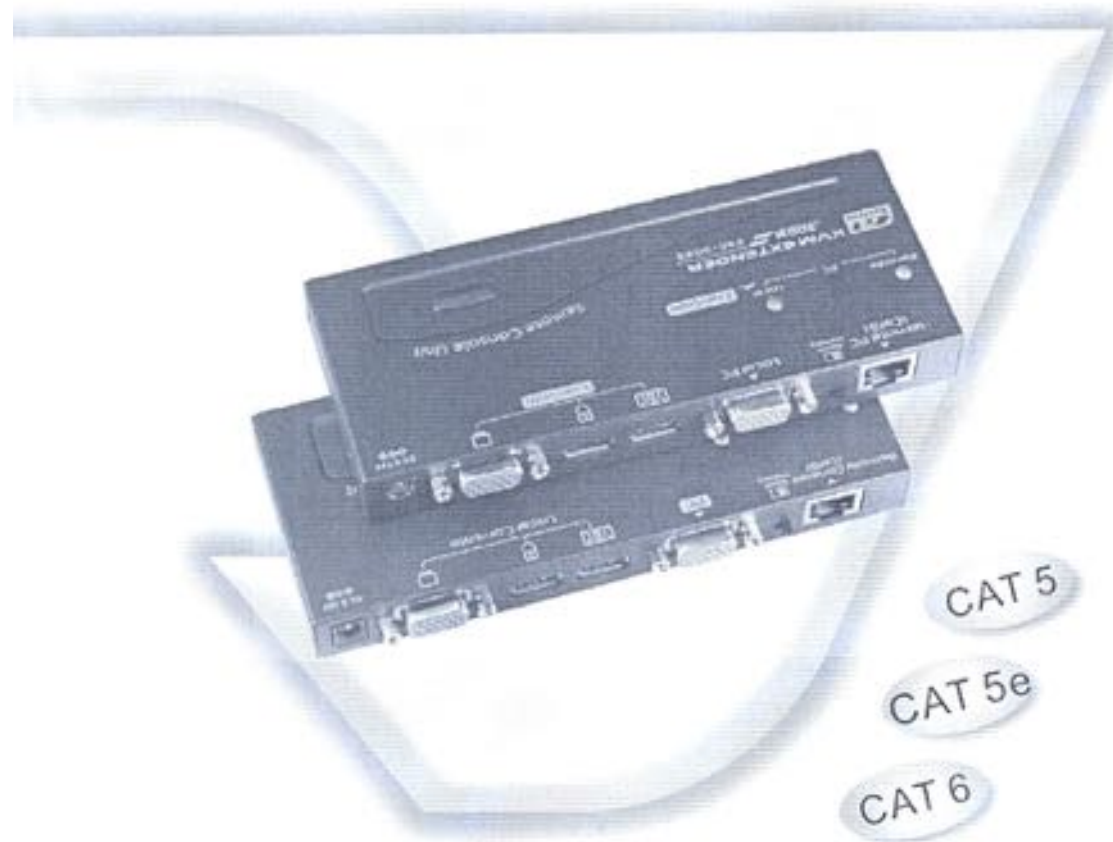


# *KVM Extender*

*Easy hotkey commands to adjust the video quality.  
Ensuring the optimum video quality for any length of  
CATx cable within the limit!*



## *User's Manual*

### *USB Console*

<b>EXC-2011</b>	<b>EXC-3011</b>	<b>EXC-4011</b>
<b>EXC-2021</b>	<b>EXC-3021</b>	<b>EXC-4021</b>
<b>EXC-2012</b>	<b>EXC-3012</b>	<b>EXC-4012</b>
<b>EXC-2022</b>	<b>EXC-3022</b>	<b>EXC-4022</b>

# ----- Models and Cable Types

Model	Function		Console Unit (Cat5 out)				Computer Unit (Cat5 in)				Cable (1.8m)	
			Model	Console Port	Computer Port		Model	Console Port		Computer Port	Included	Other Choice
					Local	Remote		Remote	Local			
EXC-4022C (= EXC-402S + EXC-421P + Cable)	2 Console →	2 Computers	EXC-402S	1	1	1	EXC-421P	1	1	1	CBM180UH	CBM180H
EXC-4012C (= EXC-402S + EXC-411P + Cable)	1 Console →	2 Computers	EXC-402S	1	1	1	EXC-411P	1		1	CBM180UH	CBM180H
EXC-4021C (= EXC-401S + EXC-421P + Cable)	2 Console →	1 Computer	EXC-401S	1		1	EXC-421P	1	1	1	CBM180UH	CBM180H
EXC-4011C (= EXC-401S + EXC-411P + Cable)	1 Console →	1 Computer	EXC-401S	1			EXC-411P	1		1	CBM180UH	CBM180H
EXC-3022C (= EXC-302S + EXC-021P + Cable)	2 Console →	2 Computers	EXC-302S	1	1	1	EXC-021P		1	1	CBM180UH	CBM180H
EXC-3012C (= EXC-302S + EXC-011P + Cable)	1 Console →	2 Computers	EXC-302S	1	1	1	EXC-011P	1		1	CBM180UH	CBM180H
EXC-3021C (= EXC-301S + EXC-021P + Cable)	2 Console →	1 Computer	EXC-301S	1		1	EXC-021P	1	1	1	CBM180UH	CBM180H
EXC-3011C (= EXC-301S + EXC-011P + Cable)	1 Console →	1 Computer	EXC-301S	1		1	EXC-011P	1		1	CBM180UH	CBM180H
EXC-2022C (= EXC-202S + EXC-021P + Cable)	2 Console →	2 Computers	EXC-202S	1	1	1	EXC-021P		1	1	CBM180UH	CBM180H
EXC-2012C (= EXC-202S + EXC-011P + Cable)	1 Console →	2 Computers	EXC-202S	1	1	1	EXC-011P	1		1	CBM180UH	CBM180H
EXC-2021C (= EXC-201S + EXC-021P + Cable)	2 Console →	1 Computer	EXC-201S	1		1	EXC-021P	1	1	1	CBM180UH	CBM180H
EXC-2011C (= EXC-201S + EXC-011P + Cable)	1 Console →	1 Computer	EXC-201S	1		1	EXC-011P	1		1	CBM180UH	CBM180H

Table 1: Models and Cable Types

\*CBM180UH: 180cm cable for USB interface computer.

\*CBM180H: 180cm cable for PS/2 interface computer.



CBM180UH for USB computer



CBM180H for PS/2 computer

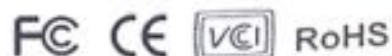
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Please read this manual thoroughly and follow the **Installation** procedures to prevent any damage to the unit or any connecting device

- \* The final specifications are based on the actual product.
- \* Features and functions may be added or changed after the manual was written. Please visit our website to download the latest version of manual for reference.
- \* To prevent damages to your installation, it is important that all devices are properly grounded.



## Introduction

Rextron KVM Extender consists of a **Console Unit** and a **Computer Unit** that are suitable to locate one single set of keyboard / monitor / mouse up to **200 / 300 / 400 meters** away from a computer or KVM switch by using an inexpensive **Category 5 / 5e / 6 UTP (unshielded twisted pair) cable**. The display can be optimized up to the maximum resolution of **Full HD (1920 x 1080) / WUXGA (1920 x 1200) / UXGA (1600 x 1200)**. Through the easy hotkey commands, it's convenient to adjust the video quality, such as equalizer (sharpness), gain (brightness), and zero the skew delay for green, blue, and red, which ensures the optimum video quality in accordance with various cable lengths; moreover, it also allows users to synchronize the maximal video resolution between the attached computers. For Cascade application, the dedicated **Hotkey Mask Switch** masks up the **KVM Extender** itself, and enable users to directly configure the cascaded **KVM Switch** as if the user are sitting in front of the **KVM Switch**.

With a variety of models to choose from, you can economically increase the flexibility of your selection and meet your needs for either PS/2 or USB computer. No software or DIP switches are required, just plug and play. **Rextron KVM Extender** is an attentive design for factories or construction areas where you want to secure your computers and valuable data or manage them both in remote and local sites.

Refer to the following figure, the unit can be connected with 1-to-3 or 1-to-2 cable(s). For details, please proceed to the section "**Specifications**".



