



# USB to RS-422/485 Adapter

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USER MANUAL

**UC485**

## EMC INFORMATION

**FEDERAL COMMUNICATIONS COMMISSION STATEMENT:** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

**FCC Caution:** Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

**Warning:** Operation of this equipment in a residential environment could cause radio interference.

The device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

### KCC Statement

이 기기는 업무용 (A 급) 전자파 적합기기로서 판매자 또는 사용자는 이 점을 주의하시기 바라며, 가정외의 지역에서 사용하는 것을 목적으로 합니다.

### ROHS

This product is RoHS compliant.



# UC485 USER MANUAL

## ONLINE REGISTRATION

International	<a href="http://eservice.aten.com">http://eservice.aten.com</a>
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## TELEPHONE SUPPORT

International	886-2-8692-6959
China	86-400-810-0-810
Japan	81-3-5615-5811
Korea	82-2-467-6789
North America	1-888-999-ATEN ext 4988
United Kingdom	44-8-4481-58923

## TECHNICAL SUPPORT

- ◆ For international online technical support – including troubleshooting, documentation, and software updates:  
**<http://eservice.aten.com>**
- ◆ For North American technical support:

Email Support		<a href="mailto:support@aten-usa.com">support@aten-usa.com</a>
Online Technical Support	Troubleshooting Documentation Software Updates	<a href="http://support.aten.com">http://support.aten.com</a>
Telephone Support		1-888-999-ATEN ext 4998

## PACKAGE CONTENTS

The UC485 USB to RS-422/485 Adapter package contains the following items:

- ◆ 1 UC485 USB to RS-422/485 Adapter
- ◆ 1 Terminal Adapter
- ◆ 1 User Instructions\*

Check to make sure that all the components are present and that nothing got damaged in shipping. If you encounter a problem, contact your dealer.

Read this manual thoroughly and follow the installation and operation procedures carefully to prevent any damage to the unit, and/or any of the devices connected to it.

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\* Features may have been added to the UC485 since this manual was printed. Please visit our website to download the most up-to-date version of the manual.

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## OVERVIEW

The ATEN UC485 USB to RS-422/485 Adapter is a high quality industrial adapter cable designed to instantly add an RS-422 / RS-485 port to your PC or laptop via a USB port. The adapter is powered via the USB connection, therefore an external power supply is not needed.

The UC485 adapter lets you use a single USB connection to create plug-and-play serial transfers without additional cables or complicated device installations. It lets you connect any RS-485 or RS-422 device to your computer's USB port without experiencing computer lock-ups, I/O or driver problems. It is the ideal solution for connecting industrial devices such as laboratory machines, measuring equipment, automated systems, monitoring devices, and many more – where mission-critical applications are required.

## **FEATURES**

- ◆ Converts a USB port to a Legacy COM port
- ◆ DB-9 female to terminal block adapter for easy wiring
- ◆ Fast COM Port Transmission – up to 921.6 Kbps per serial port
- ◆ Supports Windows Vista, 7 and above, Mac and Linux
- ◆ LEDs for indicating RS-422 (Orange) or RS-485 (Green)
- ◆ Supports Terminal/ECHO setting by switch
- ◆ Plug-and-Play – no power supply needed
- ◆ Supports USB hot-plugging

