



# SDM-E201R

## HDBaseT Receiver Module



# Operation Manual



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## SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, 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 any openings or empty slots in the unit, as you may damage parts inside the unit.
  - Do not attach the power supply cabling to building surfaces.
  - Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
  - Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
  - To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.
  - Please completely disconnect the power when the unit is not in use to avoid wasting electricity.
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## VERSION HISTORY

REV.	DATE	SUMMARY OF CHANGE
<b>Ver 1.00</b>	2024/01/05	Initial Release
<b>Ver 1.01</b>	2024/03/25	<ol style="list-style-type: none"><li>1. Modified UHD to 4K60</li><li>2. Re-arranged the sequence of features</li><li>3. Added details of LINK LED on the front panel</li></ol>
<b>Ver 1.02</b>	2024/04/09	<ol style="list-style-type: none"><li>1. Modified the product description</li><li>2. Modified the cable specifications</li></ol>

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## 1. INTRODUCTION

This HDBaseT Module Receiver is a great solution for extending 4K60 video and audio via a single run of CAT.5e/6/7 cable over distance up to 40 meters. This extender complies with the advanced HDCP 2.2 and HDMI 2.0 standards, as well as supporting the legacy HDCP 1.x and HDMI 1.x standards.

The module's design is compatible with a variety of products that have a standard CYP Module Slot, offering increased flexibility to customers.

## 2. APPLICATIONS

- Household entertainment sharing and control
- Lecture room display and control
- Showroom display and control
- Meeting room presentation and control
- Classroom display and control

## 3. PACKAGE CONTENTS

- 1× HDBaseT Module Receiver
- 1× Mounting Screws (Set of 2)
- 1× Operation Manual

## 4. SYSTEM REQUIREMENTS

- Must be installed into a product with an available compatible CYP Module Slot

*Note: Despite appearances, this card is NOT designed for installation into a PC's PCIe card slot and should only be installed in officially compatible products.*

- A compatible HDBaseT Transmitter with self-power support is required.
- Industry standard CAT. 5e/6/7 Ethernet cable is required.

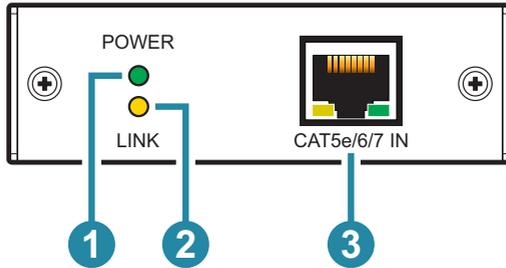


## 5. FEATURES

- Supports distance up to 70m/230ft at 1080p and 40m/131ft at 4K
- Supports output resolutions up to 4K@60Hz (4:2:0, 8-bit)
- Supports HDCP repeater and CEC bypass
- Supports Deep Color input and output up to 12-bit
- Supports pass-through of many audio formats including LPCM (up to 8 channels), Bitstream, and HD Bitstream
- HDMI 2.0 and DVI 1.0 compatible
- HDCP 2.2 and HDCP 1.x compliant

## 6. OPERATION CONTROLS AND FUNCTIONS

### 6.1 Front Panel



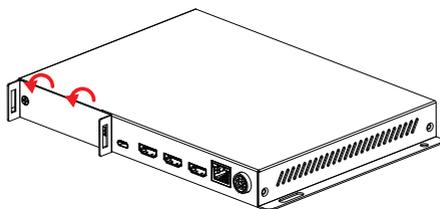
- 1 POWER LED:** This LED will illuminate to indicate the unit is on and receiving power.
- 2 LINK LED:** This LED will illuminate solidly when a live connection with a compatible transmitter is active.
- 3 CAT. 5e/6/7 IN Port:** Connect to a compatible HDBaseT Transmitter with a single CAT.5e/6/6A/7 cable for transmission of all data signals.

## 6.2 Module Card Installation

To install this module card into your unit, it must have at least one available CYP Module Slot.

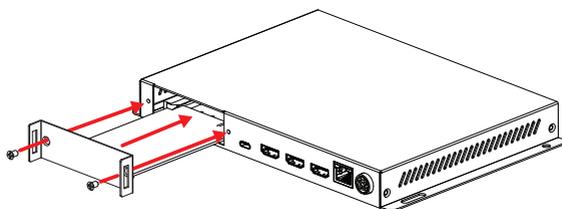
Ensure that the anti-static procedure is completed before handling the module card.