Connection of 1-to-3 and 1-to-2 cable

## ----- **Features**

- Connect the KVM Extender pair via Category 5 / 5e / 6 UTP cable
- Remotely locate the keyboard, mouse and monitor up to 200 / 300 / 400 meters away from a computer
- Support high video resolution up to Full HD (1920 x 1080) / WUXGA (1920 x 1200) / UXGA (1600 x 1200)
- Support USB console
- Support the surge protection
- Support the HID standard keys
- Equalizer (sharpness) / gain (brightness) adjustment via hotkeys for optimal video quality
- Unique design for convenient RGB skew adjustment via hotkeys for the best video quality
- Synchronize the video resolution between the attached computers via hotkeys
- Dedicated Mask Hotkey function enable the direct control in cascading
- Simple LED indication makes operation user-friendly
- Locate the computer away from your desk and work area, saving you valuable space
- Allow two users to share one or two computers both in local and remote areas
- Applicable for one console to manage two computers locally and remotely (varied depending on models)
- Beep confirmation for hotkey control makes the operation easier and cross-checked
- Support most of mice such as M/S IntelliMouse (Pro), Explorer, Optical, etc.
- Compatible with most of the popular screen resolution to XGA, SXGA, UXGA, WSXGA ...WUXGA system

## ----- **Packing Checklist**

- |    |                                      |                              |
|----|--------------------------------------|------------------------------|
| 1. | KVM Extender <b>Console Unit</b>     | x 1                          |
| 2. | KVM Extender <b>Computer Unit</b>    | x 1                          |
| 3. | Power Adapter with necessary AC Cord |                              |
|    | or                                   | x 1                          |
|    | Plug-in Power Adapter                |                              |
| 4. | User's Manual                        | x 1                          |
| 5. | Foot Pad                             | x 2 sets (8pcs)              |
| 6. | KVM Cable (CBM180H or CBM180UH)      | x 1 or 2 (depends on models) |

### ★ **Ordering Information**

Model Name + C = Model with necessary KVM Cables

For example: EXC-3022C = (EXC-302S + EXC-021P) + Cable x 2

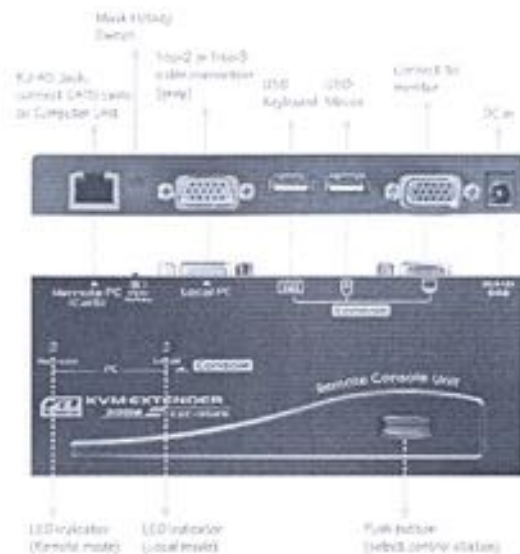
### ★ **Hardware Requirement**

1. Computer(s) with USB port(s) and PS/2 port(s)
2. Category 5 / 5e / 6 UTP cable (EIA/TIA 568B industry standard compliant) in accordance with length limits for optimum signal integrity
3. USB keyboard / mouse for console controlling

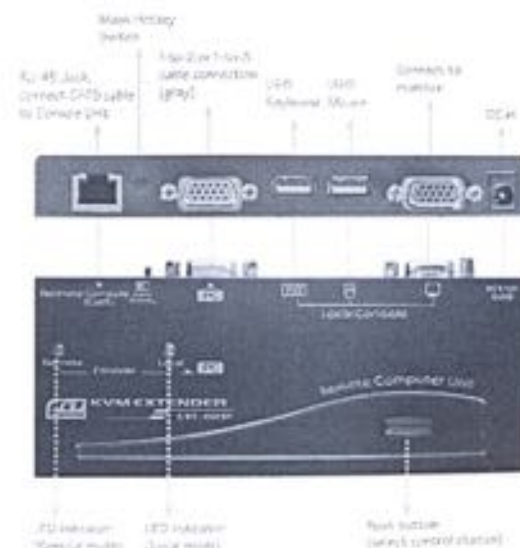
## Product Description

Figures listed below show typical applications of EXC-x02S series. The model you have purchased may be slightly different from those described in the illustrations.

### Console Unit EXC-402S / EXC-302S / EXC-202S



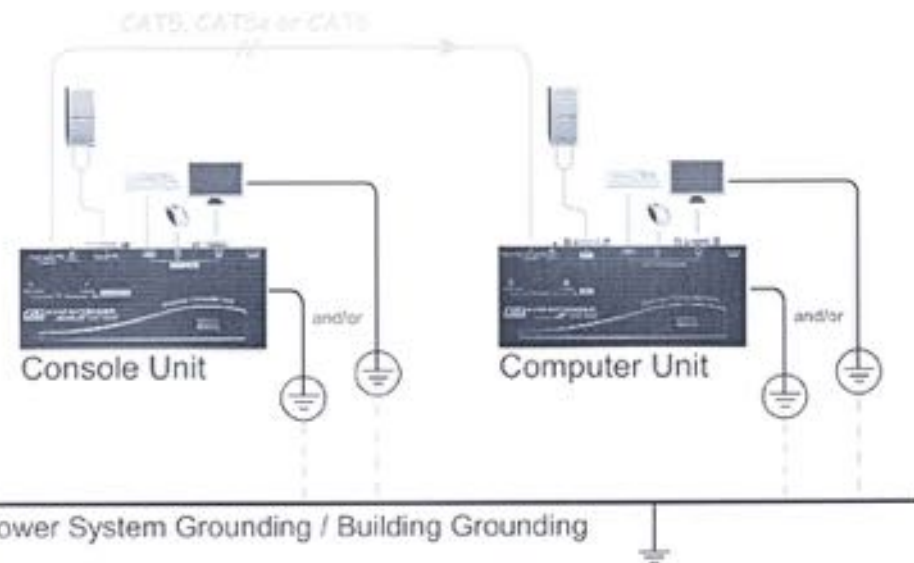
### Computer Unit EXC-021P



## Installation

### Grounding

To prevent any damage to the product or any connecting device, it is important to make sure that the monitor (or computer) connected to the Unit and the KVM Extender itself are properly grounded.



### Cautions:

1. Prior to the installation, ensure to power off all devices that will be connected to this system.
2. Ensure that all devices you will connect are properly grounded.
3. Place cables away from fluorescent lights, air conditioners, and machines that are likely to generate electrical noise.

