

Gefen

8x1 DVI KVM DL/SL Switcher

EXT-DVIKVM-841DL

User Manual



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INTRODUCTION

Congratulations on your purchase of the 8 x1 DVI-DL 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 8x1 DVI KVM DL/SL Switcher

The rack-mountable Gefen 8x1 dual link/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 8x1 DVI KVM DL/SL Switcher shares one DVI display with up to eight 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 8x1 DVI KVM DL/SL Switcher's output. Up to eight 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-8IR 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 8X1 DVI KVM DL/SL SWITCHER

- The 8x1 DVI KVM DL/SL Switcher will take any of up to eight (8) DVI dual-link or single-link resolution inputs and switch them, one at a time, to a DVI output device such as a display/monitor or projector. Resolutions can be up to 3840x2400.
- The 8x1 DVI KVM DL/SL Switcher is housed in a metal box for better RF shielding.
- Computers must be turned on one at a time and the switcher must be selected to the computer that is booting up. After one computer completes the startup process, you can boot up the second computer and repeat the process with the remaining computers. This can be avoided with the use of a EDID storage device (DVI DETECTIVE; part# EXT-DVI-EDIDN) that will constantly supply each computer with an EDID. In this scenario, each computer must have a detective placed between itself and the switcher. Then, each computer can boot up in any order and at anytime, regardless of which computer the switch is selected to.

FEATURES

Features

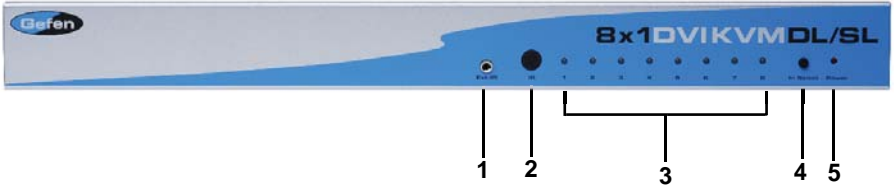
- Switches easily between any eight DVI-SL or DVI-DL sources
- Switches USB 2.0, keyboard & mouse, and analog audio
- Maintains highest resolution dual link DVI
- Supports resolutions up through 3840x2400
- Extends the range of DVI video up to 50 feet
- Discrete IR remote control included
- Serial RS-232 remote port for switching via automated control or PC
- Supports DDWG standards for DVI monitors
- Rack ears included

Package Includes

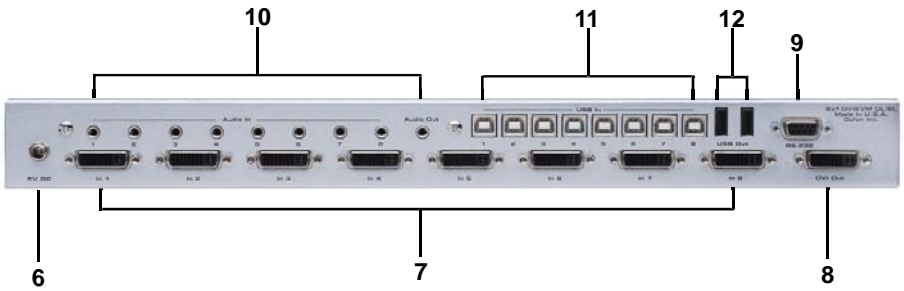
- (1) 8x1 DVI KVM DL/SL Switcher
- (1) RMT-8IR Remote Control
- (1) 5V DC Power Supply
- (8) 6-foot Dual Link DVI cables
- (8) 6-foot USB cables
- (8) 6-foot 3.5mm jack analog audio cables
- (1) Set of rack ears
- (1) User's Manual

PANEL LAYOUT

Front Panel



Back Panel



PANEL DESCRIPTIONS

1 External IR Port

For connection of external IR extension device such as the Gefen IR Extender (part # EXT-RMT-EXTIR).

2 IR Receiver

Receives IR signal from the handheld Infrared remote control unit included with the 8x1 DVI KVM DL/SL Switcher.

3 DVI Signal Status LEDs 1-8

Provide visual confirmation of the currently selected DVI input signal being output to the DVI display device.

4 DVI Input Selector

Push-button switch cycles the next DVI input 1-8 in a forward sequence starting again at 1.

5 Power Indicator LED

Indicates when the 8x1 DVI KVM DL/SL Switcher is receiving 5V DC power from its included AC power supply.