# **SYSTEM REQUIREMENTS**

## **HARDWARE**

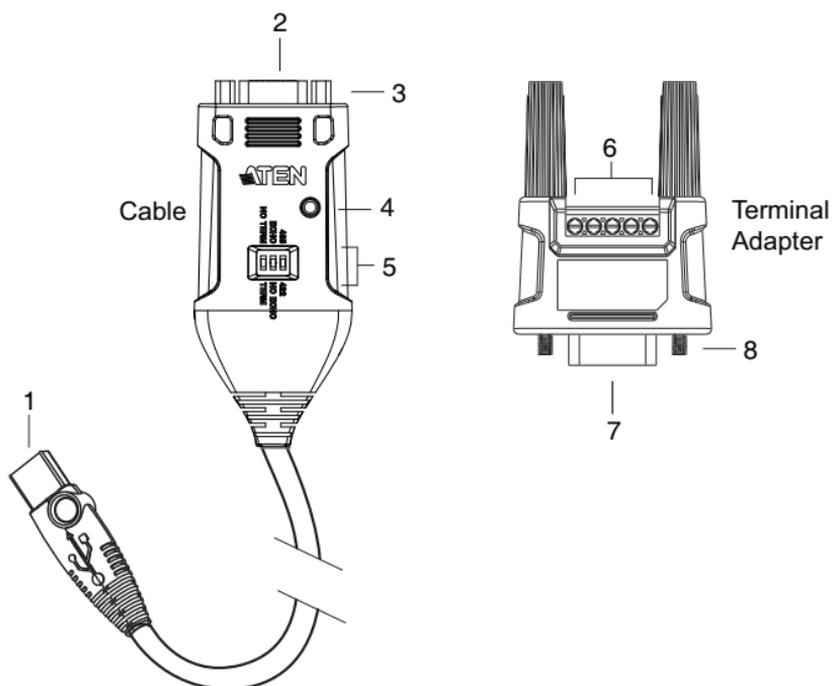
1 USB enabled computer

## **SOFTWARE**

- ◆ Windows Vista, 7 and above, Mac and Linux

# COMPONENTS

## UC485



No.	Component	Description
1	USB Connector	This connector plugs in a USB enabled computer.
2	DB-9 Connector	Connect this end of the cable to an RS-422 or RS-485 serial device.
3	Connector Nut	This nut provides an inlet for the connector screws on the Terminal Adapter (included with this package).
4	Power LED	This LED lights Orange (RS-422) or Green (RS-485) to indicate the adapter is connected and powering a device from the computer's USB port.
5	Mode Selector	These three DIP switches allow you to configure the Terminator, Echo, and device settings.
6	Terminal Connectors	These five terminal blocks provide a wired connection to the serial device.

No.	Component	Description
7	DB-9 Connector (Female)	The terminal adapter plug connects to the cable's DB-9 connector.
8	Connector Screws	These two screws go into the connector nuts on the cable's DB-9 connector.

## INSTALLATION



1. Make sure that the power to any device that you connect to the installation has been turned off.
2. Make sure that all devices you will be installing are properly grounded.

## HARDWARE

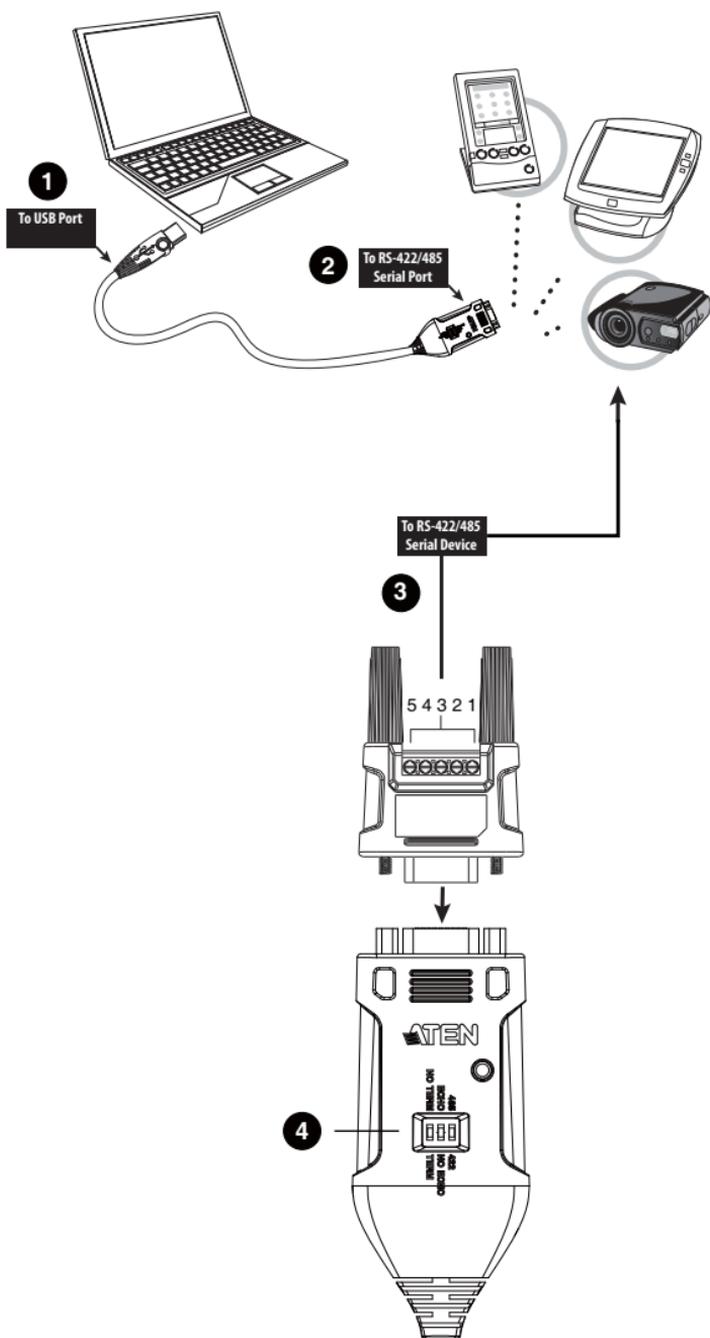
To setup the UC485, use the diagram on the next page (the numbers in the diagram correspond with the numbered instructions below), and do the following:

1. Plug the USB connector to the computer and allow the drivers to install.\*
2. Plug the DB-9 connector to an RS-422/RS-485 serial device.
3. (Optional) If you are using the terminal connectors, plug the Terminal Adapter included with this package into the DB-9 Connector, secure the connector screws, and then use the terminal blocks to wire a device to the UC485 (SEE PAGE).
4. Use the Mode Selector to configure the DIP switch settings for the connection type (SEE PAGE).
5. Power on the serial devices.

