ATEN
Simply Better Connections

UC232B / UC232BF

USB to Serial Console Adapter
User Manual

Compliance Statements

FEDERAL COMMUNICATIONS COMMISSION INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital service, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. Any changes or modifications made to this equipment may void the user's authority to operate this equipment. This equipment generates, uses, and can radiate radio frequency energy. 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.

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.

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.

KCC Statement

유선 제품용 / B 급 기기 (가정용 방송 통신 기기)
이 기기는 가정용 (B 급) 전자파적합기기로서 주로 가정에서 사용하는
것을 목적으로 하며 , 모든 지역에서 사용할 수 있습니다 .

Industry Canada Statement

This Class B digital apparatus complies with Canadian ICES-003.

CAN ICES-003 (B) / NMB-003 (B)

RoHS

This product is RoHS compliant.

User Information

Online Registration

Be sure to register your product at our online support center:

International	http://eservice.aten.com

Telephone Support

For telephone support, call this number:

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
	1-949-428-1111

User Notice

All information, documentation, and specifications contained in this manual are subject to change without prior notification by the manufacturer. The manufacturer makes no representations or warranties, either expressed or implied, with respect to the contents hereof and specifically disclaims any warranties as to merchantability or fitness for any particular purpose. Any of the manufacturer's software described in this manual is sold or licensed *as is*. Should the programs prove defective following their purchase, the buyer (and not the manufacturer, its distributor, or its dealer), assumes the entire cost of all necessary servicing, repair and any incidental or consequential damages resulting from any defect in the software.

The manufacturer of this system is not responsible for any radio and/or TV interference caused by unauthorized modifications to this device. It is the responsibility of the user to correct such interference.

The manufacturer is not responsible for any damage incurred in the operation of this system if the correct operational voltage setting was not selected prior to operation. PLEASE VERIFY THAT THE VOLTAGE SETTING IS CORRECT BEFORE USE.

Product Information

For information about all ATEN products and how they can help you connect without limits, visit ATEN on the Web or contact an ATEN Authorized Reseller. Visit ATEN on the Web for a list of locations and telephone numbers:

International	http://www.aten.com
North America	http://www.aten-usa.com

Package Contents

Check to make sure that all the components are in working order. If you encounter any problem, please contact your dealer.

1 UC232B / UC232BF USB to RJ-45 (RS-232) Console Adapter

1 user instructions

Table of Contents

About this Manual

This user manual is provided to help you get the most from the UC232B / UC232BF unit. It covers all aspects of installation, configuration, and operation. An overview of the information found in the manual is provided below.

Chapter 1, Introduction introduces you to the USB to RJ-45 (RS-232) Console Adapter. Its purpose, features, declaration, and panel components are presented and described.

Chapter 2, Hardware Setup describes the steps that are necessary to quickly and safely set up your installation.

Appendix provides a list of safety instructions and precautions, contact information for ATEN technical support, product specifications, and other technical information.

Note:

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

* This product may be updated with features and functions added, improved or removed since the release of this manual. For an up-to-date user manual, visit http://www.aten.com/global/en/

Conventions

This manual uses the following conventions:

Monospaced	Indicates text that you should key in.
[ ]	Indicates keys you should press. For example, [Enter] means to press the **Enter** key. If keys need to be chorded, they appear together in the same bracket with a plus sign between them: [Ctrl+Alt].
1.	Numbered lists represent procedures with sequential steps.
♦	Bullet lists provide information, but do not involve sequential steps.
>	Indicates selecting the option (on a menu or dialog box, for example), that comes next. For example, Start > Run means to open the *Start* menu, and then select *Run*.
⚠	Indicates critical information.

Chapter 1
Introduction

Overview

The ATEN UC232B / UC232BF is a one port USB-to-Serial console adapter. This high quality industrial adapter cable is designed to instantly add single RS-232 console port connectivity for networking appliances via a USB port. The adapter is powered via the USB connection.

