CYP

CAC-TXA & CAC-RXA
HDMI over 5 COAX Transmitter and Receiver

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.

REVISION HISTORY

VERSION NO.	DATE DD/MM/YY	SUMMARY OF CHANGE
VR0	29/09/2011	Preliminary Release
VS1	26/10/2014	Updated format/diagrams

CONTENTS

1. INTRODUCTION

The HDMI over 5 COAX Transmitter and Receiver set is ideally suited for long distance transmission of high definition video and audio from PS3/DVD or Blu-ray devices to an HDMI display or AV Receiver. It can operate at distances up to 100m at HD resolutions (up to 1080p/8-bit resolution) and supports HDMI features such as 'Deep Color' and HD Audio passthrough. The system's digital transmission format does not introduce delays or loss of image quality. There is also the option of powering the Receiver from the transmitter, making the system easy to install and operate.

2. APPLICATIONS

- Designed to support long distance HDMI applications.
- Capable of high bandwidth communication of lossless media.
- Designed to equalize and restore signals received over 75Ω Coaxial cable

3. PACKAGE CONTENTS

- 1×HDMI to 5-COAX Transmitter
- 1×5-COAX to HDMI Receiver
- 2×Power Adaptor
- Operation Manual

4. SYSTEM REQUIREMENTS

HDMI input device, R/G/B*, Clock*, Power* cables, HDMI output device.

*See Section 8.2 for Cable Specifications.

5. FEATURES

- Compatible with HDMI and DVI 1.1
  - Improved color gamut (i.e. 'Deep Color'/xvYCC).
  - High Definition audio (8-channel audio support).
  - Supports High Resolutions from VGA (640×480) to WUXGA (1920×1200).
  - Supports HDTV resolutions from 480i~1080p/12-bit.
  - Built in Consumer Electronics Control (CEC).
  - Supports 'Deep Color'
- Gigabit digital transport needs:
  - HDMI 1.3 (Category)/DVI (10.2Gb/s). The RG6 type 75Ω coaxial cables can operate up to 100m at 10.8Gb/s.
  - The receiver can be powered either from the supplied AC power adaptor or by the Transmitter unit over cable.
    Note: running off the Transmitter may result in a loss of performance over longer cable distances
  - Supports VESA DDC, CEC, Hot Plug Detect (HPD) and xvYCC.
- Easy to install and operate

6. OPERATION CONTROLS AND FUNCTIONS

6.1 Transmitter Front and Rear Panels
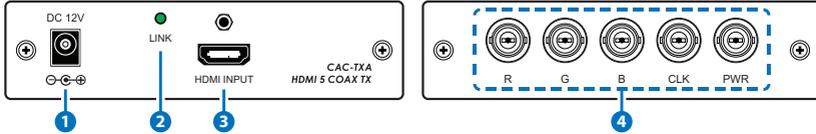
1 **DC 12V**

Connect one of the supplied power adaptors to the Transmitter unit and plug the power cable into an AC outlet.

2 **LINK LED**

This LED will illuminate green when all the connections are established and power is on.

3 **HDMI INPUT**

Connect an HDMI equipped input device such as a Blu-ray/DVD player or games console to the Transmitter unit with an HDMI cable.

4 **BNC OUTPUT**

Connect the Transmitter and Receiver units with 75Ω coaxial cables that are terminated with BNC-F connectors.

Ensure that the RGB, Clock, and Power cables are connected to the correct terminals on the Transmitter and Receiver units.

Note: It is advised to not use cables of lengths greater than 100m for 1080p/8-bit resolution and 75m long for 1080p/12-bit resolution.

6.2 Receiver Front and Rear Panels

① **DC 12V**

Connect one of the supplied power adaptors to the Receiver unit and plug the power cable into an AC outlet.

Note: The receiver can be powered by the Transmitter unit if required.

② **EXT/INT POWER**

Use to switch between External (EXT) power when using the supplied power adaptor or Internal (INT) when using the Transmitter unit to power the Receiver over cable.

Note: It is suggested to use an external power supply when operating over long cable lengths.

② **LINK LED**

This LED will illuminate green when all the connections are established and power is on.

