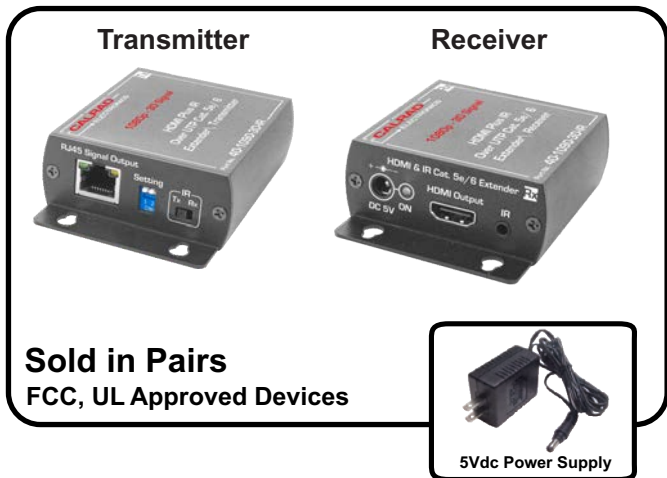


CALRAD[®] Electronics

40-1090-3D-IR HDMI- IR BALUN OVER SINGLE CAT5e/6 CABLE Brochure & Typical Application Sheet

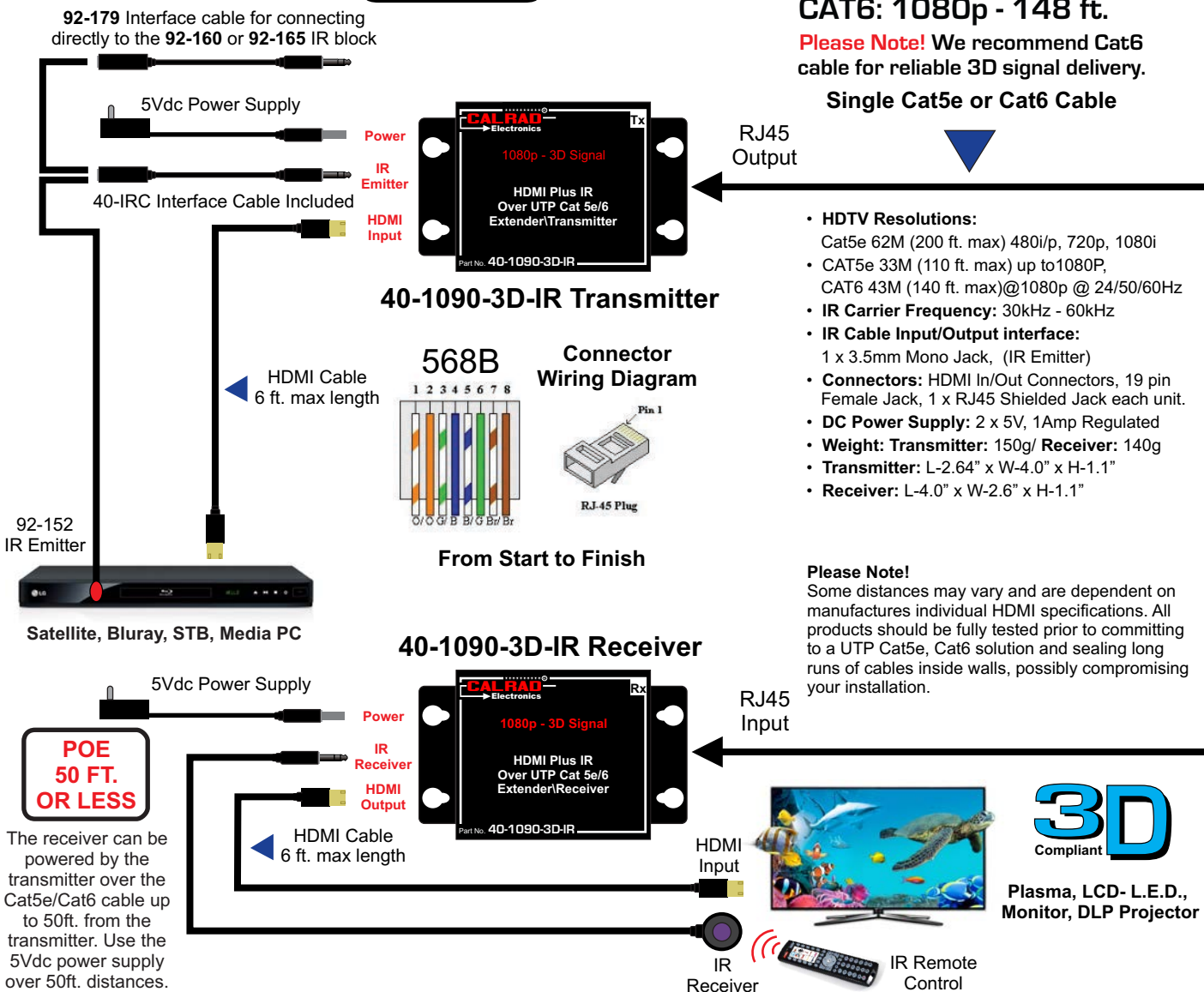
The **40-1090-3D-IR** balun provides a single UTP category 5e/6 cable solution to deliver pristine digital signals from all HDTV formats and signal sources from 480i/p to 1080i/p. Balun technologies are perfect solutions for replacing HDMI & IR cables that are limited to shorter distances and difficult to route thru walls and cabinets. Balun technology also offers many advantages when HDTV video technology changes by installing new updated baluns with the latest technology. The POE power from the transmitter is limited to 100ft. to remotely power the receiver. The included 5Vdc power supply may be required at the receiver side if the UTP Cat5e, Cat6 cable distance exceeds 100ft.



