KVM EXTENDER

User Manual

CE-252R/L

Read this guide thoroughly and follow the installation and operation procedures carefully in order to prevent any damage to the units and/or any devices that connect to them.

This package contains:

- ◆ 1 CE-252L KVM Extender (Local Unit)
- ◆ 1 CE-252R KVM Extender (Remote Unit)
- ◆ 1 User Manual
- ◆ 1 User Guide
- ◆ 2 KVM Cables
- ◆ 2 Power Adapters
- ◆ 2 Rack Mount Kits

If anything is damaged or missing, contact your dealer.

OVERVIEW

The CE-252R/L offers local and remote access to your KVM installation. Both (local and remote) KVM extenders support PS/2 consoles and can be located up to 300 m (1000 feet) apart.

You can reliably manage a large number of computers via a KVM switch. Additional computers can also be connected to the remote KVM extender.

The CE-252R/L also features *Automatic Gain Control,* which compensates signal strength as the distance between the local and remote KVM extenders varies (over Cat 5 cables). This translates into high resolution video (up to 2048 x 1536) at a lower cost.

The CE-252R/L uses a custom ASIC to ensure the utmost reliability and compatibility. This technology comprises automatic distance sensing and signal strength (gain) adjustment.

Setup is easy - simply connect the computer system box (or KVM switch) and Local Console to the CE-252 Local Unit; run a Cat. 5 cable to the CE-252 Remote Unit (up to 300 meters away); finally plug the Remote Console into the Remote Unit.

Features

- Built-in ASIC for greater reliability and compatibility
- Cat.5 cable to connect the local and remote units up to 300 meters apart
- Dual console operation – control the system from both the local and remote consoles
- Push button selection – sequential selection between local and auto mode
- High resolution video – up to 1024 x 768 @ 60Hz, 300 meters
- VGA, SVGA, and multisync monitor support
- Local monitor supports DDC; DDC2; DDC2B
- Two gain control modes provided for the sharpest video quality – adjustable (manual) or automatic
  - Adjustable gain control – manually adjusts signal strength
  - Automatic gain control – automatically adjusts signal strength
- Easy to install – no software required – connecting cables to the devices is all it takes

System Requirements

Consoles

- Two VGA, SVGA, or Multisync monitors capable of the highest resolution that you will be using on any computer in the installation
- Two PS/2 style keyboards
- Two PS/2 style mice

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.

Computers

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

- A VGA, SVGA, or Multisync card
- A 6-pin mini-DIN mouse port
- A 6-pin mini-DIN Keyboard port

Cables

- Although it is possible to use standard KVM cables to link computers with PS/2 type keyboard and mouse ports to the CE-252R/L, for optimal signal integrity ATEN recommends using the KVM Cables provided with this package.
- For best performance, use Category 5 (or better) cables to connect the CE-252 Local and Remote Units.
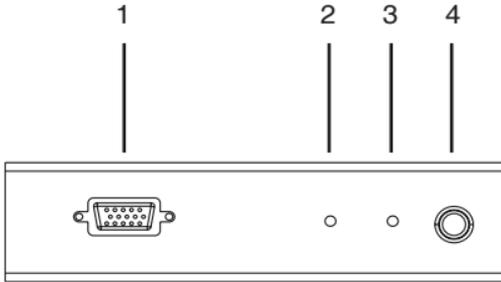
#	Description	Function
1	CPU Port (KVM Port) Section	KVM cable connector
2	Local LED	On: local console active Off: remote console active Flash: neither console active
3	Remote LED	On: remote console active Off: local console active Flash: neither console active
4	Push Button	Press to choose the operating mode: Local: only local console controls system Auto: both consoles control system

CE-252 Remote Front View

#	Description	Function
1	CPU Port (KVM Port) Section	KVM cable connector
2	Manual Gain Control	Use a flathead screwdriver or other similar object to manually adjust the signal gain
3	Auto/Manual Gain Selection Switch	Auto: the unit automatically adjusts the signal gain Manual: signal gain is set using the *Manual Gain Control*
4	Hotkey Selection Switch	Select CTRL + CTRL or SCROLL LOCK + SCROLL LOCK as the hotkey. (When changing hotkey settings, you must disconnect and then reconnect the Remote Unit's power adapter cable for the new settings to take effect.)
5	Local LED	On: remote console is accessing local PC or is able to access local PC Off: remote console is not accessing local PC Flash: connection to the local PC failed
6	Remote LED	On: remote console is accessing remote PC Off: remote console is not accessing remote PC