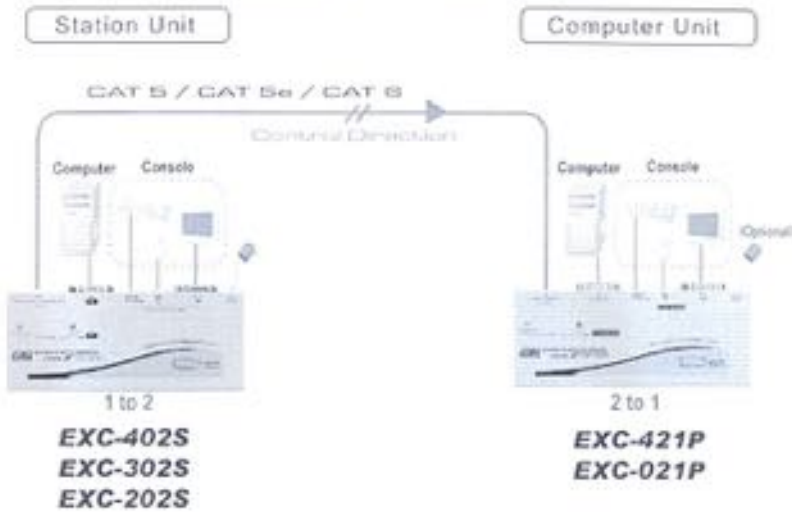


1-to-3 cable (PS/2) connector

1-to-2 cable (USB) connection

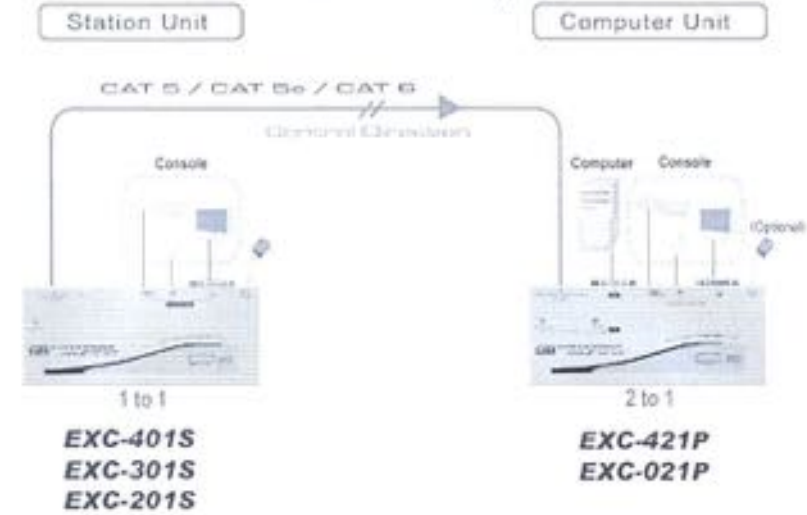
**EXC-4022 / EXC-3022 / EXC-2022**

2 Consoles → 2 Computers



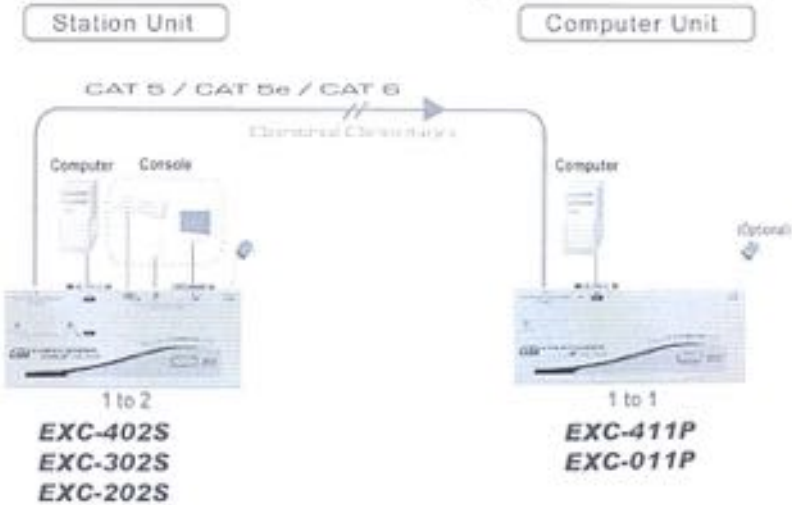
**EXC-4021 / EXC-3021 / EXC-2021**

2 Consoles → 1 Computer



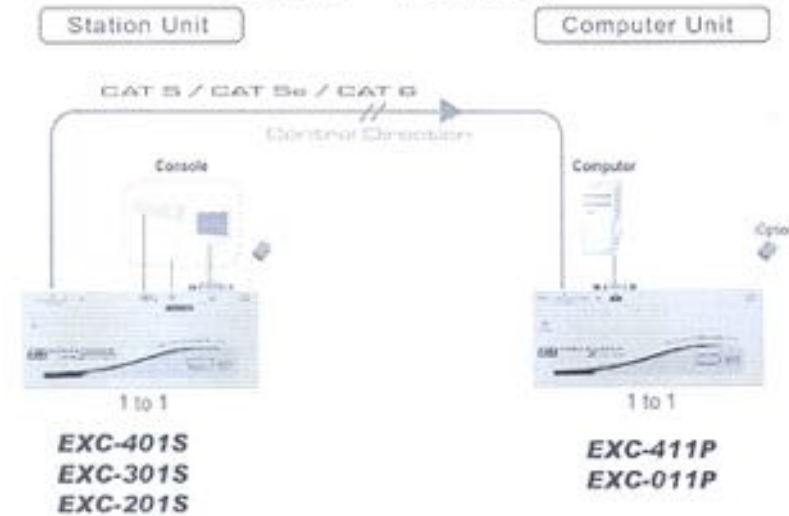
**EXC-4012 / EXC-3012 / EXC-2012**

1 Console → 2 Computers



**EXC-4011 / EXC-3011 / EXC-2011**

1 Console → 1 Computer



## LED Indicators

The LEDs on the **KVM Extender** show the latest status which indicates the linking, communication, and control situation between the **Computer Unit** and **Console Unit**.

1. Press the push-button on **Console Unit** to select "Local On" or "Remote On".
2. Press the push-button on **Computer Unit** to select "Local On", "Remote On" or "Auto Mode".

### LEDs on Console Unit

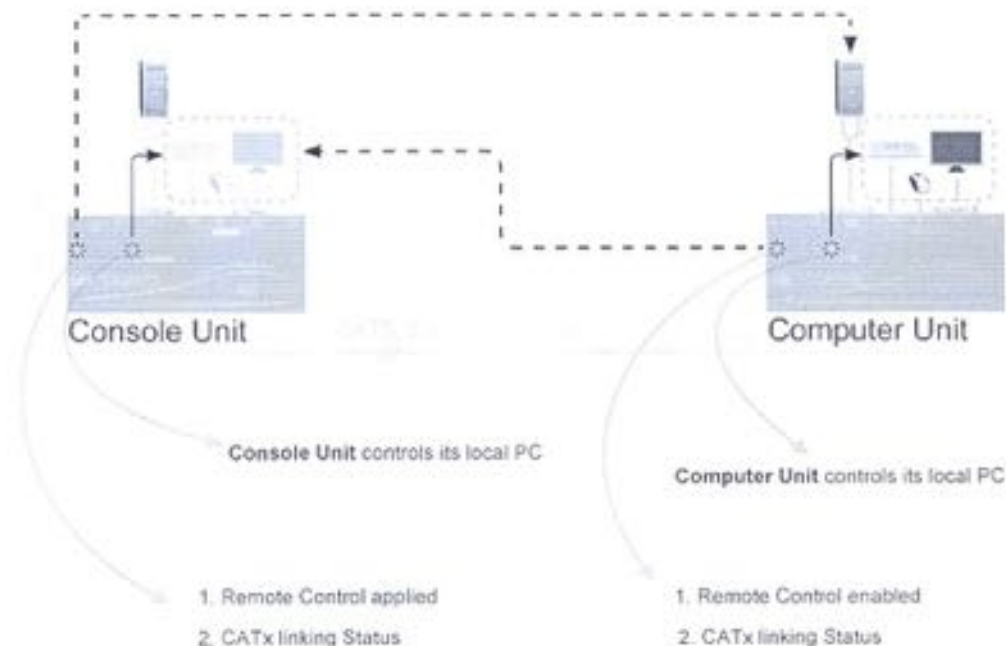
Model	LED Status	Control Description
EXC-202S EXC-302S EXC-402S	Remote: Off, Local: On*	<ul style="list-style-type: none"> <li>● <b>Console Unit</b> controls its local PC.</li> </ul>
	Remote: On, Local: Off	<p><b>Console Unit</b> is enabled to access to the <b>Computer Unit</b> and the remote LED will:</p> <ul style="list-style-type: none"> <li>● Emit yellow light if the <b>Console Unit</b> is taking control.</li> <li>● Emit yellow light with a bit of flash red if the <b>Computer Unit</b> is taking control.</li> <li>● Flash short red light if the <b>Computer Unit</b> is on Local mode.</li> </ul> <p>In this state, either of the following two statuses can be observed:</p> <ul style="list-style-type: none"> <li>● 3 LEDs (Num, Caps and Scroll Lock) on the keyboard are flashing: The <b>Computer Unit</b> is now taking control of the system.</li> <li>● 3 LEDs (Num, Caps and Scroll Lock) on the keyboard are <b>NOT</b> flashing: the system is waiting for <b>Console Unit</b> or <b>Computer Unit</b> to take control.</li> </ul>
EXC-201S EXC-301S EXC-401S	Remote: On	<ul style="list-style-type: none"> <li>● The <b>Console Unit</b> remotely controls the <b>Computer Unit</b>.</li> </ul>

- The default status is set to Local "ON" when power up
- The Remote LED will flash long red light if the CATx cable disconnected

### LEDs on Computer Unit

Model	LED Status	Control Description
EXC-021P	Remote: Off, Local: On	<ul style="list-style-type: none"> <li>● <b>Computer Unit</b> controls its local PC or <b>KVM Switches</b>. In this mode, the <b>Console Unit</b> can not take control of the <b>Computer Unit</b> remotely.</li> </ul>
	Remote: On, Local: Off	<ul style="list-style-type: none"> <li>● <b>Console Unit</b> is remotely taking control of the <b>Computer Unit</b>.</li> </ul>
	Remote / Local Flashes alternately (Auto Mode)*	<ul style="list-style-type: none"> <li>● The system is waiting for <b>Console Unit</b> or <b>Computer Unit</b> to take control. The control authority is on the first come, first served basis.</li> </ul>
EXC-011P	Remote: On	<ul style="list-style-type: none"> <li>● The system is controlled remotely from <b>Console Unit</b>.</li> </ul>

- The default status is set to Auto when power up
- The Remote LED will flash red light if the CATx cable disconnected

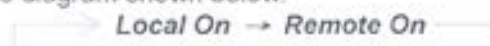


## Push-Button Control

There is a button on the panel of **Computer Unit** and **Console Unit** respectively, which can be pushed (switched) in sequence to select the operation modes.

### Push-Button on Console Unit

The button on the panel of **Console Unit** can be used to switch modes by following the sequence as the diagram shown below:

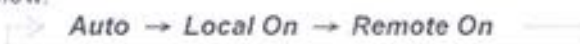


**Local On** : The LED of Local lights up, the system controls its local computer.

**Remote On:** The LED of Remote lights up, the system remotely controls the **Computer Unit**.

### Push-Button on Computer Unit

Through pressing the button, three modes will be generated in the sequence as the diagram shown below:



- Auto** :
1. The LEDs of Remote and Local flash alternately.
  2. The system is now waiting for the **Console** or **Computer Unit** to take control. The control priority is on the first come, first served basis.

For example, once the keyboard or mouse of **Computer Unit** is active, the LED of Local will light up and the LED of Remote will light off. This status indicates that the **Computer Unit** is now taking control of the system, and vice versa for **Console Unit**. In Auto mode, the duration of latch time for taking control can be preset to 5, 15, 30, or 60 seconds via hotkeys, which allows the **Computer** or **Console Unit** to resume control again via any keystroke or mouse activity if the latch time is due and the status returns to the "Auto" mode.

In "Auto" mode, whenever, any activity from the **keyboard**, **mouse buttons** or **scroll wheel** of mouse is detected, the Unit (**Computer Unit** or **Console Unit**) immediately takes control of the system.

**Local On** : The LED of Local lights up, the system is controlled by the **Computer Unit**. In this case, the **Console Unit** learns this status from the flashing of 3 LEDs (**Num**, **Caps** and **Scroll Lock**) on the keyboard.

**Remote On:** The LED of Remote lights up, the system is remotely controlled by the **Console Unit**

## Push-Button for Alternate Hotkey Control

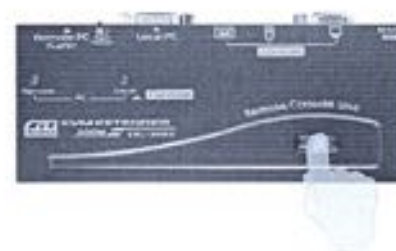
The **KVM Extender** is incapable of conducting any hotkey controls when its hotkey function is masked (Hotkey Mask Switch "ON"). No matter of the Hotkey Mask Switch ON or OFF, the Press and Hold push button 2 seconds followed by one keystroke can be applied instead of the leading code [ **Ctrl** + **Ctrl** ] or [ **Ctrl** + **Ctrl** + **E** ] for specific hotkey features by user preference. For the details of hotkey commands, please check the following sections "Hotkey Commands" and "Alternate Hotkey Control".

