

ENFORCER®

4-in-1 HD Passive Video Baluns Manual



EB-P101-01HQ
4-in-1 HD Passive Video Balun



EB-P101-20HQ
4-in-1 HD Passive Video Balun
with 6" Pigtail

Features:

- 4-in-1 TVI / CVI / AHD / Analog video up to 4K
- Transmits up to 1,312ft (400m) depending on format, resolution, and cable used
- PAL / NTSC / SECAM compatible
- Built-in TVS surge protection
- Anti-static and wave filters
- Lightning protection – Grade III
- 60dB Crosstalk and noise immunity
- Exceptional interference rejection
- Passive operation – No external power required
- Real-time transmission over low-cost Cat5e/6 cable instead of costly coaxial cable
- Quick-connect terminals for easy installation
- Small size allows mounting of multiple baluns behind a DVR

ENFORCER 4-in-1 HD Passive Video Baluns

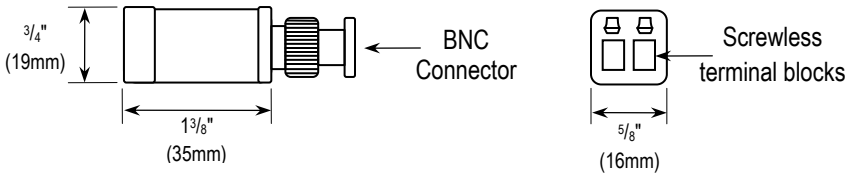
Specifications:

Model		EB-P101-01HQ	EB-P101-20HQ	
Video	Range	TVI	4MP: 590ft (180m) 4K: 426ft (130m)	
		CVI	4MP/4K: 656ft (200m)	
		AHD	4MP: 656ft (200m) 4K: 492ft (150m)	
		Analog	4MP/4K: 1,312ft (400m)	
	Video format	NTSC, PAL, SECAM		
	Frequency response	DC~42MHz		
	Common/differential mode rejection	60dB, 15kHz~42MHz		
Connections	Wire type	UTP (Unshielded Twisted Pair) 24~16 AWG		
	Wire category	Cat2~Cat6		
	UTP Connection	Nickel plated		
	Attenuation	1.5dB max.		
	Impedence	Coax, male BNC	75Ω@1MHz	
Screwless terminal		100Ω@1MHz ±20Ω		
Protection	Surge protection	Renewable solid state surge protection		
	Video input	2KV (common mode), 10/700μs IEC6100-4-5/1955 (GB/T 1726, 5-1999)		
	Video output	2KV (differential mode), 10/700μs IEC6100-4-5/1955 (GB/T 1726, 5-1999)		
Other	DC Loop resistance	52Ω/1000' (18Ω/100m)		
	Differential capacitance	19pF/ft max. (62pF/m max.)		
	Power	No external power required		
	Operating temperature	-4°~158° F (-20°~70° C)		
	Storage temperature	-40°~305° F (-40°~150° C)		
	Humidity range	0~95 % (Non-condensing)		
	Case	ABS Plastic		
	Weight	1.4-oz (40g)		
	Cable length	N/A	4" (101mm)	
	Dimensions	1 ³ / ₈ "x ⁵ / ₈ "x ³ / ₄ " (35x16x19mm) <i>excluding BNC connector</i>		1 ³ / ₈ "x ⁵ / ₈ "x ³ / ₄ " (35x16x19 mm) <i>Excluding pigtail and BNC connector</i>

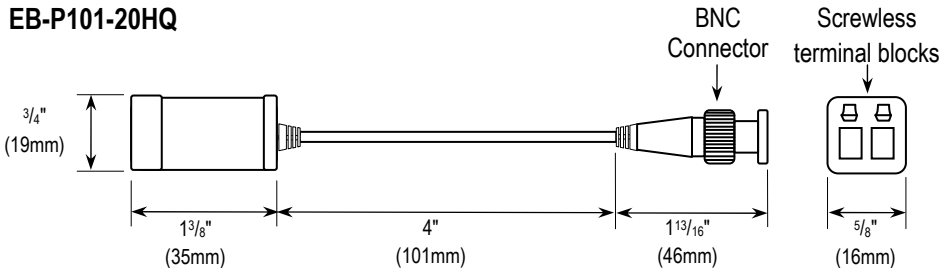
*Actual range depends on format, resolution, and cable quality.

Overview:

EB-P101-01HQ



EB-P101-20HQ



Installation:

1. HD Video baluns are connected in pairs. Connect the transmitter balun to the HD CCTV camera. Connect the receiver balun to an HD DVR or other remote HD CCTV equipment.
2. Make sure the distance between the camera and the remote video device does not exceed the specified range for the cable type and resolution used (see table below).