CE-252L / CE-252R Rear View
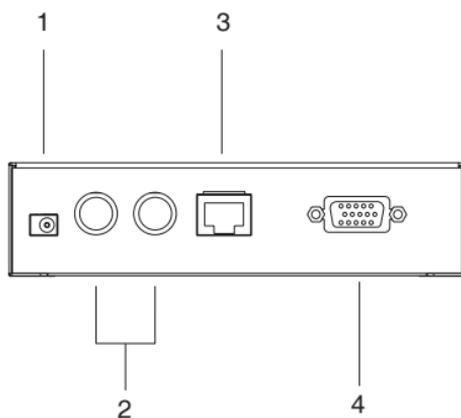
#	Description	Function
1	Power Jack	The AC Power Adapter cable connects here
2	Keyboard/Mouse Ports	PS/2 ports for keyboard (purple) and mouse (green)
3	Remote I/O	The Category 5 cable that connects the two units plugs in here
4	Monitor Port	The monitor connects to this port

Hardware Installation

Before you Begin

1. Ensure that all equipment to be connected is powered off.

2. Make sure that all devices you will be connecting up are properly grounded.

3. Unplug the power cords of any computers that have the Keyboard Power On function.

Setting up the CE-252 is simply a matter of plugging in the cables. Refer to the installation diagram on the following page (the numbers in the diagram correspond to the numbered steps) and do the following:

1. Connect the local console devices (mouse, keyboard and monitor) to the ports on the rear of the Local Unit (CE-252L).

2. Plug the provided KVM cable into the appropriate connector on the front of the CE-252L, then plug the connectors on the other end of the KVM cable into the appropriate ports on the computer system (or Console section of the KVM switch - if you are using one).

   Each connector is marked with an identifying icon.

3. Connect one end of a Category 5 twisted pair cable to the Remote I/O port on the CE-252L, then plug the other end of the Category 5 twisted pair cable into the Remote I/O port on the CE-252R.

4. Connect one of the provided power adapters into an AC source, then connect the adapter's power cable to the Power Jack on the rear of the CE-252L.

5. Connect the remote console devices (mouse, keyboard and monitor) to the ports on the rear of the Remote Unit (CE-252R).

6. Plug the provided KVM cable into the appropriate connector on the front of the CE-252R, then plug the connectors on the other end of the KVM cable into the appropriate ports on the computer system (or Console section of the KVM switch - if you are using one).

   Each connector is marked with an identifying icon.

7. Connect the other provided power adapter into an AC source, then connect the adapter's power cable to the Power Jack on the CE-252R.

Installation Diagram
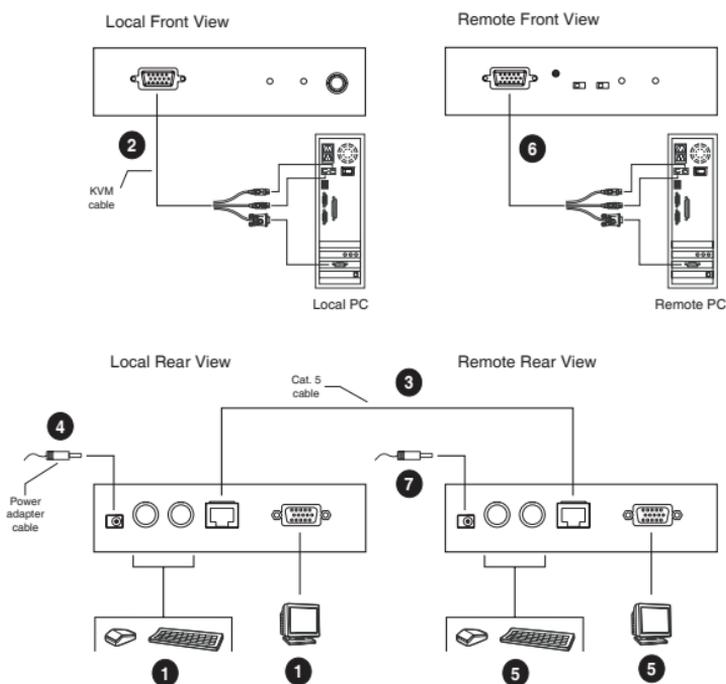
Operation

By default, the Remote Console allows you to access computers connected to the Local Unit (via the KVM switch). Moreover, the Remote Console offers access to computers connected to the Remote Unit. For example, an additional computer or KVM switch connected to the Remote Unit.

The CE-252R/L KVM Extender features the following two flexible computer access methods: Hotkey Operation and Auto Scan Mode.

Note: Before using the Remote Console, verify the Hardware installation is complete. See "Hardware Installation" on page 9. Hotkey operation and Auto Scan mode are only available to Remote Console (Remote Unit) users.

Hotkey Operation

Hotkeys offer convenient switching between the Local and Remote Units from the Remote Console.