[BTN]<sub>(2sec)</sub> + F3 : Latch time selection

[BTN]<sub>(2sec)</sub> + F6 : Privacy setting

[BTN]<sub>(2sec)</sub> + F11 : Video adjustment

[BTN]<sub>(2sec)</sub> + v + 4 digits : Video synchronization



**NOTE:** [BTN]<sub>(2sec)</sub> denotes that Press and Hold push button 2 seconds.



## Video Adjustment (Console Unit Only)

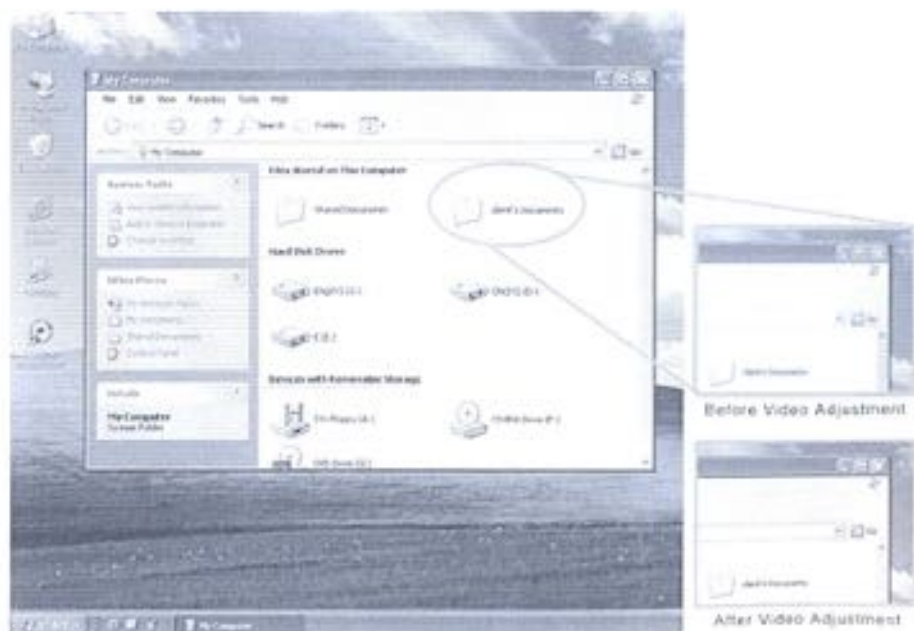
The video adjustment function is required to perform before any operations. Please also make sure that all the system unit and devices are connected properly before the video adjustment operation begin. In this case, the hotkeys are used to adjust the following aspects on the **Console Unit\*** for optimal video signal corresponding to various cable lengths.

- Equalizer (Sharpness)
- Gain (Brightness)
- Skew (for the color green, blue, and red)

Depending on the various lengths of CAT 5 / CAT 5e / CAT 6, there are 16 levels of coarse tune and up to 128/256 scales of fine tune available for adjustment on the equalizer and gain. And, 8 levels of coarse tune and 16/32 scales of fine tune are available for skew adjustment on green, blue, and red. To achieve the best video signal quality and details of video adjustment, please refer to the following section "Hotkeys for Video Adjustment".

\*NOTE: The video adjustment is available on the Console Unit ONLY.

NOTE: The video adjustment is applicable only if the CATx cable is connected and the Console Unit is remotely taking control of Computer Unit.



## Hotkeys for Video Adjustment (for Console Unit Only)

**NOTE:** Prior to any hotkey command input for video adjustment, please switch the Mask Hotkey to "OFF" enabling the hotkey control, and then set the hotkey to either: **Standard Mode** by input the hotkey command [left **Ctrl** + left **Ctrl** + **Alt** + **E** ] and then one *beep* should be generated as the confirmation, or **Compatibility Mode** by input the hotkey command [left **Ctrl** + left **Ctrl** + **Alt** + **E** ] and then two *beeps* should be generated as the confirmation; Users can switch the mode alternatively by repeating this hotkey command.

To enter the Video Adjustment Mode in Non-Cascade (Standard) Structure:

[Press left **Ctrl** + left **Ctrl** + **F11** ]

To enter the Video Adjustment Mode in Cascade (Compatibility) Structure:

[Press left **Ctrl** + left **Ctrl** + **E** + **F11** ]

While entering this mode, the LED **Numeric Lock** and **Scroll Lock** will flash simultaneously at the moment. Then, users can perform the video adjustment by hotkey commands as the table shown below. Be aware, the idle time-out is 30 seconds. That is, it will automatically escape from video adjustment mode if no activity is detected by the keyboard within 30 seconds.

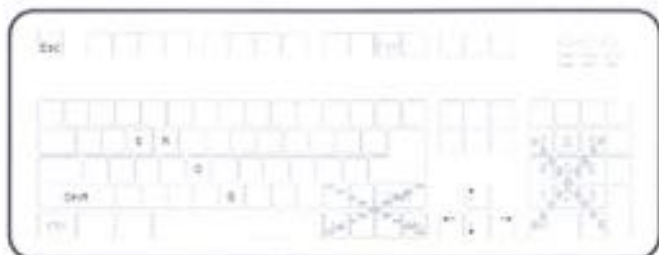
To exit the video adjustment mode, three simply approaches are available:

1. No activity is detected by the keyboard for 30 seconds.
2. Push once the escape button **Esc** on the keyboard attached to the **Console Unit**.
3. Push once the push button on the top panel of the **Console Unit**

Console Unit Hotkey Commands	Function Description
<b>E</b>	<b>Equalizer / Gain Adjustment</b> <b>Equalizer (Sharpness):</b> <b>(Num Lock LED + Caps Lock LED) Flashing</b> 1. Press <b>←</b> or <b>→</b> to coarse tune, there are 16 levels for adjusting. 2. Press and Hold <b>Shift</b> + <b>←</b> or <b>→</b> to fine tune. <b>Gain (Brightness):</b> <b>(Caps Lock LED + Scroll Lock LED) Flashing</b> 1. Press <b>↑</b> or <b>↓</b> to coarse tune, there are 16 levels for skew. 2. Press and Hold <b>Shift</b> + <b>↑</b> or <b>↓</b> to fine tune.
<b>G</b>	<b>Green Color Adjustment</b> <b>Caps Lock LED Flashing</b> 1. Press <b>←</b> or <b>→</b> to coarse tune, there are 8 levels for adjusting. 2. Press and Hold <b>Shift</b> + <b>←</b> or <b>→</b> to fine tune.
<b>B</b>	<b>Blue Color Adjustment</b> <b>Scroll Lock LED Flashing</b> 1. Press <b>←</b> or <b>→</b> to coarse tune, there are 8 levels for adjusting. 2. Press and Hold <b>Shift</b> + <b>←</b> or <b>→</b> to fine tune.
<b>R</b>	<b>Red Color Adjustment</b> <b>Num Lock LED Flashing</b> 1. Press <b>←</b> or <b>→</b> to coarse tune, there are 8 levels for adjusting. 2. Press and Hold <b>Shift</b> + <b>←</b> or <b>→</b> to fine tune.
<b>ESC</b>	Escape from Video Adjustment Mode.

**NOTE:** Make sure to connect the unit and devices properly before the video adjustment

**NOTE:** The video adjustment function is available on the Console Unit ONLY.  
**NOTE:** An alternate hotkey approach to enter Video Adjustment mode is available for users to choose as desire, in which, users can simply press the top panel push button followed by input the key [F11]. For more detailed information, please refer to the section "Hotkey Commands" and "Alternate Hotkey Control".



\* Two modes are available for hotkey control (see Hotkey Control chapter)  
 \*\* Mask Hotkey function enable the direct control over the KVM Switch (see Mask Hotkey Switch chapter)

## Hotkey Control

A hotkey command is a short key sequence to select a computer, activate computer scan, and so forth. The KVM extender interprets keystrokes for hotkeys all the time. Throughout this user manual, the following terms have the meanings:

### Standard Mode

is defined as the state of the KVM Extender without any connection to any KVM switch.

### Compatibility Mode

is defined as the state of the KVM Extender with connection(s) to KVM switch(es).

### The Command for Switching the Mode

Users can switch mode between Standard and Compatibility through inputting the hotkey command [left Ctrl + left Ctrl + Alt + E], and then one beep is generated as the confirmation of Standard Mode; otherwise, two beeps is generated as the confirmation of Compatibility Mode.

### Leading Code

In Standard Mode, a hotkey command starts with the leading code [left Ctrl + left Ctrl] followed by one or two more keystrokes.

In Compatibility Mode, a hotkey command starts with the leading code [left Ctrl + left Ctrl + E] followed by one or two more keystrokes.

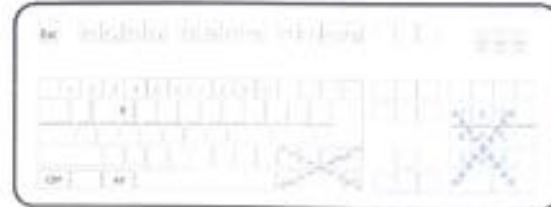
The built-in buzzer generates a high-pitched beep for correct hotkey command, otherwise, one short and one long beep are generated for a bad command, in which, the bad key command won't be sent to the extender unit or the selected computer.

