

ICUSB422

Instruction Manual

USB Serial Adapter

**USB to RS-422/485 Serial
Adapter Cable**

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FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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Introduction

Packaging Contents

- 1 x USB to Serial Adapter Cable
- 1 x Driver CD
- 1 x Instruction Manual

System Requirements

- Available USB port
- Microsoft® Windows® 98SE/ME/2000/XP/Server 2003/Vista/7, or Linux® kernel 2.4.x or later



Installation

Hardware Installation

1. Power on the computer and make sure the operating system is fully loaded.
2. Plug the USB connector on the ICUBS422 adapter cable into an available USB port on the host computer.
3. The operating system will automatically detect the new hardware and prompt for drivers.
4. Once drivers are successfully installed, connect the DB9 connector to the serial cable for your RS-422/485 device.

Driver Installation

Windows 2000/Server 2003/XP

1. When the Found New Hardware wizard appears on the screen, insert the Driver CD into your CD-ROM drive. If you are prompted to connect to Windows Update, please select the “No, not this time” option and click Next.
2. Select the option “Install Drivers Automatically (Recommended)” and then click the Next button.
3. Windows should now start searching for the drivers. Once this has completed, click the Finish button.

Windows Vista/7

1. When the Found New Hardware window appears on the screen, click on the “Locate and install drivers software (recommended)” option. If prompted to search online, select the “Don’t search online” option.
2. When prompted to insert the disc, insert the Driver CD that came with the card, into your CD-ROM drive and Windows will automatically proceed to search the CD.

3. If a Windows Security dialog window appears, click the “Install this driver software anyway” option to proceed.
4. Once the driver is installed, click the Close button.

Verifying Installation

Windows 2000/Server 2003/XP/Vista/7

From the main desktop, right-click on “My Computer” (“Computer” in Vista), then select Manage. In the new Computer Management window, select Device Manager from the left window panel.

Double-click on the “Ports (COM & LPT)” option. An additional USB serial COM port should be visible. The port is ready to connect to new devices.

DIP Switch Settings

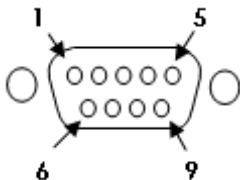
| Switch | Switch Name | Switch Position | Description |
|--------|--------------|-------------------|--|
| 1 | 485/422 | 485 (default) | 2-wire RS-485 mode |
| | | 422 | 4-wire RS-422 mode |
| 2 | Echo/No Echo | Echo | Transmitting data will be echoed back. |
| | | No Echo (default) | No data echo |
| 3 | No Term/Term | No Term (default) | Terminator resistor is disabled |
| | | Term | Terminator resistor is enabled |
| 4 | None | On/Off | Switch is not enabled |



- * **NOTE:** In “422” mode, the ECHO setting is not used.
- * The Echo mode is useful for detecting if there is data collision occurring on RS-485. If the echoed data is not equal to the transmitted data, then data collision is occurring.

DB9 Pin Assignment

| DB9 Pin | RS-422 | RS-485 |
|---------|--------|--------|
| 1 | TxD - | Data - |
| 2 | TxD + | Data + |
| 3 | RxD + | NC |
| 4 | RxD - | NC |
| 5 | GND | GND |
| 6 | NC | NC |
| 7 | NC | NC |
| 8 | NC | NC |
| 9 | NC | NC |



Specifications

| | |
|-------------------------------------|---|
| Bus Interface | USB 2.0 |
| Connectors | 1 x USB type A 1 x 9-pin DB9 male |
| Maximum Baud Rate | 921.6Kbps |
| Termination Resistor | 120 Ohm |
| Chipset | FTDI FT232RL |
| Serial Protocol | RS-422 (4-wire) RS-485 (2-wire) |
| Power Consumption | 110mA |
| Compatible Operating Systems | Windows 98SE/ME/2000/XP/ Server 2003/Vista/7, or Linux |

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Warranty Information

This product is backed by a two year warranty.

In addition, StarTech.com warrants its products against defects in materials and workmanship for the periods noted, following the initial date of purchase. During this period, the products may be returned for repair, or replacement with equivalent products at our discretion. The warranty covers parts and labor costs only. StarTech.com does not warrant its products from defects or damages arising from misuse, abuse, alteration, or normal wear and tear.

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