



**PS/2 KVM Extender
CE350 / CE370
User Manual**



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EMC Information

FEDERAL COMMUNICATIONS COMMISSION INTERFERENCE

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.

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.

CE Warning: This is a 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.

KCC Statement

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RoHS

This product is RoHS compliant.



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 one of the numbers below:

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.

Package Contents

The CE350 / CE370 package consists of:

- ◆ 1 CE350L or CE370L PS/2 KVM Extender (Local Unit)
- ◆ 1 CE350R or CE370RQ PS/2 KVM Extender (Remote Unit)
- ◆ 1 Custom PS/2 KVM Cable Set (1.8 m)
- ◆ 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 CE350 / CE370 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 CE350 / CE370 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 CE350 / CE370.

An Appendix, provides specifications and other technical information regarding the CE350 / CE370.

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 CE350 / CE370 is a PS/2 based KVM Extender with automatic signal compensation and RS-232 serial functionality allow access to a computer system from a remote PS/2 console (PS/2 keyboard, monitor, and PS/2 mouse). Because it allows access to a computer system from a remote console, the CE350 / CE370 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.

To ensure the highest quality video, the CE350 features adjustable gain control, while the CE370's automatic delay line synchronizing function (ATEN patent) corrects RGB color phase and timing errors that occur over long distance transmissions. This also enables you to manually tune the R/G/B signal settings, store the settings and retrieve them later using the memory button.

The CE350 / CE370 is also 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 CE350 / CE370 improves on previous designs by: 1) featuring Automatic Signal Control (ASC); 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 serial terminal for configuration, while the RS-232 port on the Remote Unit allows you to connect serial devices such as touchscreens and barcode scanners; 3) the addition of a dedicated KVM port section on the Local Unit so you can simply and easily include a KVM switch in your installation; 4) using inexpensive Cat 5e cable instead of bulkier, more expensive, standard cables, for a much neater, more convenient, more reliable data transfer connection; 5) its ability to sense the distance to the system and automatically adjust the gain accordingly; and 6) featuring a custom ASIC to ensure the utmost in reliability and compatibility.

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Further CE350 / CE370 key features are built-in 8KV/15KV ESD protection and 2KV surge protection, and color adjust picture compensation pushbuttons on the Remote Unit to adjust the picture on the remote console. Remote video is adjusted automatically and the settings are saved.

Setup is as easy as can be – simply connect the computer system box and local console to the Local Unit (CE350L / CE370L); run the Cat 5e cable up to 300 meters to the Remote Unit (CE350R / CE370RQ); and plug the remote console into the Remote Unit.

Features

- ◆ Local and Remote Units connect at distances up to 300 m using Cat 5e cable
- ◆ Deskew Function (CE370 only) – automatically synchronizes the time delay of RGB signals to compensate for distance
- ◆ On Screen Display (CE370 only) – conveniently adjust video quality with the intuitive OSD menu system
- ◆ Adjustable gain control – automatically and manually adjust signal strength to compensate for distance
- ◆ Dual console operation – control your system from both the local and remote keyboard, monitor, and mouse consoles
- ◆ Built-in ASIC for greater reliability and compatibility
- ◆ Auto Signal Compensation (ASC) and storage of settings
- ◆ 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
- ◆ Pushbutton operating mode selection (Local Unit only) – select between Local and Auto operating modes, with the press of a single button
- ◆ Built-in 8KV/15KV ESD protection (Contact voltage 8KV; Air voltage 15KV) and 2KV surge protection
- ◆ High resolution video – up to 1920 x 1200@60Hz (150 m); 1280 x 1024@60Hz (300 m) (CE370)
- ◆ Superior Audio – no loss in audio quality at 300 m
- ◆ Supports Wide Screen formats
- ◆ Supports VGA, SVGA, SXGA (1280 x 1024), UXGA (1600 x 1200), WUXGA (1920 x 1200) and multisync monitors; local monitor supports DDC; DDC2; DDC2B
- ◆ Hot pluggable
- ◆ Rack mountable
- ◆ Easy to install – no software required – connecting cables to the devices is all it takes

Requirements

Consoles

- ◆ A VGA, SVGA, SXGA, UXGA, WUXGA, or multisync monitor capable of the highest resolution you will be using on any computer in the installation.

Note: If you connect a DDC type monitor to the Local Unit, the monitor that connects to the Remote Unit must be able to support the highest video resolution that the DDC monitor can provide

- ◆ A PS/2 keyboard
- ◆ A PS/2 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 VGA, SVGA, SXGA, UXGA, WUXGA, or multisync card
- ◆ A 6-pin Mini-DIN (PS/2) mouse port
- ◆ A 6-pin Mini-DIN (PS/2) keyboard port
- ◆ 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 CE350 / CE370 Units. Cable of a lower standard will result in degrading of the video signal. We strongly recommend Cat 5e cable.

Maximum Cable Distances

Connection	Distance
Computer to Local Unit (CE350L / CE370L)	10 m
Local Unit to Remote Unit (CE350R)	150 m
Local Unit to Remote Unit (CE370RQ)	300 m
Remote Unit (CE350R / CE370RQ) to monitor	20 m

