

4 Port DisplayPort SST DA/MST Hub USER MANUAL

DP-1x4-II USER MANUAL v.1.6

Overview

DP-1x4-II is a high-speed 4 port DisplayPort splitter/distribution amplifier targeted for audio/video de-multiplexing and in distribution for applications such as notebook computers, docking stations, video hub, 4K2K TV/displays, daisy chainable monitors, digital signages and more. It consists of one DisplayPort input and two dual mode output ports, that are configurable as either DisplayPort or HDMI.

Package Contents

- 1 x DP-1x4-II
- 1 x User manual
- 1 x Power adapter DC12V with lock
- 1 x Mounting plate

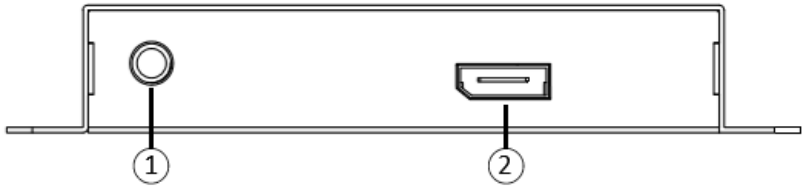
Features

- Support DisplayPort 1.2a
- Support DisplayPort HDCP1.3
- Support Link rate HBR2/HBR/RBR.
- Support SST and MST mode.
- Compliant with DisplayPort 1, 2, or 4 lanes.

Specifications

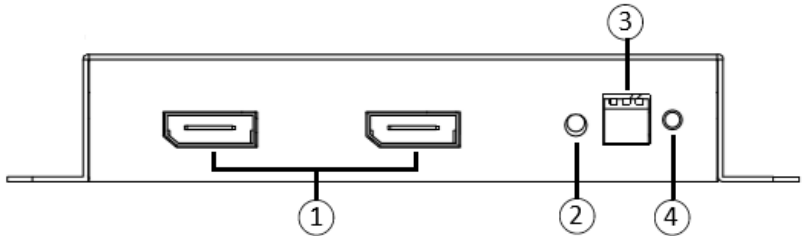
Function	DP-1x4-II
DisplayPort Input	1
DisplayPort Output	4
Compliance	DisplayPort 1.2a / HDCP 1.3
Max. Resolution	4Kx2K@60
Max. Data Rate	21.6Gbps
Link Rate	HBR2/HBR/RBR
DIP SWITCH	3pin: SST/MST Selection
Upgrade Selection	DP 9x1
RESET Key	TACT SW x 1
POWER Display	Green LED x 1
Operating Temperature	0° to 40°C
Storage Temperature	-20° to 60°C
Humidity	0 - 80% RH, Non-Condensing
Power Supply	12V/1A DC
Weight	310g
Dimensions (LxWxH)	156x83x25mm

