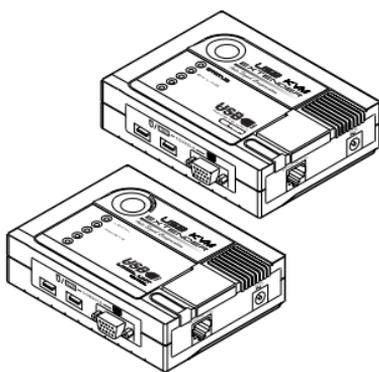


# USB KVM EXTENDER



## USER MANUAL

# CE-700

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-700L KVM Extender (Local Unit)
- ◆ 1 CE-700R KVM Extender (Remote Unit)
- ◆ 1 CS Custom KVM Cable
- ◆ 2 Power Adapters
- ◆ 1 User Manual

If anything is damaged or missing, contact your dealer.

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**Note:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- ◆ Reorient or relocate the receiving antenna;
- ◆ Increase the separation between the equipment and receiver;
- ◆ Connect the equipment into an outlet on a circuit different from that which the receiver is connected;
- ◆ Consult the dealer or an experienced radio/television technician for help.



## OVERVIEW

The CE-700 is a USB (Universal Serial Bus) based KVM Extender that allows access to a computer system from a remote USB console (USB keyboard, monitor, and USB mouse).

Because it allows access to a computer system from a remote console, the CE-700 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.

The CE-700 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.

The CE-700 improves on previous designs by: 1) using inexpensive Cat 5 cable (the kind commonly used in Ethernet networks), instead of bulkier, more expensive, standard cables, for a much neater, more convenient, more reliable data transfer connection; 2) it is able to sense the distance to the system and automatically adjusts the gain accordingly; and 3) it features a custom ASIC to ensure the utmost in reliability and compatibility.

Setup is as easy as can be - simply connect the computer system box and local console to the Local CE-700 Module; run the Cat 5 cable to the Remote CE-700 Module (up to 150 meters away); and plug the remote console into the Remote Module.

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**Note:** You can control numerous remote systems from a single console by combining the CE-700 with a KVM switch.

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## **FEATURES**

- ◆ Cat 5 cable to connect the local and remote units – up to 150 meters apart
- ◆ Auto Signal Compensation (ASC)
- ◆ USB Keyboard and USB Mouse Ports
- ◆ Dual console operation – control your system from both the local and remote USB keyboard, monitor, and mouse consoles
- ◆ USB overcurrent detection and prevention
- ◆ Push button selection of the active console
- ◆ High resolution video – up to 1280 x 1024
- ◆ Supports VGA, SVGA, and multisync monitors
- ◆ Local monitor supports DDC; DDC2; DDC2B
- ◆ Hot Pluggable
- ◆ Easy to install – no software required – connecting cables to the devices is all it takes

## SYSTEM REQUIREMENTS

### CONSOLES

- ◆ A VGA, SVGA, or Multisync monitor capable of the highest resolution that you will be using on any computer in the installation
- ◆ A USB keyboard
- ◆ A USB mouse

- 
- Note:** 1. 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.
2. You must use the same brand and model of mouse on both the local and remote units.
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### COMPUTERS

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

- ◆ A VGA, SVGA, or Multisync card
- ◆ USB Host Controller and Type A USB Port

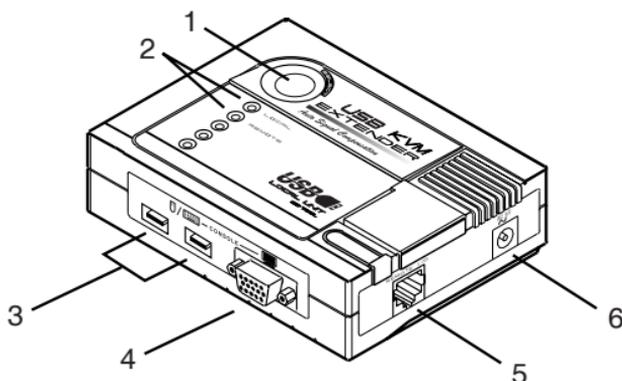
### CABLES

- ◆ For optimal signal integrity, and to simplify the layout, we strongly recommend that you use the high quality CS Custom KVM Cable that is provided with this package.
- ◆ Cat 5 cable is the minimum required to connect the local and remote CE-700 units. Cable of a lesser standard will result in degrading the video signal. For best performance, we strongly recommend Cat 5 cable.

