



Aavara Innovation Corp.

PM4X2

1080p HDMI 1.3b MATRIX 4X2
Installation Guide



WWW.AAVARA.COM

AAVARA INNOVATION CORP.

ALL RIGHTS RESERVED

Rev 1.0

TABLE OF CONTENTS

Chapter 13
Introduction3
1.1 Features3
1.2 Technical Specifications.....4
Chapter 25
Installation5
Chapter 36
Troubleshooting6
Features Index..... 6



Chapter 1

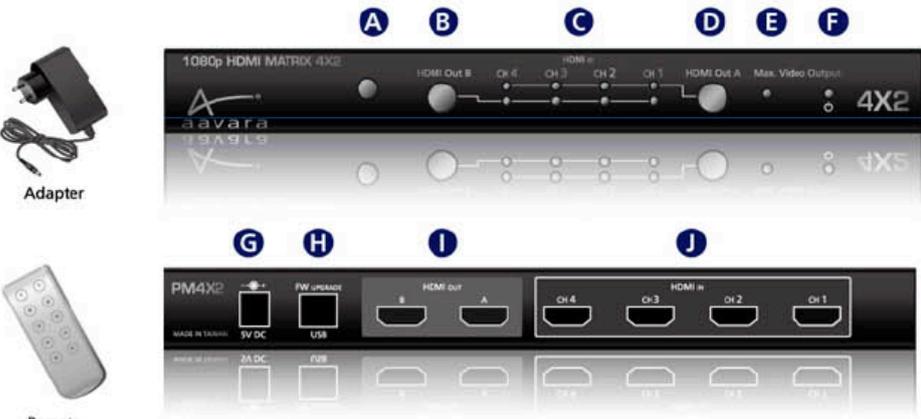
Introduction

Aavara® PM4X2 1080p HDMI 1.3b MATRIX 4X2 is a switcher/splitter hub that offers you maximum convenience in HDMI signal distribution when you have multiple HDMI sources and displays to connect together. Each of the Four HDMI sources can be directed to any one of the two HDMI outputs so two displays/projector can show same source or two different sources simultaneously. It is compliant with Blu-ray DVD players and satellite set top boxes to any HDMI compatible display. Sources are accessible at any time to any display when operating with the IR remote. PM4X2 4x2 matrix switching allows maximum versatility for integrated systems.

1.1 Features

- Allow to select same HDMI source or two different sources output to two displays separately
- Easy operating with IR remote
- “Max. Video Output” function for Home Theater installation, allow to send to TV and Amp with Max. Video and Audio signal
- HDMI Specification 1.3b Compliant
- Support HDMI 36-bit Deep Color & x.v.Color wide color gamut
- Supports 480i, 480p, 576i, 576p, 720p, 1080i and 1080p resolution
- HDMI firmware upgradeable*, no compatible issue
- Audio support Dolby® TrueHD & DTS-HD™ lossless 7.1 digital surround & Lip Sync
- DVI Specification 1.0 Compliant
- HDCP Rev1.2 specification Compliant
- Plug-and-play. Installs in seconds

1.2 Technical Specifications

Model No.	PM4X2
HDMI Source Input Port	HDMI Single Link, TMDS. 4
Display Device Output Port	HDMI Single Link, TMDS. 2
Interface	 <p>Adapter</p> <p>Remote Control</p> <ul style="list-style-type: none"> A IR Receiver B Input Select Button for HDMI Output B C Input Selection indicator for each HDMI Output HDMI Out A: Top indicator HDMI Out B: Bottom indicators D Input Select Button for HDMI Output A E Max. Video Output mode indicator F Power Indicator G Power adapter 5VDC input H USB port for firmware upgrade I HDMI Out x 2 (A, B) J HDMI In x 4 (CH 1~4)
Led Display	Power on x 1 (C) HDMI input index for Output A x 4 HDMI input index for Output B x 4
Operation temperature	+5°C to +35°C
Storage temperature	-20°C to +60°C
Humidity Range	5% to 90% RH
Power Consumption	5W
Video Bandwidth	225 MHz
Single Link Range	480i,480p, 576i, 576p, 720p,1080i,1080p
HDCP Function	HDCP Rev1.2 Compliant
Cable Length	5M (In and Out respectively)
Power Adapter	5VDC
Enclosure	Metal

Dimension (mm)	245(W) x 107(D) x 27(H) mm
Net Weight (g)	670g

Chapter 2

Installation

1. Connect the HDMI cable from the HDMI device into the HDMI Matrix Input port.
2. Connect the HDMI cable from the HDMI display or Amplifier into the PM4X2 Matrix HDMI Output port.
3. Plug 5VDC power supply into the HDMI Matrix's power DC jack.

