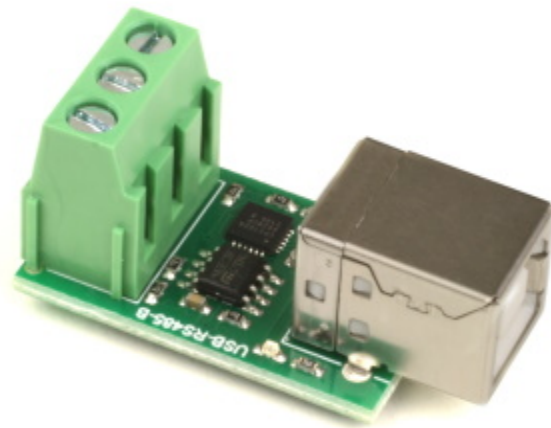


USB-RS485B Communications Module

Technical Specification

The USB-RS485B module provides an easy to use RS485 interface by means of a Virtual Com Port on the users system. There are no command structures, whatever is sent to the Virtual Comm Port is automatically converted to RS485 and vice versa. The module is completely self powered from the USB bus.

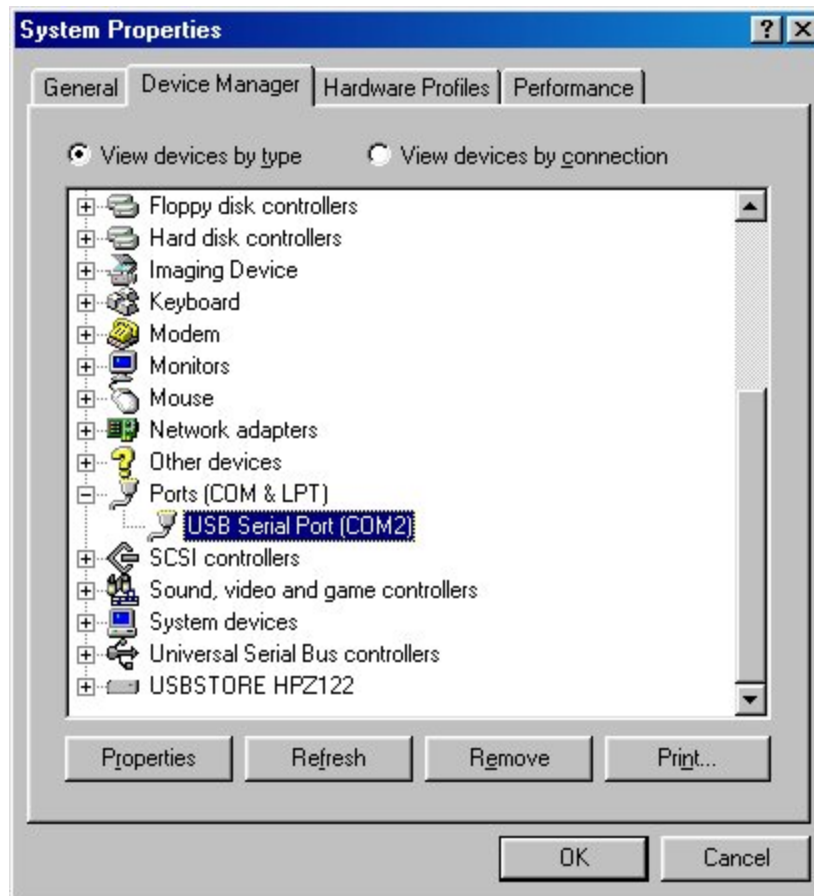


First Step - Get The Drivers

The USB-RS485B module uses the [Silicon Concepts CP2102](#) to handle all the USB protocols. Before using the USB-RS485B, you will need to install the drivers for the Virtual COM Port (VCP). These drivers appear to the system as an extra Com Port (in addition to any existing hardware Com Ports). Application software accesses the USB device in the same way as it would access a standard Windows Com Port using the Windows VCOMM API calls or by using a Com Port Library. Drivers for Windows, Macintosh, Linux and Android are available on the Silicon Concepts website. You should get and install the drivers now, before you connect the USB-RS485B to your computer. The Drivers page is [here](#).

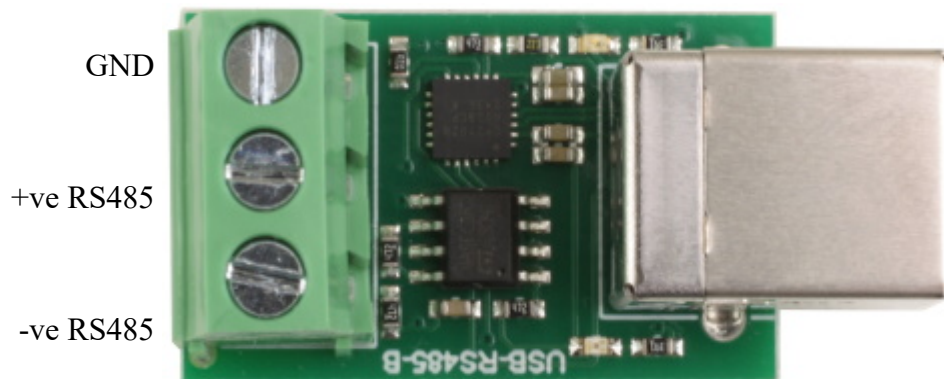
Which COM port?

After installing the drivers, and plugging in the USB-RS485B module to a spare USB port, you will want to know which COM port it has been assigned to. This will vary from system to system depending on how many COM ports you currently have installed. To find out where it is, right click on your "My Computer" desktop icon and select the "Device Manager" tab. For XP or Vista, go to Control Panel -> System -> Device Manager. Now scroll down and open the "Ports (COM & LPT)" tab. You should see the USB serial port listed - COM2 in the example below. If you want to change the COM port number - just right click on it, select properties, select advanced and select the COM port number from the available list. The USB-RS485B supports data rates of up to 250kbps (bits).



Connections

The diagram below shows the RS485 connections.



Automatic Bus Turnaround

The USB-RS485B will automatically control the ST485 to seamlessly switch the output drivers on for transmission or off for reception of data.

ST485 RS485 driver chip

The ST485 used on the USB-RS485B module features reduced slew-rate drivers that minimize EMI and reduce reflections caused by improperly terminated cables, thus allowing error-free data transmission up to 250kbps.

Writing the PC Application

Although this is your domain, it's always helpful to have a little starting point, so we've put together a couple of short articles on using the PC Serial Com. Port with [Visual Basic](#) and [C#](#). These are for the Visual

Express 2008 versions of VB and C#, which are currently free downloads from the Microsoft website.