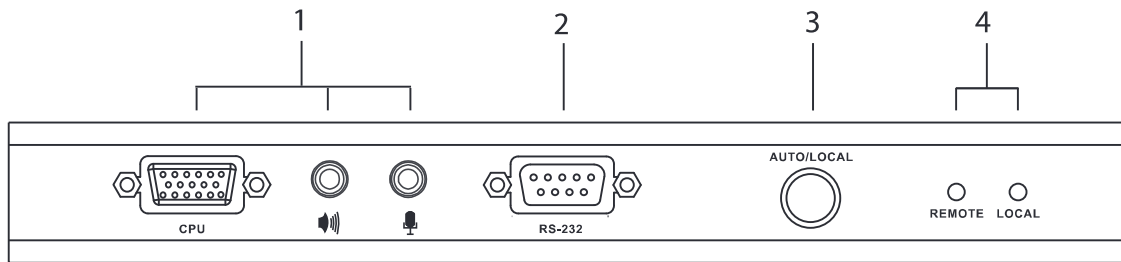
Operating Systems

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

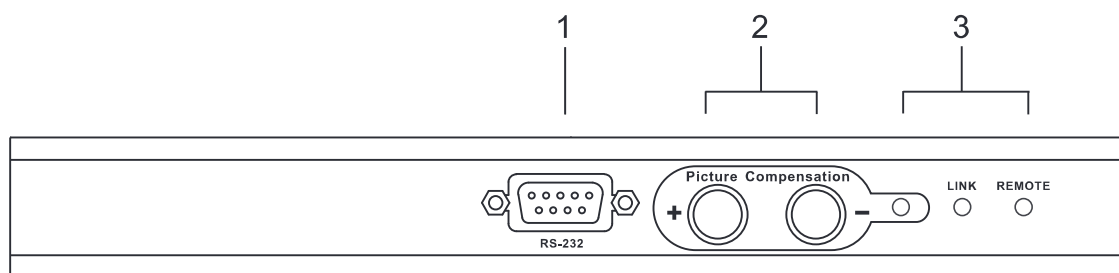
Components

CE350L / CE370L (Local Units) Front View



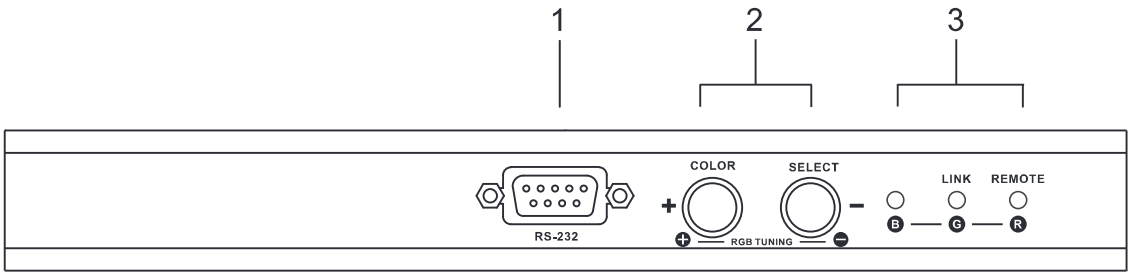
No.	Component	Description
1	KVM Port Section	If you are combining the CE350 / CE370 with a KVM switch, the PS/2 KVM cable that links to the respective ports on the Console section of the switch plugs into these ports.
2	RS-232 Serial Port	This RS-232 serial port is for connecting to a serial terminal for configuration.
3	Operating Mode Pushbutton	This pushbutton toggles between the Operating Modes available from the Local Console: ◆ Local – only the Local Console can control the system(s). ◆ Auto – both the Local and Remote Consoles can control the system. Note: The default operating mode is <i>Auto</i>. See <i>Operating Modes</i>, page 19, for full details.
4	LEDs	The CE350L / CE370L has two LEDs to indicate the operating status of the Local (CE350L / CE370L) and Remote (CE350R / CE370RQ) Units. See page 23 for full details.

CE350R (Remote Unit) Front View



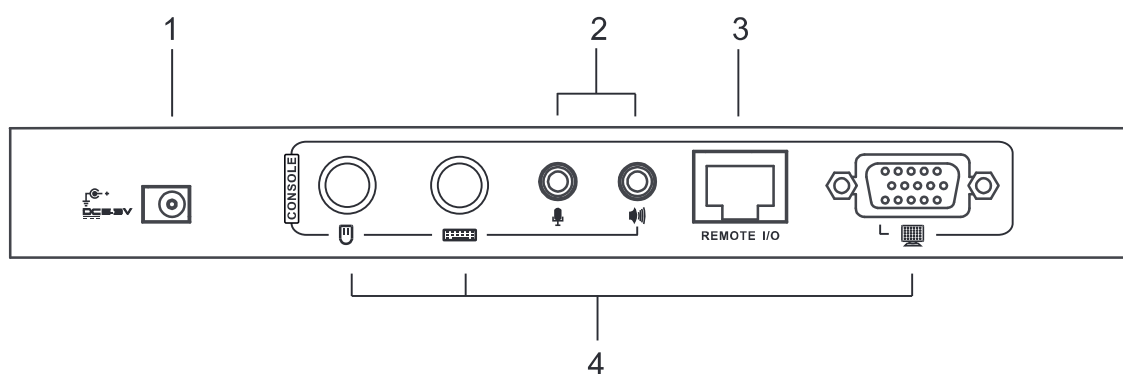
No.	Component	Description
1	RS-232 Serial Port	RS-232 serial devices – such as touchscreens or barcode scanners – plug into this port.
2	Picture Compensation Pushbuttons	These pushbuttons adjust the video quality of the remote console. See <i>Picture Compensation and Deskewing</i> , page 21 for details.
3	LEDs	The CE350R has three LEDs to indicate the operating status. See page 24.

