Switch and distribute DVI

2x8 DVI Distribution Amplifier

Two DVI Inputs, Eight DVI Outputs

Two DVI Inputs, Eight DVI Outputs = Ideal for Presentation Venues

The 2:8 DVI Distribution Amplifier is an innovative solution for anyone with more complex video viewing requirements such as studios and presentation venues. It accommodates various system scenarios. Up to two video sources (either DVI-equipped computer, DVD player or satellite set top box) are connected to the distribution amplifier on one side. On the other side, eight video outputs are available to be used in part or in full. All displays are driven by one of two sources; each source drives eight displays at one time. Sources are switched via the RMT-2 remote control. The 2:8 DVI Distribution Amplifier is also equipped with an auto sensing feature that automatically switches to whatever source is active, should one of the sources drop out.

Fully HDCP Compliant

For home theater applications, the unit is HDCP (high bandwidth digital content protection) compliant, making it compatible with all HDTV content and displays. HDCP is a standard data encryption scheme encoded into the DVI signal to prevent videos from being copied. HDCP was adopted in 2004 by the entertainment industry. If an HDCP-encoded video source is connected to a HDTV display without the proper HDCP decoding mechanism, the picture is relegated to "snow" or a very low (480P) resolution. To avoid this situation the video source, the display and any device in between must be equipped with HDCP "software key" decoding devices.

How It Works

You just connect one or two DVI graphics sources to the 2:8 DVI DA's two inputs using the supplied DVI cables. Then you connect up to eight DVI displays to the eight DVI outputs on each unit. Power-cycle all connected equipment and you should see crystal-clear duplication of your source video on all output displays.

Note:
All connected displays that cannot show the same video resolution(s) as the Primary Display connected to Output #1 may fail to show a picture. Secondary displays follow the Primary display by sharing the resolution and capability information (EDID) obtained from the Primary Display.

DVI, HDCP & HDMI Defined

Features:

- Easily switch between two sources to eight simultaneous displays
- Connects computers with DVI graphics to multiple DVI compatible monitors or projectors
- Connects a HDTV source to multiple DVI compatible displays or projectors
- Maintains high resolution video - beautiful, sharp HDTV resolutions up to 1080p, 2k, and 1920 x 1200 are easily achieved
- Discrete IR remote (included)
- Supports DDWG standard for DVI monitors
- Uplink port for easy expansion up to 32 units / 256 DVI outputs

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 Connectors: DVI-I 29 pin female (digital only)
- Power Supply: 24V DC
- Power Consumption: 60 watts (max)
- Dimensions: 17"W x 1.75"H x 7.25"D
- Rackmountable: 1U rack space
- Shipping Weight: 8 lbs.

Package Includes:

- 2:8 HDTV Distribution Amplifier
- One 6 foot DVI cable
- RMT-2IR Remote Control
- 24V External Power Supply
- Rack Ears

EXT-DVI-248

Gefen

2x8 DVI DA
USER MANUAL

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Notice
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accompanying documentation without prior written notice.

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Congratulations on your purchase of the 2:8 DVI Distribution Amplifier. The 2:8 DVI distribution amplifier is an innovative solution for anyone with more complex computer system requirements, like studios and presentation venues where multi-viewing is essential. The 2:8 DVI distribution amplifier accommodates various system scenarios. Most commonly, two video sources (either DVI-equipped computer, DVD player or satellite set top box) are connected to the distribution amplifier on one side. On the output side, eight video outputs are available to be used in part or in full. Once the unit is connected and powered, each source can be routed to multiple displays. All DVI displays are driven by the two DVI sources with each source or computer capable of driving eight displays at one time. For home theater applications, the unit is HDCP (high definition content protection) compliant, making it effective for use with all DVI displays.

