## **Technical Specifications**

| Environment                      | Close-Circuit TV (CCTV) equipment for security and surveillance  |
|----------------------------------|--|
| Devices                          | CCTV cameras, monitors, switchers, sequencers, multiplexers, and other CCTV equipment  |
| Bandwidth                        | Video: DC to 8 MHz   |
| Maximum Input                    | 1.1Vp-p  |
| Insertion Loss                   | Less than 2 dB per Balun pair over frequencies from DC to 8 MHz  |
| Return Loss                      | Better than 15 dB over the frequency range from DC to 8 MHz  |
| Common Mode Rejection            | Greater than 40 dB @ 8 MHz   |
| Max. Distance Color              | Cat 3 –1200 ft (365m); Cat 5 – 2200 ft (670m)  |
| Max. Distance Black & White      | Cat 3 –1500 ft (457m); Cat 5 – 2500 ft (762m)  |
| Cable – UTP                      | 24 gauge or lower solid copper twisted pair wire impedance: 100 ohms at 1 MHz Maximum capacitance: 20 pf/foot Attenuation: 6.6 dB/1000 ft at 1 MHz |
| Cable – BNC                      | Impedance: 75 ohms at 1 MHz (RG59/U)   |
| Connectors and pin configuration | Two screw terminals *Reverse polarity sensitive  |
| Impedance                        | Input: 75 ohms (BNC)<br>Output: 100 ohms (RJ45)  |
| Temperature                      | Operating: 0 to 55 °C Storage: -20 to 85 °C Humidity: up to 95%  |
| Enclosure                        | Fire retardant plastic   |
| Dimensions                       | 1.75"x.75 x 1" (4.4 x 1.9 x 2.54 cm)   |
| Warranty                         | 2 years  |
| Order Information                | V1, V1-Pac   |



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The V1-ST Video Balun eliminates 75-ohm coaxial cable and allows composite baseband video to be transmitted via single unshielded twisted pair (UTP) wiring in a Structured Cabling System. V1-ST Baluns are used in pairs to transmit standard NTSC, PAL, or SECAM composite video.



## Frequently Asked Questions

- 1. Is the V1-ST Balun reverse polarity sensitive? *Yes*.
- 2. Can more than one camera signal be transmitted under one 4-pair Cat 5 UTP cable? Yes. Up to four (4) camera signals can be transmitted under a 4-pair Cat 5 UTP cable. Each camera signal uses one pair. The V1-ST is recommended for such applications.
- 3. Can 25-pair and 50-pair bulk twisted pair cable be used to transmit multiple camera signals?
  - Yes. As long as the 25-pair and 50-pair cable meets Cat 5 specifications, it may be used to transmit up to 25 or 50 camera signals, respectively.
- 4. Can CCTV camera power and audio be transmitted under the same UTP cable jacket as video?
  - Yes. On separate twisted pairs.
- Will V1-ST Baluns work with other cable besides Cat 5?
   Yes. V1-ST Baluns will work with lower grades of cable such as Cat 3. Maximum distances will be less than with Cat 5.
- 6. Where can I find a weather-resistant Cat 5 cable?

  Major cable vendors offer weather-resistant Cat 5 cable. Contact Intelix Technical Support to help locate a supplier.
- 7. What is the maximum length of twisted pair at a given gauge wire?

  Maximum cable lengths are specified for 24AWG UTP cable. If lower gauge cable (i.e., 22AWG) is used, greater distances may be achieved.
- 8. Will the V1-ST Balun work with 100-ohm shielded twisted pair (STP)? Yes; however, shorter distances may be achieved due to higher capacitance. If used, ground the shield at least on one end.
- Does the V1-ST Balun work in conjunction with other CCTV Baluns?
   Yes. Providing that the signal polarity of the Baluns match. Please note, picture quality may be affected.