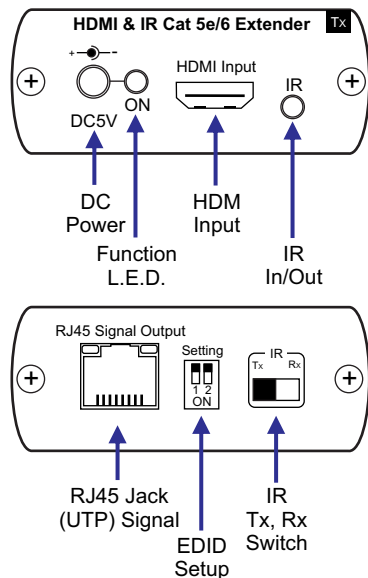
CABLE DISTANCE:
CAT5e: 480i, 720p, 1080i - 125 ft.
CAT6: 1080p - 148 ft.

Please Note! We recommend Cat6 cable for reliable 3D signal delivery.

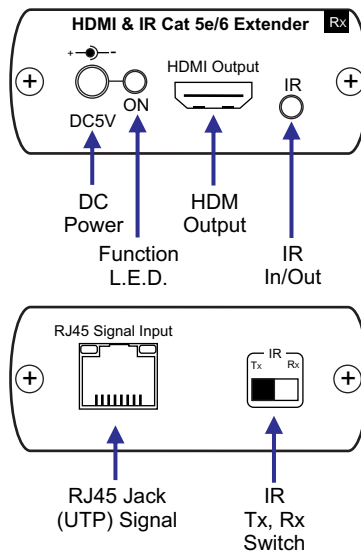
Single Cat5e or Cat6 Cable



Transmitter



Receiver



Important read first!

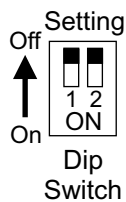
1. The Cat5e, Cat6 wiring should be kept away from any equipment that emits strong electromagnetic interference such as microwave ovens, high frequency lighting or any type of AC high voltage electrical wiring.

2. Do not connect the baluns into a computer network, damage to the baluns or network switch may occur. The baluns will only work from the transmitter to the receiver directly with no additional hardware in the middle.

3. The HDMI cables from the transmitter and receiver should not exceed 6 ft..

Please note ! This balun also supports DVI-D signals and equipment, use the appropriate adapters to convert to a HDMI male plug.

Transmitter EDID Switch Settings (Setup), Extended Display Identification Data. Please note! that the off position is up and the on position is down



Use default EDID

Move DIP switch 1 to off ↑
 Move DIP switch 2 to off ↑ will select the first default EDID: supports 1080i / LPCM 2 channel. Power up the transmitter.
 Move DIP switch 2 to on ↓ will select the second default EDID: support 1080P / LPCM 5.1 channel. Power up the transmitter.

