



# Remotely control your computer

## Optional Accessories



CAT-5 Cables

## CAT5-7000

### Computer Extension : the CAT5-7000/CAT5-7500 Operate Dual-Display and Varied Peripherals Remotely

#### Full Multimedia Functionality Provided at Extended Distances

This hard-working dual-display extension solution comes in two versions that each allow multiple analog video, audio, control and support peripheral devices to be operated at any distance up to 330-feet (100-meters) from the computer. What differentiates the two is the video extension technique used and the amount of cabling needed for extension.

#### CAT5-7000 - Multipurpose and Flexible

The CAT5-7000 is built to extend two analog monitors, one USB-equipped computer peripheral (such as a scanner or printer), one PS/2-based keyboard/mouse, two audio outputs (for two sets of speakers, for example), one audio input (for microphone or similar audio device) and one RS-232 device (like a touchscreen). Plus, using Extreme USB technology, the CAT5-7000 can support a 4-port USB hub in the case that multiple USB-based computer devices need to be operated at the extended location.

For multimedia, graphics and a/v production professionals as well as gamers and dual-display fans, this is the flexible and reliable way to ensure you and your equipment can function ideally at any remote location.

#### CAT5-7500 - Additional Video Refinement

The CAT5-7500 operates just like the CAT5-7000 but it sends video separately using its own CAT5 cable. This means it requires an additional CAT5 extension cable but it also enables video refinement capabilities for the extended monitors. Both video signals can also be extended a few hundred feet further (up to 600-feet) if needed. The CAT5-7500 is the over-and-above solution for those who need the industrious CAT5-7000 and have more discerning video requirements.

#### Compatibility

Designed to offer unprecedented flexibility with computer peripherals, both versions work with all CRT and LCD computer monitors, USB peripherals, PS/2 keyboards and mice, RS-232 and audio devices (Mac or PC).

#### How It Works

Both versions use a sender and receiver methodology to transmit signals from the computer to the workstation. The sender unit connects to the computer using the cables provided. The receiver unit connects to the two monitors, keyboard/mouse, USB, RS232 and audio devices up to 330-feet away. Multiple CAT5 extension cables (up to 4 for the CAT5-7000; up to 5 for the CAT5-7500), sold separately, connect the sender to the receiver and thus the computer to the extended workstation. Both the sender and the receiver units must be connected to a power supply. When fully powered and operational, the units extend all signals efficiently and reliably.

**Note:** If you use a patch panel or patchcords both the cables and the patch have to be shielded.

#### Features:

- Extends any two VGA displays up to 330 feet (100 meters)
- Maintains 1920 x 1200 resolution video
- Extends USB 1.1, RS-232, PS/2 and audio in/out devices up to 330 feet
- Uses four CAT-5e cables
- Sender rack ears included
- Local video Out

#### Specifications:

- Video Amplifier Bandwidth: 350 MHz
- Input Video Signal: 1.2 volts p-p
- Input Sync Signal: 5 volts p-p (TTL)
- Horizontal Frequency Range: 15 - 70 KHz
- Vertical Frequency Range: 30 - 170 Hz
- Video In: HD-15 male
- Video out: HD-15 female
- Audio Connector: mini-phone Stereo 3.5mm
- Link Connector: RJ-45 Shielded
- RS232 Connector: DB9
- PS/2 Connectors: 6 pin Mini-DIN
- USB Input/Output Connectors: type B / type A
- Power Supply: 5V DC
- Power Consumption per unit: 20 watts (max)
- CAT5-7000S Dimensions: 17"W x 1.75"H x 4"D
- CAT5-7000R Dimensions: 8.5"W x 2"H x 4"D
- Shipping Weight: 14 lbs.

