

**DVI KVM Extender
CE600 / CE602
User Manual**



FCC Information

This is an FCC Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

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.

RoHS

This product is RoHS compliant.

SJ/T 11364-2006

The following contains information that relates to China.

部件名称	有毒有害物质或元素					
	铅	汞	镉	六价铬	多溴联苯	多溴二苯醚
电器部件	●	○	○	○	○	○
机构部件	○	○	○	○	○	○

- : 表示该有毒有害物质在该部件所有均质材料中的含量均在SJ/T 11363-2006规定的限量要求之下。
- : 表示符合欧盟的豁免条款, 但该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T 11363-2006的限量要求。
- ×: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T 11363-2006的限量要求。



User Information

Online Registration

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

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

Telephone Support

For telephone support, call this number:

International	886-2-8692-6959
China	86-10-5255-0110
Japan	81-3-5615-5811
Korea	82-2-467-6789
North America	1-888-999-ATEN ext 4988
United Kingdom	44-8-4481-58923

User Notice

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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.

Package Contents

The CE600 / CE602 package consists of:

- ◆ 1 CE600L / CE602L DVI KVM Extender (Local Unit)
- ◆ 1 CE600R / CE602R DVI KVM Extender (Remote Unit)
- ◆ 1 1.8 m USB DVI-D Single Link KVM Cable Set (CE600)
- ◆ 1 1.8 m USB DVI-D Dual Link KVM Cable Set (CE602)
- ◆ 2 Power Adapters
- ◆ 1 Mounting Kit
- ◆ 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.

* Features may have been added to the CE600 / CE602 since this manual was printed. Please visit our website to download the most up-to-date version of the manual.

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About this Manual

This User Manual is provided to help you get the most from your system. 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 CE600 / CE602 system. Its purpose, features and benefits are presented, and its front and back panel components are described.

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

Chapter 3, Operation, explains the fundamental concepts involved in operating the CE600 / CE602

Chapter 4, The Firmware Upgrade Utility, explains how to use this utility to upgrade the CE600 / CE602's firmware with the latest available versions.

An Appendix, provides specifications and other technical information regarding the CE600 / CE602.

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.

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

Chapter 1

Introduction

Overview

The CE600 / CE602 is a DVI and USB based KVM Extender with RS-232 serial functionality. It allows access to a computer system from a remote console (USB keyboard, monitor, and mouse). Because it allows access to a computer system from a remote console, the CE600 / CE602 is perfect for use in any type of installation where you need to place the console where it is conveniently accessible, but you want the system equipment to reside in a safe location – away from the dust and dirt of the factory floor, or the harsh environmental influence of a construction site, for example. This allows users to deploy system equipment over large distances.

The CE600 / CE602 is useful for control and security purposes, where you can have the system unit in a secure area at the same time that you put the console in the most convenient location for user access. This is ideal for managing highly confidential data systems.

The CE600 uses one Cat 5e cable (DVI Single Link) to support up to 1920 x 1200 video resolution. The CE602 can support up to 2560 x 1600 (DVI Dual Link) resolution and requires a second Cat 5e cable to transfer HDCP, RS-232, microphone and dual link signals.

The CE600 / CE602 improves on previous designs by: 1) featuring Dual Link (for CE602); 2) the addition of an RS-232 port, on both the Local and Remote Units – the RS-232 port on the Local Unit allows you to connect to a PC, while the RS-232 port on the Remote Unit allows you to connect serial devices such as touchscreens and barcode scanners; 3) using inexpensive Cat 5e cable instead of bulkier, more expensive, standard DVI cables, for a much neater, more convenient, more reliable data transfer connection; 4) featuring a custom ASIC to ensure the utmost in reliability and compatibility.

Furthermore, the CE600 / CE602 features an EQ switch on the Remote Unit to adjust the picture on the remote console.

Setup is as easy as can be – simply connect the computer system box; run the Cat 5e cable up to 60 meters to the Remote Unit; and plug the remote console into the Remote Unit.

Features

- ◆ Local and Remote Units connect at distances up to 60 m using Cat 5e cable
- ◆ Allows access to a computer or KVM installation from a remote console (up to 60m)
- ◆ Control your system from the remote console (USB keyboard, USB mouse and DVI interface monitor)
- ◆ Supports DVI-D interface and allows transmission of DVI dual-link signals (CE602)
- ◆ Features ATEN technology that allows A/V transmission over one Cat 5e cable
- ◆ Enable HDCP, RS-232, microphone and dual link signals by adding a second Cat 5e cable (CE602 only)

Note: The length of the two Cat 5e cables must be the same.

