



# HDMI 1.3 Extender over Signal CAT5/CAT6 Cable



Model #: HDMI-C5-3-SET

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

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## 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 HDMI-C5-3-SET, HDMI 1.3 Extender over Signal CAT5 has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the HDMI-C5-3-SET 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-C5-3-SET HDMI 1.3 over Single CAT5 Extender boosts up your video/audio transmission distance up to 60m (200ft) in HDTV 1080i format, 40m (130ft) in HDTV 1080p format, and 20m (65ft) in HDTV 1080p with 36 bit color depth. With only one cost effective LAN cable, users can easily extend HDTV sources from DVD players, Blu-ray Disc player, PS3, PC, and any other HDMI sources compliant with TMDS to distant display monitors including HDMI/DVI enabled TV sets or LCD PC monitors. With the state-of-the-art Silicon Image chipsets equipped, deep color video, DTS-HD or Dolby TrueHD audio, and HDCP supports and compatibility are all further insured. This flexibility makes HDCP compliant DVD players or PS3 transmit utmost high quality video and audio with a greater distance at the minimal cost, when integrating several components apart.

The HDMI-C5-3-SET consists of Transmitter (HDMI-C5-3-S) and Receiver (HDMI-C5-3-R). The Transmitter (HDMI-C5-3-S) captures the input HDMI/DVI signals and carry the signals through one RJ-45 connector into one cost effective CAT-5/5e/6 LAN cable. The Receiver (HDMI-C5-3-R) equalizes the sent TMDS multimedia data. The transmission distance between the sending and receiving units can be up to 60m (200ft) under HD (720p/1080i) or 40m (130ft) under Full HD (1080p). With an 8-level equalization control knob on the receiving unit, users can adjust the equalization strength to the received TMDS signals accordingly, and therefore optimize the transmission distance between source and destination.

- Silicon Image chipset embedded for best compatibility and reliability HDMI video input supports up to 1080p resolution
- HDMI 1.3c Compliant
- HDCP 1.1 compliant
- Extend the transmission length up to 60m (200ft) from the HDMI sources under HD resolution (1080i or 720p at 8 bit color depth)
- Extend the transmission length up to 40m (130ft) from the HDMI sources under Full HD resolution (1080p at 8 bit color depth)
- Extend the transmission length up to 20m (65ft) from the HDMI sources under Full HD resolution (1080p at 12 bit color depth)
- Minimize the cable skew by adjustable 8-level equalization control
- Pure unaltered uncompressed 7.1ch digital HDMI over LAN cable transmission
- DTS-HD and Dolby True HD high bit rate audio support
- Allows cascading
- Perfectly integrated with other HDMI-C5-3 Series products

## 1.5 Package Contents

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

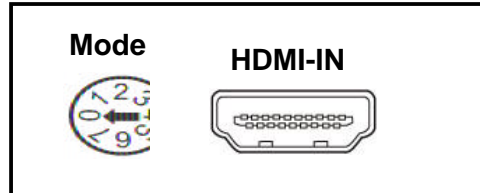
- |                             |     |
|-----------------------------|-----|
| - HDMI-C5-3-S               | x 1 |
| - HDMI-C5-3-R               | x 1 |
| - Power Adapter (+5VDC, 4A) | x 1 |
| - User's Manual             | x 1 |

## 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

### FRONT PANEL (Transmitter, HDMI-C5-3-S)



1. Rotary Switch	2. HDMI Input
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Rotary Mode SWITCH				
0	VIDEO	Supports up to HDMI 1.3 Output	AUDIO	Supports up to 7.1 Channel Output
1	VIDEO	Supports up to HDMI 1.3 Output	AUDIO	Locks to Stereo Audio Output
2	VIDEO	Locks to HDMI 1.2 Output	AUDIO	Supports up to 7.1 Channel Output
3	VIDEO	Locks to HDMI 1.2 Output	AUDIO	Locks to Stereo Audio Output
4	VIDEO	DVI Display Mode	AUDIO	No Audio Output
5	Safe Mode	Uses default EDID with video supports up to 1080p	AUDIO	Stereo Audio
6	Default Mode	Uses default EDID with video supported up to 1080p	AUDIO	7.1 Channel
7	EDID Learning Mode	Learns EDID from Display		

#### Note for EDID (Extended Display Identification Data) learning

1. If you cannot get the audio/video output from the connected display from the first time setup. Please follow the instructions below to check if the extender is OK:

**Step 1** – Please set the rotary arrow on Transmitter at “Mode 5” for Safe Mode, and wait for the LED of the RJ-45 connector blinks for a couple seconds.

