

# CMDP-13MDPI

## 1 by 3 Mini DisplayPort Extender Splitter

*Operation Manual*



CMDP-13MDPI

## • **Disclaimers**

The information in this manual has been carefully checked and is believed to be accurate. Cypress Technology assumes no responsibility for any infringements of patents or other rights of third parties which may result from its use.

Cypress Technology assumes no responsibility for any inaccuracies that may be contained in this document. Cypress also makes no commitment to update or to keep current the information contained in this document.

Cypress Technology reserves the right to make improvements to this document and/or product at any time and without notice.

## • **Copyright Notice**

No part of this document may be reproduced, transmitted, transcribed, stored in a retrieval system, or any of its part translated into any language or computer file, in any form or by any means - electronic, mechanical, magnetic, optical, chemical, manual, or otherwise - without express written permission and consent from Cypress Technology.

© Copyright 2010 by Cypress Technology.

All Rights Reserved.

Version 1.0 March 2010

## • **Trademark Acknowledgments**

All products or service names mentioned in this document may be trademarks of the companies with which they are associated.

## • **Safety Precautions**

Please read all instructions before attempting to unpack or install or operate this equipment, and before connecting the power supply. Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through module openings or empty slots, as you may damage parts.
- Do not attach the power supply cabling to building surfaces.
- Do not allow anything to rest on the power cabling or allow it to be abused by persons walking on it.
- To protect the equipment from overheating, do not block the slots and openings in the module housing that provide ventilation.

## • **Revision History**

| <u>Version No</u> | <u>Date</u>     | <u>Summary of Change</u>   |
|-------------------|-----------------|----------------------------|
| <b>V1</b>         | <b>20100317</b> | <b>Preliminary Release</b> |

# ***Table of Contents***

|  |          |
|--|----------|
| <b>1. Introduction .....</b>                     | <b>1</b> |
| <b>2. Applications .....</b>                     | <b>1</b> |
| <b>3. Package Contents .....</b>                 | <b>1</b> |
| <b>4. System Requirements .....</b>              | <b>1</b> |
| <b>5. Features .....</b>                         | <b>2</b> |
| <b>6. Specifications .....</b>                   | <b>2</b> |
| <b>7. Operation Controls and Functions .....</b> | <b>3</b> |
| 7.1 Front Panel .....                            | 3        |
| 7.2 Rear Panel .....                             | 3        |
| 7.3 Top Panel .....                              | 4        |
| <b>8. Timing tables for monitor .....</b>        | <b>5</b> |
| <b>9. Connection and Installation .....</b>      | <b>6</b> |
| <b>10. Acronyms .....</b>                        | <b>7</b> |

## **1. Introduction**

For those who want to display large content the 1x3 Mini DisplayPort Extender Splitter is for you. Able to extend an image onto 2 or 3 displays, this device also allows you to split an image two or three times to connected displays while giving you a platform that is perfect for multi-tasking. This 1 by 3 Mini DisplayPort Extender Splitter allows users to enjoy images or video in HD resolution up to 1920 x 1200 on multiple monitors from a single digital output port. The 1 by 3 Mini DisplayPort Extender Splitter is a useful device for extending displays and splitting images.

## **2. Applications**

- Home & Office display
- Stock market
- Gaming market

## **3. Package Contents**

- 1 by 3 Mini DisplayPort Splitter
- 3.3V DC Power Supply
- Operation Manual

## **4. System Requirements**

Input source equipment such as Apple, PC or any Mini DisplayPort output device with a Mini DisplayPort connection cable. Output display such as an Apple monitor or any Mini DisplayPort input display with Mini DisplayPort connection cable.

## **5. Features**

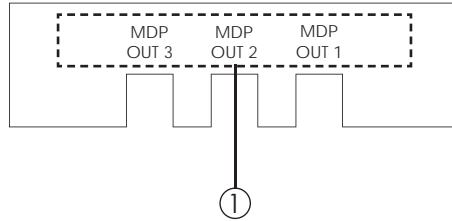
- Supports DisplayPort v1.1a, VESA DDM Standard, HDCP v1.3 and EDID v1.4
- Supports link rates of 2.7Gbps (HBR) and 1.62Gbps (RBR)
- Fully HD compatible and provides full display performance with zero lag and no display limitations
- Does not require software updates
- Quality Lab (WHQL) testing/qualification
- Supports output resolutions up to 1920 x 1200
- Works with any desktop and notebook computer which has a DisplayPort output port
- Provides exceptional Secured Content Protection with HDCP 1.3 for digital content including video and audio
- Plug and Play

## 6. Specifications

|                       |  |
|-----------------------|--|
| Output Resolution     | 1920 x 1200  |
| Input port            | 1 x Mini DisplayPort   |
| Output ports          | 3 x Mini DisplayPort   |
| Power Supply          | 3.3V / 1.5A DC (US/EU standards, CE/FCC/UL certified)  |
| ESD Protection        | Human body model: $\pm 8\text{kV}$ (air-gap discharge)<br>$\pm 4\text{kV}$ (contact discharge) |
| Dimensions(mm)        | 100 (W) x 70 (D) x 20 (H)  |
| Weight(g)             | 90   |
| Chassis Material      | Plastic  |
| Silkscreen Color      | White  |
| Operating Temperature | $0^{\circ}\text{C} \sim 40^{\circ}\text{C}$ / $32^{\circ}\text{F} \sim 104^{\circ}\text{F}$    |
| Storage Temperature   | $-20^{\circ}\text{C} \sim 60^{\circ}\text{C}$ / $-4^{\circ}\text{F} \sim 140^{\circ}\text{F}$  |
| Power Consumption     | 3W   |
| Relative Humidity     | 20~90% RH (non-condensing)   |

## 7. Operation Controls and Functions

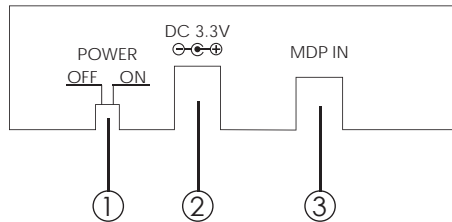
### 7.1 Front Panel



- ① MDP OUT 1~3: Connect these slots with the output displays Mini DisplayPort input port in order to send a signal.