#### Package Includes:

- Sender Unit
- Receiver Unit
- Two 6ft VGA cables
- One 6ft USB cable
- Two 6ft PS/2 cables
- One 6ft Audio cable
- Two 5V Transformers
- Rack Ears



EXT-CAT5-7000



**CAT5•7000**  
USER MANUAL

[www.gefen.com](http://www.gefen.com)

## ASKING FOR ASSISTANCE

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### Technical Support:

Telephone (818) 772-9100  
(800) 545-6900

Fax (818) 772-9120

### Technical Support Hours:

8:00 AM to 5:00 PM Monday thru Friday.

### Write To:

Gefen, Inc.  
c/o Customer Service  
20600 Nordhoff Street  
Chatsworth, CA 91311

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### Notice

Gefen Inc. reserves the right to make changes in the hardware, packaging and any accompanying documentation without prior written notice.

**CAT5•7000** is a trademark of Gefen Inc.  
**Macintosh** is a trademark of Apple Computer Inc.

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## INTRODUCTION

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Thank you for purchasing the new ex•tend•it CAT5•7000 series by Gefen, Inc.

The ex•tend•it CAT5•7000 by Gefen allows users the benefits of extending USB, audio in, audio out, PS/2, RS232, and video signals beyond the desktop. In a growing number of applications, broadcast stations and production facilities there is a need to locate a computer remotely, from the keyboard, mouse, and video monitor. A CPU may need to be shared between several users or moved to another room because of annoying fan noise.

The CAT5•7000 series can be used to extend computers with noisy fans, printers, hard drives, scanners, cameras, keyboards, mouse, and any other USB-type peripherals. The CAT5•7000 has the potential to cover the distance of 330 feet over industry standard Category 5 (CAT-5) cables. One can connect additional CAT5•7000 series to the same computer, allowing access to the same computer from other locations up to 330 feet apart.

## OPERATION NOTES

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### **READ THESE NOTES BEFORE INSTALLING OR OPERATING THE CAT5•7000 SYSTEM**

- Industry standard Category-5 (CAT-5) cables are used to operate CAT5•7000 systems.
- One CAT-5 cable extends video 1 and USB. A second CAT-5 cable extends video 2. A third CAT-5 cable is used to extend PS/2 and RS232. A fourth CAT5 cable is used to extend audio in and audio out.
- When two monitors are used in the local and remote locations, the video monitors must be a multi-resolution type. This pertains to monitors placed remotely, and those divided between local and remote locations. The video monitors will not initialize correctly at start-up if they are different types.
- The CAT5•7000 units are housed in a metal box for better RF shielding.

### CONTENTS

The CAT5•7000 system consists of:

- (1) CAT5•7000S (sender unit)
- (1) CAT5•7000R (receiver unit)
- (2) 5 VDC power supply
- (2) Video cables (6FT)
- (1) USB cable (6FT)
- (2) PS/2 cables (6FT)
- (1) Audio cable (6FT)
- (1) Rack Ears
- (1) User Manual

### HOW IT WORKS

In its most basic application, the CAT5•7000S sender unit resides next to the computer. Supplied with the system, VGA cables, PS/2 keyboard, PS/2 mouse, audio, and USB cables, they connect the computer to the CAT5•7000S sender unit.

The CAT5•7000R receiver unit is placed next to the monitors, keyboard, mouse, and USB peripherals at the remote location. The monitor and keyboard are connected to the CAT5•7000R, similar to the way they are connected to the back of the computer (PC or Macintosh).

Industry standard Category 5 (CAT-5) cables are used to link CAT5•7500S sender and CAT5•7500R receiver units together. Monitor 1 and USB are extended by one CAT-5 cable, monitor 2 is extended with a second CAT5 cable. PS/2 and RS232 are extended with a third CAT-5 cable and audio with a fourth CAT-5 cable.

## CAT5•7000S FRONT PANEL DESCRIPTIONS

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### Front Panel Function Descriptions

- 1 **Power On Indication** - Indicates that the unit is on and plugged in.

## CAT5•7000R FRONT PANEL LAYOUT



### Front Panel Function Descriptions

- 1 **BRIGHTNESS 1** - Trim pot settings adjust video brightness for monitor 2
- 2 **BRIGHTNESS 2** - Trim pot settings adjust video brightness for monitor 1
- 3 **POWER ON INDICATOR** - Indicates that the unit is on and plugged in.