- ◆ Manual compensation control to adjust signal strength in order to compensate for distance
- ◆ RS-232 serial ports – connect to a serial terminal, or serial devices such as touchscreens and barcode scanners (Baud Rate 115200 bps)
- ◆ Audio Enabled – supports stereo speakers and microphone
- ◆ Built-in 8KV/15KV ESD protection (Contact voltage 8KV; Air voltage 15KV)
- ◆ Supports Wide Screen formats
- ◆ Superior video quality of up to 2560 x 1600 @ 60 Hz (DVI Dual Link) at 40 m (CE602 only); 1920 x 1200 @ 60 Hz at 30 m; 1024 x 768 @ 60 Hz at 60 m – get an excellent, crisp image on your screen over long distance transmissions
- ◆ Hot pluggable
- ◆ Rack mountable
- ◆ Easy to install – no software required – connecting cables to the devices is all it takes
- ◆ Firmware upgrade

Requirements

Consoles

- ◆ A DVI single link or dual link monitor capable of the highest resolution you will be using on any monitor in the installation.
- ◆ A USB keyboard
- ◆ A USB mouse
- ◆ Stereo microphone and stereo speakers (optional)

Computers

The following equipment must be installed on each computer that is to be connected to the system:

- ◆ A DVI port
- ◆ 2 USB ports for the mouse and keyboard
- ◆ Microphone and speaker ports (optional)

Cables

- ◆ For optimal signal integrity, and to simplify the layout, we strongly recommend that you use the high quality custom KVM Cable that is provided with this package.
- ◆ Cat 5e cable is required to connect the Local and Remote CE600 / CE602 Units. Cable of a lower standard will result in degrading of the video signal. We strongly recommend using Cat 5e cables.
- ◆ For better quality over longer distances, we suggest using 2L-2801 (350 MHz) Low Skew Cable

Maximum Cable Distances

Connection	Distance
Computer to Local Unit (CE600L / CE602L)	5 m
Local Unit (CE600L / CE602L) to Remote Unit (CE600R / CE602R)	60 m
Remote Unit (CE600R / CE602R) to monitor	5 m

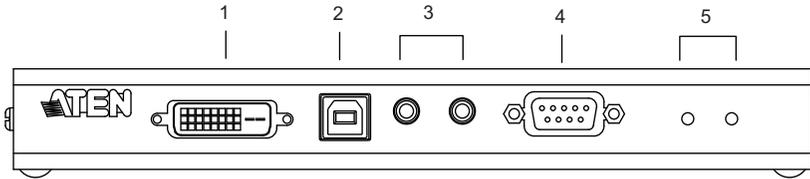
Operating Systems

Supported operating systems are shown in the table, below:

OS		Version
Windows		2000, 2003, 2008, XP, Vista, 7
Linux	RedHat	9.0 and higher
	SuSE	10 / 11.1 and higher
	Debian	3.1 / 4.0
	Ubuntu	7.04 / 7.10
UNIX	FreeBSD	5.5 / 6.1 / 6.2
Novell	Netware	6.0 and higher

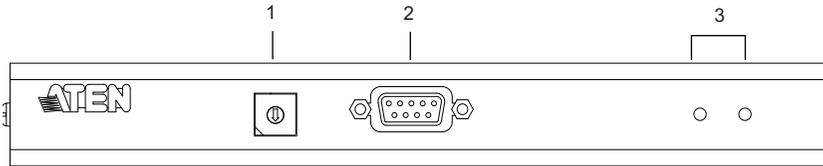
Components

CE600L / CE602L (Local Unit) Front View



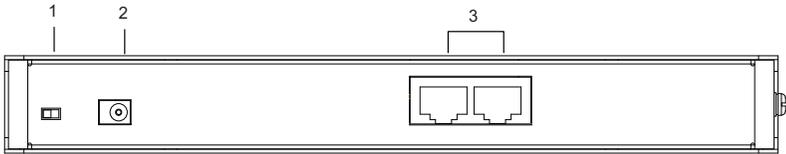
No.	Component	Description
1	DVI port	Connect a DVI cable from a computer to this port.
2	USB Type B Input	The USB cable from your computer or USB hub plugs in here.
3	Audio Ports	These mini stereo ports are for the speakers (green) and microphone (pink).
4	RS-232 Serial Port	Connect the RS-232 cable from your computer into this port.
5	LEDs	The CE600L / CE602L has two LEDs to indicate the operating status. See page 17 for full details.

CE600R / CE602R (Remote Unit) Front View

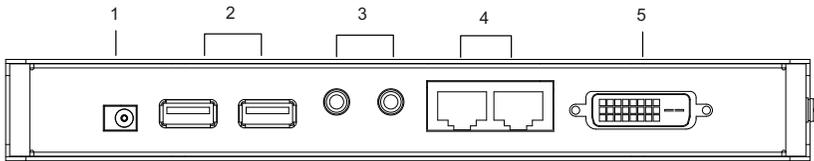


No.	Component	Description
1	EQ Switch	Use this to adjust the video quality of the remote console.
2	RS-232 Serial Port	RS-232 serial devices – such as touchscreens or barcode scanners – plug into this port.
3	LEDs	The CE602R has two LEDs to indicate operating status. See page 18 for full details.

