

# Gefen®

## 1:4 Splitter for DisplayPort

**EXT-DP-144**  
**User Manual**



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



## ASKING FOR ASSISTANCE

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### Notice

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

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# INTRODUCTION

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Congratulations on your purchase of the 1:4 Splitter for DisplayPort. Your complete satisfaction is very important to us.

## **Gefen**

Gefen delivers innovative and 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 install and simple to operate.

## **The Gefen 1:4 Splitter for DisplayPort**

The Gefen 1:4 Splitter for DisplayPort allows a DisplayPort-equipped computer to be connected to four DisplayPort displays. Resolutions up to 2560 x 1600 are supported. EDID management provides rapid integration of DisplayPort sources and displays. Two or more of these splitters can be connected together to create larger video distribution networks.

## **How It Works**

Connect the DisplayPort computer to the input on the Splitter using the supplied cable. Connect up to four DisplayPort displays to the 1:4 Splitter for DisplayPort.

## OPERATION NOTES

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### **READ THESE NOTES BEFORE INSTALLING OR OPERATING THE 1:4 SPLITTER FOR DISPLAYPORT**

- All other DisplayPort devices/displays connected to the output ports *must* be compatible with at least one resolution/audio format specified in this EDID. It is recommended to set, on the source device, a common resolution and audio format shared by all attached devices/displays. This is to ensure a compatible signal is output to all connected devices/displays.
- HDCP content is supported.
- NOTE: If the source and/or display is not 100% DisplayPort compliant, a protocol-specific adapter will be required in order to connect the source to the Splitter and/or the Splitter to a high-resolution display.

# FEATURES

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## Features

- Simultaneously displays one DisplayPort source on up to four displays
- Supports 1080p Full HD at 120Hz and dual-link resolutions up to 2560 x 1600 (WQXGA)
- EDID Management for rapid integration of source and displays
- EDID Reset button
- Supports up to 7.1 channels of linear PCM audio (32 kHz - 192 kHz sampling rate)
- Supports DisplayPort version 1.1a

## Package Includes

- (1) 1:4 Splitter for DisplayPort
- (1) 6 ft. DisplayPort cable
- (1) 5V / 3A DC power supply
- (1) Quick Start Guide

# FRONT PANEL LAYOUT

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Front Panel





## FRONT PANEL DESCRIPTIONS

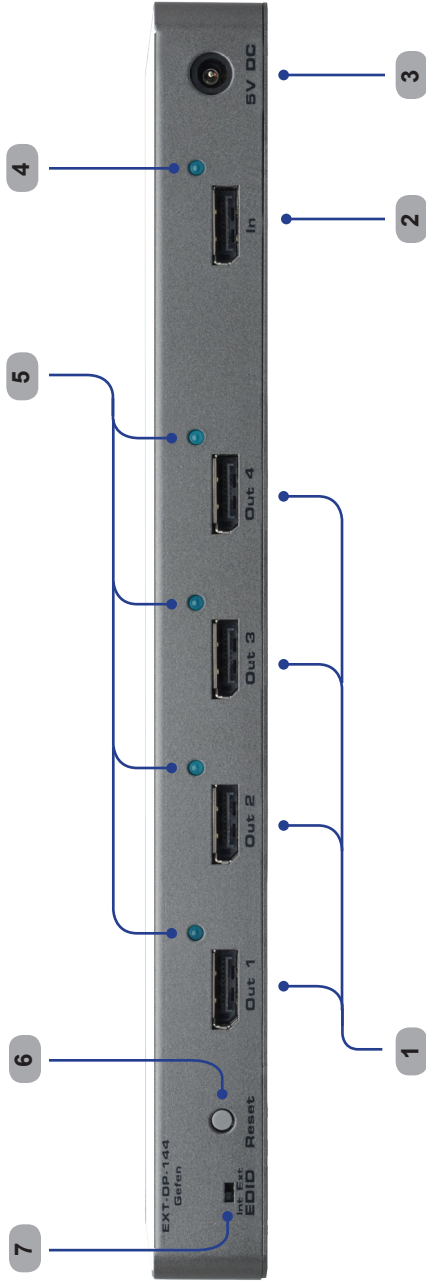
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### **1** *Power*

This LED indicator will glow bright blue when the unit is powered.

# BACK PANEL LAYOUT

## Back Panel



## BACK PANEL DESCRIPTIONS

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**1 Out 1 - Out 4**

Connect up to four (4) DisplayPort displays to each of the DisplayPort output connectors.

**2 In**

Connect a DisplayPort-equipped computer source to the input connector.

**3 5V DC**

Connect the included 5V DC power supply to this receptacle.

**4 Input Indicator**

This LED will glow bright blue when a DisplayPort source is connected to the input connector.

**5 Output Indicators**

These LEDs will glow bright blue once a DisplayPort display is connected to an output connector.

**6 Reset**

Press this button anytime the EDID is switched between Internal (Int) and External (Ext) or if the unit becomes unresponsive.