The UC232B / UC232BF is compatible with the USB 2.0 standard and works conveniently with desktop and notebook PCs. It also can be used with large integrated computer-based systems or other specialized applications, such as point-of-sale applications, networking equipment, industrial automation systems, and native serial transfer instruments to offer a convenient connectivity solution. The UC232B / UC232BF converter provides a plug & play solution. Windows, Mac and Linux drivers are included.

Features

- Converts a USB port to RJ-45 Console port (RS-232)
- Adopts FTDI chip for enhanced device compatibility (UC232BF only)
- Supports straight RJ-45 cable, no need to use Rolled RJ-45 Cable for connecting Networking Router / modems / network switch for configuration
- Fast COM Port Transmission – up to 921.6 Kbps data transfer rate
- COM retention saves the assigned port settings for the device
- Proven performance in anti-electromagnetic interference (anti-EMI) capability for stable transmission performance
- OS Compatibility: Windows, Mac, Linux
- Plug-and-Play portability – small and lightweight enclosure makes it a perfect travel companion
- No external power supply needed
- A trustworthy connectivity solution recommended and adopted by leading enterprises worldwide
- USB 2.0 compliant

System Requirements

- USB Host Controller installed on the system

Operating Systems

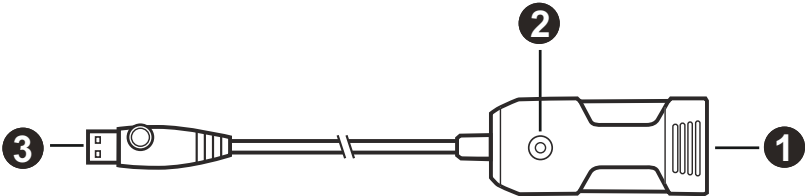Supported operating systems are shown in the table below.

OS	Version
Windows	2000, Vista, 7, 8, 8.1, 10, or above
Mac	OS 10 or later
Linux Kernel	2.6.15 or later

If your Linux kernel is between v2.6.15 ~ v5.4 and your device has a new chipset version, please update the Linux driver from our product web page. This driver works with 2021 or later chipset version device only.

Use the link below to identify which chipset version your device is.

http://eservice.aten.com/eServiceCx/Common/FAQ/view.do?id=18695

Hardware Overview

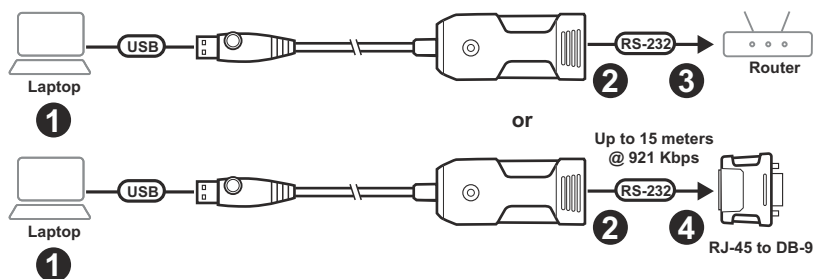| No.	Component	Description
1	RJ-45 connector (female)	Connects to a serial device or RJ-45 to DB-9 adapter via an rollover Ethernet cable.
2	power LED	Lights to indicate the unit is powered on.
3	USB connector	Connects to a USB Type-A computer.

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Chapter 2
Hardware Setup

⚠ 1. Please review the safety information regarding the placement of this device in *Safety Instructions*, page 19.

2. To prevent damage to your installation from power surges or static electricity. It is important that all connected devices are properly grounded.

Connecting the Unit

Follow the steps below to connect the UC232B / UC232BF unit.

1. Connect the USB connector to the computer and allow the driver to install.

> **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 UC232B / UC232BF drivers and install them before setting up the hardware.

2. Plug a straight-through Ethernet cable to the RJ-45 connector on the UC232B / UC232BF.

3. Plug the other end of the Ethernet cable directly into an RJ-45 console port of the target networking device.

4. Use an rollover Ethernet cable (and an optional RJ-45 to DB-9 adapter) while connecting the standard DB-9 serial port on the target serial device.

> **Note:** The maximum Ethernet cable length is up to 15 meters with transmission speed up to 921.6 Kbps.