- (1) Prior to installation, power the unit completely off.

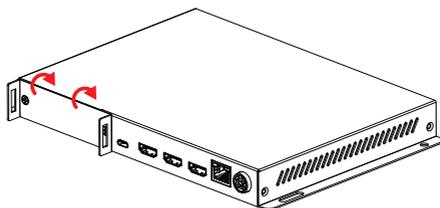


- (2) Remove the dummy faceplate that is covering the card module slot by unscrewing both screws.

*Note: Be sure to store the dummy faceplate, and its screws, somewhere safe, in case you need to use them again later.*



- (3) Align the card with the guiderails to each side of the module slot, and gently slide the module card into the slot until its faceplate is flush with the back of the unit.



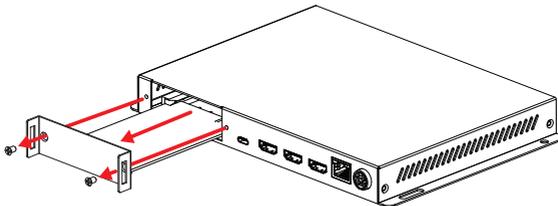
- (4) Secure the module to the unit by using the supplied screws.
- (5) The unit may now be powered back on. The card's power LED will light up to indicate it is receiving power. In most cases, the card will be automatically detected by the unit and be available for use.

## 6.3 Module Card Removal

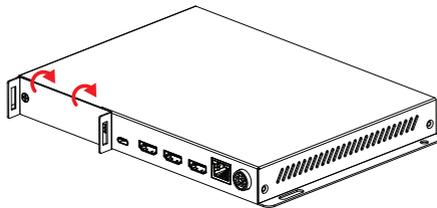
(1) Prior to removal, power the unit completely off.



(2) Completely unscrew both screws.



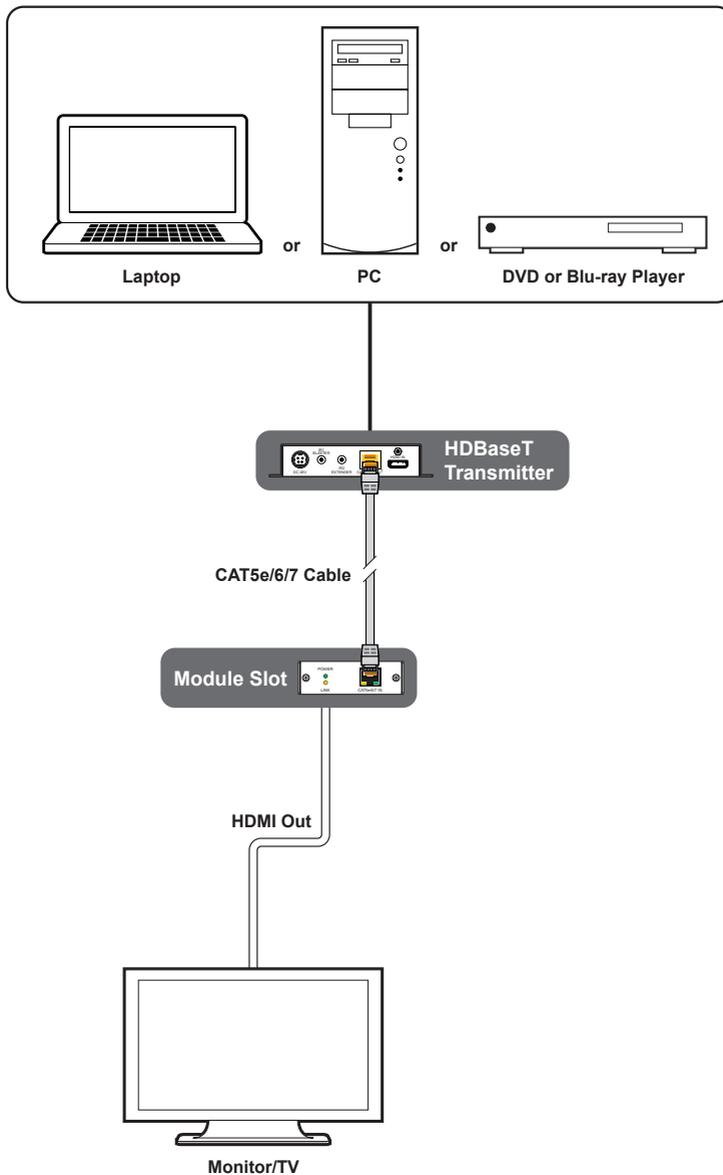
(3) Gently pull the card straight out of the module slot using the provided handles.