CE370RQ (Remote Unit) Front View

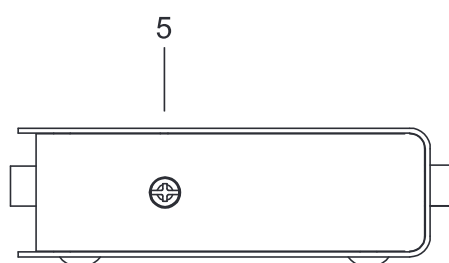


No.	Component	Description
1	RS-232 Serial Port	RS-232 serial devices – such as touchscreens or barcode scanners – plug into this port.
2	Deskew and Picture Compensation Pushbuttons	These pushbuttons adjust the video quality of the remote console. See <i>Picture Compensation and Deskewing</i> , page 21 for details.
3	LEDs	The CE370RQ has three LEDs to indicate operating status/RGB. See page 25.

Rear View



Side View



No.	Component	Description
1	Power Jack	The cable from the DC Power adapter connects here.
2	Audio Ports	These mini stereo ports are for the speakers (green) and microphone (pink).
3	Remote I/O	The Cat 5e cable that connects the Remote and Local Units plugs in here.
4	Console Ports	The Local and Remote console's keyboard, monitor, and mouse plug into these ports.
5	Grounding Terminal	The grounding wire (used to ground the unit) attaches here. See <i>Grounding</i> , page 13, for further details.

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Chapter 2

Hardware Setup

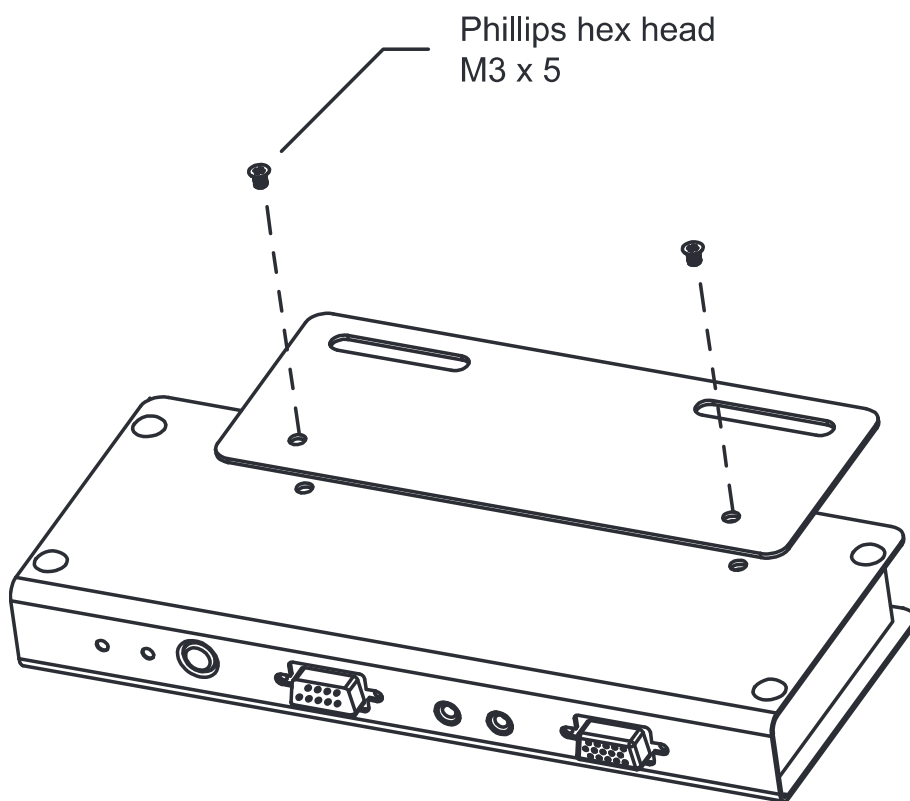


1. Important safety information regarding the placement of this device is provided on page 27. Please review it before proceeding.
2. Make sure that the power to all devices connected to the installation are turned off. You must unplug the power cords of any computers that have the Keyboard Power On function.