**Step 2** – Please turn the rotary arrow counterclockwise [↺] from Mode 5 to Mode 3. If you can get audio/video from the display, you can stay tune at this setting for 720p or 1080i and stereo audio. If you need to get 720p/1080i with 7.1ch audio output, please turn the rotary arrow counterclockwise [↺] from Mode 3 to Mode 2. For better audio/video output, please check Note#2. If you still cannot get the audio/video out normally, please go on the next step.

**Step 3** – Please turn the rotary arrow counterclockwise [↺] from Mode 3 to Mode 7. Wait a few seconds until the LED of the RJ-45 connector dims and then lights again.

**Step 4** – Please turn the rotary arrow clockwise [↻] from Mode 7 to Mode 1. You should have normal audio/video output. If not, please contact technical support.

2. For desirable 1080p video output, please follow the instructions below:

**Step 1** – Please set the rotary arrow at “Mode 6” for Default Mode, and wait for the LED of the RJ-45 connector blinks for a couple of seconds.

**Note for EDID (Extended Display Identification Data) learning continued:**

**Step 2** – Please turn the rotary arrow clockwise [↻] from **Mode 6** to **Mode 1**. If you can get audio/video from the display, you can stay tune at this setting for 1080p and stereo audio. If you need to get 1080p with 7.1ch audio output, please turn the rotary arrow counterclockwise [↻] from **Mode 1** to **Mode 0**. If you cannot get the audio/video out normally, please go to next step.

**Step 3** – Please turn the rotary arrow counterclockwise [↻] from **Mode 0/1** to **Mode 7**. Wait a few seconds until the LED of the RJ-45 connector dims and then lights again.

**Step 4** – Please turn the rotary arrow clockwise [↻] from **Mode 7** to **Mode 0/1**. You should have your desirable audio/video output. If not, please follow the instruction in Note#1.

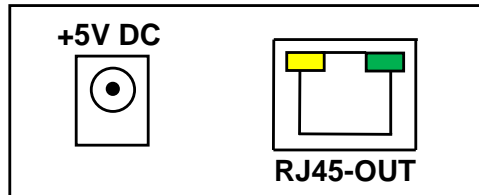
**3. To learn EDID from the HDMI display, please follow the instruction below:**

**Step 1** – Please connect the display which you want to read EDID with a HDMI cable to the transmitter's HDMI IN and set the rotary arrow at **Mode 7** so the TX can learn the EDID information from the connected display. The LED on the RJ45 connector of TX will dim and light again in a few seconds, which indicates the EDID learning procedure, is complete.

**Step 2** – Please turn the rotary arrow clockwise [↻] from **Mode 7** to **Mode 0** or **Mode 1** for desirable audio setting and enjoy the experience. DO NOT let the rotary arrow pass by **Mode 5** and **Mode 6** which will erase the EDID just learned and restore the default EDID.

## REAR PANEL (Transmitter, HDMI-C5-3-S)

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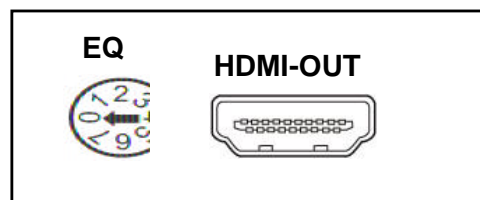


1. 5V 4A DC Power Connector

2. RJ45 Out

## FRONT PANEL (Receiver, HDMI-C5-3-R)

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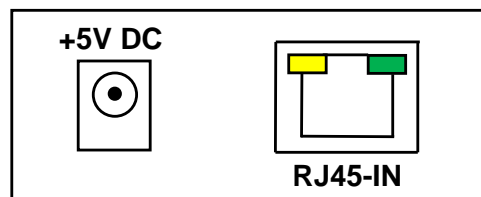
1. Rotary Switch

