

CCTV Passive Hubs and Baluns



Send video and/or audio
across ordinary CAT5 cable!

FEATURES

- Use CAT5 cable to connect audio/video equipment.
- Transmit color video up to 2200 feet (670.6 m) or black-and-white video up to 2500 feet (762 m).
- Use the CCTV Passive Hub to send video over one 4-pair CAT5 cable.
- CCTV Power-Through Video Baluns are available with RJ-45 or screw terminal connectors.

OVERVIEW

Coaxial video cable is expensive. The farther you have to run it, the bigger the bite it takes out of your budget.

Twisted-pair cable, on the other hand, is more economical. But its impedance and signal characteristics differ from those of coax. You can't just attach it directly to video inputs and outputs.

The CCTV Passive Hubs and CCTV Video or Audio Baluns translate your video-only, audio-only, or video-and-audio signals for transmission over twisted pair.

CCTV Passive Hubs (IC562A–IC563A)

The hubs support NTSC, PAL, and SECAM video standards. Two models are available: one with RJ-45 and coax connectors (IC562A) and another with RJ-45 and 2-pole screw terminal twisted-pair connectors (IC563A).

These 1U-high rackmount hubs work with the CCTV Mini Coax (IC451A) and Passthrough (IC452A) Baluns.

The hubs channel video—plus remote power and 2-wire pan/tilt/zoom (PTZ) control—over one 4-pair CAT5 cable.

Use the hubs to manage security cameras and other security devices in large installations.

CCTV Video Balun, 1-Way, Video Only (IC440A)

This balun converts a single Composite baseband video signal (such as NTSC, PAL, and SECAM) from 75-ohm coax cable to UTP cable. The one-way, video-only connection is ideal for connecting security cameras.

CCTV Video Balun (IC444A)

Use a pair of CCTV Video Baluns to transmit Closed-Circuit TV (CCTV) video signals over a single CAT3 or CAT5 cable. This balun has 2-position terminal screw locks for connection to the twisted-pair cable.

CCTV Balun, Mini Coax (IC451A)

A pair of these baluns links twisted-pair cable between coax devices. Typical applications include closed-circuit cameras, DVRs, monitors, and CCTV equipment.

CCTV Balun, Passthrough (IC452A)

Send CCTV, low-voltage power, and 2-wire pan/tilt/zoom (PTZ) signals over twisted pair between two RS-232 or RS-422 coax devices.

CCTV Power-Through Video Baluns (IC560A–IC561A)

These baluns enable you to transmit video and remote power via a single 4-pair CAT3 or CAT5 cable. With them, you eliminate the need for multiple cables and provide more efficient cabling in CCTV security and surveillance environments.

Two versions are available. The IC560A features an RJ-45 connector, and the IC561A comes with a 2-pole screw terminal.

Both baluns transmit baseband, NTSC, PAL, or SECAM video at up to 2500 feet (762 m), plus they support 24-VAC power via 3 twisted pairs at up to 518 feet (157.9 m) when using 5 VA.

We recommend using a Class II power supply.

CCTV Quad Video Balun (IC564A)

Send up to four Composite video signals up to 2200 feet (670.6 m) or Component video up to 500 feet (152.4 m) using ordinary CAT5 cable. Supported video types include Composite, NTSC, PAL, SECAM, and 480i/p Component.

CCTV Quad Audio Balun (IC565A)

Transmit up to four analog audio signals up to 5000 feet (152.4 m) using regular CAT5 cable.

CCTV Component Video/Digital Audio Balun (IC566A)

Link HDTV at long distances using CAT5 UTP cable. This balun supports Component 480i/p, 720p, and 1080i/p video standards and digital audio.

TECH SPECS

Bandwidth — IC560A–IC564A, IC566A: Video: DC to 8 MHz;
IC440A, IC444A: Video: DC to 8 MHz, Audio: 20 Hz to 50 kHz;
IC451A: DC to 25 MHz;
IC452A: 0 Hz to 8 MHz;
IC565A: 60 Hz to 20 kHz

Common-Mode Rejection — Greater than 40 dB over the frequency range

Compliance — FCC Part 15 Class B; IC Class/classe B; CISPR Pub. 22 Class B

Composite Video Standard — IC562A–IC563A, IC440A, IC444A,
IC451A–IC452A, IC561A: Composite video, NTSC, PAL, or SECAM;
IC560A, IC564A–IC566A: Baseband video, NTSC, PAL, SECAM