5. Power on the target devices.

Cable Requirements

Straight-through Ethernet Cable Pin-outs			
Signal	**RJ-45 Pin**	**RJ-45 Pin**	**Signal**
Tx+	1	1	Tx+
Tx-	2	2	Tx-
Rx+	3	3	Rx+
-	4	4	-
-	5	5	-
Rx-	6	6	Rx-
-	7	7	-
-	8	8	-

Rolled Ethernet Cable Pin-outs			
Signal	**RJ-45 Pin**	**RJ-45 Pin**	**Signal**
-	1	8	-
-	2	7	-
-	3	6	-
-	4	5	-
-	5	4	-
-	6	3	-
-	7	2	-
-	8	1	-

Windows 2000 Installation

Installing the Driver(s)

To install the UC232B / UC232BF drivers, do the following:

Note: The setup is for UC232B in the picture below, the UC232BF is the same as the UC232B.

1. Please download the latest software installation package from the UC232B product page at www.aten.com/download (search for UC232B and go to the download tab).

2. Execute the file and follow the on-screen instructions to configure detailed software settings.

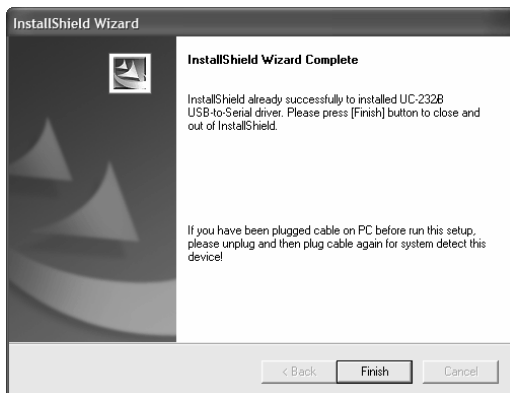3. Double click **UC-232BDriverInstaller.exe**.

   After a few moments, the following dialog box appears:

4. Click **Next** to install the drivers.

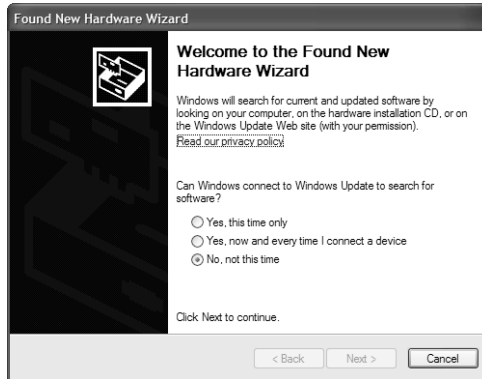5. Windows displays the following warning:

6. You can safely ignore this warning. Click **Continue Anyway** to continue installing the new software. When the installation is complete, the following dialog box appears:
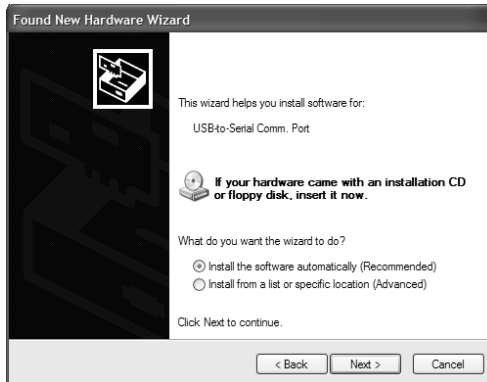

7. Click **Finish** to close the wizard. You have successfully installed the driver(s).

Connecting the UC232B / UC232BF

1. Connect the UC232B / UC232BF USB to RJ-45 (RS-232) Console Adapter to a USB port on your computer. The *New Hardware Wizard* appears:

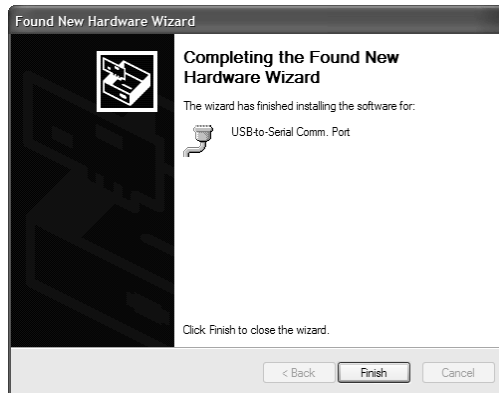2. Select *No, not this time*, and then click **Next** to continue. The following dialog box appears:

3. Leave the default choice *(Install the software automatically)*. Click **Next** to continue.

4. Windows displays the following warning:

5. You can safely ignore this warning. Click **Continue Anyway** to continue installing the new hardware. When the installation is complete, the following dialog box appears:

6. Click **Finish** to close the wizard. You have successfully installed the UC232B / UC232BF.

Uninstalling the Driver(s)

1. Insert the installation disk into the CD-ROM drive. The following dialog box appears:

2. Select *Uninstall the driver*, and then click **Next**. The following dialog box appears:

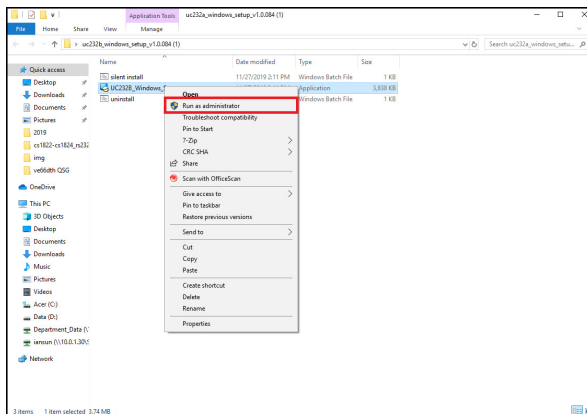3. Click **Finish**. You have successfully uninstalled the driver(s).

Windows Vista/7/8/8.1/10 Installation
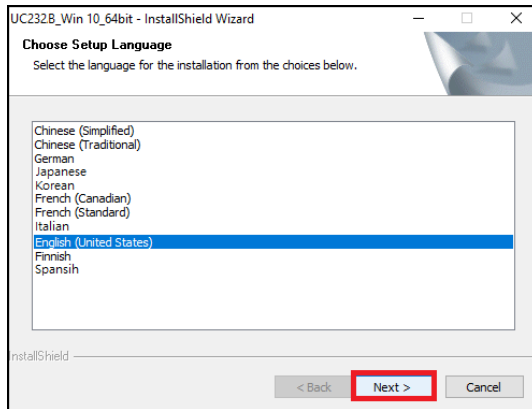
Installing the Driver(s)

To install the UC232B / UC232BF drivers, do the following:

Note: The setup is for UC232B in the picture below, the UC232BF is the same as the UC232B.

1. Make sure that the Windows language for non-Unicode programs is set to English by checking *Regional and Language Options*, then *Administrative*.

2. Please download the latest software installation package from the UC232B product page at www.aten.com/download (search for UC232B and go to the download tab).

3. Execute the file and follow the on-screen instructions to configure detailed software settings.

4. Open the downloaded file and right click on the UC232B_Windows_Setup. Select **Run as administrator** as shown in the picture below.

5. After a few moments, the following dialog box appears. Choose your desired Language and click **Next**.

6. Click **Next**.

7. Click **Install** to install the drivers.

8. When the installation is complete, the following dialog box appears. Click **Finish** to close the wizard. You have successfully installed the driver(s).

