



PESA



PRO-HDMI-BNC

HDMI over Single Coaxial Extender

User Manual



HDMI™
HIGH-DEFINITION MULTIMEDIA INTERFACE

HDCP™
HIGH-DEFINITION CONTENT PROTECTION



Made in Taiwan rev.1008



Safety and Notice

The **PRO-HDMI-BNC over Single Coaxial Extender** has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the PRO-HDMI-BNC should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Follow all instructions and warnings marked on this unit.
- Do not attempt to service this unit yourself, except where explained in this manual.
- Provide proper ventilation and air circulation and do not use near water.
- Keep objects that might damage the device and assure that the placement of this unit is on a stable surface.
- Use only the power adapter and power cords and connection cables designed for this unit.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.



Warranty Information

PESA Switching Systems, Inc., (PESA) warrants this equipment against defective workmanship or materials for a period of one (1) year from date of shipment. The sole warranty responsibility of PESA, shall be to replace or repair product proved to be defective. During the warranty period, defective parts will be replaced at no charge. Labor to repair or replace defective parts covered under the warranty will be performed at no charge at PESA. This warranty covers only products manufactured by PESA, and the components used in their manufacture. The warranty on assembled products sold by PESA., but manufactured by others shall be that of the original manufacturer. This warranty does not include shipping damage or damage caused by abuse, neglect, tampering by unauthorized personnel, damage inadvertently caused by the user, preventative maintenance, or any equipment or part thereof whose serial number has been removed or defaced. Neither the seller nor the manufacturer shall be liable for any injury, loss or damage, direct or consequential, arising out of the inability to use the product. Before using, user shall determine the suitability of the product for the intended use, and user assumes all risk and liability whatsoever in connection therewith. This warranty is effective only at the PESA factory in Huntsville, Alabama, USA. If possible, retain the original packing material for use in the unlikely event that your equipment must be returned to the PESA factory. When shipping your equipment, the shipping charges must be prepaid. The repaired unit will be returned to you, freight prepaid. This warranty is exclusive and in lieu of all other warranties, whether expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose.

INTRODUCTION

The **PRO-HDMI-BNC HDMI over Single Coaxial Extender** boosts up the audio/video transmission distance up to 180ft (60m) in HDTV 1080p format via single coaxial cable. The PRO-HDMI-BNC is easy to install and works perfectly with Belden 1694A coaxial cable. Other coaxial cables can also work with the PRO-HDMI-BNC and the transmission distance depends upon the quality and bandwidth of coaxial cables.

The PRO-HDMI-BNC includes two units – transmitting unit PRO-HDMI-BNC-TX and receiving unit PRO-HDMI-BNC-RX. The transmitting unit is used to capture the HDMI and HDCP input signals and carry the signals through only coaxial cable. The receiving unit is responsible for auto equalizing the transmitted HDMI multimedia data. The transmission range between the sending and receiving units can be up to 180ft (60m) at Full HD 1080p resolution with 7.1 channel audio.

Features

- HDMI founder Silicon Image chipsets embedded for superior compatibility and reliability
- HDMI 1.2a compliant
- HDCP compliant
- Extends HDMI signals to 180ft (60m) over Belden 1694A coaxial cable at 1080p60 24-bit color and likely longer with better HDMI source device, better grade HDMI display, and better quality coaxial cable
- Purely unaltered uncompressed 7.1ch digital HDMI transmission
- Supports 480i, 576i, 720p, 1080i, and 1080p video resolutions
- Auto signal equalization control
- Allows cascading
- Easy installation with wall mounting design