CE600L / CE602L (Local Unit) Rear View



No.	Component	Description
1	F/W Upgrade Switch	Use this switch to turn on the firmware upgrade mode. Reset the power to proceed with the firmware upgrade. Switch it off and reset the power to return to normal mode.
2	Power Jack	The cable from the DC Power adapter connects here.
3	Sub / Main	The Cat 5e cable that connects the Remote and Local Units plugs in here. Dual Link DVI (CE602 only): uses 2 cables Single Link DVI : uses 1 cable (Main-to-Main) (Note: If HDCP, RS-232, microphone and dual link signals are needed, the Sub cable must be connected.)

CE600R / CE602R (Remote Unit) Rear View

No.	Component	Description
1	Power Jack	The cable from the USB Power adapter connects here.
2	USB	The USB cable for your keyboard / mouse plugs in here.
3	Audio Ports	These mini stereo ports are for the speakers (green) and microphone (pink).
4	Sub / Main	The Cat 5e cable that connects the Remote and Local Units plugs in here. Dual Link DVI (CE602 only): uses 2 cables Single Link DVI: uses 1 cable (Main-to-Main) (Note: If HDCP, RS-232, microphone and dual link signals are needed, the Sub cable must be connected.)
5	DVI port	This DVI serial port is for connecting to a compatible monitor.

Chapter 2

Hardware Setup

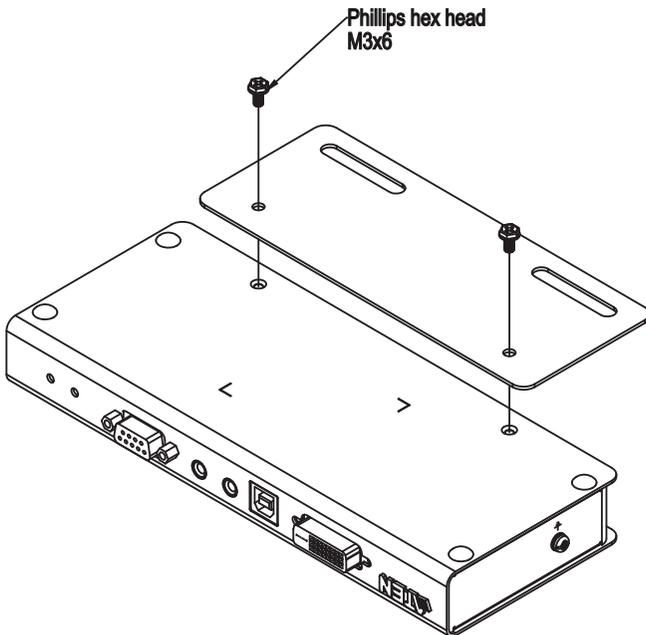


1. Important safety information regarding the placement of this device is provided on page 25. Please review it before proceeding.
2. Make sure that the power to all devices connected to the installation are turned off. You must unplug the power cords of any computers that have the Keyboard Power On function.

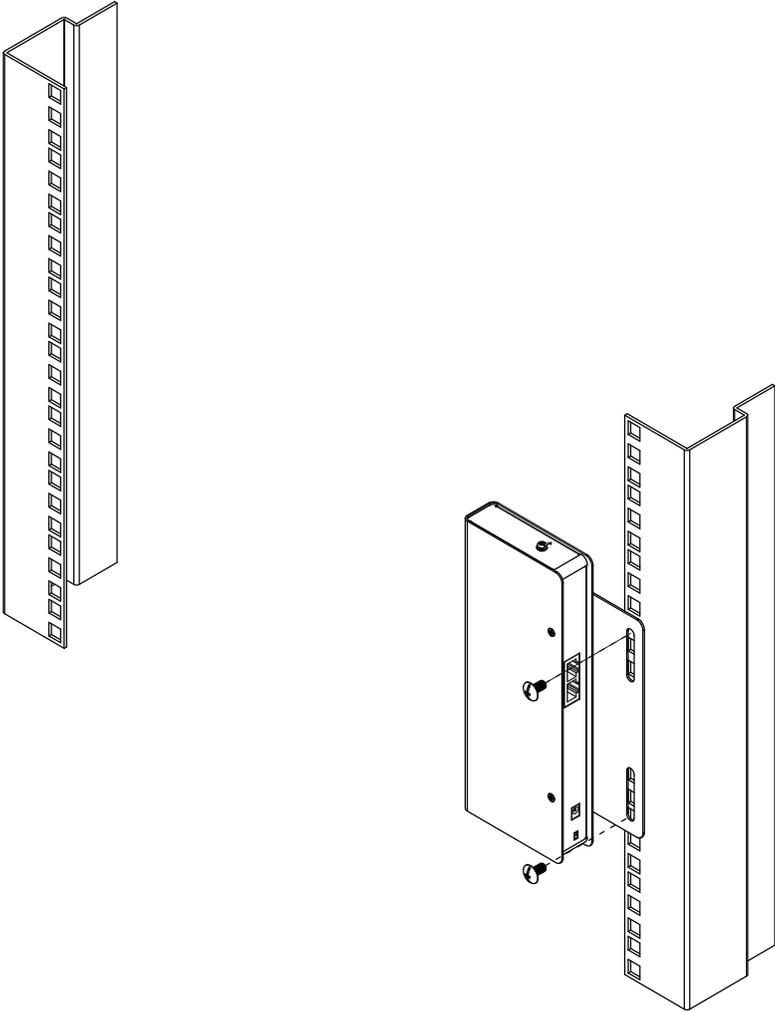
Rack Mounting

For convenience and flexibility, the CE600 / CE602 can be mounted on system racks. To rack mount a unit do the following:

1. Using the screws provided in the Rack Mount Kit, screw the mounting bracket into the top or bottom of the unit as show in the diagram below:



2. Screw the bracket into any convenient location on the rack.



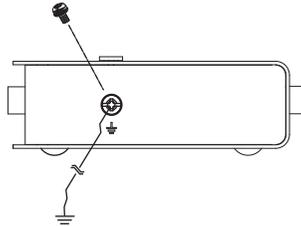
Note: These screws are not provided. We recommend that you use M5 x 12 Phillips Type I cross, recessed type screws.

Installation

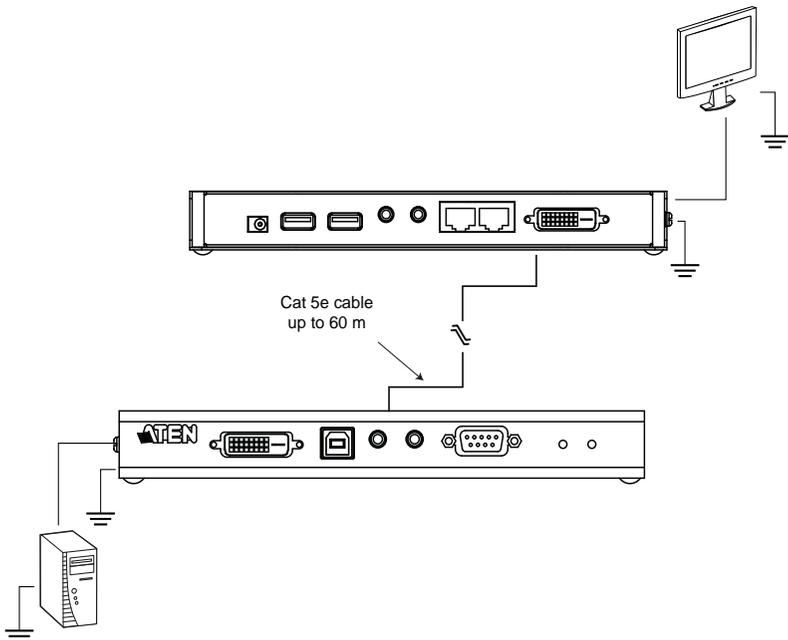
Grounding

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

1. Use a grounding wire to ground both units by connecting one end of the wire to the grounding terminal, and the other end of the wire to a suitable grounded object.

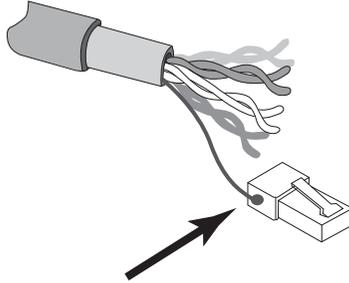


2. Make sure that the computer that the Local Unit connects to and the monitor that the Remote Unit connects to are properly grounded.

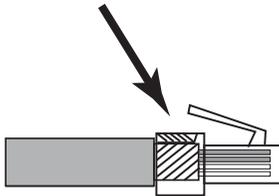


3. For increased grounding protection, use STP (shielded twisted pair) cable to connect the Local and Remote Units. There are two methods that can be used:

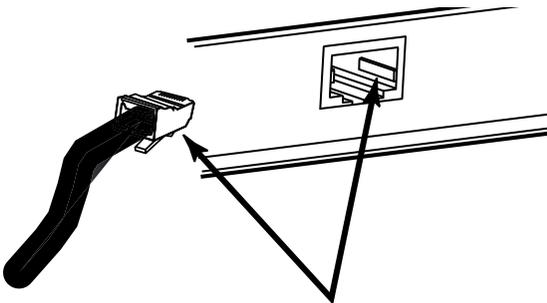
a) In addition to the eight paired wires, STP cable also contains a grounding wire. Solder this wire to the RJ-45 connector as shown in the diagram below:



b) The second method is to use the STP cable shielding for grounding. In this case, make sure that the shielding makes tight contact with the top inside of the RJ-45 connector as shown in the diagram below:



In either case, make sure that the sides of the RJ-45 connector make tight contact with the grounding contacts on the sides of the RJ-45 socket as shown in the diagram below:



Setting Up

Setting up the CE600 / CE602 DVI KVM Extender system is simply a matter of plugging in the cables. Make sure that all the equipment to be connected up is powered Off. Refer to the installation diagram on the following page and do the following:

1. Plug the appropriate connectors on the DVI KVM cable supplied with this unit into their ports on the front of the Local Unit (CE600L / CE602L).
2. Plug the connectors on the other end of the DVI KVM cable into the appropriate ports on the local computer. Each connector is marked with an appropriate icon to indicate which it is.