(4) Cover the module slot with a dummy faceplate and tighten both screws.

(5) The unit may now be powered back on.

## 7. CONNECTION DIAGRAM



## 8. SPECIFICATIONS

### 8.1 Technical Specifications

<b>HDBaseT Bandwidth</b>	10.2Gbps
<b>Card Slot Format</b>	1×CYP Module (Edge Connector)
<b>Input Ports</b>	1×HDBaseT (RJ-45)
<b>ESD Protection (HBM)</b>	±8kV (Air Discharge) ±4kV (Contact Discharge)
<b>Dimensions (W×H×D)</b>	122.2mm×25mm×82mm [Case Only] 122.2mm×25mm×82mm [All Inclusive]
<b>Weight</b>	60g
<b>Chassis Material</b>	Metal (Steel)
<b>Chassis Color</b>	Black
<b>Operating Temperature</b>	0°C – 40°C/32°F – 104°F
<b>Storage Temperature</b>	-20°C – 60°C/-4°F – 140°F
<b>Relative Humidity</b>	20 – 90% RH (Non-condensing)

## 8.2 Video Specifications

Supported Resolutions (Hz)	Input	Output
	HDBaseT	Card Slot
720×400p@70/85	✓	✓
640×480p@60/72/75/85	✓	✓
720×480i@60	✓	✓
720×480p@60	✓	✓
720×576i@50	✓	✓
720×576p@50	✓	✓
800×600p@56/60/72/75/85	✓	✓
848×480p@60	✓	✓
1024×768p@60/70/75/85	✓	✓
1152×864p@75	✓	✓
1280×720p@50/60	✓	✓
1280×768p@60/75/85	60/75	60/75
1280×800p@60/75/85	60/60(RB)	60/60(RB)
1280×960p@60/85	✓	✓
1280×1024p@60/75/85	✓	✓
1360×768p@60	✓	✓
1366×768p@60	✓	✓
1400×1050p@60	✓	✓
1440×900p@60/75	✓	✓
1600×900p@60RB	✓	✓
1600×1200p@60	✓	✓
1680×1050p@60	✓	✓
1920×1080i@50/60	✓	✓
1920×1080p@24/25/30	✓	✓

Supported Resolutions (Hz)	Input	Output
	HDBaseT	Card Slot
1920×1080p@50/60	✓	✓
1920×1200p@60RB	✓	✓
2560×1440p@60RB	×	×
2560×1600p@60RB	✓	✓
2048×1080p@24/25/30	✓	✓
2048×1080p@50/60	✓	✓
3840×2160p@24/25/30	✓	✓
3840×2160p@50/60 (4:2:0)	✓	✓
3840×2160p@24, HDR10	×	×
3840×2160p@50/60 (4:2:0),HDR10	×	×
3840×2160p@50/60	×	×
4096×2160p@24/25/30	✓	✓
4096×2160p@50/60 (4:2:0)	✓	✓
4096×2160p@24, HDR10	×	×
4096×2160p@50/60 (4:2:0),HDR10	×	×
4096×2160p@50/60	×	×

## 8.3 Audio Specifications

### 8.3.1 Digital Audio

HDBaseT Input / Card Slot Output	
<b>LPCM</b>	
Max Channels	8 Channels
Sampling Rate (kHz)	32, 44.1, 48, 88.2, 96, 176.4, 192
<b>Bitstream</b>	
Supported Formats	Standard & High-Definition

## 8.4 Cable Specifications

Cable Length	HD	FHD	4K UHD	4K UHD <sup>+</sup>	8K UHD
<b>Ethernet Cable</b>					
<b>Cat.5e/6</b>	60m	35m		×	
<b>Cat.6A/7</b>	70m	40m		×	