FRONT VIEW



1. POWER JACK 12V DC
2. DisplayPort IN

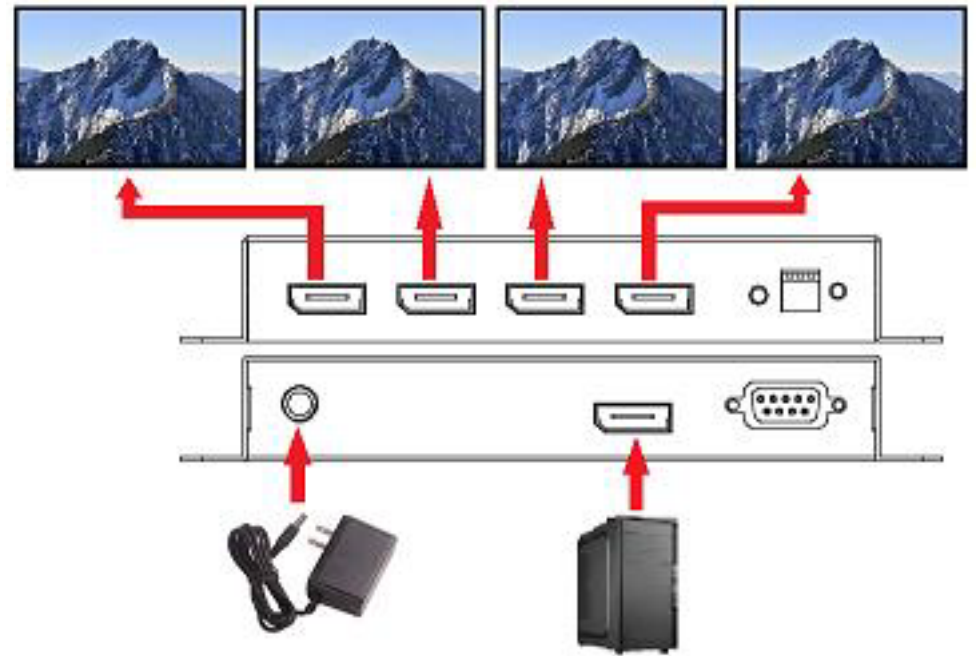
REAR VIEW



1. DisplayPort OUT
2. Reset Key
3. MODE Key
4. POWER LED

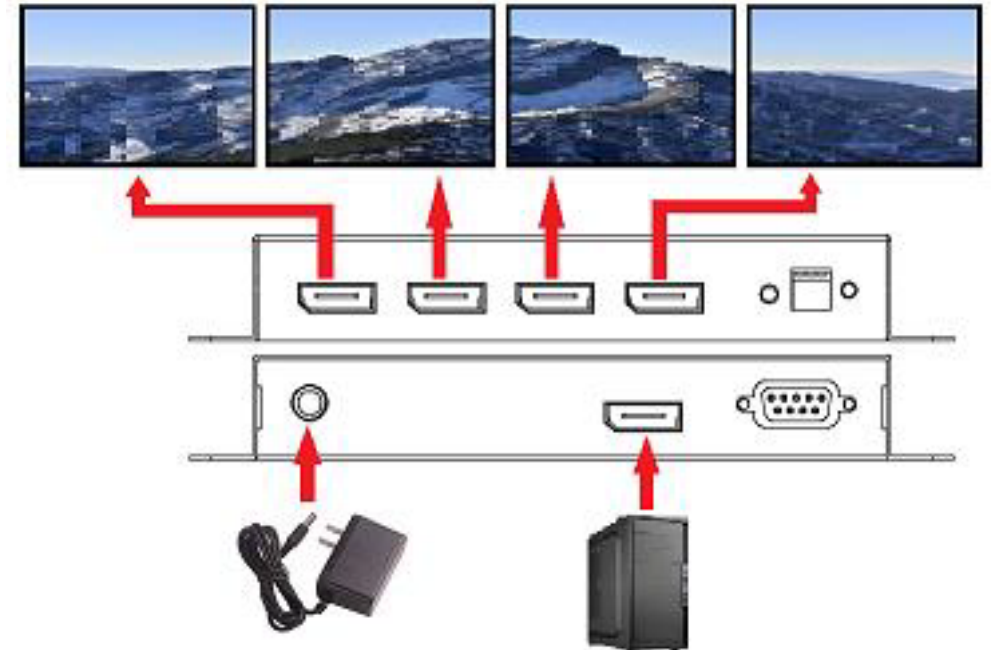
DIP Switch Setting	
PIN1	MODE
OFF	MST
ON	SST

SST: All the output screen is the same single.



MST: Extend the single video source to all outputs.

※At MST mode the highest output resolution will decrease because the total bandwidth of 21.6 Gbps is shared among all monitors.



※When the mode select is ready, please restart the power or pressing Reset Key

Installation

1. Connect the DP cable with the PC and the <IN> port
2. Connect the DP cable with the monitor and the <OUT> ports
3. Connect the power cord and turn on the DP-1x4-II
4. Turn on the PC and monitor

EDID

DisplayPort splitters do not have capability of storing the EDID, so EDID is passed from the display to the source. When there are multiple displays, it will use whichever the EDID is sent first, it will use that EDID. If you remove the displays from the splitter, the splitter will keep the last EDID until power cycle.

Compatibility Tests

Due to the different interpretations of DisplayPort modes by different major graphics accelerator companies, it is important to provide detail compatibility test data as follows,

Test Equipment

Graphics Card 1	GTX 1050Ti (NVIDIA, OS: WIN 10)
Graphics Card 2	Radeon RX560 (AMD: OS: WIN 7)
Display 1	Dell P2415Q
Display 2	ASUS PB287
Display 3	AOC U2849VF
Display 4	SAMSUNG LU28D590S
DisplayPort cable	LPC-1603 2m

1. SST tests

DP-1x4-II (SST Mode)				
Resolutions	Output 1	Output 2	Output 3	Output 4
GTX1050Ti	P2415Q	PB287	U2849VF	LU28D590S
4K@60Hz	Pass	Pass	Pass	Pass
4K@30Hz	Pass	Pass	Pass	Pass
1920x1080P@60Hz	Pass	Pass	Pass	Pass
GTX1051Ti	LU28D590S	P2415Q	PB287	U2849VF
4K@60Hz	Pass	Pass	Pass	Pass
4K@30Hz	Pass	Pass	Pass	Pass
1920x1080P@60Hz	Pass	Pass	Pass	Pass
GTX1051Ti	U2849VF	LU28D590S	P2415Q	PB287
4K@60Hz	Pass	Pass	Pass	Pass
4K@30Hz	Pass	Pass	Pass	Pass
1920x1080P@60Hz	Pass	Pass	Pass	Pass
GTX1051Ti	PB287	U2849VF	LU28D590S	P2415Q