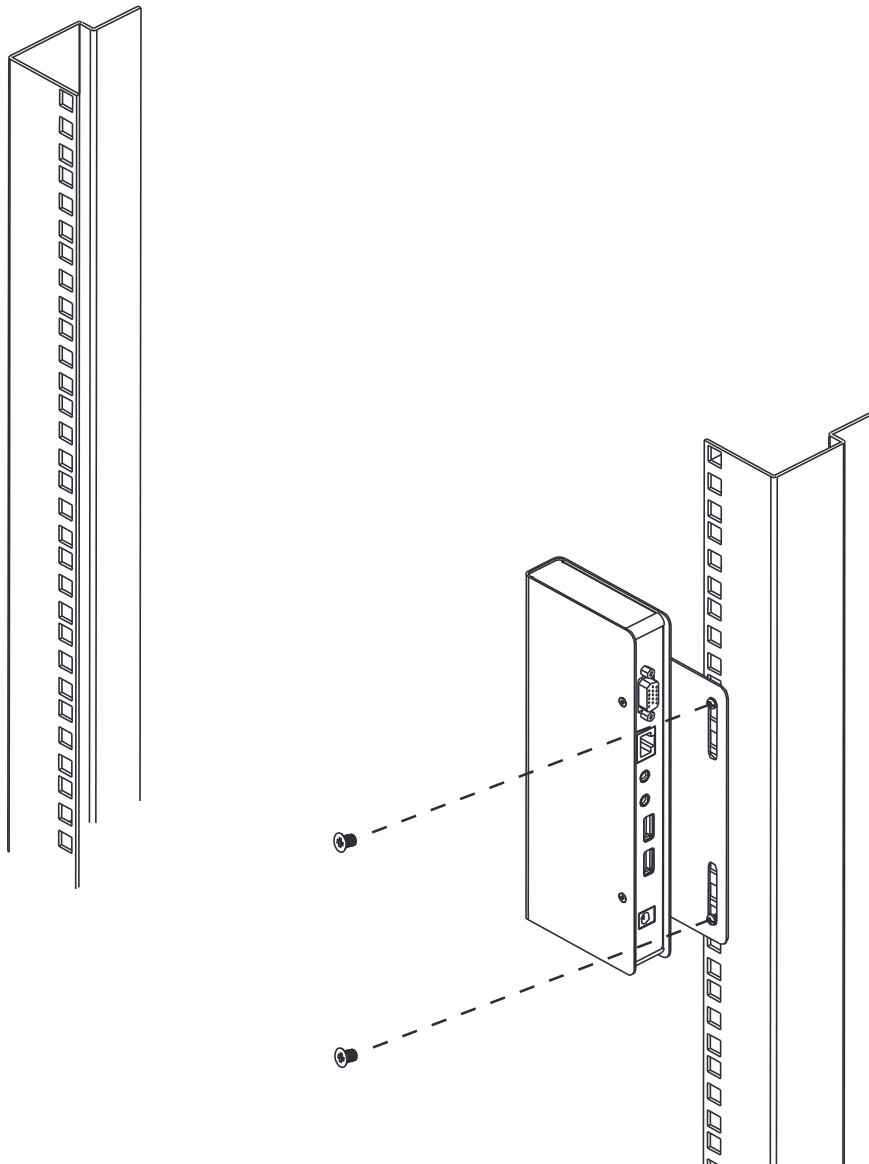
Rack Mounting

For convenience and flexibility, the CE350 / CE370 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.



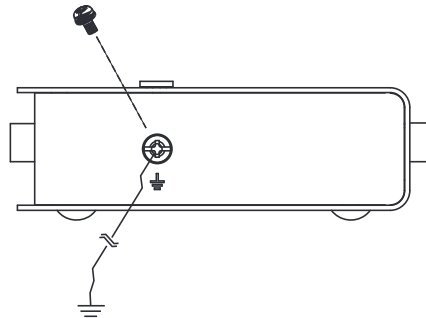
Note: These screws are not provided. We recommend that you use M5 x 12 Phillips Type I cross, recessed type screws.

Installation

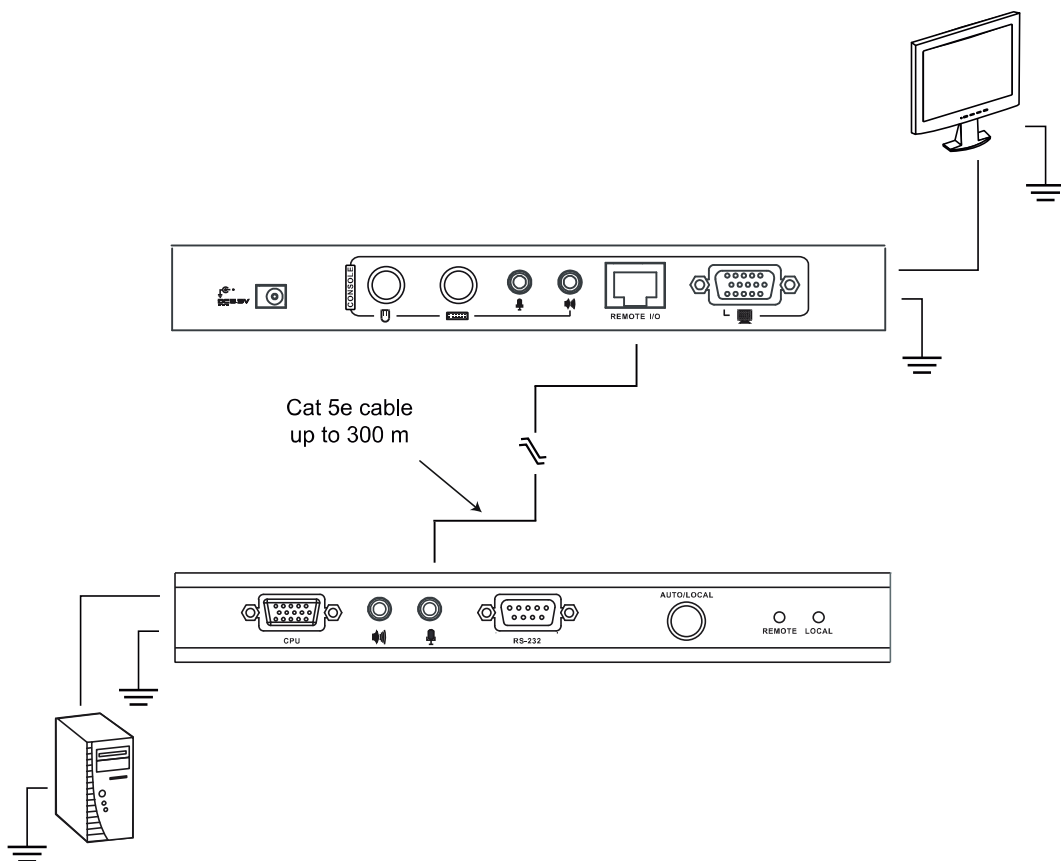
Grounding

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

1. Use two grounding wires 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.

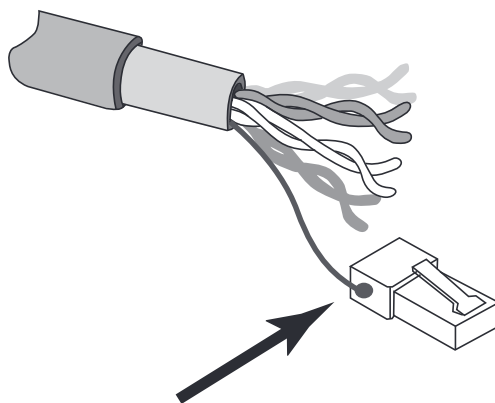


2. Make sure that the computer that the Local Unit connects to and the monitor that the Remote Unit connects to are properly grounded.