### Mask Hotkey Switch

The hotkey commands of KVM Switches vary from model to model; and it may cause hotkey errors, unpredictable result between the Extender Unit and mixed types of KVM Switch that connect to each other. The Hotkey Mask extremely simplifies the hotkey control in cascade architecture; through the mask ON, users can bypass the Extender Unit and directly apply the KVM Switch built-in hotkey commands to access and configure the cascaded computer(s) / KVM Switch(es). More details about this feature can be found in the following section "Operations on Hotkey Mask".

### Alternate Hotkey Approach

Press and Hold push button two seconds followed by one keystroke can be applied as the alternate hotkey approach for specific hotkey features. The KVM Extender is incapable of conducting any hotkey controls when its hotkey function is masked (Hotkey Mask Switch "ON"); this alternate approach is especially useful in this state. For the details of hotkey commands, please check the following sections "Hotkey Commands" and "Alternate Hotkey Control".



## Hotkey Commands

- Prior to any hotkey command input, please enable either of two modes as the following:  
**Standard Mode** by input the hotkey command [left **Ctrl** + left **Ctrl** + **Alt** + **E**] and then one *beep* should be generated as the confirmation.  
**Compatibility Mode** by input the hotkey command [left **Ctrl** + left **Ctrl** + **Alt** + **E**] and then two *beeps* should be generated as the confirmation; or Users can switch the mode alternatively by repeating this hotkey command.
- Only the key **Ctrl** located on the lower-left corner of the keyboard is eligible for hotkey commands.
- The hotkey command will be *automatically time-out*, if there is no activity detected by the keyboard *within 3 seconds* after the leading code input.
- When the mask hotkey switch is set to "ON", the **Extender Unit** masks up itself in this state, users can sit in front of the **Extender** and directly apply the **KVM Switch** built-in hotkey commands to configure the computers that attached to the **KVM Switch** as if the user is virtually sitting in front of the **KVM Switch**.

**NOTE:** **Standard Mode** is defined as the state of the **KVM Extender** without additional connection to any **KVM switch(es)**.  
**Compatibility Mode** is defined as the state of the **KVM Extender** with connection to **KVM Switch(es)**.

**NOTE:** **[Leading Code]** denotes that,  
in **Standard Mode**, the hotkey sequence [ left **Ctrl** + left **Ctrl** ]  
in **Compatibility Mode**, the hotkey sequence [ left **Ctrl** + left **Ctrl** + **E** ]

**NOTE:** **[BTN]** denotes that **Press and Hold** the Push Button in the top panel for two seconds.

**NOTE:** The hotkey state will be *automatically time-out*, if

1. There is no activity detected by the keyboard *within 6 seconds* after **Press and Hold** the Push Button two seconds.
2. Press the button **Esc** once to escape from the hotkey mode.
3. Press the Push Button once to escape from the hotkey mode and switch to the mode between the Local and Remote.

**NOTE:** **Console Unit** is not capable of draw any power from the attached computer(s), and need a switching AC Adaptor DC 9V to power up.

**NOTE:** By default, the EDID setting between the **Console Unit** and **Computer Unit** will concur with the **Console Unit** setting after reboot, blackout, or CATx cable reconnection.



Console Unit Hotkey Commands				Function Description
Mask Hotkey: OFF		Mask Hotkey: ON		
Hotkey	Alternate Hotkey	Hotkey	Alternate Hotkey	
[Ctrl] + [Ctrl] + [Alt] + [E]	None	None	None	<b>Cascading status selection</b> <i>Two beeps:</i> enable <b>Compatibility Mode</b> , and the user of <b>Console Unit</b> accessing to the <b>KVM switch</b> that is connecting to <b>Computer Unit</b> . <i>One beep:</i> disable <b>Compatibility Mode</b> .
[Leading Code] + [Esc]	None	None	None	<b>Escape from hotkey mode</b>
[Leading Code] + [1]	None	None	None	<b>Mode selection in Sequence</b> switch console control between Local Computer and Remote Computer
[Leading Code] + [F2]	None	None	None	
[Leading Code] + [1]	None	None	None	<b>Local mode selection</b> enable the user at the <b>Console Unit</b> accessing to the computer on the <b>Console Unit</b> .
[Leading Code] + [2]	None	None	None	<b>Remote mode selection</b> enable the user at the <b>Console Unit</b> exclusive accessing to the <b>Computer Unit</b> . (only if the <b>Computer Unit</b> is in Remote or Auto mode). Disable <b>Computer Unit</b> user accessing to the <b>Computer Unit</b> during this mode.
[Leading Code] + [F11]	[BTN] + [F11] (2 Sec.)	N/A	[BTN] + [F11] (2 Sec.)	<b>Video adjustment entrance</b> More video quality setting can be found here.
[Leading Code] + [F12]	[BTN] + [F12] (2 Sec.)	N/A	[BTN] + [F12] (2 Sec.)	<b>Mouse resynchronized (for PS/2 model only)</b>
[Leading Code] + [V] + 4 digits	[BTN] + [V] + 4 digits (2 Sec.)	N/A	[BTN] + [V] + 4 digits (2 Sec.)	<b>Video synchronization</b> Prevent the video resolution setting from exceeding the capability of the connected display (require CPU reboot). 10 options for video resolution are available input 4 digits with: 1007 for resolution of 1024 x 0768 1210 for resolution of 1280 x 1024 1612 for resolution of 1600 x 1200 1914 for resolution of 1920 x 1440 1307 for resolution of 1360 x 0768 1409 for resolution of 1440 x 0900 1410 for resolution of 1440 x 1050 1610 for resolution of 1680 x 1050 1910 for resolution of 1920 x 1080 1912 for resolution of 1920 x 1200
Follow the <b>KVM Switch User Manual</b> (applicable in <b>Compatibility Mode</b> only)				<b>CPU port selection of KVM Switch</b>

Computer Unit Hotkey Commands				Function Description
Mask Hotkey: OFF		Mask Hotkey: ON		
Hotkey	Alternate Hotkey	Hotkey	Alternate Hotkey	
[Ctrl] + [Ctrl] + [Alt] + [E]				<b>Cascading status selection</b> Two beeps: enable Compatibility Mode, and the users at Computer Unit accessing to the KVM switch that connects to the Computer Unit One beep: disable Compatibility Mode
[Leading Code] + [Esc]				<b>Escape from hotkey mode</b>
[Leading Code] + [T]				<b>Mode selection in sequence</b> Toggle switch to select [Auto], [Local On], or [Remote On] mode.
[Leading Code] + [F2] <small>(Applicable in Standard Mode only)</small>				<b>Local mode selection</b> enable the user at Computer Unit exclusive accessing to the KVM Switch that connects to Computer Unit. Disables the Console Unit user accessing.
[Leading Code] + [F3]				<b>Remote mode selection</b> enable the user at Console Unit exclusive accessing to the KVM Switch that connects to Computer Unit. Disables the user at the Computer Unit accessing to the connected KVM Switch.
[Leading Code] + [F3]				<b>Auto mode selection</b>
[Leading Code] + [F3]	[BTN] + [F3] (2 Sec.)	N/A	[BTN] + [F3] (2 Sec.)	<b>Latch time selection</b> Auto mode latch time setting, the extender generates 1 to 4 beeps to indicate the duration of latch time: 5, 15, 30, 60 seconds respectively.
[Leading Code] + [F6]	[BTN] + [F6] (2 Sec.)	N/A	[BTN] + [F6] (2 Sec.)	<b>Privacy setting *</b> Configure the Computer Unit Video Signal
[Leading Code] + [F12]	[BTN] + [F12] (2 Sec.)	N/A	[BTN] + [F12] (2 Sec.)	<b>Mouse resynchronized (for PS/2 model only)</b>
[Leading Code] + [V] + 4digits	[BTN] + [V] + 4digits (2 Sec.)	N/A	[BTN] + [V] + 4digits (2 Sec.)	<b>Video synchronization</b> Prevent the video resolution setting from exceeding the capability of the connected display (require CPU reboot). 10 alternatives of video resolution are available: Input 4 digits with 1007 for resolution of 1024 x 768 1210 for resolution of 1280 x 1024 1612 for resolution of 1600 x 1200 1914 for resolution of 1920 x 1440 1307 for resolution of 1360 x 1025 1409 for resolution of 1440 x 1060 1410 for resolution of 1440 x 1050 1610 for resolution of 1680 x 1050 1910 for resolution of 1920 x 1080 1912 for resolution of 1920 x 1200
Follow the KVM Switch User Manual (Applicable in Compatibility Mode only)				<b>CPU port selection of KVM Switch</b>

**NOTE:** Standard Mode is defined as the state of the KVM Extender without additional connection to any KVM switch(es).  
Compatibility Mode is defined as the state of the KVM Extender with connection to KVM Switch(es).

**NOTE:** [Leading Code] denotes that,  
in Standard Mode, the hotkey sequence [left Ctrl] + [left Ctrl]  
in Compatibility Mode, the hotkey sequence [left Ctrl] + [left Ctrl] + [E]

**NOTE:** [BTN] denotes that Press and Hold the Push Button in the top panel for two seconds

- NOTE:** The hotkey state will be automatically time-out, if
1. There is no activity detected by the keyboard within 6 seconds after Press and Hold the Push Button two seconds.
  2. Press the button [Esc] once to escape from the hotkey state.
  3. Press the button Push Button once to escape from the hotkey state and switch to the mode among the Auto, Local and Remote.