# CAT5•7000S BACK PANEL LAYOUT

10 11 12 13 14 15 16



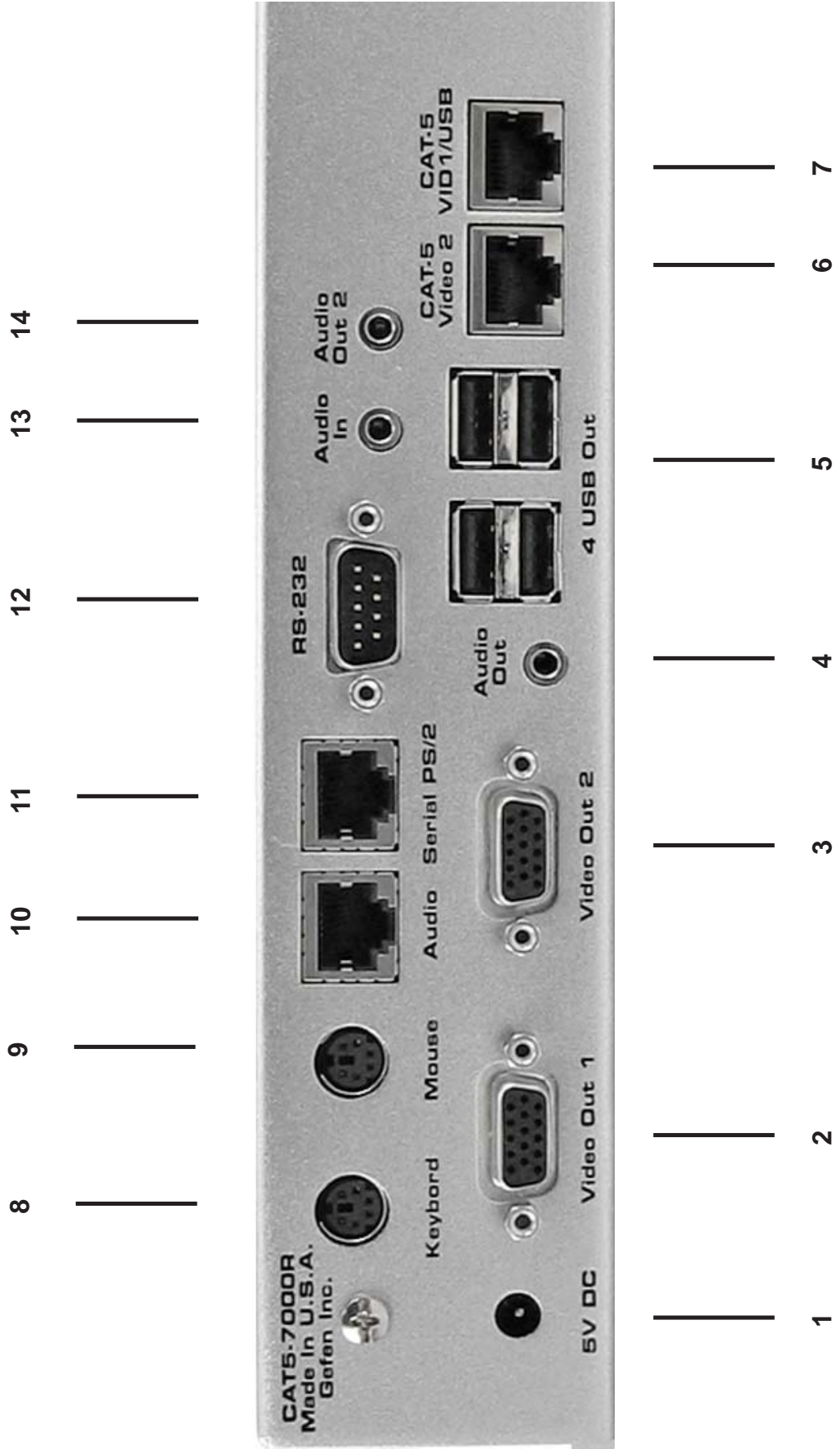
1 2 3 4 5 6 7 8 9

## CAT5•7000S BACK PANEL LAYOUT

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- 1     **POWER** - 5 VDC external power supply
- 2     **MONITOR 1** - HD15 output connects to the monitor 1 for local video
- 3     **VIDEO IN 1** - HD15 input from computer
- 4     **MONITOR 2** - HD15 output connects to the monitor 2 for local video
- 5     **VIDEO IN 2** - HD15 input from computer
- 6     **AUDIO IN 1** - Audio mini jack input connects to computers audio output
- 7     **CAT5 VIDEO 2** - RJ-45 input extends video input 2 with CAT-5 cable
- 8     **CAT5 1 VIDEO1/USB/AUDIO1** - RJ-45 input extends video, audio 1, and USB signals with CAT-5 cable
- 9     **USB IN** - USB input from computer
- 10    **KEYBOARD** - PS/2 keyboard input from computer
- 11    **MOUSE** - PS/2 mouse input from computer
- 12    **AUDIO** - RJ-45 input extends audio in and audio out 2
- 13    **SERIAL PS/2** - RJ-45 input extends RS-232 and PS/2 signals
- 14    **RS232 IN** - RS232 input from computer
- 15    **AUDIO OUT** - Audio mini jack input connects to computers microphone input