4K@60Hz	Pass	Pass	Pass	Pass
4K@30Hz	Pass	Pass	Pass	Pass
1920x1080P@60Hz	Pass	Pass	Pass	Pass
Radeon RX560	P2415Q	PB287	U2849VF	LU28D590S
4K@60Hz	Pass	Pass	Pass	Pass
4K@30Hz	Pass	Pass	Pass	Pass
1920x1080P@60Hz	Pass	Pass	Pass	Pass
Radeon RX560	LU28D590S	P2415Q	PB287	U2849VF
4K@60Hz	Pass	Pass	Pass	Pass
4K@30Hz	Pass	Pass	Pass	Pass
1920x1080P@60Hz	Pass	Pass	Pass	Pass
Radeon RX560	U2849VF	LU28D590S	P2415Q	PB287
4K@60Hz	Pass	Pass	Pass	Pass
4K@30Hz	Pass	Pass	Pass	Pass
1920x1080P@60Hz	Pass	Pass	Pass	Pass
Radeon RX560	PB287	U2849VF	LU28D590S	P2415Q
4K@60Hz	Pass	Pass	Pass	Pass
4K@30Hz	Pass	Pass	Pass	Pass
1920x1080P@60Hz	Pass	Pass	Pass	Pass

2. MST testing

DP-1x4-II (MST Mode)				
Resolutions	Output 1	Output 2	Output 3	Output 4
GTX1050Ti	P2415Q	PB287	U2849VF	LU28D590S
	1080P	1080P	1080p	1080P
	LU28D590S	P2415Q	PB287	U2849VF
	1080P	1080P	1080p	1080P
	U2849VF	LU28D590S	P2415Q	PB287
	1080P	1080P	1080p	1080P
	PB287	U2849VF	LU28D590S	P2415Q
	1080P	1080P	1080p	1080P
	N/A	PB287	U2849VF	LU28D590S
		No output	No output	No output
	N/A	P2415Q	PB287	U2849VF
		No output	No output	No output
	N/A	LU28D590S	P2415Q	PB287
		No output	No output	No output
	N/A	U2849VF	LU28D590S	P2415Q
		No output	No output	No output
	P2415Q	N/A	U2849VF	LU28D590S
	1080P		1080p	1080P
	LU28D590S	N/A	PB287	U2849VF
	1080P		1080p	1080P
U2849VF	N/A	P2415Q	PB287	
1080P		1080p	1080P	

PB287	N/A	LU28D590S	P2415Q
1080P		1080p	1080P
P2415Q	PB287	N/A	LU28D590S
1080P	1080P		1080P
LU28D590S	P2415Q	N/A	U2849VF
1080P	1080P		1080P
U2849VF	LU28D590S	N/A	PB287
1080P	1080P		1080P
PB287	U2849VF	N/A	P2415Q
1080P	1080P		1080P
P2415Q	PB287	U2849VF	N/A
1080P	1080P	1080p	
LU28D590S	P2415Q	PB287	N/A
1080P	1080P	1080p	
U2849VF	LU28D590S	P2415Q	N/A
1080P	1080P	1080p	
PB287	U2849VF	LU28D590S	N/A
1080P	1080P	1080P	
P2415Q	PB287	N/A	N/A
4K@30Hz	4K@30Hz		
LU28D590S	P2415Q	N/A	N/A
4K@30Hz	4K@30Hz		
U2849VF	LU28D590S	N/A	N/A
4K@30Hz	4K@30Hz		
PB287	U2849VF	N/A	N/A
4K@30Hz	4K@30Hz		
P2415Q	N/A	U2849VF	N/A
4K@30Hz		4K@30Hz	
LU28D590S	N/A	PB287	N/A
4K@30Hz		4K@30Hz	
U2849VF	N/A	P2415Q	N/A
4K@30Hz		4K@30Hz	
PB287	N/A	LU28D590S	N/A
4K@30Hz		4K@30Hz	
P2415Q	N/A	N/A	LU28D590S
4K@30Hz			4K@30Hz
LU28D590S	N/A	N/A	U2849VF
4K@30Hz			4K@30Hz
U2849VF	N/A	N/A	PB287
4K@30Hz			4K@30Hz
PB287	N/A	N/A	P2415Q
4K@30Hz			4K@30Hz

	<ol style="list-style-type: none"> 1. In MST Mode, if output 1 is not connected to a display, there is no output 2. If all outputs are connected, the maximum resolution for all ports are 1080P 3. If only 3 displays are connected, any of the output can be 4K@30Hz 4. If only 2 displays are connected, both outputs can be 4K@30Hz <p>Total bandwidth for the above connection methods cannot exceed 21.6 Gbps</p> <ol style="list-style-type: none"> 5. The resolution is set by the PC. If the PC is set to 4K@60Hz, there will only be one output present 			
	Output 1	Output 2	Output 3	Output 4
Radeon RX560	P2415Q	PB287	U2849VF	LU28D590S
	No output	No output	No output	No output
	Note: Radeon RX560 is set to MST, there is no outputs			



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