Note: If you are combining the CE600 / CE602 with a KVM switch, the other end of the DVI KVM cable plugs into the appropriate ports on the KVM switch.

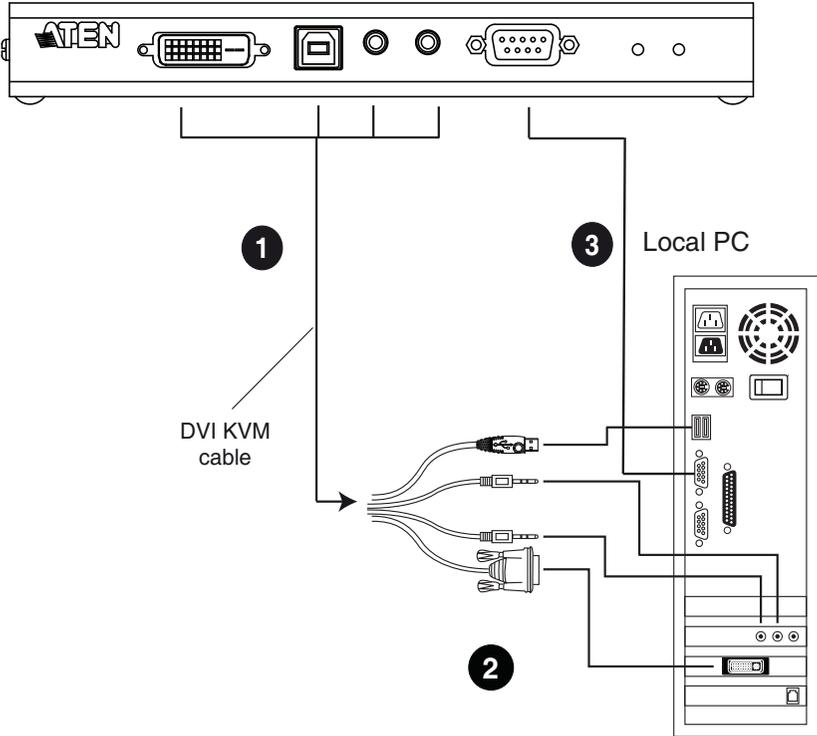
3. For control of serial devices, connect the RS-232 serial port on the local unit to a serial port on the local computer.
4. Plug either end of the Cat 5e cable into the CE600L / CE602L's Sub / Main ports. Plug the other end of the Cat 5e cable into the Sub / Main ports of the Remote Unit (CE600R / CE602R).

Note: For DVI Dual Link or HDCP-supported installations (CE602 only), both Main and Sub ports can be used. A second Cat 5e cable is needed for HDCP, RS-232, microphone and dual link signals. The length of the two Cat 5e cables must be the same. For Single Link DVI installations, only one cable (Main-to-Main) is required.

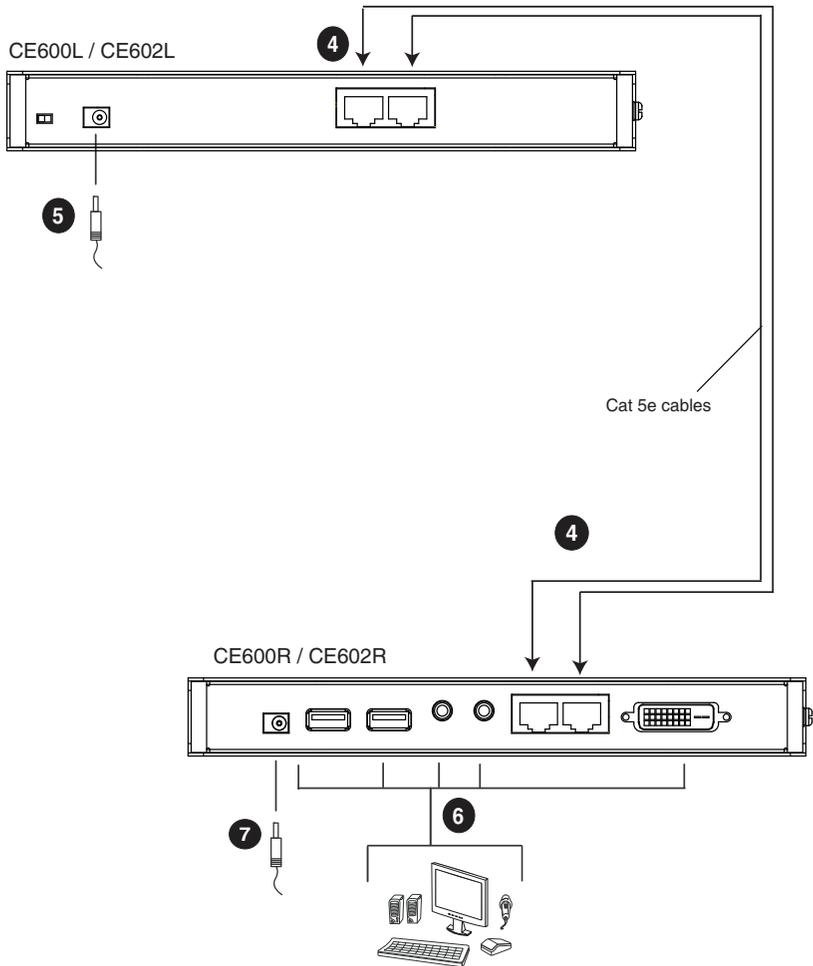
5. Plug one of the power adapters (supplied with this package) into an AC source; plug the adapter's power cable into the CE600L / CE602L's Power Jack.
6. Plug the cables from the remote console devices (mouse, keyboard, monitor, speakers, microphone), into their ports on the Console side of the CE600R / CE602R.
7. Plug the second power adapter (supplied with this package) into an AC source; plug the adapter's power cable into the CE600R / CE602R's Power Jack.