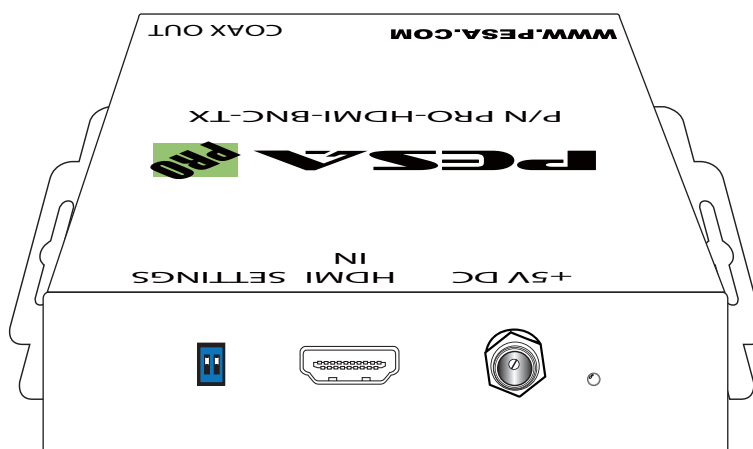
Specifications & Package Contents

Model Name		PRO-HDMI-BNC	
Technical			
Role of usage		Transmitter [TX]	Receiver [RX]
HDMI compliance		HDMI 1.2a	
HDCP compliance		Yes	
Video bandwidth		Single-link 165MHz (4.95Gbps)	
Video support		480i / 480p / 720p / 1080i / 1080p60 24-bit color	
Audio support		Surround sound (up to 7.1ch) or stereo digital audio	
HDMI over coaxial transmission (24-bit)		Full HD 1080p: 180ft / 60m coaxial cable	
HDMI equalization		Auto	
Input TMDS signal		1.2 Volts (peak-to-peak)	
Input DDC signal		5 Volts (peak-to-peak, TTL)	
ESD protection		Human body – $\pm 19\text{kV}$ air-gap discharge & $\pm 12\text{kV}$ contact discharge Core chipset – $\pm 8\text{kV}$	
PCB stack-up		6-layer board (impedance control – differential 100Ω ; single 50Ω)	
Input		1x HDMI	1x BNC
Output		1x BNC	1x HDMI
HDMI connector		Type A (19-pin female)	
BNC connector		75Ω interlocking socket	
Mechanical			
Housing		Metal enclosure	
Dimensions LxWxH	Model	TX / RX = 2.9" x 2.9" x 1.1" / 74 x 73 x 27mm	
	Package	6.9" x 10.4" x 3" / 174 x 264 x 77mm	
Weight	Model	TX / RX = 7.5 oz / 212g	
	Package	2.5 lbs / 1115g	
Fixedness		Wall mounting and latch-locking power jacks	
Power supply		5V 2A DC	
Power consumption		3 Watts (max)	3 Watts (max)
Operation temperature		32-104°F / 0-40°C	
Storage temperature		-4-140°F / -20-60°C	
Relative humidity		20-90% RH (no condensation)	
Package Contents		1x PRO-HDMI-BNC 2x 5V power supply unit 1x User manual	

PANEL DESCRIPTION

Transmitting unit ▶ **PRO-HDMI-BNC-TX**

Input Panel



SETTINGS: A 2-pin DIP switch for EDID and audio selection

Pin No.	1	2
OFF (↑)	Default EDID for Full HD	7.1ch PCM audio
ON (↓)	Default EDID for HD	Stereo PCM audio

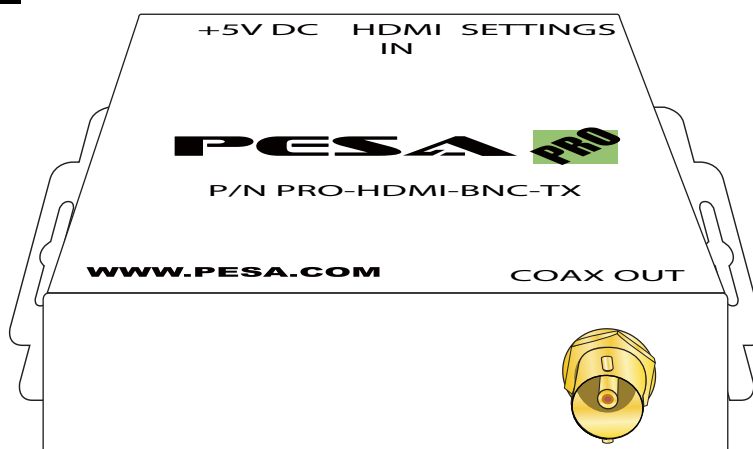
Factory default is OFF-OFF (↑↑) for best audio/video experience

HDMI IN: Connect to a HDMI source device with a HDMI male-male cable.

+5V DC: Connect to a 5V DC latch-locking power supply unit.

LED: Yellow light refers to video in Full HD mode while orange light refers to SD or HD mode.

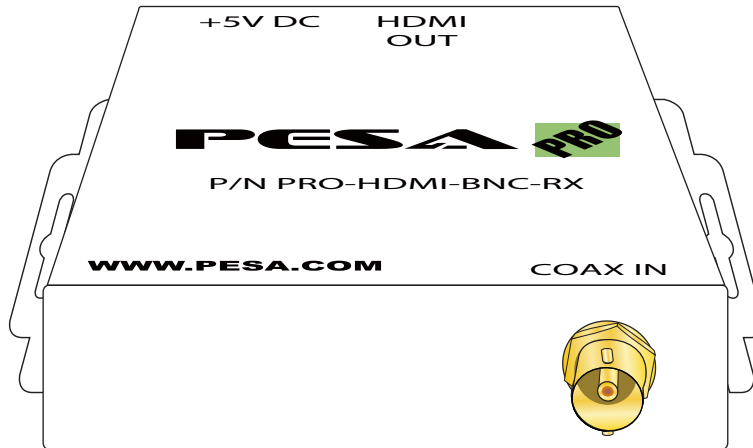
Output Panel



COAX OUT: Connect a coaxial cable and link it to the **COAX IN** port on the receiving unit PRO-HDMI-BNC-RX.