※ “Max. Video Output” function for Home Theater Integration

1. TV and Amplifier select the same source
2. Press select button “HDMI Out A” and “HDMI Out B” together for 3 seconds, the “Max. Video Out” LED will light, the TV and Amplifier will re-set for Max. Video/Audio Output.

To turn off the “Max. Video Output” function, repeat step2, the “Max. Video Output” LED become dark for general HDMI Splitter output*.

Note: The HDMI Matrix output signal will automatically select the lowest resolution among multiple displays to handshake with the input device to ensure all output display show correctly.

Problem	Solution
HDMI MATRIX 4X2 does not work	<ol style="list-style-type: none"> 1. Make sure the 5V power is plugged in the HDMI MATRIX 4X2. 2. Check if the power LED light is on.
No Signal or poor image	<ol style="list-style-type: none"> 1. Make sure your video display is HDCP compliant. 2. Plug your HDMI cable to source and display directly, if there is no signal or poor image, please change another cable. 3. Make sure all HDMI connectors are tightly secured to all HDMI ports. 4. Turn off all equipments and restart all equipments.

※ If the Matrix HDMI Switcher has HDCP compliant issue , please contact video source device and display customer service for HDCP compliant consulting.



Features Index:



High-bandwidth Digital Content Protection (HDCP) is a form of digital copy protection to prevent copying of digital audio and video content as it travels across DisplayPort, Digital Visual Interface (DVI), High-Definition Multimedia Interface (HDMI)



DTS-HD Master Audio is a lossless audio codec created by Digital Theater System. It was previously known as DTS++ and DTS-HD



1080p is the shorthand name for a category of display resolutions. The number "1080" represents 1,080 lines of vertical resolution (1080 horizontal scan lines while the letter "p" stands for progressive scan. 1080p can be referred to as full HD or full high definition to differentiate it from other HDTV video modes



HDMI 1.3 incorporates an automatic audio/video syncing capability that allows devices to perform this synchronization automatically with accuracy



The Digital Visual Interface (DVI) is a video interface standard designed to maximize the visual quality of digital display devices such as flat panel LCD computer displays and digital projectors.



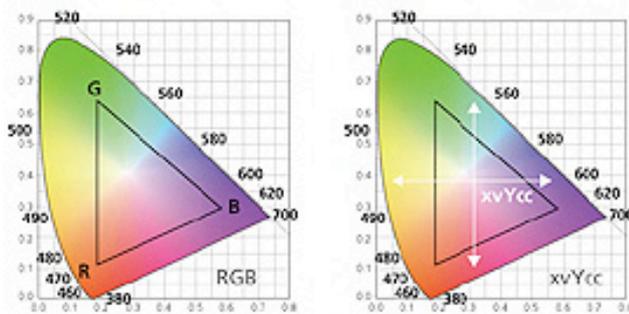
Consumer Electronic Control Pass-Through allows one TV remote to sync interoperability between display/projector and HDMI AV device connected. (output CH1). Alternative names for CEC: SAMSUNG-Anynet+, TOSHIBA-CE-Link, Regza Link, PANASONIC /JVC-VIERA Link™, EZ-SYNE, SONY-Bravia Theater Sync, LG-SimpLink, SHARP-Aquos Link, MITSUBISHI-NetCommand, Philips-Easylink, Onkyo-RIHD.



120/100Hz double frame rate, which is twice as fast as that of standard 60/50Hz HDTVs, to enhance motion-blur reduction on very fast panning scenes or fast-action sports for the ultimate flat-panel TV watching experience.



Enables HDTVs display colors more accurately and purely, broader color space supports 1.8 times as many colors as existing HDTV signals.



Up to 10.2Gbps to support hi-definition display device



Up to 16bit color per pixel color depth for smoother images, higher contrast ratio and eliminates color banding.

Color Depth	8-bit	10-bit	12-bit	16-bit
Possible Colors	17M	1B	69B	280T



Dolby TrueHD, from Dolby Laboratories, is an advanced lossless multi-channel audio codec, intended primarily for high-definition home-entertainment equipment, such as HD DVD and Blu-ray Disc.



HDMI (High-Definition Multimedia Interface) is the digital interface standard for connecting HD components. With just a single cable, HDMI transmits the highest quality digital video and audio between HD devices. Latest Spec. 1.3b.

- F/W Upgradable:



New Version firmware is upgradable through USB from any of your USB devices.

