Avenview

USER GUIDE

2X8 HDMI 1.3 Extender / Splitter over Single CAT5

Model #: HDMI-C5SP-8SRSR

HD ready 1080p HDMI HDCP 7.1CH Audio X.V.Color

Table of Contents

Section 1: Getting Started

1.1 Important Safeguards

Please read all of these instructions carefully before you use the device. Save this manual for future reference.

What the warranty does not cover

- Any product, on which the serial number has been defaced, modified or removed.
- Damage, deterioration or malfunction resulting from:
    - Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
    - Repair or attempted repair by anyone not authorized by us.
    - Any damage of the product due to shipment.
    - Removal or installation of the product.
    - Causes external to the product, such as electric power fluctuation or failure.
    - Use of supplies or parts not meeting our specifications.
    - Normal wear and tear.
    - Any other causes which does not relate to a product defect.
- Removal, installation, and set-up service charges.

1.2 Safety Instructions

The Avenview HDMI-C5SP-8SR HDMI 1.3 Extender / Splitter over CAT5 Cascading Distribution Amplifier has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipment's, the HDMI-C5SP-8SR should be used with care. Read the following safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Do not dismantle the housing or modify the module.
- Dismantling the housing or modifying the module may result in electrical shock or burn.
- Refer all servicing to qualified service personnel.
- Do not attempt to service this product yourself as opening or removing housing may expose you to dangerous voltage or other hazards
- Keep the module away from liquids.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.
- Have the module checked by a qualified service engineer before using it again.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.

1.3 Regulatory Notices Federal Communications Commission (FCC)

This equipment has been tested and found to comply with Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

Any changes or modifications made to this equipment may void the user's authority to operate this equipment.

1.4 Introduction

The Avenview HDMI-C5SP-8SR HDMI 1.3 over Single CAT5 Cascading Distribution Amplifier provides the most flexible solution by which the high definition video and high quality audio can be transmitted to different locations over a long distance. The devices are cascadable, allowing you to extend HDMI compliant displays almost anywhere. The 2 input HDMI source (only 1 input can be used at a time) can be duplicated and distributed to up to 8 HDMI enable displays through cost effective Cat-5/5e cables and RJ-45 to HDMI mini-extenders HDMI-C5-R-M. With the built in equalization, the input HDMI cable can be extended up to 20 meters (66 feet) long under Full HD, and make the overall transmission distance superior than regular HDMI splitters or matrix switches in the market.

- Silicon Image chipset embedded for best quality, compatibility and reliability
- HDMI 1.3c compliant
- HDCP compliant
- Regenerates the HDMI signal
- Acts as 2X1 HDMI Switch and 1X8 HDMI over CAT5 Splitter
- HDMI video distribution to up to 7 displays and one CAT5e Receiver or cascade to another HDMI-C5SP-8SR
- Supports default HDMI EDID and has the ability to learn the EDID of the displays
- Input up to 15m (50ft) using HDMI cables
- Extends up to 60m (200ft) (720p / 1080i) of output CAT5/6 cable
- Outputs up to 15m (50ft) using HDMI cables
- Pure unaltered uncompressed 7.1ch digital HDMI over LAN cable transmission
- Allows cascading
- 1U rack mountable with interlocking power adapter for fixedness
- Perfectly integrated with other HDMI-C5XD Series products