④ **HDMI OUTPUT**

Connect an HDMI equipped output device such as an HDTV or HDMI monitor to the Receiver unit with an HDMI cable .
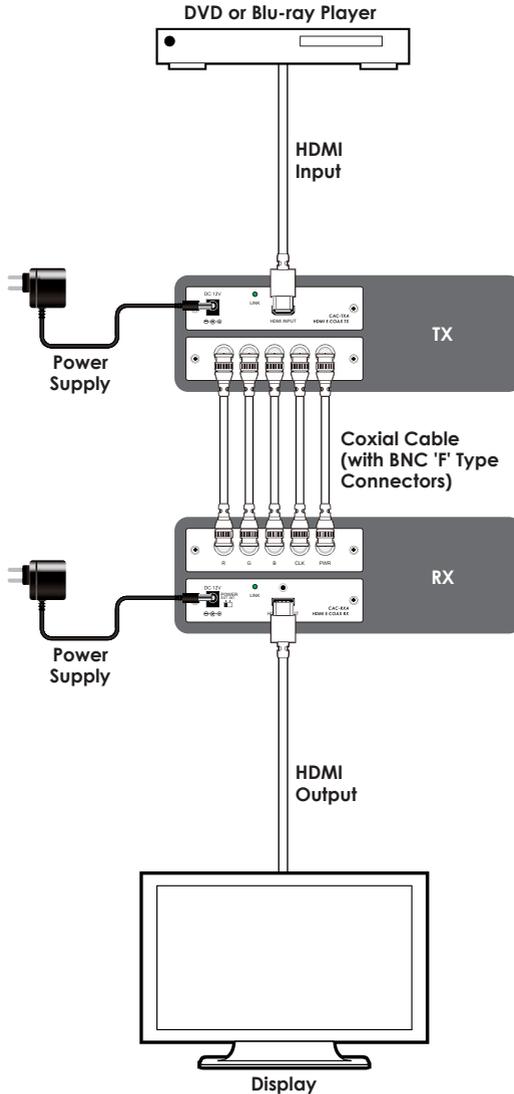
⑤ **BNC INPUT**

Connect the Transmitter and Receiver units with 75Ω coaxial cables that are terminated with BNC-F connectors.

Ensure that the RGB, Clock, and Power cables are connected to the correct terminals on the Transmitter and Receiver units.

Note: It is advised to not use cables of lengths greater than 100m for 1080p/8-bit resolution and 75m long for 1080p/12-bit resolution.

7. CONNECTION DIAGRAM

DVD or Blu-ray Player

**HDMI
Input**

**Power
Supply**

DC 12V

LINK

HDMI INPUT   CAC-TX-A
HDMI II COAX TX

TX

**Coxial Cable
(with BNC 'F' Type
Connectors)**

R   G   B   CLK   PWR

RX

**Power
Supply**

DC 12V   POWER
LINK

CAC-RX
HDMI II COAX RX

**HDMI
Output**

Display

*Note: The Receiver unit can be powered
by the Transmitter unit if required. It is
suggested to use an external power
supply when operating over long cable
lengths.*

8. SPECIFICATIONS

8.1 Technical Specifications

Transmitter

Input Port	1×HDMI
Output Ports	5×Coaxial (BNC Connectors)

Receiver

Input Ports	5×Coaxial (BNC Connectors)
Output Port	1×HDMI
HDMI Resolutions	480i~1080p@50/60, 1080p@24, VGA~WUXGA
CEC Function	Bypass
HDMI Audio Formats	PCM 2CH/5.1CH/7.1CH, Dolby 5.1CH, Dolby Digital Plus, Dolby TrueHD, DTS-HD Master Audio
Color Space	RGB 24~36, Y444 24~36, Y422 16~24
Deep Color	1080p@12-bit
HDMI Input Cable Distance	3m@1080p/8-bit, 3m@1080p/12-bit
HDMI Output Cable Distance	6m@1080p/8-Bit, 3m@1080p/12-bit
Coaxial Input/Output Cable Distance	100m@1080p/8-bit, 65m@1080p/12-bit
Power Supply	12 V/1 A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	125 mm×110 mm×30 mm (each unit)
Weight	270 g (each unit)
Chassis Material	Aluminum
Color	Black
Operating Temperature	0 °C ~ 40 °C
Power Consumption	TX: 1.9 W; RX:2.2 W

8.2 Recommended Cables

- Channel Master® RG6 Type 75Ω Coaxial cable (for cable TV) with 5 BNC connectors:
  - Up to 100m for 1080p/8-bit resolution
  - Up to 65m (±10m) for1080p/12-bit resolution

75 Ohm Coaxial Cable

Pro Install Series RG6 Coaxial Cable
MODEL 9532B-FP-1000 Feeder-Pak®
MODEL 9532G-FP-1000 Feeder-Pak®
• 100% shielded
• 18 gauge copper clad steel center conductor
• 60% aluminum braid
• Black (B) or Gray (G) PVC jacket

MHz	50	100	200	400	700	800	1000	1200	1450	1800	2200
dB loss per 100 feet	1.45	2.02	2.83	4.05	5.60	6.23	6.59	7.50	8.10	8.95	9.98

- Belden™ 7789A 23 Solid AWG and Solid 25AWG RGBHV cable with 5 BNC connectors:

AMERICAN WIRE GAUGE	RESOLUTION	DISTANCE
23 AWG	1080p/8-bit	90m±10m
	1080p/12-bit	65m±10m
25 AWG	1080p/8-bit	65m±5m
	1080p/12-bit	40m±5m

- Total Technologies, Ltd.© E193793 28 AWG RGBHV Cable with 5 BNC connectors:

AMERICAN WIRE GAUGE	RESOLUTION	DISTANCE
28 AWG	1080p/8-bit	45m±5m
	1080p/12-bit	15m±5m

9. ACRONYMS

ACRONYM	COMPLETE TERM
CAT5e	Category 5 Cable
CAT6	Category 6 Cable
CEC	Consumer Electronics Control
DVI	Digital Visual Interface
HDCP	High-bandwidth Digital content protection
HDMI	High Definition Multimedia Interface
IR	Infrared