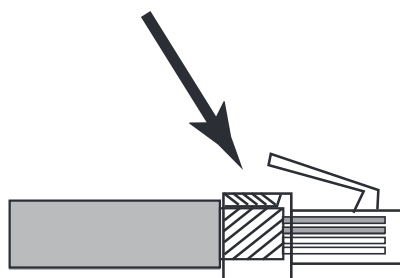


3. For increased grounding protection, use STP (shielded twisted pair) cable to connect the Local and Remote Units. There are two methods that can be used:

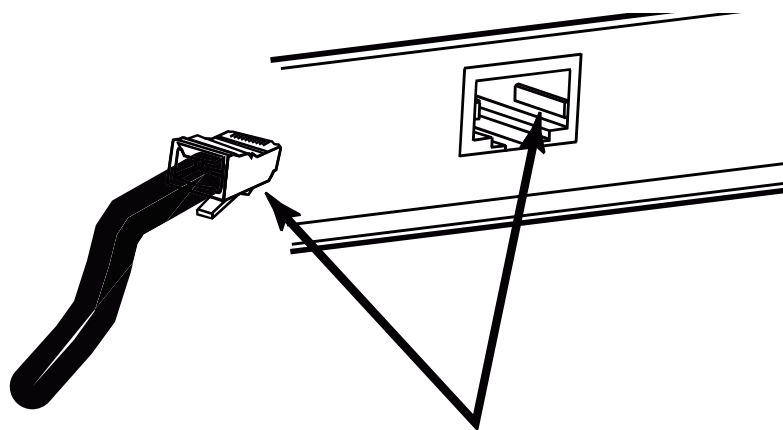
- a) In addition to the eight paired wires, STP cable also contains a grounding wire. Solder this wire to the RJ-45 connector as shown in the diagram below:



- 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 CE350 / CE370 PS/2 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 cables from the local console devices (mouse, keyboard, monitor, microphone, speakers) into their ports on the Console section on the rear of the Local Unit (CE350L/CE370L). Each port is marked with an appropriate icon to indicate itself.
2. Plug the appropriate connectors on the PS/2 KVM cable supplied with this unit into their ports on the CPU section on the front of the Local Unit (CE350L/CE370L).
3. Plug the connectors on the other end of the PS/2 KVM cable into the appropriate ports on the local computer. Each connector is marked with an appropriate icon to indicate which it is.

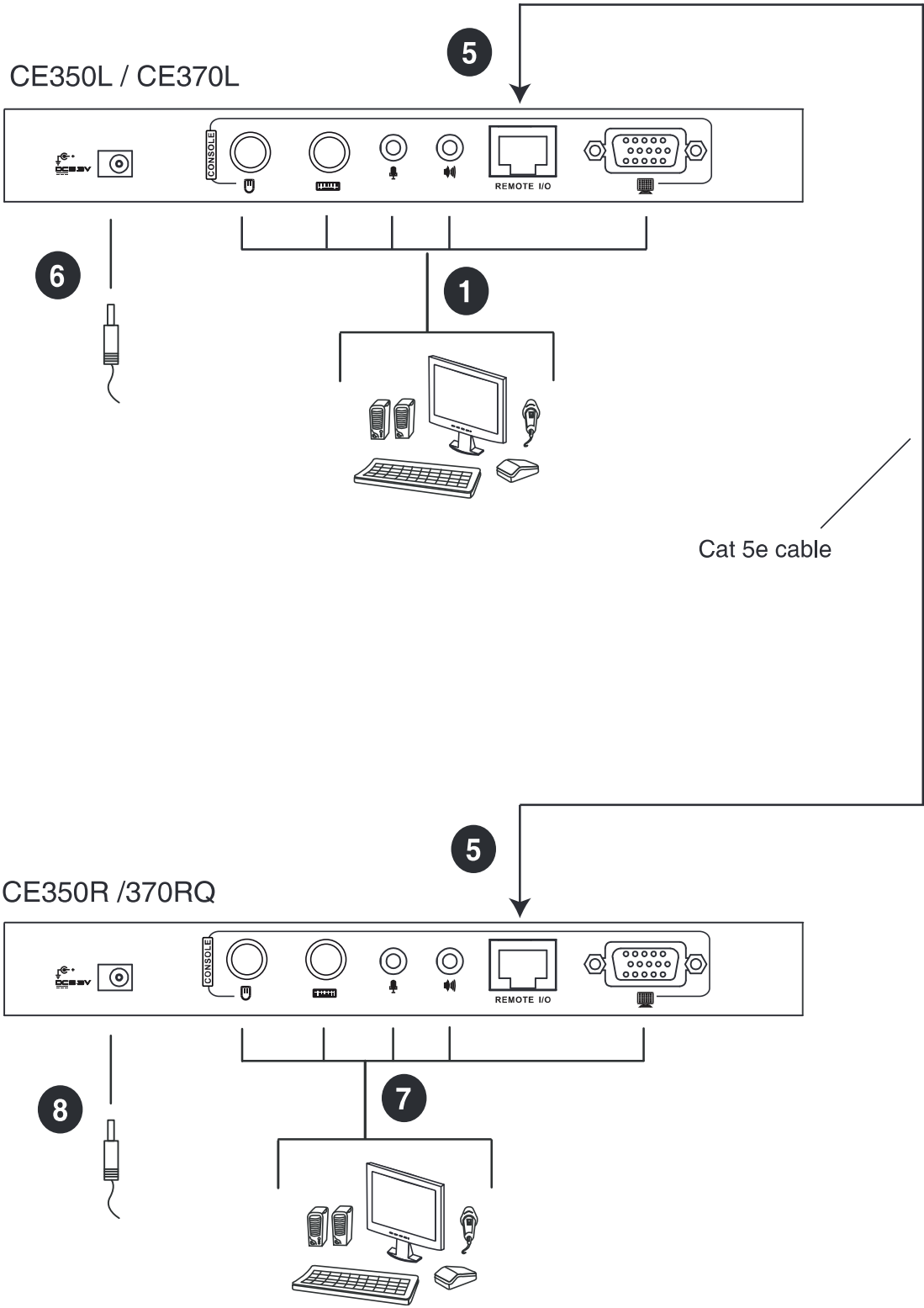
Note: If you are combining the CE350 / CE370 with a KVM switch, the other end of the PS/2 KVM cable plugs into the appropriate ports on the KVM switch.

