

Gefen[®]

4x1 DVI KVM Switcher

EXT-DVIKVM-441

User Manual



www.gefen.com

1080P
PROGRESSIVE

HDTV

ASKING FOR ASSISTANCE

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CONTENTS

- 1 Introduction**
- 2 Operation Notes**
- 3 Features**
- 4 Panel Layout**
- 5 Panel Descriptions**
- 6 Connecting & Operating The 4x1 DVI KVM Switcher**
- 7 Operation Notes & Troubleshooting**
- 8 RMT-4IR Remote Control Description**
- 9 4x1 DVI KVM Switcher Remote Installation**
- 10 RMT-4IR Remote And 4x1 KVM Switcher Configuration**
- 11 Rack Mount Installation**
- 12 Specifications**
- 13 Warranty**

INTRODUCTION

Congratulations on your purchase of the 4x1 DVI KVM Switcher. Your complete satisfaction is very important to us.

Gefen

Gefen delivers innovative, progressive computer and electronics add-on solutions that harness integration, extension, distribution and conversion technologies. Gefen's reliable, plug-and-play products supplement cross-platform computer systems, professional audio/video environments and HDTV systems of all sizes with hard-working solutions that are easy to implement and simple to operate.

The Gefen 4x1 DVI KVM Switcher

The rack-mountable Gefen 4x1 single link DVI KVM Switcher offers an economical solution by eliminating the need to purchase many displays for each computer in a studio or lab situation. A plug-and-play solution that supports both Macintosh and IBM-PC computers, the 4x1 DVI KVM Switcher shares one DVI display with up to four computers or other DVI video sources. A single USB 2.0 port, keyboard & mouse ports, and an analog audio jack are also switched. The switcher saves space on your desktop by eliminating a crowded workspace full of DVI monitors, keyboards & mice, and USB and audio cables. Switching of DVI sources is easy and reliable.

How It Works

The DVI monitor is connected to the 4x1 DVI KVM Switcher's output. Up to four DVI video sources connect to the switcher's DVI inputs using included high quality DVI cables. The included power supply is connected to the switcher via the locking power plug and then to a power outlet. The currently selected DVI video signal appears on the shared monitor. DVI Video sources (and optionally keyboards & mice, USB and audio cables) are selected/switched using the RMT-4IR remote control, RS-232 control, or the input selector push button on the front panel of the switcher.

OPERATION NOTES

READ THESE NOTES BEFORE INSTALLING OR OPERATING THE GEFEN 4X1 DVI KVM SWITCHER

- The 4x1 DVI KVM Switcher will take any of up to four (4) DVI single-link resolution inputs and switch them, one at a time, to a DVI output device such as a display/monitor or projector. Supported resolutions can be up to 1920x1200.
- The 4x1 DVI KVM Switcher is housed in a metal box for better RF shielding.

FEATURES

Features

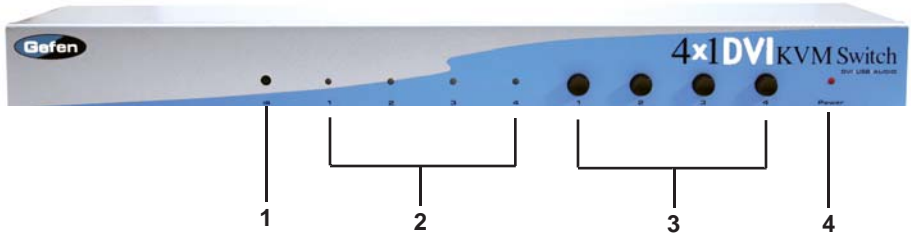
- Switches easily between any four DVI sources.
- Switches USB 2.0, keyboard & mouse, and analog audio
- Maintains highest resolution single link DVI
- Supports resolutions up through 1920x1200
- Discrete IR remote control included
- Serial RS-232 remote port for switching via automated control or PC
- Supports DDWG standards for DVI monitors
- Rack ears included