- 16    **AUDIO IN 2** - Audio mini jack input connects to computers audio output (Audio 2 offers improved signal to noise ratio by using differential signal technics)

# CAT5•7000R BACK PANEL LAYOUT



## CAT5•7000R BACK PANEL FUNCTIONS







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- 1     **POWER** - 5 VDC external power supply
- 2     **VIDEO OUT 1** - HD15 output connecting to the video monitor 1
- 3     **VIDEO OUT 2** - HD15 output connecting to the video monitor 2
- 4     **AUDIO 1** - Audio mini jack connects to speakers
- 5     **USB OUT** - 4 port power USB hub, connects to USB devices
- 6     **CAT-5 VIDEO 2** - RJ-45 input connects CAT-5 cable to receive extended video signals
- 7     **CAT-5 VIDEO/USB/AUDIO** - RJ-45 input connects CAT-5 cable to receive extended video, audio 1, and USB signals
- 8     **KEYBOARD** - PS/2 mini din connects to PS/2 keyboard
- 9     **MOUSE** - PS/2 mini din connects to PS/2 mouse
- 10    **AUDIO** - RJ-45 input connects CAT-5 cable to receive extended audio in and audio out 2 signals
- 11    **SERIAL PS/2** - RJ-45 input connects CAT-5 cable to receive extended RS-232 and PS/2 signals
- 12    **RS232** - DB-9 connector connects to RS-232 devices
- 13    **AUDIO IN** - Audio mini jack connector connects to microphone
- 14    **AUDIO OUT 2** - Audio mini jack connects to speakers