Installation Diagrams

Front View



Rear View



Note: 1. The serial port on the CE600L / CE602L connects to the computer; the serial port on the CE600R / CE602R (not shown) connects to a serial device (optional).

2. The illustration above shows a Dual Link DVI installation where both Cat 5e cables are used (CE602 only).

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Chapter 3

Operation

Picture Adjustment

Use the EQ switch to adjust the equalization strength and improve a blinking image.

The values range from 0-7 where:

- ◆ 7: strongest equalization
- ◆ 0: weakest equalization

LED Display

The CE600 / CE602 Local and Remote Units have front panel LEDs to indicate their operating status, as shown in the tables, following:

CE600L / CE602L (Local Units)

LED	Indication
Link (Green)	<ul style="list-style-type: none">◆ Lights steadily to indicate that the connection to the Remote unit is ok.◆ Flashes when there is a problem with the connection to the Remote unit.
Power (Green)	<ul style="list-style-type: none">◆ Lights steadily to indicate that the Local unit is receiving power.

CE600R / CE602R (Remote Unit)

LED	Indication
Link (Green)	<ul style="list-style-type: none">◆ Lights steadily to indicate that the connection to the Local Unit is ok.◆ Flashes when there is a problem with the connection to the Local Unit.
Power (Green)	<ul style="list-style-type: none">◆ Lights steadily to indicate that the Remote unit is receiving power.

Chapter 4

The Firmware Upgrade Utility

The Windows-based Firmware Upgrade Utility (using the file name CE600_602_ATEN_v1.x.xxx.exe) provides a smooth, automated process for upgrading the KVM switch's firmware.

The Utility comes as part of a Firmware Upgrade Package that is specific for each device. New firmware upgrade packages are posted on our web site as new firmware revisions become available. Check the web site regularly to find the latest packages and information relating to them:

<http://www.aten.com>

Before You Begin

To prepare for the Firmware Upgrade, do the following:

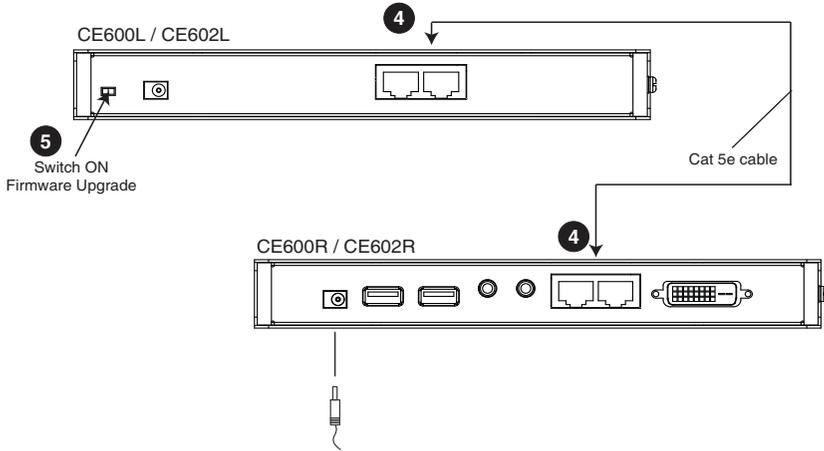
1. Using a computer connected to the Local Unit, go to our Internet support site and choose the model name of your device (CE600 / CE602) to get a list of available Firmware Upgrade Packages.
2. Choose the Firmware Upgrade Package you want to install (usually the most recent), and download it to your computer.
3. Use the a Serial RS-232 cable to connect a COM port on your computer to the CE600L / CE602L's RS-232 port.

Note: The Serial RS-232 cable is not provided in the package.

4. Make sure both units are connected by the Cat 5e cable and Link, then unplug the Local unit's power adapter.

(Continues on next page.)