# COMPONENTS

## THE LOCAL UNIT (CE-700L)

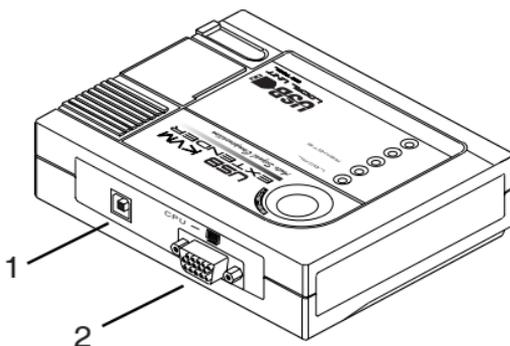
### Front View:



| # | Description                     | Function  |
|---|---------------------------------|---|
| 1 | Operating Mode Selection Switch | Pressing this button toggles between the operating mode choices: <ul style="list-style-type: none"><li>◆ Local: only the local console can control the system(s)</li><li>◆ Auto: both consoles can control the system(s).</li></ul> |
| 2 | LEDs                            | The Local Unit has two LEDs to indicate the operating status of the Local and Remote units (see <i>CE-700L (Local Unit)</i> , p. 11).   |
| 3 | USB Keyboard and Mouse Ports    | The local USB keyboard and mouse plug into these connectors.  |
| 4 | Monitor Port                    | The local monitor plugs into this connector.  |
| 5 | Remote I/O                      | The Cat 5 twisted pair cable that connects to the Remote Unit plugs into this connector.  |
| 6 | Power Jack                      | The cable from the AC Power Adapter plugs into this jack.   |

## THE LOCAL UNIT (CE-700L)

### Rear View:

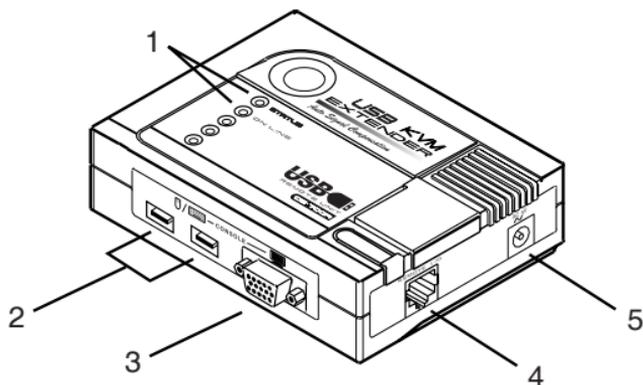


| # | Description  | Function   |
|---|--------------|--|
| 1 | USB Port     | The <b>B Connector</b> of the USB KVM Custom Cable supplied with this package plugs in here.     |
| 2 | Monitor Port | The HDB-15 video connector of the USB KVM Custom Cable supplied with this package plugs in here. |

**Note:** If you are combining the CE-700 with a KVM switch, the KVM cable connects back to the respective ports on the Console section of the switch.

## THE REMOTE UNIT (CE-700R)

### Front View:



| # | Description                  | Function  |
|---|------------------------------|---|
| 1 | LEDs                         | The Remote Unit has two LEDs (Power and On Line) to indicate the operating status of the Local and Remote units (see <i>CE-700R (Remote Unit)</i> , p. 11). |
| 2 | USB Keyboard and Mouse Ports | The remote USB keyboard and USB mouse plug into these connectors.   |
| 3 | Monitor Port                 | The remote monitor plugs into this connector.   |
| 4 | Remote I/O                   | The Cat 5 cable that connects back to the Local Unit plugs into this connector.   |
| 5 | Power Jack                   | The cable from the AC Power Adapter plugs into this jack.   |

## INSTALLATION

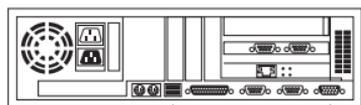
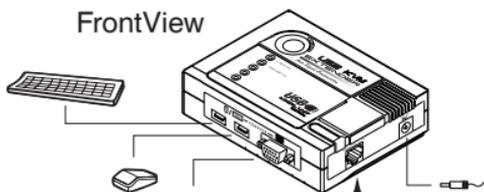
Setting up the CE-700 KVM Extender system is simply a matter of plugging in the cables. Refer to the installation diagram on the following page and do the following:

1. Make sure that all the equipment to be connected up is powered Off.
2. Plug the cables from the local console devices (mouse, keyboard, monitor), into their ports on the Console side of the Local Unit (CE-700L).
3. Plug the appropriate connectors on the USB KVM cable supplied with this unit into the CPU side of the CE-700L. Each connector is marked with an appropriate icon to indicate which it is.

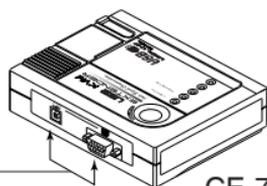
**Note:** The female monitor connector is the one that plugs into the CE-700L.