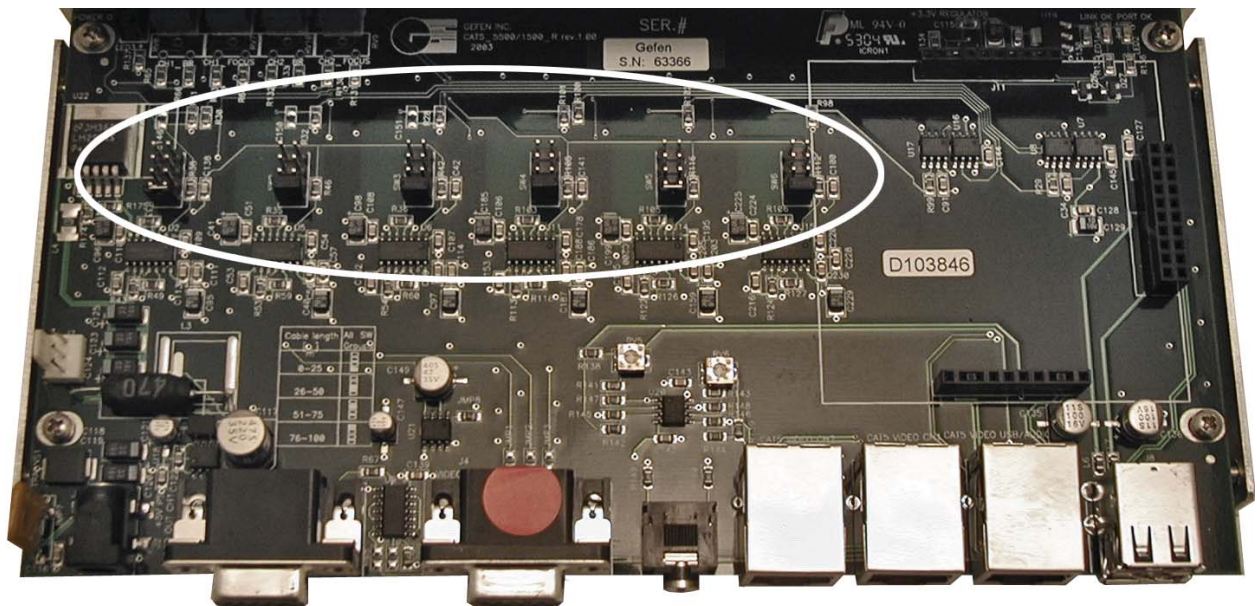
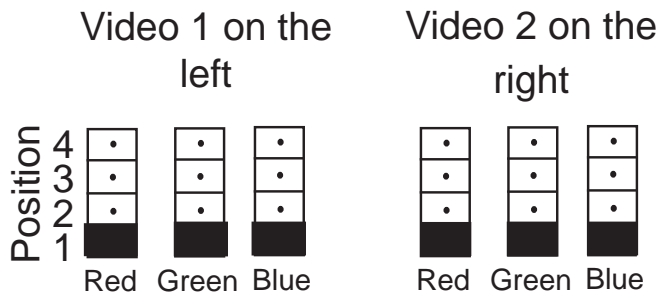
# CAT5 CABLE LENGTH SETUP

Jumper settings are used to set the focus of the picture and characters to the best possible sharpness. The jumpers in the CAT5•7000R are set at the factory as shown in the diagram below. The first step to adjusting the video is to have the CAT5•7000S and CAT5•7000R connected together with the CAT-5 cable that is going to be used in the installation. Then set your computer to the resolution and refresh rate that you will be using most frequently be using. Then open up the CAT5•7000R by unscrewing the bottom three screws on back end of the box. Then two screws on each side of the box and the top. That is 9 screws in total that need to be removed. Lastly the 4 hex bolts around the Monitor Out port and the Video In port need to also be removed. After that look at some text on the monitor and set the jumpers to the recommended jumper setting based on the length of your CAT-5 cable. If you still see some smearing try moving all the jumpers up or down one from the recommended setting. If you see smearing of just one color adjust an individual jumper for the color that is smearing (it can be two colors). Repeat the same steps for monitor 2

## Recommended Jumper Settings

Cable length	
0-132 feet	
<b>*As shown in picture</b>	
133-198 feet	
199-264 feet	
265-330 feet	