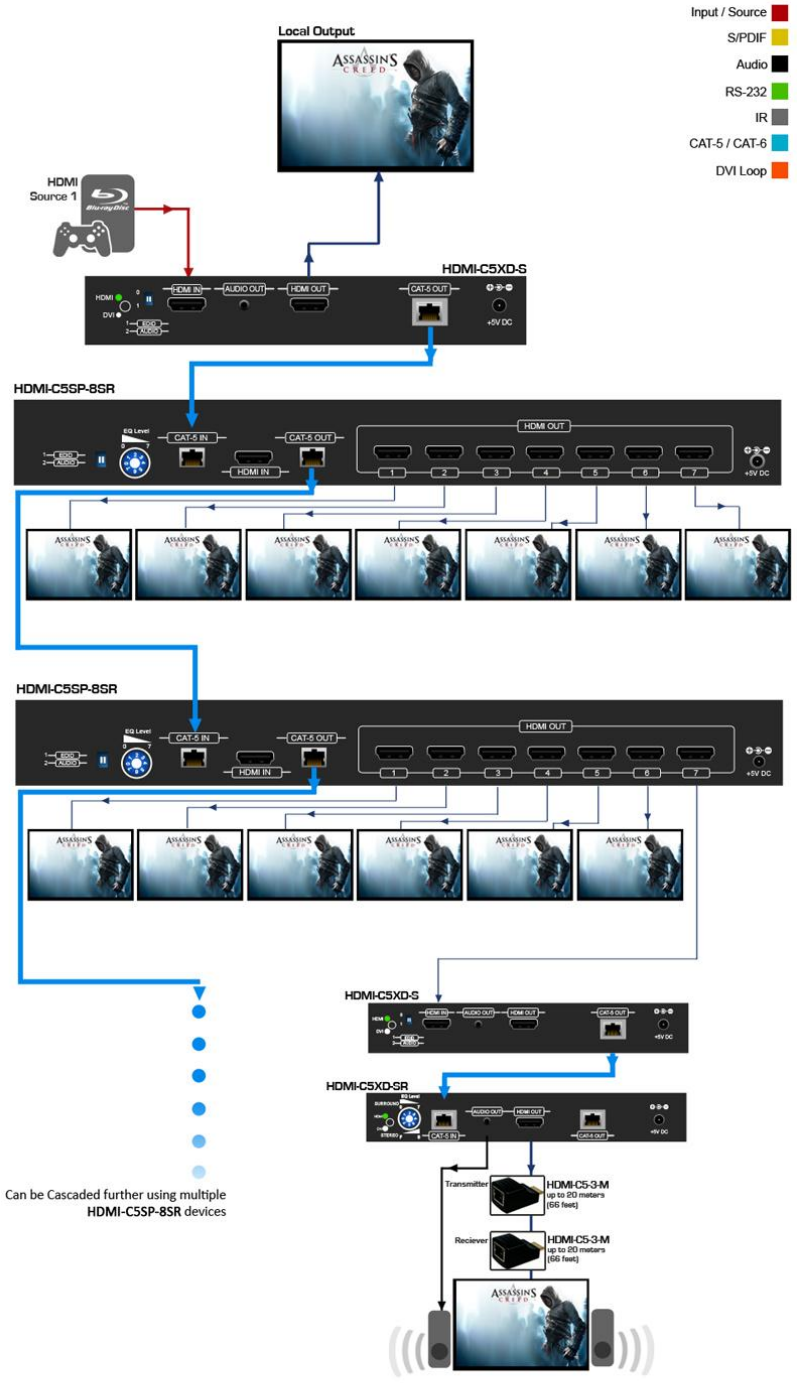
HDMI-C5SP-8SR

720p/1080i = 50m (165 feet) **CAT5**
720p/1080i = 55m (200 feet) **CAT6**
1080p = 30m (130 feet) **CAT5**
1080p = 40m (165 feet) **CAT6**