Package Includes

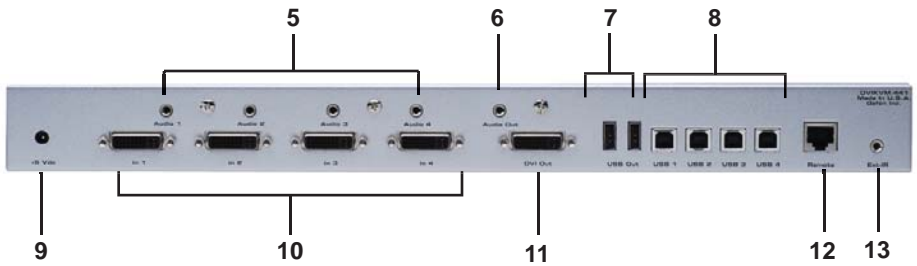
- (1) 4x1 DVI KVM Switcher
- (1) RMT-4IR Remote Control
- (1) 5V DC Power Supply
- (4) 6-foot Dual Link DVI cables
- (4) 6-foot USB cables
- (4) 6-foot 3.5mm jack analog audio cables
- (1) Set of rack ears
- (1) User's Manual

PANEL LAYOUT

Front Panel



Back Panel



PANEL DESCRIPTIONS

- 1 IR Receiver**
Receives IR signal from the handheld Infrared remote control unit included with the 4x1 DVI KVM Switcher.
- 2 DVI Signal Status LEDs 1-4**
Provide visual confirmation of the currently selected DVI input signal being output to the DVI display device.
- 3 DVI Input Selector Bank**
Push-button switches select the next DVI input.
- 4 Power Indicator LED**
Indicates when the 4x1 DVI KVM Switcher is receiving 5V DC power from its included AC power supply.
- 5 3.5mm Analog Audio Inputs 1-4**
Audio Sources 1-4 connect to the switcher here on 3.5mm Analog Audio Inputs.
- 6 3.5mm Analog Audio Output**
This audio output port connects to an external amplified audio device. The selected audio input will be output through this port.
- 7 USB Type A Control Ports 1-2**
The keyboard & mouse for controlling the selected remote computer or device connects to the switcher here.
- 8 USB Type B Ports 1-4**
USB devices (typically computers) one through four connect to the switcher here
- 9 5V Power Receptacle**
Supplies power to the 4x1 DVI KVM Switcher from the included external 5V DC power supply.
- 10 DVI Input Ports 1-4**
DVI video sources 1-4 attach to the 4x1 DVI KVM Switcher.
- 11 DVI Output Port**
This DVI output port is connected to the display device (Monitor, Projector).
- 12 RJ45 Wired Remote Port**
Wired contact-closure remote control (Gefen's EXT-RMT-4) attaches here.
- 13 IR Remote Extender Port**
The optional IR Extender (Gefen's EXT-RMT-EXTIR) attaches here to extend the range of the included IR remote by placing the infrared eye farther from the unit. Please see the bottom of page 8 for more information.

CONNECTING & OPERATING THE 4X1 DVI KVM SWITCHER

How to Connect the 4x1 DVI KVM Switcher to your devices:

1. Connect your computers' DVI, USB, and Audio sources to the 4x1 DVI KVM Switcher inputs using the supplied cables.
2. Connect your USB and audio devices to the USB and audio outputs using the supplied cables.
3. Connect your DVI-compliant display to the DVI output of the 4x1 DVI KVM Switcher using a user-supplied DVI cable.
4. Connect the included 5V DC power supply to the Switcher by connecting its 5V DC power supply tip into the receptacle in the rear of the unit, then plug it into the wall.
5. Turn on the DVI display or projector first, then the DVI video sources/ computers.

Note: Computers must be turned on one at a time and the switcher must be selected to the computer that is booting up. This is so that monitor information (EDID) can be transmitted from the display to each computer. After one computer completes the startup process, you can boot up the second computer and repeat the process with the remaining computers.

How to Operate the 4x1 DVI KVM Switcher:

1. Use the RMT-4IR remote control to remotely switch between DVI video sources.
2. Alternatively, use the front panel selector buttons.

USB

If your USB stops functioning correctly, you can manually re-initialize the USB hub in the switch by pushing twice on the channel select button that corresponds with the channel that the switcher is pointed at, on the front of the unit. This will cause the channel selected LED to blink once letting you know that the internal USB hub has been re-initialized. To have the USB re-initialize automatically every time you switch, look under the 4x1 DVI Switcher and locate the blank sticker. Peel it off to reveal a bank of four dip switches. Find the dip switch labeled "4" and flip it to the ON position. Now every time you switch the hub will re-initialize itself.