How it works:

Gefen's Gefen 2:8 DVI distribution amplifier is an expandable distribution hub that sends the same DVI graphics source to eight DVI based digital screens (flat panels or projectors). It is a flexible solution that accommodates multiple DVI displays. You can switch from source one and two via the RMT-2IR remote control. The 2:8 DVI distribution amplifier is also equipped with an auto sensing feature to switch between whatever source is active. When one source is inactive it will automatically switch to the active source.

The Gefen 2:8 DVI distribution amplifier is connected with a DVI (male to male) cable from the DVI graphic source to the distribution amplifier input. There are eight DVI outputs in each module. DVI output one is the primary connection and is used for the main display. DVI output 2 thru 8 follow the main display. The 2:8 DVI distribution amplifiers is using a unique DVI Bus™ technology to connect multiple amplifiers without sacrificing a DVI output connection. The ninth output is an expansion output used to daisy chain an additional 2:8 DVI Distribution Amplifier. The 2:8 DVI Distribution Amplifier is expandable to 256 outputs (32 DVI DA's).

Contents:

The 2:8 DVI Distribution Amplifier consists of:

(1) 2x8 DVI Distribution Amplifier
(1) DVI 6ft Male to Male Cables
(1) 24VDC Power Supply
(1) RMT-2 IR Remote
(1) User Manual

READ THESE NOTES BEFORE INSTALLING
OR OPERATING THE 2:8 DVI DISTRIBUTION AMPLIFIER SYSTEM

• All the monitors connected to the 2:8 DVI Distribution Amplifier must be able to run at the same native resolution. The 2:8 DVI Distribution Amplifier does not scale the video.

• The 2:8 DVI Distribution Amplifier units are housed in a metal box for better RF shielding.

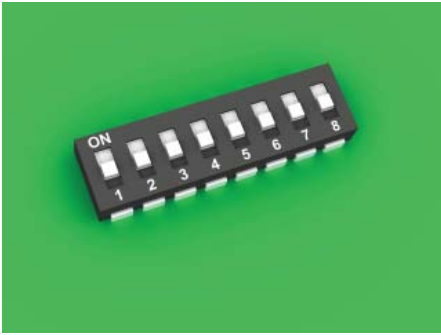• You must connect the sources and displays prior to applying power to the unit.

IR Eye

DVI Output

DVI Input

RS-232
Input

IR
Extender
Input

Power
Input

DIP SWITCH
EDID GUIDE

Extended display identification data (EDID) is a data structure provided by a display to describe its capabilities to any source that asks for it. The EDID includes manufacturer name, product type, timings supported by the display, display size, luminance data, (for digital displays only) pixel mapping data, supported audio channels and formats. This information is used by the source to cater its output to resolutions and audio formats that are supported by the display.

Additional EDID modes are available and configured using a combination of dip switches 1, 2, and 5. Please refer below for the different EDID modes.

To access the Dip Switches, remove all screws from the bottom and sides of the Gefen unit. Remove the hex screw heads from each side of the rear DVI & RS-232 ports. Carefully slide the unit apart. The 8 Bank of Dip Switches are located on the main PCB. Once adjustments are complete, slide the unit back together and replace all removed screws.

EDID Mode 0 (Switch 1=OFF Switch2=OFF Switch5=ON)
-EDID is copied from the first HDMI port

EDID Mode 1 (Switch 1=ON Switch2=OFF Switch5=ON)
-Same as Mode 0 and adds basic audio support

EDID Mode 2 (Switch 1=OFF Switch2=ON Switch5=ON)
-Same as Mode 0 and adds full audio support

EDID Mode 3 (Switch 1=ON Switch2=ON Switch5=OFF)
-EDID is generated based on the common video and audio features of all of the connected devices

EDID Mode 4 (Switch 1=OFF Switch2=ON Switch5=OFF)
-Same as Mode 3 and adds basic audio support

EDID Mode 5 (Switch 1=ON Switch2=OFF Switch5=OFF)
-Same as Mode 3 and adds full audio support

EDID Mode 6 (Switch 1=OFF Switch2=OFF Switch5=OFF) **DEFAULT**
-EDID is generated based on the common video features of all of the connected devices and the combined audio features of all of the connected devices

IR CODE CONFLICTS

How to Resolve IR Code Conflicts

There are matching pairs of dip switches underneath the 2x8 DVI DA unit and under the remote battery cover. Switch 1 & 2 on the Remote and Switch 3 & 4 inside the unit are the matching switches. These switches need to be matched for the remote to communicate with the switcher. There are 4 possible sets of IR codes and at least one of these sets should be able to resolve any IR conflicts with other home theater devices.