6 5V Locking Power Receptacle

Supplies power to the 8x1 DVI KVM DL/SL Switcher from the included external 5V DC power supply. The 5V power supply has a locking power tip which screws into this receptacle.

7 DVI Input Ports 1-8

DVI video sources one through eight attach to the 8x1 DVI KVM DL/SL Switcher.

8 DVI Output Port

This DVI output port is connected to the display device (Monitor, Projector).

9 RS-232 Serial Communications Interface

Provided for external control of the 8x1 DVI KVM DL/SL Switcher.

10 3.5mm Analog Audio Jacks 1-8

Audio Sources one through eight connect to the switcher here.

11 USB Type B Ports 1-8

USB devices one through eight connect to the switcher here.

12 USB Type A Control Ports 1-2

The keyboard & mouse for controlling the selected remote computer or device connects to the switcher here.

CONNECTING & OPERATING THE 8X1 DVI KVM DL/SL SWITCH

How to Connect the 8x1 DVI KVM DL/SL Switcher to your devices:

1. Connect your computers' DVI, USB, and Audio sources to the 8x1 DVI KVM DL/SL Switcher inputs using the supplied cables.
2. Connect your DVI display to the DVI output of the 8x1 DVI KVM DL/SL Switcher using a user-supplied DVI cable.
3. Connect your USB and audio devices to the USB and audio outputs with user-supplied cables.
4. Connect the included 5V DC power supply to the Switcher by by screwing 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. This can be avoided with the use of a EDID storage device (DVI DETECTIVE; part# EXT-DVI-EDIDN) that will constantly supply each computer with an EDID. In this scenario, each computer must have a detective placed between itself and the switcher. Then, each computer can boot up in any order and at anytime, regardless of which computer the switch is selected to.

How to Operate the 8x1 DVI KVM DL/SL Switcher:

1. Use the RMT-8IR remote control to remotely switch between DVI video sources.
2. Alternatively, use a RS-232 control system or the front panel selection button.

8X1 DVI KVM DL/SL REMOTE DESCRIPTION



The RMT-8IR remote control will allow the user to choose which of 8 DVI sources or computers will be selected. Please use the information below when selecting the desired source:

RMT-8IR Button	DVI Source
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8

8X1 DVI KVM DL/SL SWITCHER REMOTE INSTALLATION

To use the RMT-8IR 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

RMT-8IR REMOTE AND 8X1 KVM SWITCHER CONFIGURATION

How to Resolve IR Code Conflicts

In the event that IR commands from other remote controls conflict with the supplied RMT-8IR remote control, changing the remote channel will alleviate this issue. The RMT-8IR remote control and the 8x1 DVI KVM DL/SL 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-8IR is located underneath the battery cover. DIP Switch banks for the 8x1 DVI KVM DL/SL Switcher are located on the underside of the unit beneath a black piece of metallic tape. One DIP switch bank (4-switch) is for the adjustment of remote control frequencies and switch behavior. The other DIP switch (8-switch) is reserved for Gefen use only. DIP Switches 1 and 2 on the RMT-8IR directly correspond to DIP Switches 1 and 2 on the 8x1 DVI KVM DL/SL 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 RMT8-IR remote showing the exposed DIP Switch bank between the battery chambers.

8x1 DVI KVM DL/SL Switcher

Remote Channel 1:
Default



Remote Channel 2:



Remote Channel 3:



Remote Channel 4:



RS-232 SERIAL CONTROL INTERFACE



Only Pins 2 (RX), 3 (TX), and 5 (Ground) are used on the RS-232 serial interface

Binary Table

ASCII	Corresponding RMT8-IR Button	Binary
1	1	0011 0001
2	2	0011 0010
3	3	0011 0011
4	4	0011 0100
5	5	0011 0101
6	6	0011 0110
7	7	0011 0111
8	8	0011 1000

RS232 Settings

Bits per second 19200

Data bits 8

Parity None

Stop bits1

Flow Control None

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 x 2
Input Video Signal:.....	1.2 Volts p-p
Input DDC Signal:.....	5 Volts p-p (TTL)
Single Link Range:.....	1920 x 1200
Dual Link Range :.....	3840 x 2400
DVI Connector:.....	DVI-I 29-pin female (digital only)
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:.....	12 lbs.