4. Plug the connectors on the other end of the cable into the appropriate ports on the computer (or Console section of the KVM switch - if you are using one). Each connector is marked with an appropriate icon to indicate which it is.
5. Plug either end of the Cat 5 cable into the CE-700L's Remote I/O port.
6. Plug one of the power adapters (supplied with this package) into an AC source; plug the adapter's power cable into the CE-700L's Power Jack
7. Plug the other end of the Cat 5 cable into the I/O port of the Remote Unit (CE-700R).
8. Plug the cables from the remote console devices (mouse, keyboard, monitor), into their ports on the Console side of the CE-700R.
9. Plug the second power adapter (supplied with this package) into an AC source; plug the adapter's power cable into the CE-700R's Power Jack.

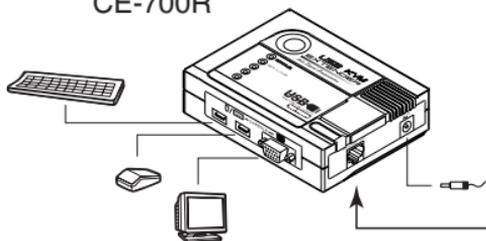
CE-700L  
FrontView



CE-700L  
Rear View



CE-700R



## OPERATION

The Local and Remote Units each have two LEDs to indicate their operating status, as shown in the tables, below:

### CE-700L (LOCAL UNIT)

| Operating Mode         | LEDs  |       |
|------------------------|-------|-------|
|                        | Local | Auto  |
| Local Console Active   | Flash | Off   |
| Remote Console Active  | Off   | Flash |
| Error / Disconnect     | On    | Off   |
| Not Ready              | Off   | Off   |
| Neither Console Active | On    | On    |

### CE-700R (REMOTE UNIT)

| Operating Mode         | LEDs  |       |
|------------------------|-------|-------|
|                        | Local | Auto  |
| Local Console Active   | Off   | On    |
| Remote Console Active  | Flash | On    |
| Error / Disconnect     | Off   | Flash |
| Not Ready              | Off   | Off   |
| Neither Console Active | On    | On    |

## TROUBLESHOOTING

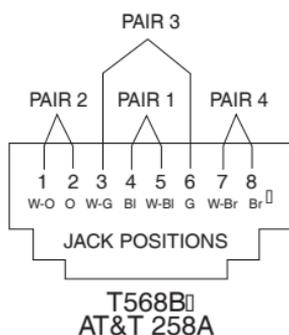
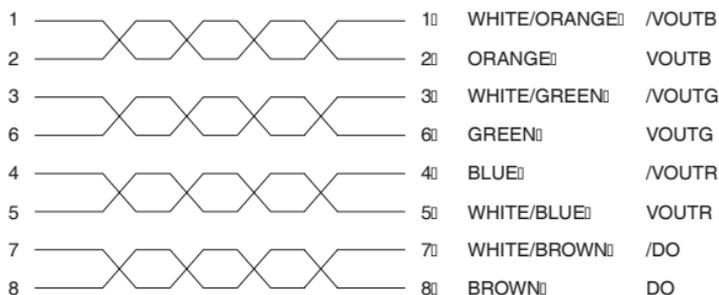
| Problem             | Action   |
|---------------------|--|
| No video            | Make sure that all cables are securely plugged into their sockets. |
| Poor video quality. | The video quality can be improved by reducing the refresh rate.    |

## SPECIFICATIONS

| Function               |          | CE-700L                       | CE-700R              |
|------------------------|----------|-------------------------------|----------------------|
| Connectors             | Keyboard | 2 x 6-pin Mini-DIN F          | 1 x 6-pin Mini-DIN F |
|                        | Mouse    | 2 x 6-pin Mini-DIN F          | 1 x 6-pin Mini-DIN F |
|                        | Monitor  | 1 x HDB-15 M<br>1 x HDB-15 F  | 1 x HDB-15 F         |
| LEDs                   |          | 1 x Local                     | 1 x Power On         |
|                        |          | 1 x Remote                    | 1 x On Line          |
| Function Keys          |          | 1 x Local/Auto Select         | N/A                  |
| Cable Length           |          | 150m [500'] (max.)            |                      |
| Video Resolution       |          | 1280 x 1024; DDC; DDC2; DDC2B |                      |
| Power Consumption      |          | AC 9V, 2.7W (max.)            | AC 9V, 4.0W (max.)   |
| Housing                |          | Plastic                       |                      |
| Weight                 |          | 0.30kg                        | 0.22kg               |
| Dimensions (L x W x H) |          | 13 x 10 x 3.5 cm              | 10 x 8 x 3.5 cm      |

\* DDC, DDC2, and DDC2B support is for the Local monitor only.

## TP WIRING DIAGRAMS



## 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         |

## **LIMITED WARRANTY**

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

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