**\*NOTE:** Please identify the current mode (in either Local or Auto mode) by checking the Computer Unit LED first, then, through repeating the hotkey commands for privacy setting, the KVM Extender generates 1 to 3 beeps to indicate the statuses of the Computer Unit as follows:

#### A. Computer Unit in Local mode

(Remote LED: Off, Local LED: On)

- One beep: Reset to Factory Default.
- Two or three beeps: Disable the output video signal of Computer Unit.

#### B. Computer Unit in Auto mode

(Remote / Local LED flashes alternately)

- One beep: Reset to Factory Default.
- Two beeps: By triggering keyboard / mouse, users can disable the output video signal of Computer Unit temporarily. (The Computer Unit users protect the privacy for 5, 15, 30, and 60 seconds. See the above table; Latch time selection for more descriptions)
- Three beeps: By triggering keyboard / mouse, the Console Unit or Computer Unit users can disable the output video signal temporarily. (The users protect the privacy for 5, 15, 30, and 60 seconds as well)



## -----Alternate Hotkey Control

No matter of the mask hotkey ON or OFF, users can Press and Hold the push button on the top panel for two seconds instead of the leading code [ **Ctrl** + **Ctrl** ] or [ **Ctrl** + **Ctrl** + **E** ] for some specific hotkey control as outlined below.

### Configuration on Console Unit

1. To enter the Video Adjustment Mode

**Press & Hold push button 2 Sec.** + **F11**

Please refer to the section "Video Adjustment" for further configurations.

2. To synchronize the video resolution between Console Unit and Computer Unit

**Press & Hold push button 2 Sec.** + **V** + 4 digits

Please refer to the section "Hotkey Control" for further configurations.

3. Mouse resynchronized (for PS/2 Model only)

**Press & Hold push button 2 Sec.** + **F12**

### Configuration on Computer Unit

1. To set the duration of latch time

**Press & Hold push button 2 Sec.** + **F3**

2. To set the privacy

**Press & Hold push button 2 Sec.** + **F6**

3. To synchronize the video resolution between Console Unit and Computer Unit

**Press & Hold push button 2 Sec.** + **V** + 4 digits

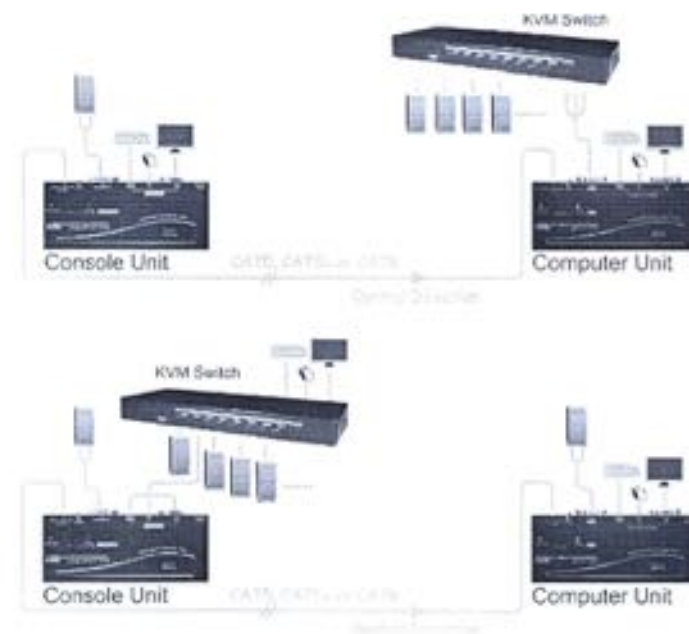
Please refer to the section "Hotkey Control" for further configurations.

4. Mouse resynchronized (for PS/2 Model only)

**Press & Hold push button 2 Sec.** + **F12**

## -----Cascade Configuration

The KVM Extender can be connected to the KVM Switch in compliance with the "Cascade Configuration". In this case, there are some patterns of connection may be conducted in a certain situations. However, to prevent from any conflict via hotkey commands among the connected Units, the **E** key is required to add and follow behind the **Ctrl** + **Ctrl** for accessing to the KVM Extender, which will enable users to manage the KVM Extender directly. Moreover, a shortcut through Hotkey Mask significantly simplifies the cascade hotkey configuration. The highly expandable cascade architecture that easily accommodates additional servers / computers requires complex connections and installations, please refer to the "Notice of Cascade Connection" stressed below for better management of your system.



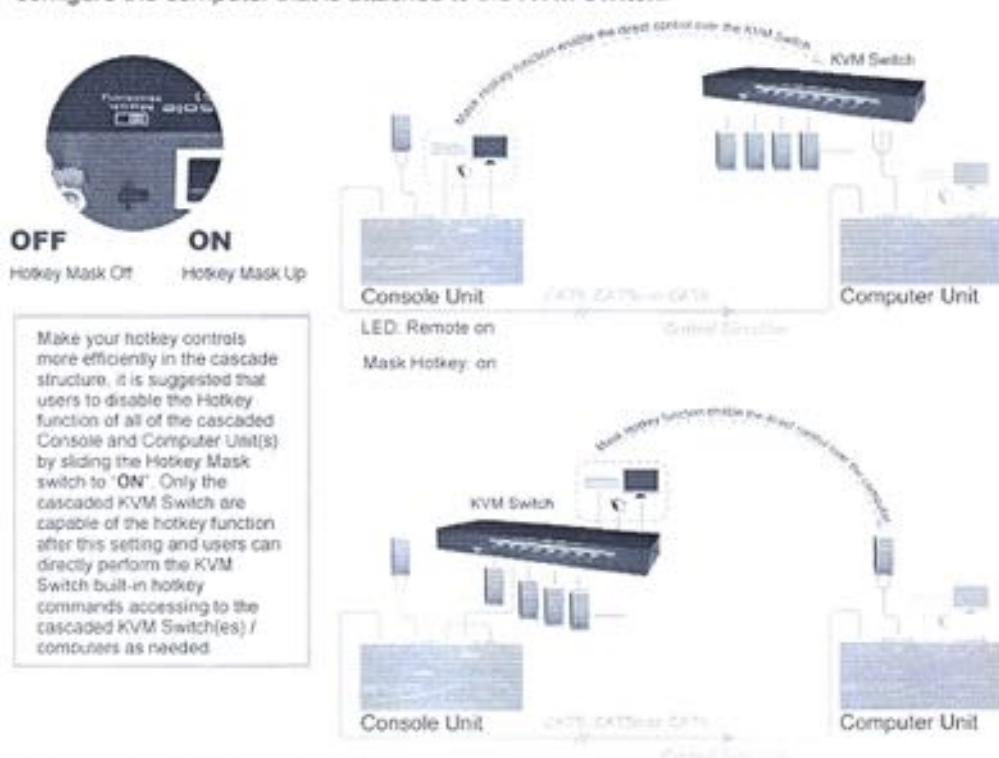
### Notice of Cascade Connection

1. The external power source is required to supply enough power to the **Extender Unit** when connecting to the KVM Switch. Users can purchase optional power adapter from your local dealers.
2. To prevent from wrong keystrokes for Hotkey control to **Console Unit** on **KVM Extender**, the parameters such as the latch time and push button control should be set up before connecting to the KVM switch.

## Mask Hotkey Switch

A Mask Hotkey Switch located on the rear panel of both **Console Unit** and **Computer Unit** can be slid ON/OFF to switch hotkey control between the KVM Switch cascaded / Computer connected accordingly. Through sliding Mask Hotkey Switch "ON" to mask up the **Extender Unit** itself, as if users actually sit in front of the **KVM Switch** to directly configure the attached **computers** by applying the **KVM Switch** built-in hotkey commands.

For instance, an IT administrator is sitting front of the **Console Unit**, he pre-set the **Console Unit** to **remote** mode for accessing to the **KVM Switch** that is attached to **Computer Unit**, then slide "ON" the Mask Hotkey Switch on the **Console Unit**, after that, he can directly apply the **KVM Switch** built-in hotkey commands on the **Console Unit** to configure the computer that is attached to the **KVM Switch**.



## Alternate Hotkey Control

The **KVM Extender** is incapable of conducting any hotkey controls when its hotkey function is **masked**. The combination of top panel **push button** and **one keystroke** can be applied as the alternate approach for some specific hotkey controls. For the details of hotkey commands, please go back to the previous section "Alternate Hotkey Controls".

## Cable Requirements

The cable Category 5 (CAT5) terminated with RJ45 connectors is normally used for the interconnection between **Computer Unit** and **Console Unit**. It's easy to get from the local stores or call your dealers for help. Besides, CAT5e or CAT6 are applicable to the **KVM Extender**. This CAT5 is not provided in the standard package mainly because it is subject to the different length you may require. However, the better quality CATx cable the longer extend. And, the higher resolution the shorter cable length.

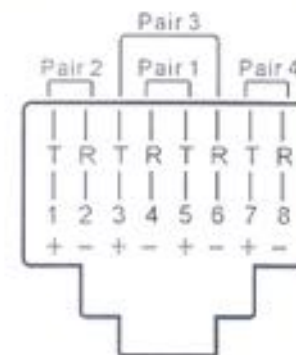
## CAT5 Cable

The **KVM Extender** needs a piece of unshielded twisted pair (UTP) cable.



The cable must be wired in compliance with the EIA/TIA 568B industry standard

**Note:** CAT5, CAT5e or CAT6 cables are applicable to the **KVM Extender** pair.



Above diagram shows the RJ45 connector of a CAT5 cable with its metal contacts facing up.