- In the Local Unit's rear panel, turn the FW Upgrade switch **On**. This enables both the Local and Remote Units to operate in Firmware Upgrade Mode when the Local Unit is powered on again.



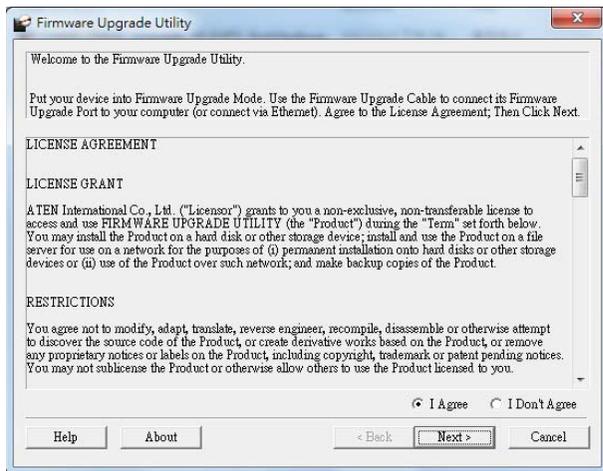
- Plug in the Local Unit's power adapter to power it on.

Starting the Upgrade

To upgrade your firmware:

1. Run the downloaded Firmware Upgrade Package file – either by double clicking the file icon, or by opening a command line and entering the full path to it.

The Firmware Upgrade Utility Welcome screen appears:

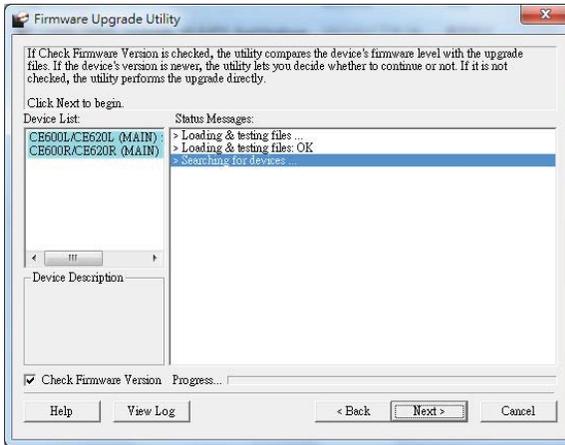


Note: The screens shown in this section are for reference only. The wording and layout of the actual screens put up by the Firmware Upgrade Utility may vary slightly from these examples.

2. Read and agree to the **License Agreement** (enable the **I Agree** radio button).

(Continues on next page.)

3. Click **Next** to continue. The Firmware Upgrade Utility main screen appears:



The Utility inspects your installation. The Local and Remote Units are listed in the **Device List** panel and automatically selected for upgrade.

4. Click **Next** to perform the upgrade.

If you enabled **Check Firmware Version**, the Utility compares the device's firmware level with that of the upgrade files. If it finds that the device's version is higher than the upgrade version, it brings up a dialog box informing you of the situation and gives you the option to **Continue** or **Cancel**.

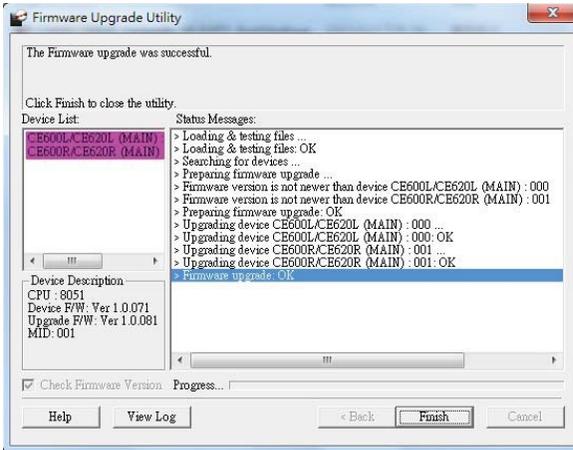
If you did not enable **Check Firmware Version**, the Utility installs the upgrade files without checking whether or not they are a higher level.

As the upgrade proceeds, status messages appear in the **Status Messages** panel, and the progress toward completion is shown on the **Progress...** bar. The highlight / color of the device name in the **Device List** panel also changes as follows:

- ◆ Green - the device is being prepared for upgrade
- ◆ Blue - firmware upgrade is in progress
- ◆ Magenta - firmware upgrade is successful

Upgrade Succeeded

After the upgrade has completed, a screen appears to inform you that the procedure was successful:



1. Click **Finish** to close the Firmware Upgrade Utility.
2. After successfully upgrading the firmware, unplug the Local unit's power adapter.
3. Turn the FW Upgrade switch **Off** to exit the Firmware Upgrade Mode for both Local and Remote Units.
4. Plug in the Local unit's power adapter to turn it on.

Upgrade Failed

If the *Upgrade Succeeded* screen does not appear, then the upgrade failed to complete successfully. You should repeat the upgrade procedure from the beginning.