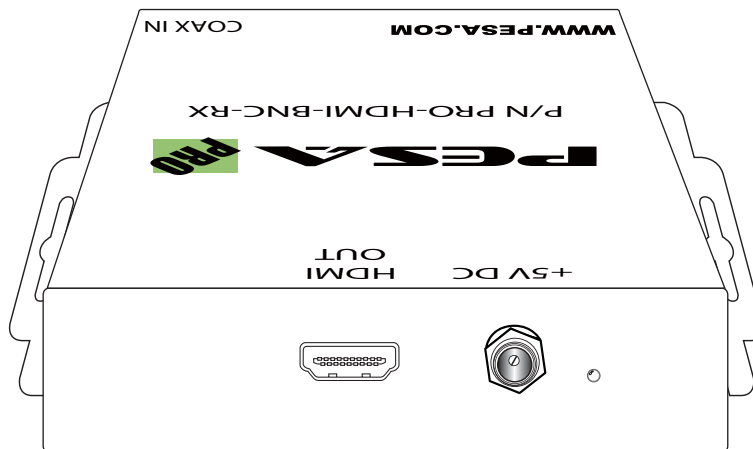
Receiving unit ► **PRO-HDMI-BNC-RX**

Input Panel



COAX IN: Connect a coaxial cable and link it to the **COAX OUT** port on the transmitting unit PRO-HDMI-BNC-TX.

Output Panel



HDMI OUT: Connect to a HDMI display or projector with a HDMI male-male cable.

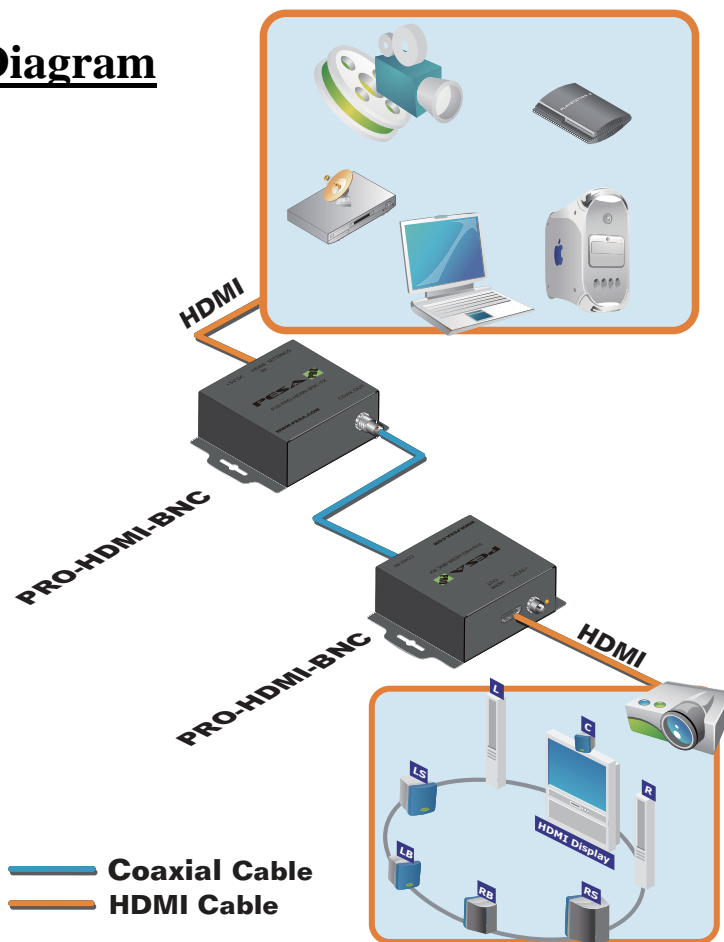
+5V DC: Connect to a 5V DC latch-locking power supply unit.

LED: Yellow light refers to video in Full HD mode while orange light refers to SD or HD mode.

INSTALLATION

1. Connect a HDMI source to the transmitting unit PRO-HDMI-BNC-TX.
2. Connect a HDMI display or projector to the receiving unit PRO-HDMI-BNC-RX.
3. Connect a coaxial cable between the transmitting and receiving units.
4. Make sure this coaxial cable is tightly connected and not loose.
5. Plug in 5V DC power supply units to the latch-locking power jack on the both transmitting and receiving units of PRO-HDMI-BNC.

Connection Diagram



NOTICE

1. Since PRO-HDMI-BNC is sensitive to the HDMI source's input jitters, the input HDMI signals with larger jitters will shorten the transmission distance significantly, especially at full HD 1080p60 mode.
2. All HDMI over coaxial transmission distances are measured using Belden 1694A coaxial cable and ASTRODESIGN Video Signal Generator VG-859C.
3. 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.



PRO-HDMI-BNC

HDMI over Single Coaxial Extender

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