LAYOUT 1

CABLE INDEX

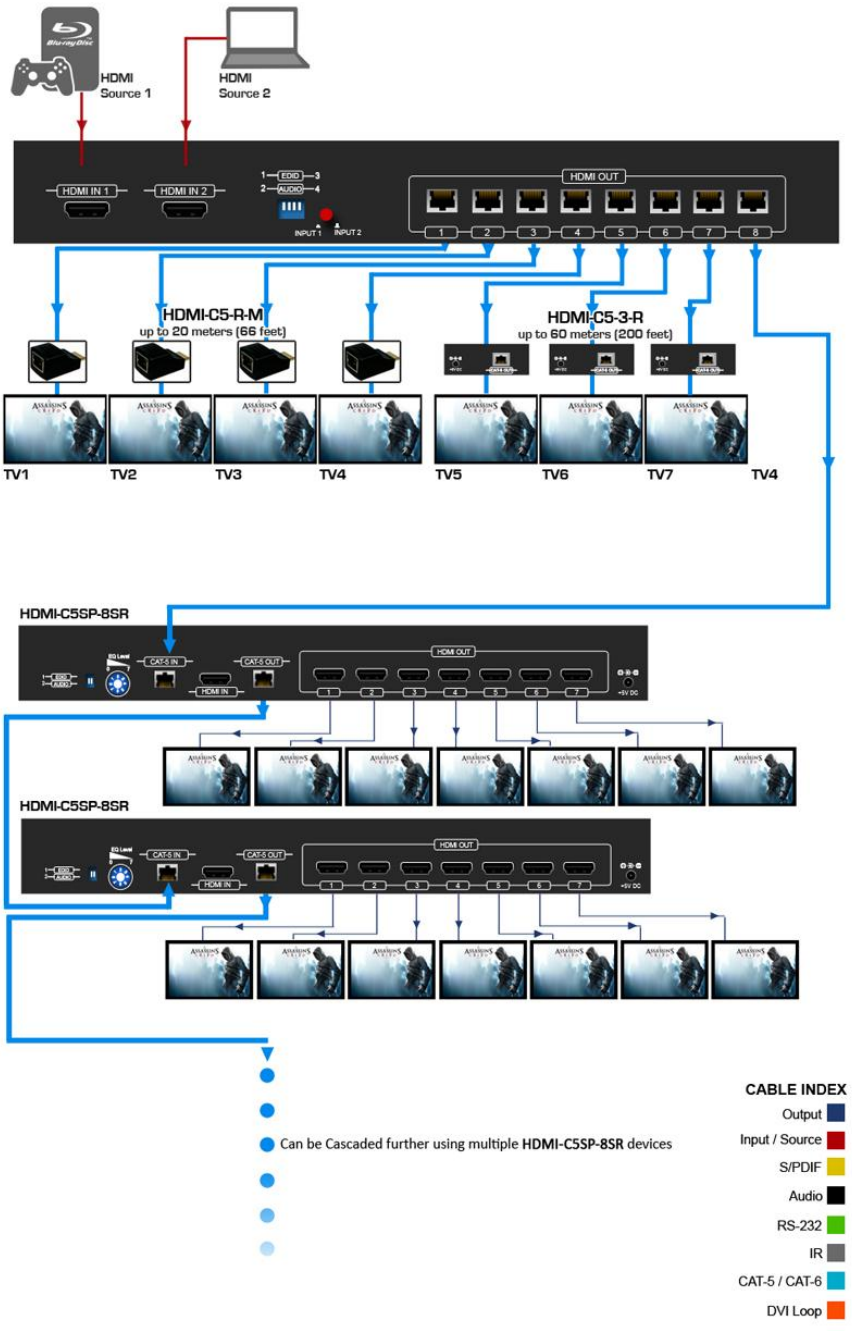
- Output
- Input / Source
- S/PDIF
- Audio
- RS-232
- IR
- CAT-5 / CAT-6
- DVI Loop



HDMI-C5SP-8SR

720p/1080i = 50m (165 feet) **CAT5**
720p/1080i = 55m (200 feet) **CAT6**
1080p = 30m (130 feet) **CAT5**
1080p = 40m (165 feet) **CAT6**

LAYOUT 2



1.5 Package Contents

Before you start the installation of the converter, please check the package contents.

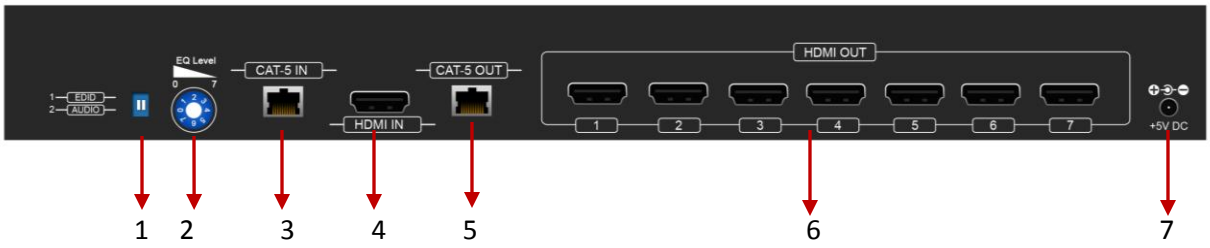
- HDMI-C5SP-8SR x 1
- Rack-mounting ears x 2
- Power Adapter x 1
- User's Manual x 1

1.6 Before Installation

- Put the product in an even and stable location. If the product falls down or drops, it may cause an injury or malfunction.
- Don't place the product in too high temperature (over 50°C), too low temperature (under 0°C) or high humidity.
- Use the DC power adapter with correct specifications. If inappropriate power supply is used then it may cause a fire.
- Do not twist or pull by force ends of the optical cable. It can cause malfunction.