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Appendix

Safety Instructions

General

- ◆ 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.
- ◆ The device is designed for IT power distribution systems with 230V phase-to-phase voltage.
- ◆ To prevent damage to your installation, it is important that all devices are properly grounded.
- ◆ The device is equipped with a 3-wire grounding type plug. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not attempt to defeat the purpose of the grounding-type plug. Always follow your local/national wiring codes.
- ◆ 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.

- ◆ If an extension cord is used with this device make sure that the total of the ampere ratings of all products used on this cord does not exceed the extension cord ampere rating. Make sure that the total of all products plugged into the wall outlet does not exceed 15 amperes.
- ◆ To help protect your system from sudden, transient increases and decreases in electrical power, use a surge suppressor, line conditioner, or un-interruptible power supply (UPS).
- ◆ 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.

Rack Mounting

- ◆ Before working on the rack, make sure that the stabilizers are secured to the rack, extended to the floor, and that the full weight of the rack rests on the floor. Install front and side stabilizers on a single rack or front stabilizers for joined multiple racks before working on the rack.
- ◆ Always load the rack from the bottom up, and load the heaviest item in the rack first.
- ◆ Make sure that the rack is level and stable before extending a device from the rack.
- ◆ Use caution when pressing the device rail release latches and sliding a device into or out of a rack; the slide rails can pinch your fingers.
- ◆ After a device is inserted into the rack, carefully extend the rail into a locking position, and then slide the device into the rack.
- ◆ Do not overload the AC supply branch circuit that provides power to the rack. The total rack load should not exceed 80 percent of the branch circuit rating.
- ◆ Make sure that all equipment used on the rack – including power strips and other electrical connectors – is properly grounded.
- ◆ Ensure that proper airflow is provided to devices in the rack.
- ◆ Ensure that the operating ambient temperature of the rack environment does not exceed the maximum ambient temperature specified for the equipment by the manufacturer.
- ◆ Do not step on or stand on any device when servicing other devices in a rack.

Technical Support

International

- ◆ For online technical support – including troubleshooting, documentation, and software updates: **<http://support.aten.com>**
- ◆ For telephone support, *Telephone Support*, page iii

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

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		CE600L / CE602L	CE600R / CE602R	
Connectors	Console Ports	Keyboard	N/A	1 x USB Type A Female (White)
		Video	N/A	1 x DVI-D Female (White)
		Mouse	N/A	1 x USB Type A Female (White)
		Speakers	N/A	1 x Mini Stereo Jack Female (Green)
		Mic.	N/A	1 x Mini Stereo Jack Female (Pink)
	KVM Ports	Video	1 x DVI-D Female (White)	N/A
		Speakers	1 x Mini Stereo Jack Female (Green)	N/A
		Mic.	1 x Mini Stereo Jack Female (Pink)	N/A
		USB	1 x USB Type B Female (White)	N/A
	RS-232		1 x DB-9 Female (Black)	1 x DB-9 Male (Black)
Power		1 x DC Jack (Black)		
Sub / Main		2 x RJ-45 Female (Black)		
LEDs	LINK	1 (Green)	1 (Green)	
	POWER	1 (Green)	1 (Green)	
Switches	EQ Switch	N/A	1 x 8-position switch	
	F/W Upgrade	1 x Slide Switch	N/A	
Emulation	Keyboard / Mouse	USB		
Video		2560 x 1600 @ 60Hz (40 m) (CE602 only); 1920 x 1200 @ 60Hz (30 m); 1024 x 768 @ 60Hz (30 m)		
Power Consumption		CE600L: DC5.3V, 2.65W	CE600R: D5.3V, 4.24W	
		CE602L: DC5.3V, 3.18W	CE602R: DC5.3V, 5.04W	
Environment	Operating Temp.	0–50°C		
	Storage Temp	-20–60°C		
	Humidity	0–80% RH, Non-condensing		
Physical Properties	Housing	Metal		
	Weight	0.48 kg	0.48 kg	
	Dimensions (L x W x H)	20.20 x 8.54 x 2.50 cm	20.20 x 8.70 x 2.50 cm	

Troubleshooting

Operation problems can be due to a variety of causes. The first step in solving them is to make sure that all cables are securely attached and seated completely in their sockets.

Problem	Action
No video	Make sure that all cables are securely plugged into their sockets.
Poor quality video	The video quality can be improved by adjusting the EQ switch on the CE600R / CE602R to increase or reduce the video signal compensation.
	The video quality can be improved by reducing the refresh rate.

Limited Warranty

IN NO EVENT SHALL THE DIRECT VENDOR'S LIABILITY EXCEED THE PRICE PAID FOR THE PRODUCT FROM DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THE PRODUCT, DISK, OR ITS DOCUMENTATION.

The direct vendor makes no warranty or representation, expressed, implied, or statutory with respect to the contents or use of this documentation, and especially disclaims its quality, performance, merchantability, or fitness for any particular purpose.

The direct vendor also reserves the right to revise or update the device or documentation without obligation to notify any individual or entity of such revisions, or update. For further inquiries, please contact your direct vendor.