Remote Channel 1:
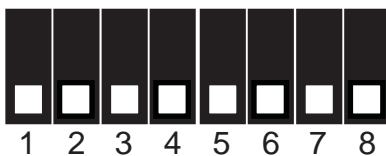
Remote

Remote Channel 2:
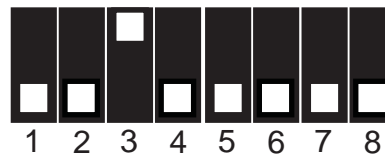
Remote Channel 3:

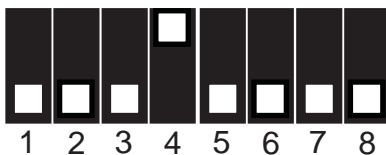Remote Channel 4:

2:8 DVI Distribution Amplifier

Remote Channel 1:
Default

Remote Channel 2:

Remote Channel 3:

Remote Channel 4:

9 Pin Female   **9 Pin Male**
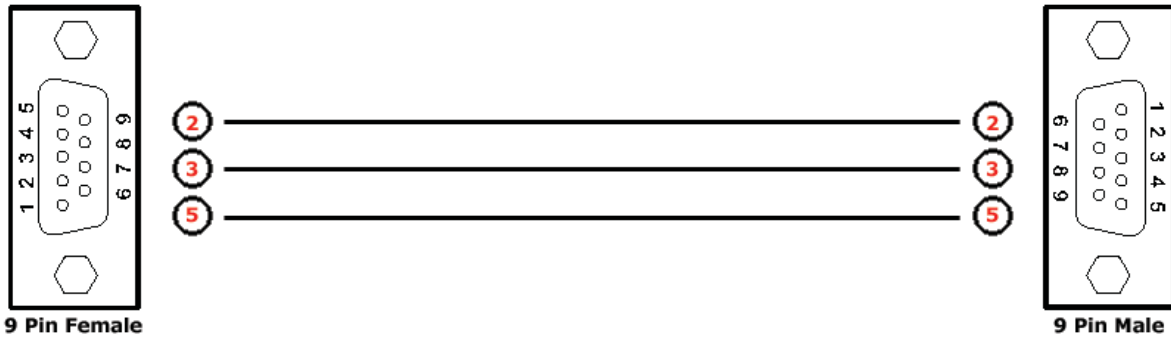
Binary Table

ASCII	Input	Binary
1	1	0011 0001
2	2	0011 0010

Additional control of the EDID modes and IR channel are possible using the RS-232 interface. For any of these modes to be successfully written to the EEPROM, all Dip Switches must be in the OFF position.

ASCII	EDID Mode
m0	0
m1	1
m2	2
m3	3
m4	4
m5	5
m6	6

ASCII	Remote Channel
r1	1
r2	2
r3	3
r4	4

OK is printed out on screen when a mode has successfully been changed.

Terminal Settings

Bits per second 19200

Data bits 8

Parity .... None

Stop bits 1

Flow Control .... None

SPECIFICATIONS

Video Amplifier Bandwidth .... 1.65 GHz

Single Link Range .... 1920 x 1200

Vertical Frequency Range .... 60 Hz

DVI Input/Output Connector Type .... DVI-I (Digital Only)

Power Consumption .... 60 Watts (max.)

Power Supply 24VDC

Dimensions .... 17"W x 1.75"H x 7.5"D

Rackmountable .... 1 Rack Space

Shipping Weight .... 8 Lbs