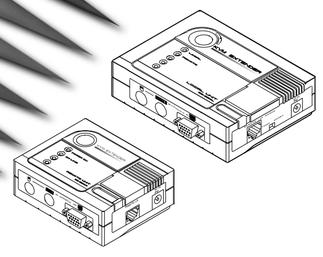
# KVM EXTENDER



## USER'S MANUAL

CE-220

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-220L Console Extender Local Unit
- 1 CE-220R Console Extender Remote Unit
- 1 Custom KVM Cable
- 2 Power Adapters
- 1 User Manual

When unpacking, check to make sure that all the components are there, and that nothing was damaged in shipping. If you encounter a problem, contact your dealer.

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## Overview

Because the CE-220 Console Extender System allows access to a computer system from a remote console (keyboard, monitor, and mouse), it is perfect for factory and construction sites, or any type of installation where the console needs to be kept in a conveniently accessible location, but you want the system equipment to reside in a safe place - away from dust, dirt, and harsh environmental influences.

The CE-220 Extender System 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 a location that offers convenient access.

The CE-220 Console Extender provides the ideal means to access the remote system box, since it improves on previous designs by using inexpensive Category 5 STP cable - the kind commonly used in Ethernet networks - instead of bulkier, more expensive, standard cables.



Category 5 cabling makes for a much neater, more convenient, more reliable data transfer connection. Setup is as easy as can be - simply connect the PC system box and local console to the Local CE-220 Module; run the STP cable to the Remote CE-220 Module (up to 150 m away); and plug the remote console into the Remote Module.

Note: You can control numerous remote systems from a single console by combining the CE-220 with KVM Switch.

## Features

- Uses Inexpensive, Reliable, Category 5 STP Ethernet Cable to Connect the Local and Remote Units
- Dual Console Operation - Control Your System From Both the Local and Remote PS/2 Keyboard, Mouse, and Monitor Consoles
- Push Button Selection of the Active Console
- High Resolution Video - Up To 1024 x 768 @ 150 m (max.)
- Supports VGA, SVGA, and Multisync Monitors
- Local Monitor Supports DDC2

## System Requirements

- Consoles

  A VGA, SVGA, or Multisync monitor capable of the highest resolution that you will be using on any PC in the installation

  A PS/2 Style Keyboard

  A PS/2 Style Mouse

  Note: You must use the same brand and model of mouse on both the local and remote units.



- PC

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

  A VGA, SVGA or Multisync card.

  A 6-pin mini-DIN (PS/2 style) mouse port.

  A 6-pin mini-DIN (PS/2 style) keyboard port.

- Cables

  Although it is possible to use standard extender cables to connect the computer to the CE-220L, for optimum signal integrity and tosimplify the layout, we strongly recommend that you use the high quality CS Custom Cable that is provided with this package.

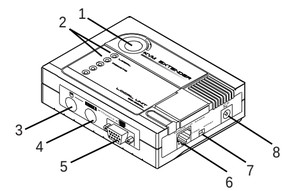
  Category 5 STP cable is required to connect the local and remote CE-220 units.

  Note: Using other types of cable (e.g. UTP cable) will result in degrading the video signal.

## Introduction

### The Local Unit (CE-220L)

Front View





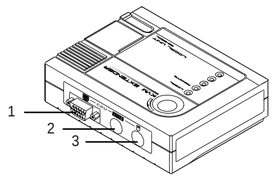

1. Operating Mode Selection Switch
   Pressing this button cycles you through the operating mode choices:
   Local - only the local console can control the system(s);
   Auto - both consoles can control the system(s)).
2. LEDs
   The Local Unit has two LEDs (Local and Remote) that function in the following manner:

| LED | Operating Mode | |
|---|---|---|
| | Local | Auto |
| Local | Lights to indicate that the local console is active (the Remote LED is out). | 1. Lights when the local console is active (the Remote LED is out)<br>2. Turns off when the remote console is active (the Remote LED turns on)<br>3. Flashes on and off alternately with the Remote LED when neither console is active. |
| Remote | The LED is Off | 1. Lights when the remote console is active (the Local LED is out)<br>2. Turns off when the local console is active (the Local LED turns on)<br>3. Flashes on and off alternately with the Local LED when neither console is active. |

3. Mouse Port
   The local PS/2 mouse plugs into this connector.
4. Keyboard Port
   The local PS/2 keyboard plugs into this connector.
5. Monitor Port
   The local monitor plugs into this connector.
6. Remote I/O
   The Category 5 twisted pair cable that connects to the Remote Unit plugs into this connector.
7. Range Switch
   Slide the switch to the Long position if the Remote Unit is located a long distance away (greater than 30 m); slide the switch to the Short position if the Remote Unit is located a short distance away.
8. AC 9V Power Jack
   The cable from the AC Power Adapter plugs into this jack.