To change the KVM focus between the Local and Remote Units do the following:

1. From the Remote Unit, select CTRL + CTRL or SCROLL LOCK + SCROLL LOCK (Hotkey selection slide switch, see *CE-252 Remote Front View*, p. 7). This will set the desired hotkey.

   Note: When connecting an additional KVM switch to the Remote Unit, make sure the selected hotkey is different from the one being used to control the KVM.

2. At the Remote Unit console, press the selected hotkey twice. This will change the KVM focus between the local and remote PCs.

Auto Scan Mode (ASM)

The Auto Scan feature automatically toggles the KVM focus between the Local and Remote Units at regular intervals. As a result, any computers connected to each can be monitored without user intervention. The default time interval is 5 seconds.

To invoke Auto Scan Mode do the following:

Press and release the Left Shift key; then press and release the Right Shift *key:*

   [Left Shift] [Right Shift]

Once scanning begins, it continues until you press the [Spacebar] to exit Auto Scan Mode. The port that was currently active at the time scanning stopped remains active.

Note: While Auto Scan Mode is in effect, ordinary keyboard and mouse functions are suspended. You must exit Auto Scan Mode by pressing the [Spacebar] in order to regain normal control of their use.

Changing the Scan Interval

If you wish, before you invoke Auto Scanning you can change the amount of time Auto Scan stops at each port. To do so, use the following Hotkey combination (press and release the keys one at a time):

   [Left shift] [Right shift] [n]

Where **n** represents a number from 1 to 4 that specifies the desired scan interval time, as shown in the table on the following page:

n	Scan Interval
1	3 secs
2	5 secs
3	10 secs
4	20 secs

Using Gain Controls

After installing the CE-252R/L, you can adjust the strength of the video signal (Gain).

There are two available Gain controls: **Automatic** and **Manual**.

Select the Automatic Gain slide switch on the Remote Unit to let CE-252R/L adjust the video signal strength. Otherwise, to adjust the gain manually, select the Manual Gain slide switch, then turn the **Video Gain Control** knob left or right.

Accessing Local Computers

The **Local/Auto** button located on the Local Unit allows users to restrict the access to the KVM switch connected to it.

Pushing the **Local** button will block access from the remote console to the local computers (only the Local Console has access). Selecting **Auto** will allow access from both consoles (Local and Remote Consoles).

Specifications

Function			CE-252L	CE-252R
Computer Connections			1	
Port Selection			1 x Pushbutton	N/A
Connectors	Console Port	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)	
	KVM Port		1 x SPHD-15 Female (Yellow)	
	Link		1 x RJ-45	
	Power adapter		1 x DC Jack (Black)	
LEDs	Local		1 (green)	
	Remote		1 (green)	
Knobs	Video Gain Control		N/A	1
Switches	Auto / Manual Gain		N/A	1 x 2 Slide
	Hotkey Selection		N/A	1 x 2 Slide
Emulation	Keyboard / Mouse		PS/2	
Video			2048 x 1536 @60Hz, DDC2B	1600x1200 @ 150 m. 1024x768 @ 300 m.
Power Consumption			DC 5.3V, 2.6W	
Environment	Operating Temperature		0°–50°C	
	Storage Temperature		-20°–60°C	
	Humidity		0–90% RH, Non-condensing	
Physical Properties	Housing		Metal	
	Weight		0.4kg	
	Dimensions (L x W x H)		13 x 7.7 x 4.5 cm	20 x 7.7 x 4.5 cm

VGA Pin Assignments

Pin	Signal	Pin	Signal	Pin	Signal
1	Red Video	6	Analog Ground	11	ID0
2	Green Video	7	Analog Ground	12	ID1
3	Blue Video	8	Analog Ground	13	Horizontal Sync
4	ID2	9	NC	14	Vertical Sync
5	Ground	10	Ground	15	ID3

TP WIRING DIAGRAM

PAIR 3

PAIR 2   PAIR 1   PAIR 4

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1  2  3  4  5  6  7  8
W-O  O  W-G  Bl  W-Bl  G  W-Br  Br
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JACK POSITIONS

T568B
AT&T 258A
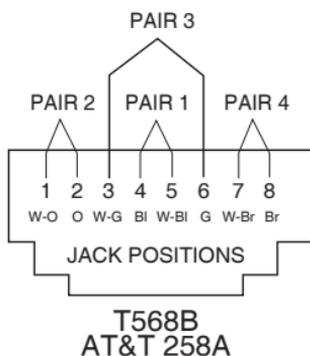
TP PIN ASSIGNMENTS

Pin	Assignment
1	V OUT B
2	/V OUT B
3	V OUT G
4	V OUT R
5	/V OUT R
6	/V OUT G
7	/DO
8	DO

Getting Help

If you need to contact ATEN technical support with a problem, visit our website at *www.aten.com.*

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