### Bandwidth Category Examples:

- **HD Video**
  - 720p@60Hz
  - HDMI transmission rates lower than 3Gbps
  - HD-SDI (SMPTE 292M, 1.485Gbps)
- **FHD Video**
  - 1080p@60Hz
  - HDMI transmission rates between 3Gbps and 5.3Gbps
  - 3G-SDI (SMPTE 424M, 2.970Gbps)
- **4K UHD Video**
  - 4K@24/25/30Hz (8-bit color) & 4K@50/60Hz (4:2:0, 8-bit color)
  - HDMI transmission rates between 5.3Gbps and 10.2Gbps
  - 6G-SDI (SMPTE ST 2081, 6Gbps)
- **4K UHD<sup>+</sup> Video**
  - 1080p@120Hz (10/12-bit HDR)
  - 4K@50/60Hz (4:4:4, 8-bit) & 4K@50/60Hz (4:2:0, 10/12-bit HDR)
  - HDMI transmission rates between 10.2Gbps and 18Gbps
  - 12G-SDI (SMPTE ST 2082, 12Gbps)
- **8K UHD Video**
  - 4K@120Hz (10/12-bit HDR)
  - 8K@24/25/30Hz (10/12-bit HDR) & 8K@50/60Hz (4:2:0, 8-bit color)
  - HDMI transmission rates between 18Gbps and 48Gbps
  - 24G-SDI (SMPTE ST 2083, 24Gbps)

## 8.5 HDBaseT Features

HDBaseT Feature Set	Receiver
Video & Audio Extension	Supported
LAN Extension	Unsupported
Send power to Transmitter	Unsupported
Accept power from Transmitter	Unsupported
IR Extension	Unsupported
RS-232 Extension	Unsupported
USB 2.0 Extension	Unsupported

## 9. ACRONYMS

ACRONYM	COMPLETE TERM
<b>4K UHD</b>	4K Ultra-High-Definition (10.2Gbps max)
<b>ADC</b>	Analog-to-Digital Converter
<b>ARC</b>	Audio Return Channel
<b>ASCII</b>	American Standard Code for Information Interchange
<b>AV</b>	Audio/Video
<b>AVR</b>	Audio/Video Receiver or Recorder
<b>Cat.5e</b>	Enhanced Category 5 cable
<b>Cat.6</b>	Category 6 cable
<b>Cat.6A</b>	Augmented Category 6 cable
<b>Cat.7</b>	Category 7 cable
<b>CEC</b>	Consumer Electronics Control
<b>CLI</b>	Command-Line Interface
<b>COM</b>	Communication
<b>DHCP</b>	Dynamic Host Configuration Protocol
<b>eARC</b>	Enhanced Audio Return Channel
<b>EDID</b>	Extended Display Identification Data
<b>GbE</b>	Gigabit Ethernet
<b>Gbps</b>	Gigabits per second
<b>GUI</b>	Graphical User Interface
<b>HD</b>	High-Definition
<b>HDBT</b>	HDBaseT
<b>HDCP</b>	High-bandwidth Digital Content Protection
<b>HDMI</b>	High-Definition Multimedia Interface
<b>HDR</b>	High Dynamic Range
<b>HDTV</b>	High-Definition Television
<b>HPD</b>	Hot Plug Detection

ACRONYM	COMPLETE TERM
<b>IP</b>	Internet Protocol
<b>IR</b>	Infrared
<b>kHz</b>	Kilohertz
<b>LAN</b>	Local Area Network
<b>LED</b>	Light-Emitting Diode
<b>LPCM</b>	Linear Pulse-Code Modulation
<b>MAC</b>	Media Access Control
<b>MHz</b>	Megahertz
<b>OAR</b>	Optical Audio Return
<b>OSD</b>	On-Screen Display
<b>PD</b>	Powered Device
<b>PoC</b>	Power over Cable
<b>PoH</b>	Power over HDBaseT
<b>PoE</b>	Power over Ethernet
<b>PSE</b>	Power Sourcing Equipment
<b>SDTV</b>	Standard-Definition Television
<b>SDVoE</b>	Software Defined Video over Ethernet
<b>SNR</b>	Signal-to-Noise Ratio
<b>TCP</b>	Transmission Control Protocol
<b>THD+N</b>	Total Harmonic Distortion plus Noise
<b>TMDs</b>	Transition-Minimized Differential Signaling
<b>UHDTV</b>	Ultra-High-Definition Television
<b>USB</b>	Universal Serial Bus
<b>WUXGA (RB)</b>	Widescreen Ultra Extended Graphics Array (Reduced Blanking)
<b>XGA</b>	Extended Graphics Array
<b>Ω</b>	Ohm



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