1.7 Panel Description

1.7.1 Rear Panel



1. **DIP Switches** (details below)	2. **EQ Level**
3. **CAT-5 IN:** HDMI Signal In from HDMI-C5SP-SR or HDMI-C5XD-S	4. **HDMI IN**
5. **HDMI Output** over RJ45	6. **HDMI Output** (1 – 7)
7. **Power Jack**	

1.7.3 Dip Switch

DIP Switch Position		Video	Audio	Description
PIN # 1	PIN # 2			
OFF ⬆	OFF ⬆	1080p	Stereo[1]	**Default Mode[2]:** Up to 1080p & Stereo output.
OFF ⬆	ON ⬇	720p/1080i	Stereo	**Safe Mode[3]:** Forces system to output at 720p/1080i with Stereo Audio.
ON ⬇	OFF ⬆	Bypass[4]	Bypass	**EDID Learning Mode[5]:** for learning EDID from the display while playing any received HDMI Audio format.
ON ⬇	ON ⬇	Bypass	Stereo	**EDID Learning & Stereo Mode:** For learning EDID from the display while enforcing stereo output.

1 If the HDTV shows video but without audio, please try to set audio mode to stereo

2 Factory default: Pin#1-OFF[⬆], Pin#2- OFF[⬆] for 1080p with stereo.

3 If you encounter any unsolved audio/video output problem during system installation, please turn to Safe Mode (Pin#1-OFF[] & Pin#2-ON[]) to enforce the most compatible 720p stereo output for system check.

4 Bypass means the matrix will maintain playing the original format of HDMI signals in video and perhaps audio. By setting at this mode, the users may encounter compatibility issue among different kinds of HDMI sources and displays. If you cannot get the audio and/or video output normally at the system installation, please change the DIP switch setting to default mode or even safe mode to verify the functionality of the device.

5 Set Pin#1 at ON[] first then connect the HDMI Input to HDTV through a HDMI cable. Wait for 20 seconds. The EDID learning procedure will be finished. If you want to learn the EDID from another HDTV, you must set Pin#1 at OFF first and repeat this procedure.

1.7.4 EDID Learning

1. Power up the HDMI-C5SP-8SR. Connect to HDMI OUT7 with the display you want the HDMI-C5SP-8SR to learn its EDID.
2. The HDMI-C5SP-8SR is only bound to learn the EDID from the display for the HDMI source device connected to HDMI IN2. For HDMI signal input at RJ45 IN1, please use the transmitting device that sends the HDMI signals over CAT5 to the HDMI Signal IN1 of the HDMI-C5SP-8SR to learn the EDID of the display.
3. To learn the display's EDID for source device connected to HDMI IN2, pull both DIP switch pin#1 & pin#2 up-and-down to stay at ON[]-ON[] and wait for about 5 seconds to complete the EDID learning process. You DON'T NEED to pull up the DIP switch again unless you want to learn another display's EDID by pulling both DIP switch pin#1 & pin#2 up-and-down one more time.

1.7.5 EQ Level Control

In order to adapt the CAT5 cable, HDMI-C5SP-8SR offers 8-level equalization control on the received HDMI signal level. 0-to-7 = strongest-to-weakest signal level for respective transmission length [long to short]. It is recommended to switch from 7 to 0 to find the optimal visual experience.

1.7.6 HDMI Output Format Selection

When input signal exists, the output format LED turns on. If the input HDMI source is HDMI 1.3 format, you can set the output format to HDMI 1.2 mode and Red LED will be on. If the input HDMI source is HDMI 1.2, the output format is always set to HDMI 1.2. The main purpose of lower the HDMI 1.3 resolution [36~48-bit color depth] to HDMI 1.2 [24-bit color depth] is to increase the transmission distance without creating noticeable video quality distortion still at 1080p. By pressing the push-in button, users can enforce the HDMI output at HDMI 1.2 format for longer transmission to the display. The HDMI-C5SP-8SR cannot upgrade the HDMI 1.2 source content to become HDMI 1.3 format.