## Jumper Settings



**RJ-45 Jack**



**White/Orange**

**Orange**

**White/Green**

**Blue**

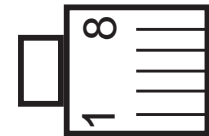
**White/Blue**

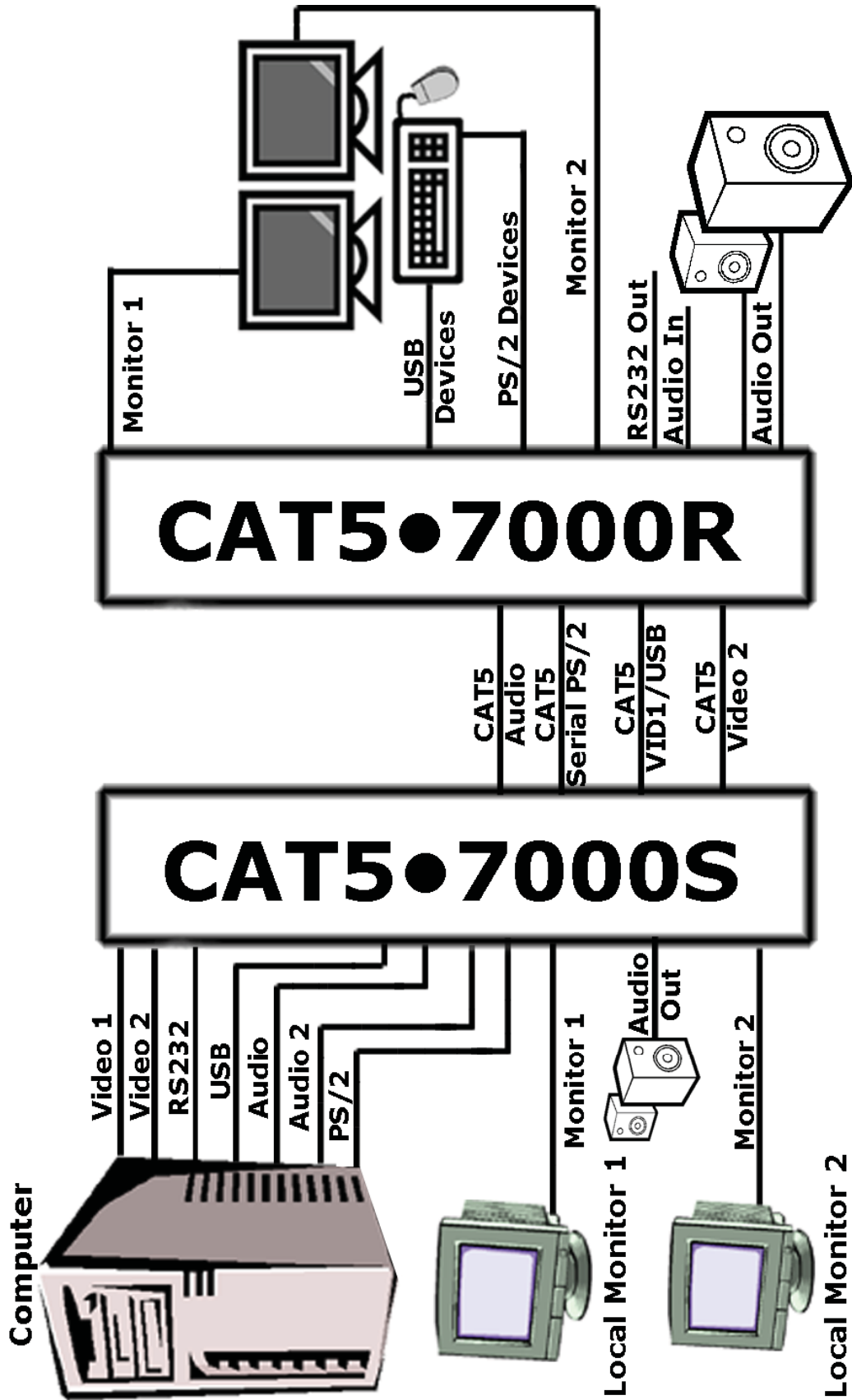