Use and store external EDID codes into the transmitter

Move DIP switch 1 to on ↓ unplug the DC power supply to the transmitter.
 Connect the HDMI from the 40-1090-3D-IR to the TV display for auto backup of the TV EDID code.
 Move DIP switch 2 to off ↑ selects the first default EDID: supports 1080i / LPCM 2 channel.
 Move DIP switch 2 to on ↓ selects the second default EDID: support 1080P / LPCM 5.1 channel.
 Connect the DC power supply to the transmitter when the EDID learning process is complete the function L.E.D. will flash blue.
 Remove DC power and reapply DC power to activate the new EDID.

IR Ports (Tx and Rx settings)



Slide Switch

The IR ports are bi-directional, the IR receiver and IR emitter can be located on either the transmitter or on the receiver depending on your application. **(Transmit IR from your TV display to your equipment in another room)** 1. Set the IR switch to (Rx) on the 40-1090-3D-IR receiver, 2. set the IR switch to (Tx) on the 40-1090-3D-IR transmitter.

(Send IR commands to the display for control using the IR receiver) 1. Set the IR switch to (TX) on the 40-190-3D-IR receiver, 2. set the IR switch to (Rx) on the 40-1090-3D-IR receiver.

(Send IR commands to the display for control using a home automation control system) 1. Set the IR switch to (TX) on the 40-1090-3D-IR receiver 2. set the IR switch to (Rx) on the 40-1090-3D-IR receiver. 2 x 40-IRC cables are required one cable on the transmitter side and one on the receiver side.

Troubleshooting

No Video: 1. Make sure both the transmitter and receiver L.E.D. indicators are green, most common issues are related to the Cat5e, Cat6 cabling, recheck and verify your wiring and RJ45 connections. 2. Use a factory pre-made ethernet cable to verify and quickly retest for signal. Check the transmitter and the receiver for power with no ethernet cable connected. Verify that the all HDMI cables work independently of the baluns.

No IR: 1. Verify that the IR emitter flashes when a verified working remote control is pointed at the IR receiver and a command is sent. 2. Make sure the Tx and Rx switches are correctly configured. 3. It may be necessary for certain products like cable boxes to use a non flashing ultraviolet L.E.D. Calrad part no. 92-151 to properly control the device instead of the included flashing L.E.D. style emitter.

IR Emitter flashes but the equipment being controlled does not respond: 1. Verify the IR emitter is correctly placed over the controlled equipments IR receiving window, 2. locate the receiver window by using the factory remote, turn the products power on that your testing, start from the front of the face plate moving the remote from left to right while pressing the power button until the product turns off, this is the general area of the IR receiver and is the location of where the IR emitter should be placed for continued testing.

Specifications

HDMI: 1.3 compliant, 3D capable, **Video Resolutions:** 480i/p, 720P, 1080i/p

Distances: Cat5e 62M (200 ft. max) 480i/p, 720p, 1080i, CAT5e 33M (110 ft. max) up to 1080P, CAT6 43M (140 ft. max) @ 1080p @ 24/50/60Hz

DC Power: 5Vdc, 1A, **POE Power from transmitter:** 50 ft. max

IR Carrier frequency: 30-60Khz, IR signal tip and sleeve using Calrad 40-IRC IR adapter cable

IR Transmission: Bi-directional with settings on the transmitter and receiver for Tx and Rx

Receiver Function L.E.D.: **Blue**=using external power supply, **Green**=Power and HDMI signal received from transmitter unit, **Yellow**=no data input or the signal is to weak.

Transmitter Function L.E.D.: **Solid Blue**=power on, **Flashing Blue**=TV EDID backup completed, **Green**=sending power or video to receiver unit, **Yellow**=No data input or unsupported video format.

Connectors: **HDMI:** 2 x Female Jacks, **Power:** Transmitter, 1 x 2.1mm jack, Receiver, 1 x 2.1mm jack, **Ethernet linking jacks:** RJ45 (Female)

Size: Balun transmitter, receiver L-4.0" x W-2.6" x H-1.1", **Mounting:** 4 hole slotted mounting system