1.8 Installation

To setup Avenview HDMI-C5SP-8SR follow these steps for connecting to a device:

1. Connect Cat-5e cable if using any Cat-5e HDMI video transmitter as cascading source
2. Connect HDMI input to HDMI compliant sources (such as a Blu-ray Disc player)
3. Connect all HDMI outputs to the HDMI displays
4. Connect RJ-45 output to HDMI over CAT5 receiver through Cat-5e cable
5. Plug in 5V 4A DC power supply.
6. Power on the HDMI-C5SP-8SR
7. Power on the HDMI displays.
8. Power on the HDMI source(s)

Section 2: Specifications

Item	Description
Units	HDMI-C5SP-8SR
Unit Description	2x8 HDMI 1.3 Transmitter / Splitter over CAT5 / CAT6 Cascadable
HDMI Compliance	HDMI 1.3c
HDCP Compliance	Yes
Video Bandwidth	Single Link 225 MHz (6.75Gbps)
Supported Resolutions	480i / 480p / 720p / 1080i / 1080p60
Resolution and Distance	**Full HD:** (1080p) ~ 40meter (130feet) (CAT5e) / 50meter (165feet) (CAT6) **HD:** (720p/1080i) ~ 50meter (165feet) (CAT5e) / 60meter (200feet) (CAT6)
Audio Support	Surround Sound (up to 7.1 Ch) or Stereo Digital Audio
Equalization	-
Input TMDS Signal	1.2 Volts (peak-to-peak)
Input DDC Signal	5 Volts (peak-to-peak, TTL)
ESD Protection	- Human body model — ±15kV (air-gap discharge) & ±8kV (contact discharge) - Core chipset — ±8kV
Input	1 x HDMI 1 x RJ45
Output	7 x HDMI 1 x Rj45
HDMI Connector	Type A (19 pin female)
RJ45 Connector	WE/SS 8P8C with 2 LED indicators
Dimensions (L x W x H)	13” x 4.3” x 1.7”
Power Supply	5V 4A DC
Power Consumption	13 Watt (max)

Environmental

Operating Temperature	32˚ ~ 104˚F (0˚ to 40˚C)
Storage Temperature	-4˚ ~ 140˚F (-20˚ ~ 60˚C)
Relative Humidity	20~90% RH (no condensation)

Notice

1. *If the DVI or HDMI device requires the EDID information, please use EDID Reader/Writer to retrieve and provide DVI/HDMI EDID information.*
2. *All HDMI over CAT5 transmission distances are measured using Belden 1583A CAT5e 125MHz LAN cable and ASTRODESIGN Video Signal Generator VG-859C.3*
3. *The transmission length is largely affected by the type of LAN cables, the type of HDMI sources, and the type of HDMI display. The testing result shows solid LAN cables (usually in bulk cable 300m or 1000ft form) can transmit a lot longer signals than stranded LAN cables (usually in patch cord form). Shielded STP cables are better suit than unshielded UTP cables. A solid UTP CAT5e cable shows longer transmission length than stranded STP CAT6 cable. For long extension users, solid LAN cables are your only choice.*
4. *EIA/TIA-568-B termination (T568B) for LAN cables is recommended for better performance.*
5. *To reduce the interference among the unshielded twisted pairs of wires in LAN cable, you can use shielded LAN cables to improve EMI problems, which is worsen in long transmission.*
6. *Because the quality of the LAN cables has the major effects in how long transmission distance will be made and how good is the received display, the actual transmission length is subject to your LAN cables. For resolution greater than 1080i or 1280x1024, a CAT6 cable is recommended.*
7. *If your HDMI display has multiple HDMI inputs, it is found that the first HDMI input [HDMI input #1] generally can produce better transmission performance among all HDMI inputs.*

Disclaimer

While every precaution has been taken in the preparation of this document, Avenview Inc. assumes no liability with respect to the operation or use of Avenview hardware, software or other products and documentation described herein, for any act or omission of Avenview concerning such products or this documentation, for any interruption of service, loss or interruption of business, loss of anticipatory profits, or for punitive, incidental or consequential damages in connection with the furnishing, performance, or use of the Avenview hardware, software, or other products and documentation provided herein.

Avenview Inc. reserves the right to make changes without further notice to a product or system described herein to improve reliability, function or design. With respect to Avenview products which this document relates, Avenview disclaims all express or implied warranties regarding such products, including but not limited to, the implied warranties of merchantability, fitness for a particular purpose, and non-infringement.