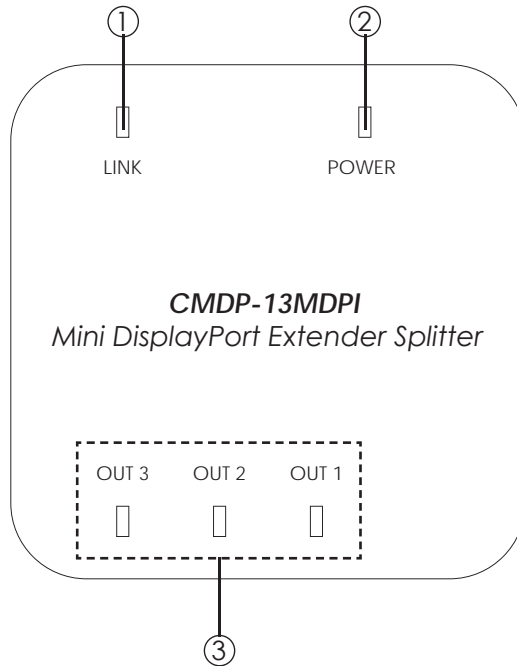
**Note:** It is suggested to use the same type/model of display in order to get optimal image quality. When the input source's timing is matched with the output display's timing, the device will first extend the image according to the specifications of the connected output display. If the input sources timing does not match the output display's timing the device will then split the signal to match the number of the connected display to show an identical image. (Detail information please refer to section 8. Timing table for monitors).

### 7.2 Rear Panel



- ① On/off switch: Push this switch to turn the device on or off. The green LED will turn on when the device is switched on.
- ② DC 3.3V: This slot is where you plug the 3.3V DC power supply into the unit and connect the adaptor to an AC outlet.
- ③ MDP IN: This slot is where you connect the input source equipment such as a PC or any output device that has a Mini DisplayPort.

### 7.3 Top Panel



- ① LINK LED: The green LED will turn on when the input source device is connected.
- ② POWER LED: The green LED will switch on when the device is powered on.
- ③ OUT 1~3 LED: The green LED will turn on when the output port is connected with the output display.



## 8. Timing tables for monitor

The 1 by 3 Mini DisplayPort splitter is a smart device with a built in feature that can define which and how many monitors are connected and can transmit the proper signal for the display. Below is the expanded timing list which is supported by the device.

| Two monitors mode |             |                            |
|-------------------|-------------|----------------------------|
| From PC           | To monitor  | Vertical refresh rate (Hz) |
| 3840 x 1200       | 1920 x 1200 | 60                         |
| 2560 x 1024       | 1280 x 1024 | 60                         |
| 2048 x 768        | 1024 x 768  | 60                         |
| 3360 x 1050 * 1   | 1680 x 1050 | 60                         |
| 3200 x 1200 * 1   | 1600 x 1200 | 60                         |
| 2880 x 900 * 1    | 1440 x 900  | 60                         |
| 1600 x 600 * 1    | 800 x 600   | 60                         |
| 1280 x 480 * 1    | 640 x 480   | 60                         |
| 2800 x 1050 * 1   | 1400 x 1050 | 60                         |

| Three monitors mode |             |                            |
|---------------------|-------------|----------------------------|
| From PC             | To monitor  | Vertical refresh rate (Hz) |
| 3840 x 800          | 1280 x 800  | 60                         |
| 3840 x 1024         | 1280 x 1024 | 60                         |
| 3072 x 768          | 1024 x 768  | 60                         |
| 2400 x 600 * 1      | 800 x 600   | 60                         |
| 1920 x 480 * 1      | 640 x 480   | 60                         |
| 4080 x 768 * 1, * 2 | 1360 x 768  | 60                         |
| 3840 x 720 * 1      | 1280 x 720  | 60                         |
| 2160 x 480 * 1      | 720 x 480   | 60                         |
| 3840 x 960 * 1      | 1280 x 960  | 60                         |

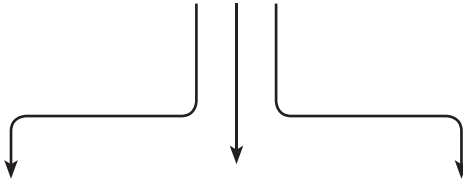
**Note:**

- \*1. The timing is listed in the EDID extension block. Some old GPU drivers may not be supported.
- \*2. The total horizontal pixel include the active area and blank area is larger than 4096, some GPU driver may not support the timing.
- \*3. For Apple Cinema Display support timing please refer to <http://www.apple.com/displays/specs.html>

## 9. Connection and Installation



Mac Pro / Mac Book / Mac Mini



LED Cinema Display



LED Cinema Display



LED Cinema Display

or



LED Cinema Display



LED Cinema Display



LED Cinema Display



# Acronyms

---

| <b>Acronym</b> | <b>Complete Term</b>                      |
|----------------|---|
| EDID           | Extended display identification data      |
| GPU            | Graphics Processing Unit                  |
| HDCP           | High-bandwidth Digital Content Protection |



**CYPRESS TECHNOLOGY CO., LTD.**  
Home page: <http://www.cypress.com.tw>

20100505 MPM-CMDP13MDPI