TVI	CVI	AHD	Analog
4MP: 590ft (180m) 4K: 426ft (130m)	4MP/4K: 656ft (200m)	4MP: 656ft (200m) 4K: 492ft (150m)	4MP/4K: 1,312ft (400m)

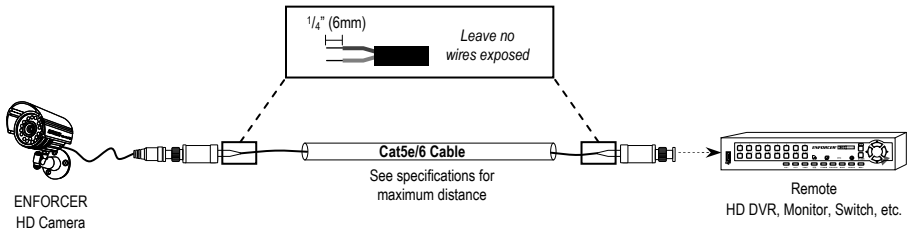
3. Run Cat5e/6 cable (UTP) from the remote video device to the camera.
4. Connect the Cat5e/6 cable to the baluns.

NOTE: HD Video baluns are polarity-sensitive.

- a. Strip approximately $\frac{1}{4}$ " (6mm) of insulation from the same two wires at both ends of a Cat5e/6 cable.
 - b. Push down the small tabs above the terminals. Insert each wire into each terminal at both ends of the cable. After the wires have been inserted into the terminals, there should be no bare wire showing.
5. Test the connection by powering up the CCTV camera and remote video device to make sure they operate as expected.

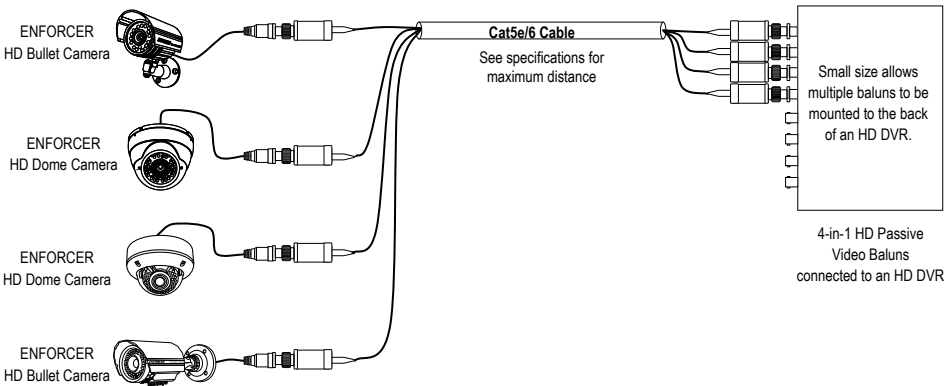
Sample Applications:

Single Pair of 4-in-1 HD Passive Video Baluns



Note: Shorter range may result when used with a DVR.

Multiple CCTV Cameras over a Single Cat5e/6 Cable



Note: Shorter range may result when used with a DVR.

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Troubleshooting:

Wavy or ghost image if connected to image processor (e.g., multiplexer or DVR), but not if directly to monitor.	<ul style="list-style-type: none">• Move the Cat5e/6 cable away from possible sources of interference.• Ensure that the same twisted pair connects to a balun at both ends of the cable.• Replace the cable with a new Cat5e/6 cable.
Image background flutters between dark and light.	<ul style="list-style-type: none">• Remove a local power source, or adjust the monitor's brightness and contrast.
Image is wavy and shakes.	<ul style="list-style-type: none">• Try reversing polarity of the two wires at one end of the Cat5e/6 cable.• Reduce the Cat5e/6 cable length.
Image is weak or faded.	<ul style="list-style-type: none">• Replace with a higher-grade cable. Cat5e cable meets the specifications in the manual. Cat6 cable allows longer range.
No image.	<ul style="list-style-type: none">• Double-check that the Cat5e/6 and BNC cables are connected properly.• Run a continuity test on all wires in the cable.• Check that the camera and monitor are powered up.• Ensure that the polarity of the Cat5e/6 connections is correct.

IMPORTANT: Users and installers of this product are responsible for ensuring this product complies with all national, state, and local laws and statutes related to monitoring and recording audio and video signals. SECO-LARM will not be held responsible for the use of this product in violation of any current laws or statutes.

WARNING: Incorrect mounting which leads to exposure to rain or moisture inside the enclosure could cause a dangerous electric shock, damage the device, and void the warranty. Do not open the case of this device, as there are no field-serviceable components inside.

WARRANTY: This SECO-LARM product is warranted against defects in material and workmanship while used in normal service for two (2) years from the date of sale to the original customer. SECO-LARM's obligation is limited to the repair or replacement of any defective part if the unit is returned, transportation prepaid, to SECO-LARM. This Warranty is void if damage is caused by or attributed to acts of God, physical or electrical misuse or abuse, neglect, repair or alteration, improper or abnormal usage, or faulty installation, or if for any other reason SECO-LARM determines that such equipment is not operating properly as a result of causes other than defects in material and workmanship. The sole obligation of SECO-LARM and the purchaser's exclusive remedy, shall be limited to the replacement or repair only, at SECO-LARM's option. In no event shall SECO-LARM be liable for any special, collateral, incidental, or consequential personal or property damage of any kind to the purchaser or anyone else.

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