Passive Video Baluns

Installation Manual

EB-P101-01Q
Passive Video Balun

EB-P101-20Q
Passive Video Balun with 6” Pigtail

- Transmits up to 1,300ft (400m) color video or up to 1,950ft (600m) B/W video
- Passive operation – No external power required
- High immunity from interference
- Uses low-cost Cat5e/6 cable instead of costly coaxial cable
- Screwless terminal blocks for easy installation
- Small size allows mounting of multiple baluns behind a DVR

Note: Products with model numbers that end with “Q” or that have a round green “Q” sticker are RoHS compliant.
### Specifications:

<table>
<thead>
<tr>
<th>Model</th>
<th>EB-P101-01Q</th>
<th>EB-P101-20Q</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Video</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range*</td>
<td>B/W 1,950' (600m)</td>
<td>1,300' (400m)</td>
</tr>
<tr>
<td></td>
<td>Color 1,300' (400m)</td>
<td></td>
</tr>
<tr>
<td>Video format</td>
<td>NTSC, PAL, SECAM</td>
<td></td>
</tr>
<tr>
<td>Maximum input</td>
<td>1.1Vp-p</td>
<td></td>
</tr>
<tr>
<td>Insertion loss</td>
<td>&lt;2dB per pair from DC~6MHz</td>
<td></td>
</tr>
<tr>
<td>Return loss</td>
<td>&gt;15dB from DC~6MHz</td>
<td></td>
</tr>
<tr>
<td>Frequency response</td>
<td>DC~6MHz</td>
<td></td>
</tr>
<tr>
<td>Common mode rejection</td>
<td>&gt;40dB, 15kHz~6MHz</td>
<td></td>
</tr>
<tr>
<td><strong>Connections</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wire type</td>
<td>UTP (Unshielded Twisted Pair) 24~16 AWG</td>
<td></td>
</tr>
<tr>
<td>Wire category</td>
<td>Cat2~Cat6</td>
<td></td>
</tr>
<tr>
<td>UTP Connection</td>
<td>Silver plated</td>
<td></td>
</tr>
<tr>
<td>Attenuation</td>
<td>DC~6MHz, 6.6dB max.</td>
<td></td>
</tr>
<tr>
<td>Impedence</td>
<td>Coax, male BNC 75Ω@1MHz</td>
<td>Terminal block 100Ω@1MHz</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DC Loop resistance</td>
<td>52Ω/1000' (52Ω/305m)</td>
<td></td>
</tr>
<tr>
<td>Differential capacitance</td>
<td>19pF/ft max. (62pF/m max.)</td>
<td></td>
</tr>
<tr>
<td>Power</td>
<td>No power required</td>
<td></td>
</tr>
<tr>
<td>Operating temperature</td>
<td>32 ~ 131 F (0 ~ 55 C)</td>
<td></td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-4 ~ 158 F (-20 ~ 70 C)</td>
<td></td>
</tr>
<tr>
<td>Humidity range</td>
<td>0 ~ 95 % (Non-condensing)</td>
<td></td>
</tr>
<tr>
<td>Case</td>
<td>ABS Plastic</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>1.4-oz (40g)</td>
<td></td>
</tr>
<tr>
<td>Cable length</td>
<td>N/A</td>
<td>6&quot; (153mm)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>1 13/16&quot;x9/16&quot;x9/16&quot; (46x15x15 mm)</td>
<td>1 15/16&quot;x9/16&quot;x9/16&quot; (30x15x15 mm) Housing only</td>
</tr>
</tbody>
</table>

*Shorter range may result when used with a DVR.

### Parts List:

<table>
<thead>
<tr>
<th>EB-P101-01Q</th>
<th>EB-P101-20Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 x Passive video baluns</td>
<td>10 x Passive video baluns with 6&quot; pigtail</td>
</tr>
<tr>
<td>1 x Manual</td>
<td>1 x Manual</td>
</tr>
</tbody>
</table>

### Overview:

**EB-P101-01Q**

```
\[ \text{BNC Connector} \]
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**EB-P101-20Q**

```
\[ \text{BNC Connector} \]
```
Installation:

1. Video baluns are connected in pairs. Connect one balun to the CCTV camera. Connect another balun to a DVR or other remote device.
2. Make sure the distance between the camera and the remote video device does not exceed 1,950ft (600m) for black and white video or 1,300ft (400m) for color video.
3. Run Cat5e/6 cable (UTP) from the remote video device to the camera.
4. Connect the Cat5e/6 cable to both baluns. **NOTE:** Video baluns are polarity-sensitive.
   a. Strip approximately 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. Connect the video baluns into the BNC connector of the CCTV camera and the remote video device.
6. 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 Passive Video Baluns

![Diagram of Single Pair of Passive Video Baluns]

Multiple CCTV Cameras Over a Single Cat5e/6 Cable

![Diagram of Multiple CCTV Cameras Over a Single Cat5e/6 Cable]

Note: Shorter range may result when used with a DVR.
ENFORCER Passive Video Baluns

Troubleshooting:

Wavy or ghost image if connected to image processor (e.g., multiplexer or DVR), but not if directly to monitor.
- 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.
- Remove a local power source, or adjust the monitor’s brightness and contrast.

Image is wavy and shakes.
- Try reversing polarity of the two wires at one end of the Cat5e/6 cable.

Image is weak or faded.
- Reduce the Cat5e/6 cable length.
- Replace with a higher-grade cable. Cat5e cable meets the specifications in the manual. Cat6 cable allows longer range.

No image.
- 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.

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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Also Available from SECO-LARM:

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Active Video Baluns (Single or Hub)
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Passive Video, Power, and Data Balun
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