Video

When turning on or rebooting your computers, the 4x1 DVI KVM Switcher must be selected to the computer that is booting until the computer completes the boot cycle. This step can be eliminated using the Gefen DVI Detective. If you lose your picture when you switch between sources you will need a DVI Detective.

RMT-4IR REMOTE CONTROL DESCRIPTION



The RMT-4IR remote control will allow the user to choose which of the 4 DVI sources or computers will be selected. Please use the information below when selecting the desired source:

RMT-4IR Button	DVI Source
1	1
2	2
3	3
4	4

4X1 DVI KVM SWITCHER REMOTE INSTALLATION

To use the RMT-4IR remote, remove the battery cover on the back of the remote to reveal the battery compartment. Insert the included battery into the open battery slot. The positive (+) side should be facing up. Ensure that both DIP (Dual Inline Package) switches are in the OFF position. Replace the battery cover. The remote ships with 2 batteries. One battery is needed for operation and the other battery is complimentary.



— Empty Battery Slot

— IR Code Dip Switches



How to Operate the IR Extender Eye (optional Gefen p/n EXT-RMT-EXTIR)

Plug in the IR extender eye to the extender port on the back of the switcher. As soon as the IR extender eye is plugged in you can extend your IR signal. The IR extender eye does not come included with the 4x1 DVI KVM Switcher; it must be purchased separately.

RMT-4IR REMOTE AND 4X1 KVM SWITCHER CONFIGURATION

How to Resolve IR Code Conflicts

In the event that IR commands from other remote controls conflict with the supplied RMT-4IR remote control, changing the remote channel will alleviate this issue. The RMT-4IR remote control and the 4x1 DVI KVM Switcher both have banks of DIP (Dual Inline Package) Switches for configuring the remote channel that both units use to communicate. These settings must exactly match each other for proper operation.

The DIP Switch bank on the RMT-4IR is located underneath the battery cover. DIP Switch banks for the 4x1 DVI KVM Switcher are located on the underside of the unit beneath a piece of metallic-like tape. The DIP switch bank (4 switches) is for the adjustment of remote control frequencies and switch behavior. Switches 1 and 2 on the RMT-4IR directly correspond to DIP Switches 1 and 2 on the 4x1 DVI KVM Switcher. Only switches 1 and 2 (of 4 in that bank) are used for IR Code settings.



Remote Channel 1:
Default



Remote Channel 2:



Remote Channel 3:



Remote Channel 4:



Left: Picture of the opened rear battery compartment of the RMT-4IR remote showing the exposed DIP Switch bank between the battery chambers.

4x1 DVI KVM Switcher

Remote Channel 1:
Default



Remote Channel 2:



Remote Channel 3:



Remote Channel 4:



RACK MOUNT INSTALLATION

Rack mount ears are provided for installation of this unit into a 1U rack mount space.

1. Locate the side screws on the unit.
2. Remove the front 2 screws that are located closest to the front of the unit.
3. Using the removed screws, screw the rack mounting bracket into the unit.
4. Repeat the procedure on the opposite side of the unit.



SPECIFICATIONS

Video Amplifier Bandwidth:	165 MHz
Input Video Signal:	1.2 Volts p-p
Input DDC Signal:	5 Volts p-p (TTL)
Single Link Range:	1080p/1920 x 1200
DVI Connector:	DVI-I 29-pin female (digital only)
USB Input Connection:	Type "B"
USB Output Connection:	Type "A"
Audio Connector:	3.5mm mini-Stereo
Power Supply:	5V DC
Power Consumption:	20 Watts (max)
Dimensions:	17" W x 1.75" H x 4.375" D
Rackmountable:	1U Rack Space
Shipping Weight:	9 lbs.

WARRANTY

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

If equipment fails because of such defects and Gefen is notified within two (2) years from the date of shipment, Gefen 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 cables must be in their original condition.

The information in this manual has been carefully checked and is believed to be accurate. However, Gefen assumes no responsibility for any inaccuracies that may be contained in this manual. In no event will Gefen 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 the features and specifications is subject to change without notice.

For the latest warranty coverage information, please visit Gefen's Warranty web page at <http://www.gefen.com/kvm/aboutus/warranty.jsp>

PRODUCT REGISTRATION

Please register your product online by visiting Gefen's web site at <http://www.gefen.com/kvm/Registry/Registration.jsp>

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