Connecting the UC232B / UC232BF

1. Connect the UC232B / UC232BF USB-to-Serial Adapter to a USB port in your computer. The following dialog box appears on the bottom right of your PC screen to confirm that the driver has been installed and that your UC232B / UC232BF is ready to use:

Mac Installation

Installing the Software

To install the UC232B / UC232BF software, do the following:

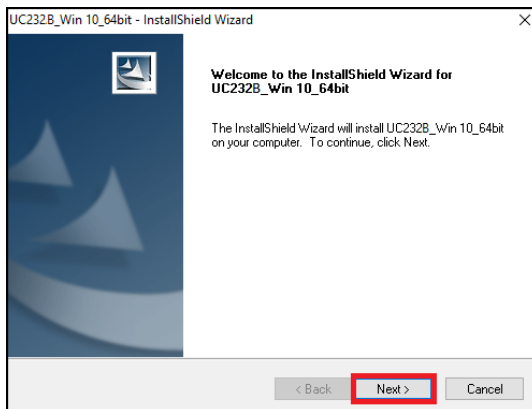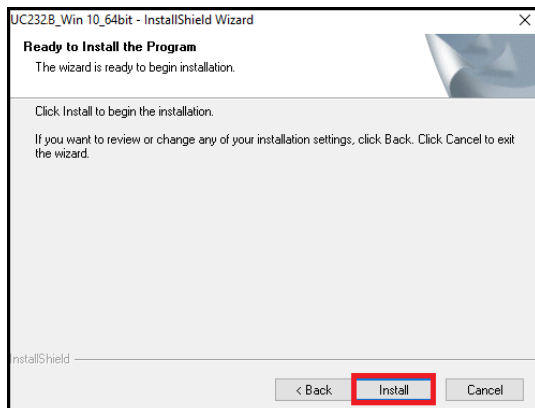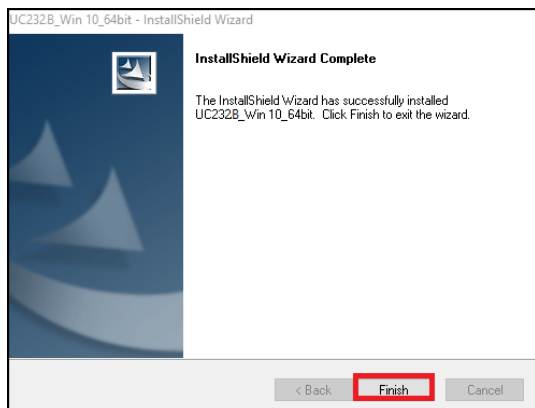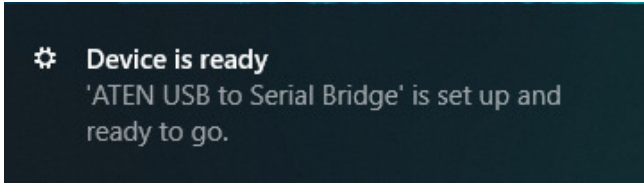**Note:** The setup is for UC232B in the picture below, the UC232BF is the same as the UC232B.

1. Please download the latest software installation package from the UC232B product page at www.aten.com/download (search for UC232B and go to the download tab).

2. Execute the file and follow the on-screen instructions to configure detailed software settings.

3. Open the downloaded folder and copy the Mac OS file to your hard disk.

4. Double-click on the file icon to extract the compressed file(s).

5. Copy the extracted file(s) to the *Hard Disk > System Folder > Extensions* folder.

   Note: If you are using a non-English language version, copy the files to the corresponding folder for your system.

Connecting the UC232B / UC232BF

Connect the UC232B / UC232BF to a USB port on your Mac.

Note: The UC232B / UC232BF will not function properly unless the software was previously installed.

Linux Installation

Installing the Driver(s)

To install the UC232B / UC232BF drivers, do the following:

Note: The setup is for UC232B in the picture below, the UC232BF is the same as the UC232B.

1. Please download the latest software installation package from the UC232B product page at www.aten.com/download (search for UC232B and go to the download tab).

2. Execute the file and follow the on-screen instructions to configure detailed software settings.

3. Open a command line.

4. Move to the subdirectory that corresponds to the version of your operating system. (For example, if your operating system is Red Hat 7.3, then move to the *Redhat73* subdirectory.)

5. Enter the following commands to copy the files in the subdirectory to a directory on your hard disk:

```
cp pl2303.c /directory_name
cp Makefile /directory_name/makefile
```

where *directory_name* is the name of the directory on your hard disk that you are copying the files to.

Note: Be sure to change the capital "M" in "Makefile" to a lowercase "m" when you copy the file to the new directory.