## Troubleshooting

If you encounter problems with the **KVM Extender** during the installation or operations, please check through this section for a possible solution. If your problem is not listed here and you can not resolve the issue, please contact your local dealer for the fastest assistances.

Symptom	Action
No video signal	<ul style="list-style-type: none"> <li>◆ Verify that all the cables are qualified according to the hardware requirement section.</li> <li>◆ Verify that all the cables are properly connected to their ports and are firmly seated.</li> <li>◆ Use an alternative CATx cable connection between the unit of console and computer.</li> <li>◆ Power down the computer. Connect the monitor directly to the computer and power up again. If the monitor does not operate correctly direct to the computer, try another monitor.</li> </ul>
Poor video quality	<ul style="list-style-type: none"> <li>◆ Use the EIA / TIA 568B industry standard CATx cable for <b>KVM Extender</b> connection.</li> <li>◆ Unplug the CATx cable(s) from the <b>Extender</b>, then plug it / them back in.</li> <li>◆ Perform the video quality adjustment for the length of CATx being used.</li> </ul>
Keyboard hotkeys are inoperable when the <b>KVM Extender</b> connects with the <b>KVM Switch</b>	<ul style="list-style-type: none"> <li>◆ Apply compatibility mode hotkey commands.</li> <li>◆ Verify if the <b>Extender</b> has enough power.</li> </ul>
Computer units are inoperable	<ul style="list-style-type: none"> <li>◆ Verify if the unit have enough power. If the power is insufficient for the needs, purchase a power adapter from your local dealers.</li> </ul>
Problems continue to occur after checking the solutions above	<ul style="list-style-type: none"> <li>◆ Remove and reinstall each device, checking the connectors and sockets for bent pins or other damage.</li> </ul>

## Relative Products

KVM Extender (Max. Resolution: 1280 x 1024, Max. Distance: 150 M)		
PS/2 Console	USB Console	
PS/2 Computer	USB+PS/2 Computer	USB+PS/2 Computer
EKP-211	EKU-211	EUC-211
EKP-221	EKU-221	EUC-221
EKP-212	EKU-212	EUC-212
EKP-222	EKU-222	EUC-222
2 Accesses KVM Switch: One Local Console (USB) + One Remote Console (RJ-45)		
Computer Unit w/ 4~16 CPU Port expandable		
4-Port	8-Port	16-Port
UENV-2184D	UENV-2108D	UENV-2116D

## VGA CAT5 Extender

Model Number	Local Unit	Repeater Unit	Remote Unit	CAT5 Input	CAT5 Output	VGA Input	VGA Output	Remote Control Jack
EV-12L	-			NONE	1	1	2	NONE
EV-112L	-			NONE	2	1	2	NONE
EV-114L	-			NONE	4	1	1	NONE
EV-128L	-			NONE	8	1	2	NONE
ERV-128L	-			NONE	8	1	2	1
EV-1210L	-			NONE	10	1	2	NONE
ERV-1210L	-			NONE	10	1	2	1
EV-02R			-	1	NONE	NONE	2	NONE
EV-021X			-	1	1	NONE	2	NONE

Quick Order : EV-214 = EV-12L + EV-02R

## VGA + Audio CAT5 Extender

Model Number	Local Unit	Repeater Unit	Remote Unit	CAT5 Input	CAT5 Output	VGA Input	VGA Output	Remote Control Jack
EVA-12L	-			NONE	1	1	2	
EVA-128L	-			NONE	8	1	2	
ERVA-128L	-			NONE	8	1	2	1
EVA-02R			-	1	NONE	NONE	2	

Quick Order : EVA-214 = EVA-12L + EVA-02R

## ----- Specifications

USB + PS/2 Model		EXC-4022C	EXC-4012C	EXC-4021C	EXC-4011C	EXC-3022C	EXC-3012C	EXC-3021C	EXC-3011C	EXC-2022C	EXC-2012C	EXC-2021C	EXC-2011C	
Maximum Video Resolution		UXGA (1600 x 1200) / WUXGA (1920 x 1200)												
Extension Distance		400M				300M				200M				
Connection		CAT 5- RJ45 female												
Console Unit Connectors	Console	USB-A, female x 2 HDB15 female x 1	USB-A, female x 2 HDB15 female x 1	USB-A, female x 2 HDB15 female x 1	USB-A, female x 2 HDB15 female x 1	USB-A, female x 2 HDB15 female x 1	USB-A, female x 2 HDB15 female x 1	USB-A, female x 2 HDB15 female x 1	USB-A, female x 2 HDB15 female x 1	USB-A, female x 2 HDB15 female x 1	USB-A, female x 2 HDB15 female x 1	USB-A, female x 2 HDB15 female x 1	USB-A, female x 2 HDB15 female x 1	
	Computer	HDB15 female x 1	HDB15 female x 1			HDB15 female x 1	HDB15 female x 1			HDB15 female x 1	HDB15 female x 1			
Computer Unit Connectors	Console	USB-A, female x 2 HDB15 female x 1		USB-A, female x 2 HDB15 female x 1		USB-A, female x 2 HDB15 female x 1		USB-A, female x 2 HDB15 female x 1		USB-A, female x 2 HDB15 female x 1		USB-A, female x 2 HDB15 female x 1		
	Computer	HDB15 female x 1	HDB15 female x 1	HDB15 female x 1	HDB15 female x 1	HDB15 female x 1	HDB15 female x 1	HDB15 female x 1	HDB15 female x 1	HDB15 female x 1	HDB15 female x 1	HDB15 female x 1	HDB15 female x 1	
LED Indicators (Console Unit)	Local	On: Controls its computer	On: Controls its computer	x	x	On: Controls its computer	On: Controls its computer	x	x	On: Controls its computer	On: Controls its computer	x	x	
	Remote	On: Controls system remotely				On: Controls system remotely				On: Controls system remotely				
LED Indicators (Computer Unit)	Local	On: Controls local computer	x	On: Controls local computer	x	On: Controls local computer	x	On: Controls local computer	x	On: Controls local computer	x	On: Controls local computer	x	
	Remote	On: System is controlled remotely				On: System is controlled remotely				On: System is controlled remotely				
	Flash Alternately	Auto mode	x	Auto mode	x	Auto mode	x	Auto mode	x	Auto mode	x	Auto mode	x	
Video Adjustment	Equalizer Tune* (Sharpness)	16 Levels ( 4~16 Scales )												
	Gain Tune* (Brightness)	16 Levels ( 4~16 Scales )												
	Skew	Red Color Tune**	8 Levels ( 2~8 Scales )											
		Green Color Tune**	8 Levels ( 2~8 Scales )											
Blue Color Tune**		8 Levels ( 2~8 Scales )												
Push Button		Switch to the control status												
Power Supply (min)		External power adapter DC9V, 600mA												
Weight (per pair)		293g x 2												
Dimensions (W x D x H) (per pair)		156 x 65 x 20 (mm) x 2												

\* Each level contains 4~16 scales of fine tune that may differ from model to model

\*\* Each level contains 2~8 scales of fine tune that may differ from model to model



## Console Unit Hotkey Control

Console Unit Hotkey Commands				Function Description
Mask Hotkey: OFF		Mask Hotkey: ON		
Hotkey	Alternate Hotkey	Hotkey	Alternate Hotkey	
<b>Ctrl + Ctrl + Alt + E</b>				<b>Cascading status selection</b> <u>Two beeps</u> : enable <b>Compatibility Mode</b> , and the user at <b>Console Unit</b> accessing to the <b>KVM switch</b> that is connecting to <b>Computer Unit</b> <u>One beep</u> : disable <b>Compatibility Mode</b>
[Leading Code]+ <b>Esc</b>				<b>Escape from hotkey mode</b>
[Leading Code]+ <b>T</b>				<b>Mode selection in Sequence</b> switch console control between Local Computer and Remote Computer
[Leading Code]+ <b>F2</b>				<b>Local mode selection</b> enable the user at the <b>Console Unit</b> accessing to the computer on the <b>Console Unit</b>
[Leading Code]+ <b>F1</b>				<b>Remote mode selection</b> enable the user at the <b>Console Unit</b> exclusive accessing to the <b>Computer Unit</b> (only if the <b>Computer Unit</b> is in Remote or Auto mode). Disable <b>Computer Unit</b> user accessing to the <b>Computer Unit</b> during this mode
[Leading Code]+ <b>F11</b>	[BTN]+ <b>F11</b> (2 Sec.)	N/A	[BTN]+ <b>F11</b> (2 Sec.)	<b>Video adjustment entrance</b> More video quality setting can be found here
[Leading Code]+ <b>F12</b>	[BTN]+ <b>F12</b> (2 Sec.)	N/A	[BTN]+ <b>F12</b> (2 Sec.)	<b>Mouse resynchronized</b> (for PS/2 model only)
[Leading Code]+ <b>V</b> +4 digits	[BTN]+ <b>V</b> +4 digits (2 Sec.)	N/A	[BTN]+ <b>V</b> +4 digits (2 Sec.)	<b>Video synchronization</b> Prevent the video resolution setting from exceeding the capability of the connected display (require CPU reboot). 10 options for video resolution are available. Input 4 digits with 1007 for resolution of 1024 x 0256 1210 for resolution of 1280 x 1024 1612 for resolution of 1600 x 1200 1914 for resolution of 1920 x 1440 1307 for resolution of 1360 x 0208 1409 for resolution of 1440 x 0900 1410 for resolution of 1440 x 1050 1610 for resolution of 1680 x 1050 1910 for resolution of 1920 x 1080 1912 for resolution of 1920 x 1200
Follow the <b>KVM Switch User Manual</b> (applicable in <b>Compatibility Mode</b> only)				<b>CPU port selection of KVM Switch</b>