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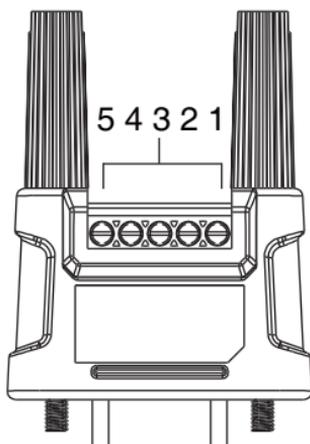
**Note:** If you are using an older computer that doesn't contain the drivers for this device, please go to our website to download the UC485 drivers and install them before setting up the hardware.

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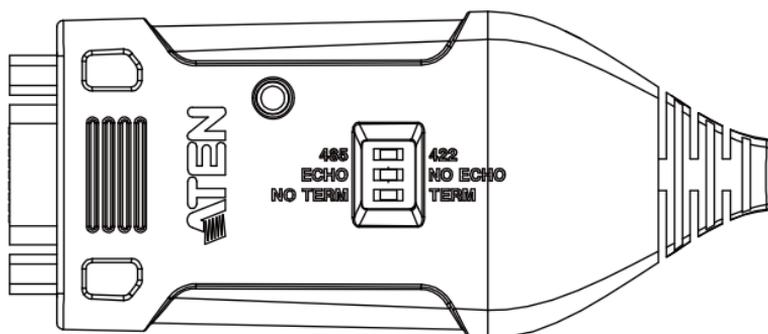
# CONFIGURATION AND SETTINGS

## TERMINAL BLOCK



PIN	RS-422 (4-Wire)	RS-485 (2-Wire)
1	TxD-(A)	Data-(A)
2	TxD+(B)	Data+(B)
3	RxD+(B)	
4	RxD-(A)	
5	GND	GND

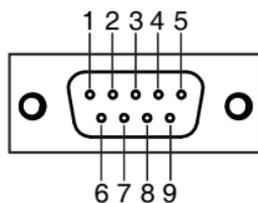
## DIP SWITCH



Switch	Name	Position	Description
1	Term / No Term	No Term (default)	The terminator resistor is disabled.
		Term	The terminator resistor is enabled.
2	Echo / No Echo	Echo	The data transmitted is echoed back.
		No Echo (default)	No data is echoed back.
3	485 / 422	485 (default)	RS-485 2-wire mode
		422	RS-422 4-wire mode

## DB9 PIN ASSIGNMENT

### Male DB9



PIN	RS-422 (4-Wire)	RS-485 (2-Wire)
1	TxD-(A)	Data-
2	TxD+(B)	Data+
3	RxD+(B)	
4	RxD-(A)	
5	GND	GND
6	RTS-	
7	RTS+	
8	CTS+	
9	CTS-	

# SPECIFICATIONS

Function	UC485
<b>Device Connections</b>	1
<b>Connectors</b>	
Serial Port	1 x DB-9 Male (Silver)
USB Port	1 x USB Type-A Male (White)
<b>LED</b>	
Power Status	RS-422 (Orange) / RS-485 (Green)
<b>Interface</b>	
RS-485	Baud Rate: 75bps~921.6 Kbps
<b>Flow Control</b>	
RTS/CTS, XON/XOFF	Stop Bit: 1, 1.5, 2
<b>FIFO</b>	
64 Bytes	Parity: Even, Odd, None, Mark, Space
<b>Power</b>	
Consumption	DC5V, 0.228W
<b>Environmental</b>	
Operating Temperature	0–40° C
Storage Temperature	-20–60° C
Humidity	0–80% RH, Non-condensing
<b>Physical Properties</b>	
Housing	Plastic
Weight	0.09 kg
Dimensions (L x W x H)	9.53 x 4.10 x 2.20 cm

## **Limited Hardware Warranty**

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ATEN warrants its hardware in the country of purchase against flaws in materials and workmanship for a Warranty Period of two [2] years (warranty period may vary in certain regions/countries) commencing on the date of original purchase. This warranty period includes the LCD panel of ATEN LCD KVM switches. Select products are warranted for an additional year (see *A+ Warranty* for further details). Cables and accessories are not covered by the Standard Warranty.

### **What is covered by the Limited Hardware Warranty**

ATEN will provide a repair service, without charge, during the Warranty Period. If a product is defective, ATEN will, at its discretion, have the option to (1) repair said product with new or repaired components, or (2) replace the entire product with an identical product or with a similar product which fulfills the same function as the defective product. Replaced products assume the warranty of the original product for the remaining period or a period of 90 days, whichever is longer. When the products or components are replaced, the replacing articles shall become customer property and the replaced articles shall become the property of ATEN.

To learn more about our warranty policies, please visit our website:

<http://www.aten.com/global/en/legal/policies/warranty-policy/>