6. Move to the directory where you copied the files.

7. Enter the following command:

```
make inst
```

8. Connect the UC232B / UC232BF to a USB port on your computer.

Note: The UC232B / UC232BF will not function properly unless the drivers have been previously installed.

Uninstalling the Driver(s)

1. Open a command line.

2. Move to the directory where you installed the driver(s).

3. Enter the following command:
   - To uninstall the driver:

     ```
     make uninst
     ```
   - To uninstall all drivers (including the base driver):

     ```
     make uninst_all
     ```

   You have successfully uninstalled the driver(s).

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Appendix

Safety Instructions

General

- This product is for indoor use only.

- Read all of these instructions. Save them for future reference.

- Follow all warnings and instructions marked on the device.

- Do not place the device on any unstable surface (cart, stand, table, etc.). If the device falls, serious damage will result.

- Do not use the device near water.

- Do not place the device near, or over, radiators or heat registers.

- The device cabinet is provided with slots and openings to allow for adequate ventilation. To ensure reliable operation, and to protect against overheating, these openings must never be blocked or covered.

- The device should never be placed on a soft surface (bed, sofa, rug, etc.) as this will block its ventilation openings. Likewise, the device should not be placed in a built in enclosure unless adequate ventilation has been provided.

- Never spill liquid of any kind on the device.

- Unplug the device from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.

- The device should be operated from the type of power source indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.

- To prevent damage to your installation it is important that all devices are properly grounded.

- Do not allow anything to rest on the power cord or cables. Route the power cord and cables so that they cannot be stepped on or tripped over.

- Position system cables and power cables carefully; Be sure that nothing rests on any cables.

- Never push objects of any kind into or through cabinet slots. They may touch dangerous voltage points or short out parts resulting in a risk of fire or electrical shock.

- Do not attempt to service the device yourself. Refer all servicing to qualified service personnel.

- If the following conditions occur, unplug the device from the wall outlet and bring it to qualified service personnel for repair.
  - The power cord or plug has become damaged or frayed.
  - Liquid has been spilled into the device.
  - The device has been exposed to rain or water.
  - The device has been dropped, or the cabinet has been damaged.
  - The device exhibits a distinct change in performance, indicating a need for service.
  - The device does not operate normally when the operating instructions are followed.
- Only adjust those controls that are covered in the operating instructions. Improper adjustment of other controls may result in damage that will require extensive work by a qualified technician to repair.
- Avoid circuit overloads. Before connecting equipment to a circuit, know the power supply's limit and never exceed it. Always review the electrical specifications of a circuit to ensure that you are not creating a dangerous condition or that one doesn't already exist. Circuit overloads can cause a fire and destroy equipment.

Technical Support

International

- For online technical support – including troubleshooting, documentation, and software updates: http://support.aten.com

- For telephone support, see *Telephone Support*, page iv:

North America

Email Support		support@aten-usa.com
Online Technical Support	Troubleshooting Documentation Software Updates	http://www.aten-usa.com/support
Telephone Support		1-888-999-ATEN ext 4988 1-949-428-1111

When you contact us, please have the following information ready beforehand:

- Product model number, serial number, and date of purchase

- Your computer configuration, including operating system, revision level, expansion cards, and software

- Any error messages displayed at the time the error occurred

- The sequence of operations that led up to the error

- Any other information you feel may be of help

Specifications

Function		UC232B / UC232BF
Connectors	USB Port	1 x USB Type-A Male (White)
	Serial	1 x DB-9 Female (Silver)
Data Rate		Up to 921.6 kbps
Cable Length		1.2 m
LED		Power Status
Power Mode		Bus Powered
USB Specification		USB Compliant
Environmental	Operating Temperature	0 – 40°C
	Storage Temperature	-20 – 60°C
	Humidity	0 – 80% RH, Non-condensing
Physical Properties	Housing	Plastic
	Weight	0.06 kg (0.13 lb)
	Dimensions (L x W x H)	2.56 x 5.84 x 2.23 cm (1.01 x 2.30 x 0.88 in)

Rolled Ethernet Cable Pin-Outs

Note the reversed correlation of 1 to 8, 2 to 7, and so on.