**Green**

**White/Brown**

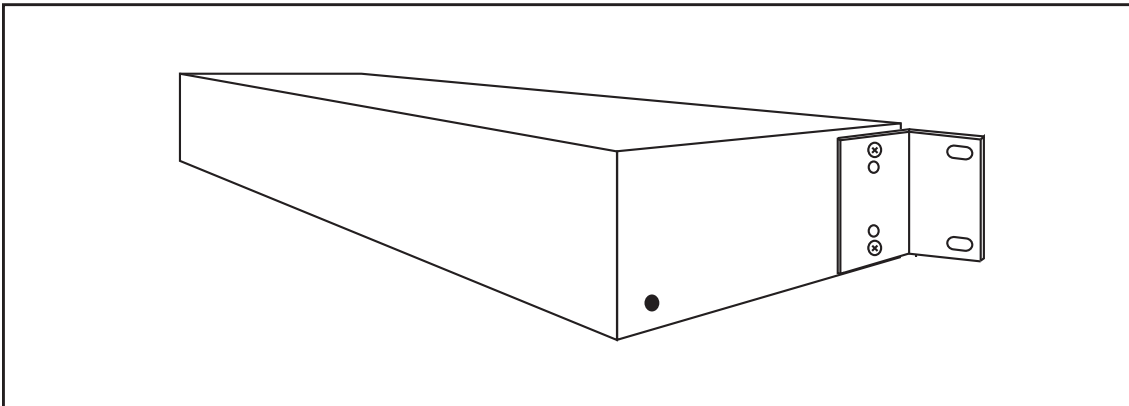
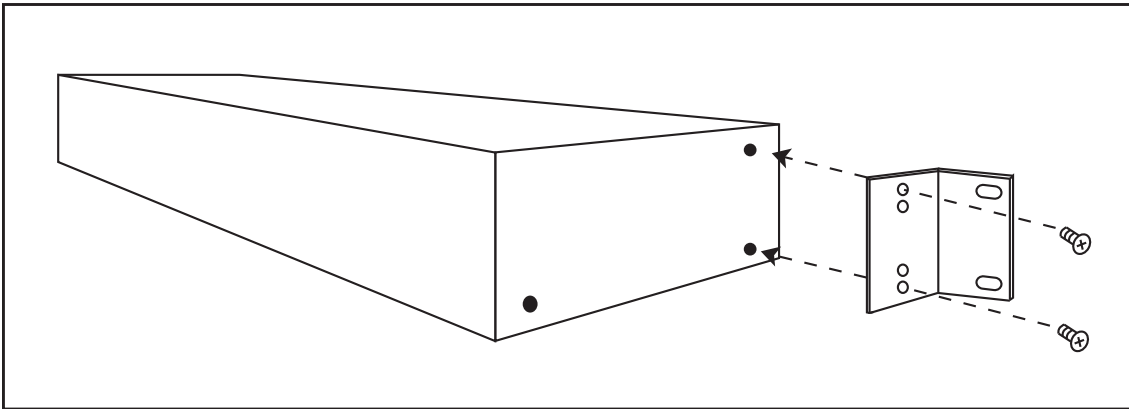
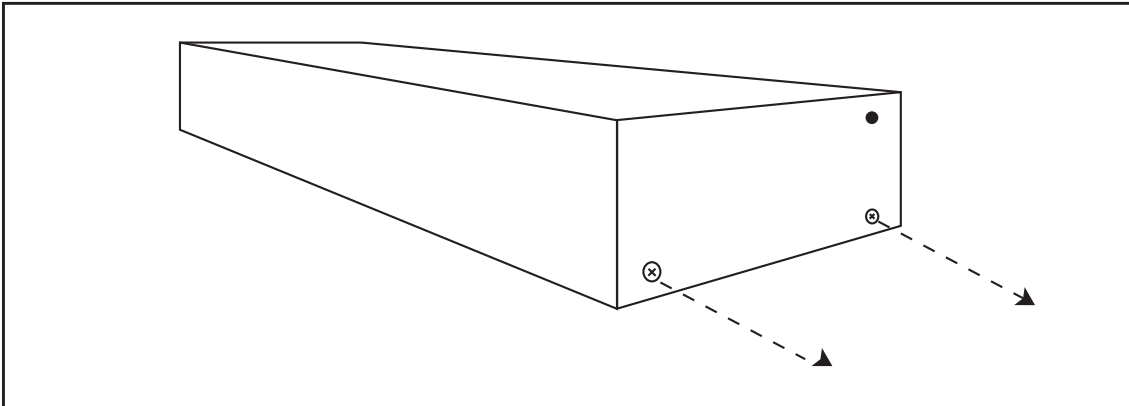
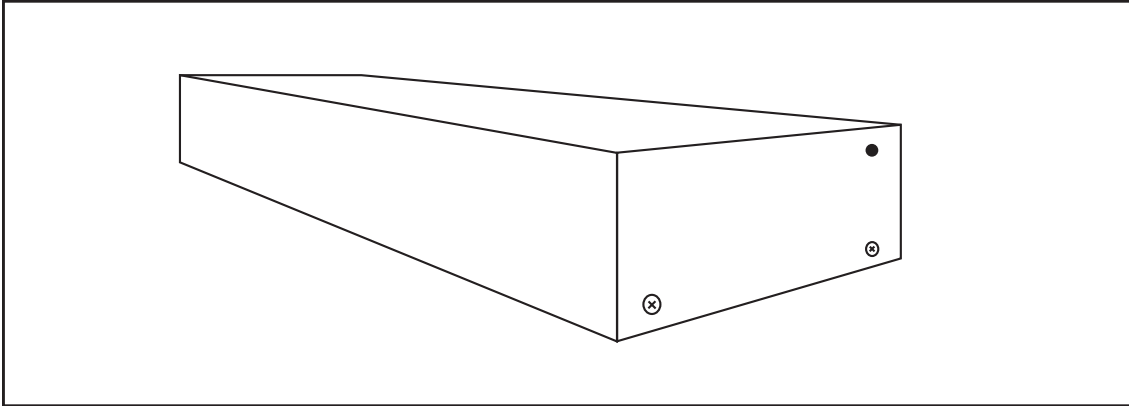
**Brown**

