software.
Terminating Resistor	Built in 120 Ohms resistance
USB Port	USB A type
RS485 Distance	1200 meters with twisted pair cable
Degree of Protection	IP 30
Box Dimension	70x26x12mm
Box Material	ABS Black Transparent

Module Pin Details

Pin	Details
GND	Signal Ground - Optional for Shielding, Not used in communication
D+/A	Bidirectional Data Pin RS485 Standard
D-/B	Bidirectional Data Pin RS485 Standard

Installation

Step: 1 - Install USB Driver

It is recommended to install USB Driver before connecting device to your PC.

Visit Download USB VCP on this page <https://www.sunrom.com/m/1438>

Once Install you can view the installed com port by going to **Device Manager>Ports** or **Start > Device and Printers**

The USB driver setup work for both Windows 32 bit and Windows 64 bit OS.

Normally your system assigns a unique COM Port to the device. If required for your software optionally you can change that by going to **Device Manager > Ports > Properties > Advanced**

Step: 2 - Use a software to test

You can use any software like Terminal to test data communication

<https://sites.google.com/site/terminalbpp/>

Support

Sunrom Electronics offers free **technical support** (www.sunrom.com/contact) for customers, until the end of the product's lifetime, so if something goes wrong, we're ready and willing to help!

Technical Support is available by email only and scope is limited to problem faced during use of the use of product and does not cover end user programming and hardware troubleshooting.

Each product passes through strict quality checks before it reaches you. So if something is not working out right, the first thing to doubt is the connections or programming of your hardware.

Disclaimer

Sunrom Electronics assumes no responsibility or liability for any errors or inaccuracies that may appear in the present document. Specification and information contained in the present schematic are subject to change at any time without notice.

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