2. HDMI Out

*EQ: Adjust the 8-level equalization control knob to the received HDMI signals.  
0 – 7 = Strongest – Weakest.  
It is recommended to switch from 7 to 0 to find the optimal visual experience.*

## REAR PANEL (Receiver, HDMI-C5-3-R)

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1. 5V 4A DC Power Connector

2. RJ45 In





## 1.8 Installation

To setup Avenview HDMI-C5-3-SET follow these steps for connecting to a device:

1. Connect your HDMI/DVI source (such as a Blu-ray Disc player) to Transmitter (HDMI-C5-3-S).
2. Connect your HDMI/DVI display (such as a LCD TV) to the receiving unit HDMI-C5-3-R.
3. Connect your CAT-5/5e/6 LAN cable between the transmitting and receiving units.
4. Make sure CAT-5/5e/6 LAN cable is tightly connected and not loose.
5. Plug in 5V DC power cord to the power jack of the receiving unit HDMI-C5-3-R.
6. Plug in 5V DC power cord to the power jack of the transmitting unit HDMI-C5-3-S.

*If a flickering or a blinking image is seen, try to adjust the rotational switch to improve the cable skew. 0 stands for the strongest EQ while 7 stands for the weakest. Try adjusting the EQ from 7 to 0*

## 1.9 EDID Learning

To learn EDID from the monitor/TV following these steps

1. Turn on HDMI-C5-3-S.
2. Turn the Mode of HDMI-C5-3-S counterclockwise from 0 (for surround sound) or 1 (for stereo) to 7.
3. Use a HDMI cable to connect HDMI-C5-3-S & the display (better not connect to video source). The LED on the RJ-45 of HDMI-C5-3-S will dim and light again, which indicates the EDID learning process is finished.
4. Turn the Mode of HDMI-C5-3-S clockwise from 7 to 0 (for surround sound) or 1 (for stereo).
5. Connect HDMI-C5-3-S and the video source through a HDMI cable and enjoy the experience.

*The most important thing is don't let the rotary arrow pass through 6 which will erase the EDID just learned and restore to default EDID.*

## 1.10 General Troubleshooting

Problem	Possible Solution
No Image	<ul style="list-style-type: none"> <li>Check if connection to the source and the display are correct.</li> <li>Ensure that display device supports 480p, 720p and 1080p resolution</li> </ul>
Screen Defects Appear	<ul style="list-style-type: none"> <li>This product supports up to 1080p (1920x1200) resolution.</li> <li>Check the DVI and HDMI connection</li> <li>If outputting from a PC. Check the maximum resolution range of the graphics card.</li> </ul>

## Section 2: Specifications

Item	Description	
Units	HDMI-C5-3-S	HDMI-C5-3-R
Unit Description	HDMI 1.3 Transmitter	HDMI 1.3 Receiver
HDMI Compliance	HDMI 1.3c	
HDCP Compliance	Yes	
Video Bandwidth	Single Link 340 MHz (10.2Gbps)	
Supported Resolutions	480i / 480p / 720p / 1080i / 1080p60	
Resolution and Distance (8-bit)	<b>Full HD:</b> (1080p) ~40meter (130feet) (CAT5e) / 50meter (165feet) (CAT6) <b>HD:</b> (720p/1080i)-50meter (165feet) (CAT5e) / 60meter (200feet) (CAT6)	
Audio Support	Surround Sound (up to 7.1 Ch) or Stereo Digital Audio	
Equalization	-	8 Level Digital Control
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	1 x RJ45	1 x HDMI
HDMI Connector	Type A (19 pin female)	
RJ45 Connector	WE/SS 8P8C with 2 LED indicators	
Rotary Switch	Mode	EQ
Dimensions	3.3" X 2.4" x 1" (L x W x H)	
Power Supply	5V 4A DC	
Power Consumption	1 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)



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