**RJ-45 Jack**





# CAT5•7500S RACK MOUNT DIAGRAM





## SPECIFICATIONS

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Video Amplifier Bandwidth .....	350 MHz
Actual Bandwidth .....	120 MHz
Input Video Signal .....	1.2 Volts p-p
Input Sync Signal .....	5 Volts p-p (TTL)
Horizontal Frequency Range .....	15-70 KHz
Vertical Frequency Range .....	30-170 Hz
Video In.....	HD-15
Focus/Brightness Control .....	25 to 450 FT
Video out .....	HD-15
Link Connector .....	RJ-45
USB - "A" Connector .....	USB Out
USB - "B" Connector .....	USB Device Input
Power Consumption .....	15 Watts (max.)
Power Supply .....	5 VDC (External)
Dimensions Send Unit .....	16"W x 1 3/4"H x 4"D
Dimensions Receive Unit ..	8"W x 1 3/4"H x 4"D
Rack Mountable .....	2 Rack Spaces
Shipping Weight .....	9 Lbs

## WARRANTY

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Gefen Inc. warrants the equipment it manufactures to be free from defects in material and workmanship.

If equipment fails because of such defects and Gefen Inc. is notified within two (2) year from the date of shipment, Gefen Inc. will, at its option, repair or replace the equipment, provided that the equipment has not been subjected to mechanical, electrical, or other abuse or modifications.

Equipment that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for ninety (90) days from the day of reshipment to the Buyer.

This warranty is in lieu of all other warranties expressed or implied, including without limitation, any implied warranty or merchantability or fitness for any particular purpose, all of which are expressly disclaimed.

1. Proof of sale may be required in order to claim warranty.
2. Customers outside the US are responsible for shipping charges to and from Gefen.
3. Copper cables are limited to a 30 day warranty and cable must be free from any scratches, markings, and neatly coiled.

The information in this manual has been carefully checked and is believed to be accurate. However, Gefen Inc. assumes no responsibility for any inaccuracies that may be contained in this manual. In no event will Gefen Inc., be liable for direct, indirect, special, incidental, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. The technical information contained herein regarding CAT5•7000 features and specifications is subject to change without notice.