### Rear View

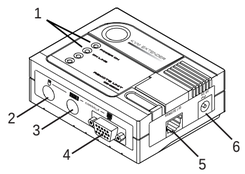



1. Monitor Port
   The extension cable that connects to the computer's VGA port plugs into this connector.
2. Keyboard Port
   The extension cable that connects to the computer's Keyboard port plugs into this connector.
3. Mouse Port
   The extension cable that connects to the computer's Mouse port plugs into this connector.

   Note: If you are combining the CE-220 with a KVM switch, the extension cable connects back to the respective ports on the Console section of the switch.

### The Remote Unit (CE-220R)

Front View




1.LEDs
The Remote Unit has two LEDs (Power and On Line) that function in the following manner:

| LED | Indication |
|---|---|
| Power | 1. Lights steadily to indicate that the connection to the Local Unit is ok.<br>2. Flashes when there is a problem with the connection to the Local Unit. |
| On Line | 1. Lights when the remote console is active.<br>2. Is Off when the local console is active.<br>3. Is Off when there is a problem with the connection to the Local Unit. |

2. Mouse Port
   The remote PS/2 mouse plugs into this connector.
3. Keyboard Port
   The remote PS/2 keyboard plugs into this connector.
4. Monitor Port
   The remote monitor plugs into this connector.
5. Remote I/O
   The Category 5 twisted pair cable that connects back to the Local Unit plugs into this connector.
6. AC 9V Power Jack
   The cable from the AC Power Adapter plugs into this jack.



## Installation

Setting up the Console Extender System is simply a matter of plugging in the cables:

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 CE-220L.
3. Plug the appropriate connectors on the KVM extension cable supplied with this unit into the CPU side of the CE-220L.

   Note: Each connector is marked with an appropriate icon to indicate which it is.
4. Plug the connectors on the other end of the cable into the appropriate ports on the PC system (or Console section of the KVM switch - if you are using one).

   Note: Each connector is marked with an appropriate icon to indicate which it is.
5. Plug one end of the Category 5 twisted pair cable into the Local Unit's Remote I/O port.
6. Slide the Range Switch to the Long position if the Remote Unit location is a long distance away (more than 30 m); slide the switch to the Short position if the Remote Unit location is a short distance away.
7. Plug one of the power adapters (supplied with this package) into an AC source; plug the adapter's power cable into the Local Unit's AC 9V Power Jack
8. Plug the other end of the Category 5 twisted pair cable into the Remote Unit's Remote I/O port.
9. Plug the cables from the remote console devices (mouse, keyboard, monitor), into their ports on the Console side of the CE-220R.
10. Plug the second power adapter (supplied with this package) into an AC source; plug the adapter's power cable into the Remote Unit's AC 9V Power Jack
11. Power On all the equipment



## Appendix

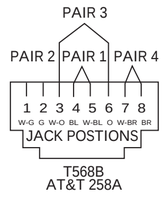
### Troubleshooting

| Symptom | Action |
|---|---|
| No Video | Make sure that all cables are securely plugged into their sockets. |

### TP Pin Assignments

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

### TP Wiring Diagram




### Specifications

| Function | | CE-220L | CE-220R |
|---|---|---|---|
| Connectors | Keyboard | 2 x 6 pin mini-DIN Female | 6 pin mini-DIN Female |
| | Mouse | 2 x 6 pin mini-DIN Female | 6 pin mini-DIN Female |
| | Monitor | 1 x 15 pin HDB Male<br>1 x 15 pin HDB Female | 15 pin HDB Female |
| | Unit To Unit | 8P8C Jack | |
| LEDs | | 1 Local<br>1 Remote | 1 Power On<br>1 On Line |
| Function Keys | | Local/Auto Select Pushbutton | N/A |
| Cable Length | | 150m [500] (max.) | |
| Video Resolution | | 1024 x 768 | |
| Power Consumption | | AC 9V 300mA (max.) | |
| Housing | | Plastic | |
| Weight | | 300 g | 220 g |
| Dimensions (L x W x H) | | 130 x 100 x 35 mm | 100 x 80 x 35 mm |



## Limited Warranty

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

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

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

### Radio & TV Interference

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 instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

この装置は、情報処理装置等電波障害自主規制協議会(VCCI)の基準に基づくクラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるように要求されることがあります。