**7 EDID**

Used to switch between Internal (Int) and External (Ext) EDID modes. See pages 9 - 10 for details on EDID management.

# CONNECTING THE 1:4 SPLITTER FOR DISPLAYPORT

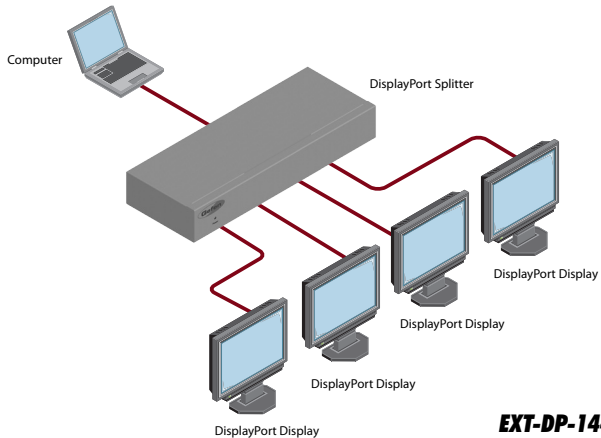
## How to Connect the 1:4 Splitter for DisplayPort

- 1 Connect the included DisplayPort cable between the DisplayPort source and the DP In connector on the Splitter.
- 2 Connect up to four (4) DisplayPort displays to each of the DP Out connectors on the Splitter.
- 3 Connect the included 5V / 3A DC power supply to the power receptacle on the 1:4 Splitter for DisplayPort then connect the AC power cord to an available electrical outlet.

## Wiring Diagram for the 1:4 Splitter for DisplayPort



**DISPLAYPORT CABLE** 



# EDID MANAGEMENT

## EDID Management

The 1:4 Splitter for DisplayPort has an EDID switch which can be used to select between the Internal EDID and an the External EDID.

### *Internal EDID Mode*

When the 1:4 Splitter for DisplayPort is set to Internal EDID Mode, the EDID is read from the on-board internal memory of the Splitter.

To use this mode, slide the EDID button to the "Int" position. This mode will use a preset EDID stored in the Gefen 1:4 Splitter for DisplayPort. This pre-programmed standard EDID data structure is compatible with most audio/video devices. All resolutions and audio formats specified in this EDID will be passed to the source device. See the tables below for a complete listing of the resolutions and audio formats listed in this EDID.



**IMPORTANT:** All other DisplayPort devices/displays connected to the output ports *must* be compatible with at least one resolution/ audio format specified in this EDID. It is recommended to set, on the source device, a common resolution and audio format shared by all attached devices/displays. This is to ensure a compatible signal is output to all connected devices/displays.

### Internal EDID Video Timings

Timing	Timing
640 x 480	1600 x 900
800 x 600	1600 x 1200
1024 x 768	1680 x 1050
1280 x 720	1792 x 1344
1280 x 800	1800 x 1440
1280 x 960	1856 x 1392
1280 x 1024	1920 x 1080
1360 x 768	1920 x 1200
1400 x 1050	2048 x 1536
1440 x 900	2560 x 1440

# EDID MANAGEMENT

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## *External EDID Mode*

When the 1:4 Splitter for DisplayPort is set to External EDID Mode, the source device reads the EDID (Extended Display Identification Data) from the output devices connected to the Splitter. The EDID contains information about what type of audio/video data that the source can send to each output.

To use this mode, slide the EDID button to the “Ext” position. The EDID of the display connected to Output 1 will be recorded and copied to all other DisplayPort outputs on the Splitter.

If a display is not detected on Output 1, then the Splitter will look for a display on Output 2, then Output 3, and so on until a valid EDID is found.



**IMPORTANT:** All other DisplayPort devices/displays connected to the output ports *must* be compatible with at least one resolution/audio format specified in this EDID. It is recommended to set, on the source device, a common resolution and audio format shared by all attached devices/displays. This is to ensure a compatible signal is output to all connected devices/displays.

## SPECIFICATIONS

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Maximum Pixel Clock .....	300 MHz
Maximum Data Rate.....	10.8 Gbps
Maximum Resolution .....	2560 x 1600
Video Input Connector .....	(1) DisplayPort, female
Video Output Connectors .....	(4) DisplayPort, female
Power Supply .....	5V / 3A DC
Power Consumption .....	15W (max.)
Operating Temperature .....	0° C - 40° C
Dimensions (W x H x D).....	10.75" x 1.25" x 5.25" (274mm x 32mm x 134mm)
Shipping Weight .....	3 lbs (1.2 kg)

## WARRANTY

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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.

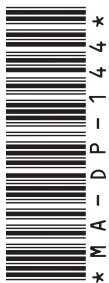
For the latest warranty coverage information, refer to the Warranty and Return Policy under the Support section of the Gefen Web site at [www.gefen.com](http://www.gefen.com).

## PRODUCT REGISTRATION

**Please register your product online by visiting the Register Product page under the Support section of the Gefen Web site.**







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This product uses UL listed or CE compliant power supplies.