4. For control of serial devices, connect the RS-232 serial port on the local unit to a serial port on the local computer.
5. Plug either end of the Cat 5e cable into the CE350L/CE370L's Remote I/O port. Plug the other end of the Cat 5e cable into the I/O port of the Remote Unit (CE350R/CE370RQ).
6. Plug one of the power adapters (supplied with this package) into an AC source; plug the adapter's power cable into the CE350L/CE370L's Power Jack.
7. Plug the cables from the remote console devices (mouse, keyboard, monitor, speakers, microphone), into their ports on the Console side of the CE350R/CE370RQ.
8. Plug the second power adapter (supplied with this package) into an AC source; plug the adapter's power cable into the CE350R/CE370RQ's Power Jack.

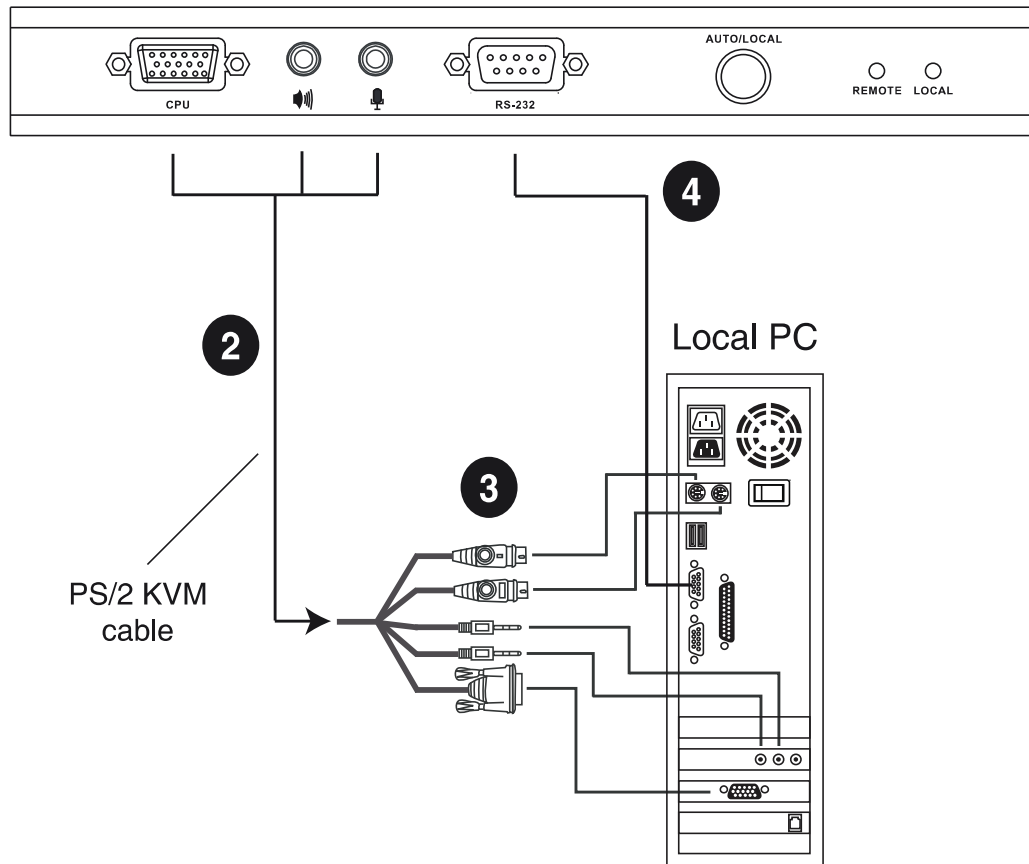
Note: Hot-plugging the Cat 5e cable will automatically trigger the deskew function.

Installation Diagrams

Rear View



Front View



Note: The serial port on the CE350L / CE370L connects to the computer; the serial port on the CE350R / CE370RQ (not shown) connects to a serial device (optional).

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Chapter 3

Operation

Operating Modes

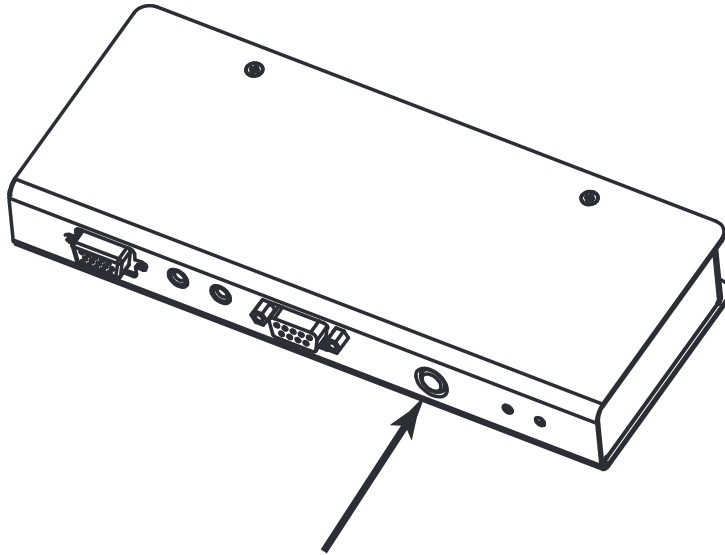
The CE350 / CE370 PS/2 KVM Extender has three operating modes: Local, Auto, and Remote, as described in the table below:

Mode	Description
Local	Only the local console has KVM access. The remote console's keyboard and mouse input is disabled.
Auto	Both the local and remote consoles can have KVM access, but not at the same time. The console without access has to wait until the console with access stops inputting data before it can gain access.
Remote	The remote console has KVM access. Remote mode can only occur when the pushbutton on the Local Unit (CE350L / CE370L) is set to <i>Auto</i> and the local console is idle. See note on page 20.

Note: The default operating mode is *Auto*.

Mode Selection

The *Operating Mode Pushbutton*, located on the Local Unit's front panel, controls the operating mode of the CE350 / CE370 PS/2 KVM Extender system. Pressing the switch toggles through *Local* and *Auto* operating modes.



Note: Remote mode cannot be selected. The remote console can get control only when the Operating Mode Pushbutton on the CE350L / CE370L is toggled to *Auto* and the local console is idle. If the remote console is then idle for more than five seconds, the local console can gain access.

Picture Compensation and Deskewing

CE350R

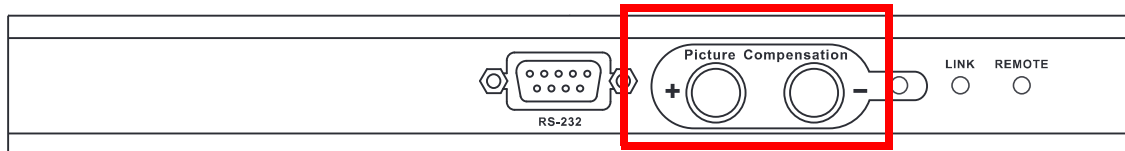
The CE350R supports automatic and manual video adjustment:

- ◆ **Automatic adjustment**

- ◆ The CE350R features ASC (Auto Signal Compensation), which automatically adjusts the video and stores the settings.
- ◆ To reset the CE350R's current video compensation settings and trigger an auto video adjustment, press and hold both **Picture Compensation** pushbuttons (+ and -) on the front panel of the CE350R for 2 seconds.

- ◆ **Manual adjustment**

To fine tune the video signal, use the **Picture Compensation** pushbuttons on the front panel of the CE350R to increase and/or decrease the compensation.



CE370RQ

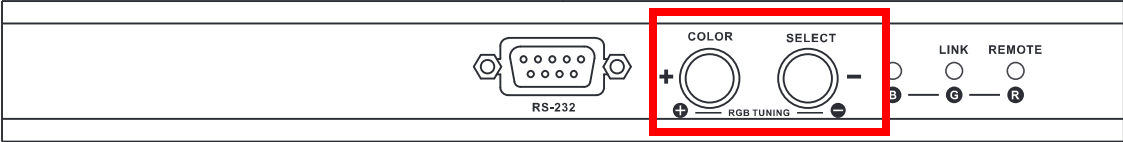
The CE370RQ supports automatic and manual video adjustment:

- ◆ **Automatic adjustment**

- ◆ The CE370RQ features ASC (Auto Signal Compensation), which automatically and constantly adjusts the video and stores the settings.
- ◆ The CE370RQ features the Deskew function that automatically synchronizes the time delay of RGB signals to compensate for distance. This adjustment is triggered when a Cat 5e/6 cable is plugged into the CE370RQ.
- ◆ Press and hold both **Color** and **Select** pushbuttons simultaneously to trigger the auto-detect function (adjusts R/G/B/Compensation automatically) and clear the stored settings.

◆ **Manual adjustment**

To fine tune the video quality, use the **Deskew and Picture Compensation** pushbuttons on the front panel of the CE370RQ. Refer to the table below for details.



Button	Description
Color / +	1. Press and release to enter Red color mode. Use (+) and (–) to adjust. 2. Press and hold for two seconds to invoke the OSD (when no color is selected). 3. Press and hold for two seconds to change the color mode or compensation (when selected). The sequence is R _ G _ B _ Video Compensation _ exit _ R ... 4. Press and release to increase value (delay time / compensation) when any color / compensation is selected.
Select / -	1. Press and release to enter Red color mode. Use (+) and (–) to adjust. 2. Press and release to decrease value (delay time / compensation) when any color / compensation is selected.

- Note:** 1. There is a ten-second timeout for operations 1 and 2 of the Color / + button.
2. The value for operations using + and – do not cycle from maximum to minimum and vice versa. Use the other button to increase/decrease as required.

LED Display

The CE350 / CE370 Local and Remote Units have front panel LEDs to indicate their operating status, as shown in the tables, following:

CE350L / CE370L(Local Units)

LED	Operating Mode	
	Local	Auto
Local (Green)	◆ Lights to indicate that the local console is active (the Remote LED is off).	◆ Lights when the local console is active (the Remote LED is off). ◆ Turns off when the remote console is active (the Remote LED turns on). ◆ Flashes on and off alternately with the Remote LED when neither console is active.
Remote (Green)	The LED is off	◆ Lights when the remote console is active (the Local LED is off). ◆ Turns off when the local console is active (the Local LED turns on). ◆ Flashes on and off alternately with the Local LED when neither console is active.