**NOTE:** **Standard Mode** is defined as the state of the **KVM Extender** without additional connection to any **KVM switch(es)**  
**Compatibility Mode** is defined as the state of the **KVM Extender** with connection to **KVM Switch(es)**

**NOTE:** [Leading Code] denotes that

in **Standard Mode**, the hotkey sequence [ left **Ctrl** + left **Ctrl** ]

in **Compatibility Mode**, the hotkey sequence [ left **Ctrl** + left **Ctrl** + **E** ]

**NOTE:** [BTN] denotes that **Press and Hold** the **Push Button** in the top panel for two seconds

**NOTE:** The hotkey state will be automatically time-out, if

1. There is no activity detected by the keyboard within 6 seconds after **Press and Hold** the **Push Button** two seconds
2. Press the button **Esc** once to escape from the hotkey mode
3. Press the **Push Button** once to escape from the hotkey mode and switch to the mode between the Local and Remote

**NOTE:** **Console Unit** is not capable of draw any power from the attached computer(s), and need a switching AC Adaptor DC 9V to power up

**NOTE:** By default, the EDID setting between the **Console Unit** and **Computer Unit** will concur with the **Console Unit** setting after reboot, blackout, or CATx cable reconnection.

## Video Adjustment (for Console Unit Only)

To enter the Video Adjustment Mode in Non-Cascade (Standard) Structure:

[Press left **Ctrl** + left **Ctrl** + **F11**]

To enter the Video Adjustment Mode in Cascade (Compatibility) Structure:

[Press left **Ctrl** + left **Ctrl** + **E** + **F11**]

While entering this mode, the LED **Number Lock** and **Scroll Lock** are flashing simultaneously at the moment. Then, users can perform the video adjustment by hotkey commands as the table shown below. Be aware, the idle time-out is 30 seconds. That is, it will automatically escape from video adjustment mode if no action is detected by the keyboard within 30 seconds.

To exit the video adjustment mode, three simplified approaches are available:

1. No action is detected by the keyboard for 30 seconds.
2. Push once the escape button **Esc** on the keyboard attached to the **Console Unit**.
3. Push once the push button on the top panel of the **Console Unit**

Console Unit Hotkey Commands	Function Description
<b>E</b>	<b>Equalizer / Gain Adjustment</b> <b>Equalizer (Sharpness):</b> <b>Num Lock</b> LED + <b>Caps Lock</b> LED Flashing 1. Press <b>←</b> or <b>→</b> to coarse tune, there are 16 levels for adjusting 2. Press and Hold <b>Shift</b> + <b>←</b> or <b>→</b> to fine tune. <b>Gain (Brightness):</b> <b>Caps Lock</b> LED + <b>Scroll Lock</b> LED Flashing 1. Press <b>↑</b> or <b>↓</b> to coarse tune, there are 16 levels for skew. 2. Press and Hold <b>Shift</b> + <b>↑</b> or <b>↓</b> to fine tune.
<b>G</b>	<b>Green Color Adjustment</b> <b>Caps Lock</b> LED Flashing 1. Press <b>←</b> or <b>→</b> to coarse tune, there are 8 levels for adjusting. 2. Press and Hold <b>Shift</b> + <b>←</b> or <b>→</b> to fine tune.
<b>B</b>	<b>Blue Color Adjustment</b> <b>Scroll Lock</b> LED Flashing 1. Press <b>←</b> or <b>→</b> to coarse tune, there are 8 levels for adjusting. 2. Press and Hold <b>Shift</b> + <b>←</b> or <b>→</b> to fine tune.
<b>R</b>	<b>Red Color Adjustment</b> <b>Num Lock</b> LED Flashing 1. Press <b>←</b> or <b>→</b> to coarse tune, there are 8 levels for adjusting. 2. Press and Hold <b>Shift</b> + <b>←</b> or <b>→</b> to fine tune.
<b>ESC</b>	Escape from Video Adjustment Mode.

**NOTE:** Make sure to connect the unit and devices properly before the video adjustment

**NOTE:** The video adjustment function is available on the **Console Unit ONLY**.

**NOTE:** An alternate hotkey approach to enter Video Adjustment mode is available for users to choose as desire, in which, users can simply press the top panel push button followed by input the key **F11**. For more detailed information, please refer to the section "Hotkey Commands" and "Alternate Hotkey Control".

## Computer Unit Hotkey Control

Computer Unit Hotkey Commands				Function Description
Mask Hotkey: OFF		Mask Hotkey: ON		
Hotkey	Alternate Hotkey	Hotkey	Alternate Hotkey	
[Ctrl] + [Ctrl] + [Alt] + [F]				<b>Cascading status selection</b> Two beeps: enable <b>Compatibility Mode</b> , and the users at Computer Unit accessing to the KVM switch that connects to the Computer Unit. One beep: disable <b>Compatibility Mode</b> .
[Leading Code] + [Esc]				<b>Escape from hotkey mode</b>
[Leading Code] + [1]				<b>Mode selection in sequence</b> Toggle switch to select <b>Auto</b> , <b>Local On</b> , or <b>Remote On</b> mode.
[Leading Code] + [2]				
[Leading Code] + [3]				<b>Local mode selection</b> enable the user at <b>Computer Unit</b> exclusive accessing to the <b>KVM Switch</b> that connects to <b>Computer Unit</b> . Disables the <b>Console Unit</b> user accessing.
[Leading Code] + [4]				<b>Remote mode selection</b> enable the user at <b>Console Unit</b> exclusive accessing to the <b>KVM Switch</b> that connects to <b>Computer Unit</b> . Disables the user at the <b>Computer Unit</b> accessing to the connected <b>KVM Switch</b> .
[Leading Code] + [5]				<b>Auto mode selection</b>
[Leading Code] + [F5]	[BTN] + [F5] (2 Sec.)	N/A	[BTN] + [F5] (2 Sec.)	<b>Latch time selection</b> <b>Auto</b> mode latch time setting, the extender generates 1 to 4 beeps to indicate the duration of latch time: <b>5, 15, 30, 60</b> seconds respectively.
[Leading Code] + [F6]	[BTN] + [F6] (2 Sec.)	N/A	[BTN] + [F6] (2 Sec.)	<b>Privacy setting</b> Configure the Computer Unit Video Signal.
[Leading Code] + [F12]	[BTN] + [F12] (2 Sec.)	N/A	[BTN] + [F12] (2 Sec.)	<b>Mouse resynchronized (for PS/2 model only)</b>
[Leading Code] + [V] + 4digits	[BTN] + [V] + 4digits (2 Sec.)	N/A	[BTN] + [V] + 4digits (2 Sec.)	<b>Video synchronization</b> Prevent the video resolution setting from exceeding the maximum capability of the connected display (require CPU reboot). 10 alternatives of video resolution are available. Input 4 digits with 1007 for resolution of 1024 x 768 1210 for resolution of 1280 x 1024 1612 for resolution of 1600 x 1200 1914 for resolution of 1920 x 1440 1307 for resolution of 1360 x 765 1409 for resolution of 1440 x 900 1410 for resolution of 1440 x 1050 1610 for resolution of 1680 x 1050 1910 for resolution of 1920 x 1080 1912 for resolution of 1920 x 1200
Follow the KVM Switch User Manual (applicable in Compatibility Mode only)				<b>CPU port selection of KVM Switch</b>

**NOTE:** Standard Mode is defined as the state of the KVM Extender without additional connection to any KVM switch(es).  
Compatibility Mode is defined as the state of the KVM Extender with connection to KVM Switch(es).

**NOTE:** [Leading Code] denotes that.

in Standard Mode, the hotkey sequence [left Ctrl] + [left Ctrl]  
in Compatibility Mode, the hotkey sequence [left Ctrl] + [left Ctrl] + [1]

**NOTE:** [BTN] denotes that Press and Hold the Push Button in the top panel for two seconds.

**NOTE:** The hotkey state will be automatically time-out, if

1. There is no activity detected by the keyboard within 6 seconds after Press and Hold the Push Button two seconds.
2. Press the button [Esc] once to escape from the hotkey mode.
3. Press the button Push Button once to escape from the hotkey mode and switch to the mode among the Auto, Local and Remote.

**\*NOTE:** Please identify the current mode (in either Local or Auto mode) by checking the **Computer Unit** LED first, then, through repeating the hotkey commands for privacy setting, the **KVM Extender** generates 1 to 3 beeps to indicate the statuses of the **Computer Unit** as follows.

#### A. Computer Unit in Local mode

(Remote LED: Off, Local LED: On)

- One beep: Reset to Factory Default.
- Two or three beeps: Disable the output video signal of **Computer Unit**.

#### B. Computer Unit in Auto mode

(Remote / Local LED flashes alternately)

- One beep: Reset to Factory Default.
- Two beeps: By triggering keyboard / mouse, users can disable the output video signal of **Computer Unit** temporarily. (The **Computer Unit** users protect the privacy for 5, 15, 30, and 60 seconds. See the above table: **Latch time selection** for more descriptions).
- Three beeps: By triggering keyboard / mouse, the **Console Unit** or **Computer Unit** users can disable the output video signal temporarily. (The users protect the privacy for 5, 15, 30, and 60 seconds as well).