ATEN UC232B / UC232BF Console / Aux Cable Mode

Console/Aux Port (DTE)			UC232B / UC232BF RJ-45 Port	
Signal Type 1	Signal Type 2	RJ-45 Pin	Straight Cable Pin	Signal
-	RTS	1	1	CTS
DTR	DTR	2	2	DSR
TxD	TxD	3	3	RxD
GND	GND	4	4	GND
GND	GND	5	5	GND
RxD	RxD	6	6	TxD
DSR	DSR	7	7	DTR
-	CTS	8	8	RTS

ATEN RS-232 Serial Cable Mode

3rd Party RJ-45 to RS-232 Adapter				UC232B / UC232BF RJ-45 Port	
Signal	DB-9 Out	Signal	RJ-45 Pin	Rolled Cable Pin	Signal
RTS	7	CTS	8	1	CTS
DTR	4	DSR	7	2	DSR
TxD	3	RxD	6	3	RxD
GND	5	GND	5	4	GND
GND	5	GND	4	5	GND
RxD	2	TxD	3	6	TxD
DSR	6	DTR	2	7	DTR
CTS	8	RTS	1	8	RTS

Thank you for purchasing this ATEN product! It is recommended that you register the product right away at our website: http://eservice.aten.com. This will give you access to useful add-on features, as follows:

◆ View details of all your registered ATEN products in one place
◆ Read about application tips and supporting information specific to your product
◆ Get fast service and response from our highly skilled engineers
◆ Receive the latest news and promotions from ATEN, and participate in customer surveys

ATEN warrants this product against flaws in the materials and workmanship during the warranty period which commence on the date of original purchase. The duration, terms, and conditions of the warranty period may vary from country to country. Please visit ATEN's website for more information or contact the ATEN office responsible for providing support in your country/ region. Contact details for all ATEN offices are listed in the following table.

Corporate Headquarters (Original Manufacturer) ATEN International Co., Ltd. Website: http://www.aten.com Address: 3F., No.125, Sec. 2, Datong Rd., Sijhih District., New Taipei City 221, Taiwan	**U.S.A Subsidiaries (Importer) ATEN Technology Inc.** Website: http://www.aten-usa.com Address: 19641 DaVinci Foothill Ranch, CA 92610, U.S.A **ATEN New Jersey Inc.** Address: 155 Pierce Street, Somerset, NJ 08873, U.S.A
Belgium Subsidiary (Importer) ATEN Infotech N.V. Website: http://www.aten.be Address: Mijnwerkerslaan 34 3550 Heusden-Zolder, Belgium	**U.K. Subsidiary (Importer) ATEN U.K. Limited** Website: http://www.aten.co.uk Address: 229 Berwick Avenue Slough, SL1 4QT, U.K.
Japan Subsidiary (Importer) ATEN Japan Co., Ltd. Website: http://www.atenjapan.jp Address: ATEN Bldg. 8-4, Minami-senjyu 3-chome, Arakawa-ku, Tokyo 116-0003 Japan	**Korea Subsidiary (Importer) ATEN Korea., Ltd.** Website: http://www.aten.co.kr Address: B-303, Gabeul Great Valley, 60-5, Gasan-dong, Geumcheon-gu, Seoul, Korea; 153-801
China Subsidiary (Importer) ATEN China Co., Ltd. Website: http://www.aten.com.cn Address: 18/F, Tower A, Horizon International Tower, No.6,Zhichun Road, Haidian District, Beijing, China 100088	**Taiwan Subsidiary (Importer) Atech Peripherals, Inc.** Website: http://www.aten.com.tw Address: 6F., No.133, Sec. 2, Datong Rd., Sijhih District., New Taipei City 221, Taiwan

ATEN Warranty Policy

The warranty policy may vary by product category and region of purchase. For details, please visit ATEN's official website, select your purchase counties/regions and then go to the Support Center, or contact your local ATEN sales representative for further assistance.