CE350R (Remote Unit)

LED	Indication
Link (Orange)	◆ 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 and the Remote LED is off.
Remote (Red)	◆ Lights steadily when the remote console is active. ◆ Turns off when the local console is active. ◆ Flashes to indicate that the system is in Auto mode.
Picture Compensation (Blue)	◆ Lights when a Picture Compensation pushbutton has been pushed (+ or –) and the CE350 is adjusting the video gain.* ◆ Lights steadily to indicate that the video gain adjustment has been completed and saved.

Note: There is a 10-second timeout once a Picture Compensation pushbutton has been pushed.

CE370RQ (Remote Unit)

LED	Indication
B (Blue)	◆ Flashes to indicate that the BLUE color is selected and the pushbutton can be used to adjust the delay time of the BLUE color.
Link / G (Orange/Green)	◆ Lights Orange to indicate that the connection to the Local unit is ok. ◆ Flashes Orange when there is a problem with the connection to the Local unit and the Remote LED (Red) is off. ◆ Flashes Green to indicate that the GREEN color is selected and the pushbutton can be used to adjust the delay time of GREEN color.
Remote / R (Red)	◆ Lights Red to indicate that the remote console is active. ◆ Turns off when the local console is active. ◆ Flashes to indicate that the system is in Auto Mode. ◆ Flashes Red to indicate that the RED color is selected and the pushbutton can be used to adjust the delay time of RED color. ◆ Both Red and Green flash to indicate that the Video Compensation is selected and the pushbutton can be used to adjust the Video Compensation.

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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.
- ◆ Do not connect the RJ-11 connector marked “UPGRADE” to a public telecommunication network.

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

Technical support is available both by email and online (with a browser over the web):

International

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

CE350

Function			CE350L	CE350R
Connectors	Console Ports	Keyboard	1 x 6-pin Mini-DIN Female (Purple)	
		Video	1 x HDB-15 Female (Blue)	
		Mouse	1 x 6-pin Mini-DIN Female (Green)	
		Speakers	1 x Mini Stereo Jack Female (Green)	
		Mic.	1 x Mini Stereo Jack Female (Pink)	
	KVM Ports	KB / Video / Mouse	1 x SPHD-17 Female (Yellow)	N/A
		Speakers	1 x Mini Stereo Jack (Green)	
		Mic.	1 x Mini Stereo Jack (Pink)	
	RS-232		1 x DB-9 Female (Black)	1 x DB-9 Male (Black)
	Unit to Unit		1 x RJ-45 Female (Black)	
	Power		1 x DC Jack (Black)	
LEDs	Local		1 (Green)	N/A
	Remote		1 (Green)	1 (Red)
	Link		N/A	1 (Orange)
	Picture Compensation		N/A	1 (Blue)
Pushbuttons	Operating Mode Selection		1 x Pushbutton	N/A
	Compensation / Up		N/A	1 x Pushbutton
	Compensation / Down		N/A	1 x Pushbutton
Emulation	Keyboard / Mouse		PS/2	
Video			1920 x 1200 @ 60Hz (30 m); 1600 x 1200 @ 60Hz (150 m); DDC, DDC2, DDC2B	
Power Consumption			DC5.3V / 3.38W	DC5.3V / 4.77W
Environment	Operating Temp.		0–50°C	
	Storage Temp		-20–60°C	
	Humidity		0–80% RH, Non-condensing	
Physical Properties	Housing		Metal	
	Weight		0.49 kg	0.48 kg
	Dimensions (L x W x H)		20.0 x 8.0 x 2.5 cm	

CE370

Function			CE370L	CE370RQ
Connectors	Console Ports	Keyboard	1 x 6-pin Mini-DIN Female (Purple)	
		Video	1 x HDB-15 Female (Blue)	
		Mouse	1 x 6-pin Mini-DIN Female (Green)	
		Speakers	1 x Mini Stereo Jack Female (Green)	
		Mic.	1 x Mini Stereo Jack Female (Pink)	
	KVM Ports	KB / Video / Mouse	1 x SPHD-17 Female (Yellow)	N/A
		Speakers	1 x Mini Stereo Jack (Green)	
		Mic.	1 x Mini Stereo Jack (Pink)	
	RS-232		1 x DB-9 Female (Black)	1 x DB-9 Male (Black)
	Unit to Unit		1 x RJ-45 Female (Black)	
	Power		1 x DC Jack (Black)	
LEDs	Local		1 (Green)	N/A
	Remote		1 (Green)	N/A
	B		N/A	1 (Blue)
	G	Link	N/A	1 (Orange/Green)
	R	Remote	N/A	1 (Red)
Pushbuttons	Operating Mode Selection		1 x Pushbutton	N/A
	Color / Up		N/A	1 x Pushbutton
	Select / Down		N/A	1 x Pushbutton
Emulation	Keyboard / Mouse		PS/2	
Video			1920 x 1200 @ 60Hz (150 m); 1280 x 1024 @ 60Hz (300 m); DDC, DDC2, DDC2B	
Power Consumption			DC5.3V / 3.38W	DC5.3V / 6.43W
Environment	Operating Temp.		0–50°C	
	Storage Temp		-20–60°C	
	Humidity		0–80% RH, Non-condensing	
Physical Properties	Housing		Metal	
	Weight		0.49 kg	0.48 kg
	Dimensions (L x W x H)		20.0 x 8.0 x 2.5 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	Hot-plug the Cat 5e cable again to trigger the deskew function.
	The video quality can be improved by using the Color / Select pushbuttons on the CE370RQ to increase or reduce the video signal gain.
	The video quality can be improved by reducing the refresh rate.

About SPHD Connectors



This product uses SPHD connectors for its KVM and/or Console ports. We have specifically modified the shape of these connectors so that only KVM cables that we have designed to work with this product can be connected.

Limited Warranty

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/>