Distance — IC562A–IC563A: Composite video: 2500 ft. (762 m),

Power: 350 ft. (106.7 m), PTZ: 4000 ft. (1219.2 m);

IC440A, IC444A: Color video: 2200 ft. (670.6 m), Black-and-white video:
2500 ft. (762 m);

IC451A–IC452A, IC560A–IC561A: Color video: CAT3: 1200 ft. (365.8 m),
CAT5: 2200 ft. (670.6 m), Black-and-white video: CAT3: 1500 ft.
(457.2 m), CAT5: 2500 ft. (762 m), Power: 24 VAC via (3) twisted pairs
(based on a 10% voltage drop at the camera), 5 VA: 518 ft. (157.9 m),
10 VA: 259 ft. (78.9 m), 20 VA: 130 ft. (39.6 m), 30 VA: 86 ft. (26.2 m);

IC564A: Composite video: 2200 ft. (670.6 m), Component video: 500 ft.
(152.4 m);

IC565A: Analog audio: 5000 ft. (1524 m);

IC566A: Component video: 1000 ft. (304.8 m), Digital audio: 600 ft.
(182.9 m)

Impedance — Coaxial connections: 75 ohms;

UTP connections: 100 ohms;

Phone connections: 600 ohms;

S-Video connections: 75 ohms

Insertion Loss — IC562A–IC563A, IC440A, IC444A, IC451A–IC452A,

IC560A–IC561A: Less than 2 dB per pair over the DC-to-8-MHz
frequency range;

IC564A–IC565A: 3 dB per pair over the DC-to-8-MHz frequency range;

IC566A: Per pair (Video): Greater than 15 dB over the DC-to-8-MHz
frequency range; Per pair (Audio): Greater than 15 dB over the
DC-to-8-MHz frequency range



IC562A

IC440A



IC444A



IC452A

Return Loss — Greater than 15 dB over the frequency range

RF Input (Maximum) — 1.1 volts at 60 Hz

Connectors — IC562A: (16) RJ-45, (16) BNC F, (16) 2-pole screw terminals
for power, (16) 2-pole screw terminals for control;
IC563A: (16) RJ-45, (16) 2-pole screw terminals for twisted-pair,
(16) 2-pole screw terminals for power, (16) 2-pole screw terminals
for control;

IC440A, IC444A: (1) RJ-45, (1) BNC M;

IC451A: (2) screw terminals, (1) BNC M on an 8" (20.3-cm) mini
coax lead;

IC452A: (1) RJ-45, (1) BNC M on an 8" (20.3-cm) mini coax lead (power),
(1) 2-wire 24 AWG twisted-pair lead (PTZ control);

IC560A: (1) RJ-45, (1) BNC M, (1) 2-wire 18 AWG lead;

IC561A: (1) 2-pole screw terminal, (1) BNC M, (1) 2-wire 18 AWG lead;

IC564A–IC565A: (1) RJ-45, (1) RCA F;

IC566A: (1) RJ-45, (3) RCA M video, (1) RCA F audio

Temperature Tolerance — Operating: 32 to 131°F (0 to 55°C);

Storage: -4 to +185°F (-20 to +85°C)

Humidity Tolerance — Up to 95%, noncondensing

Power — From the interface

Size — IC562A–IC563A: 1.75"H x 19"W x 1.5"D (4.4 x 48.3 x 3.8 cm);

IC440A: 1"H x 0.8"W x 1.8"D (2.5 x 2 x 4.6 cm);

IC444A: 0.6"H x 0.6"W x 2.3"D (1.5 x 1.5 x 5.8 cm);

IC451A: 0.8"H x 1"W x 1.3"D (2 x 2.5 x 3.3 cm);

IC452A: 1"W x 1.9"L (2.5 x 4.8 cm);

IC560A–IC561A: 1.9"L x 1" diameter (4.8 x 2.5 cm) plus 8" (20.3-cm)
video lead and 10" (25.4-cm) power lead;

IC564A–IC566A: 2.4"H x 2.3"W x 1"D (6.1 x 5.8 x 2.5 cm)

Item	Code
CCTV Passive Hub	
Coax	IC562A
Twisted-Pair	IC563A
CCTV Baluns	
Video Balun, 1-Way, Video Only	IC440A
Video Balun	IC444A
Mini Coax	IC451A
Passthrough	IC452A
Power-Through Video Baluns	
RJ-45	IC560A
Screw Terminal	IC561A
Quad Video Balun	IC564A
Quad Audio Balun	IC565A
Component Video/Digital Audio Balun	IC566A