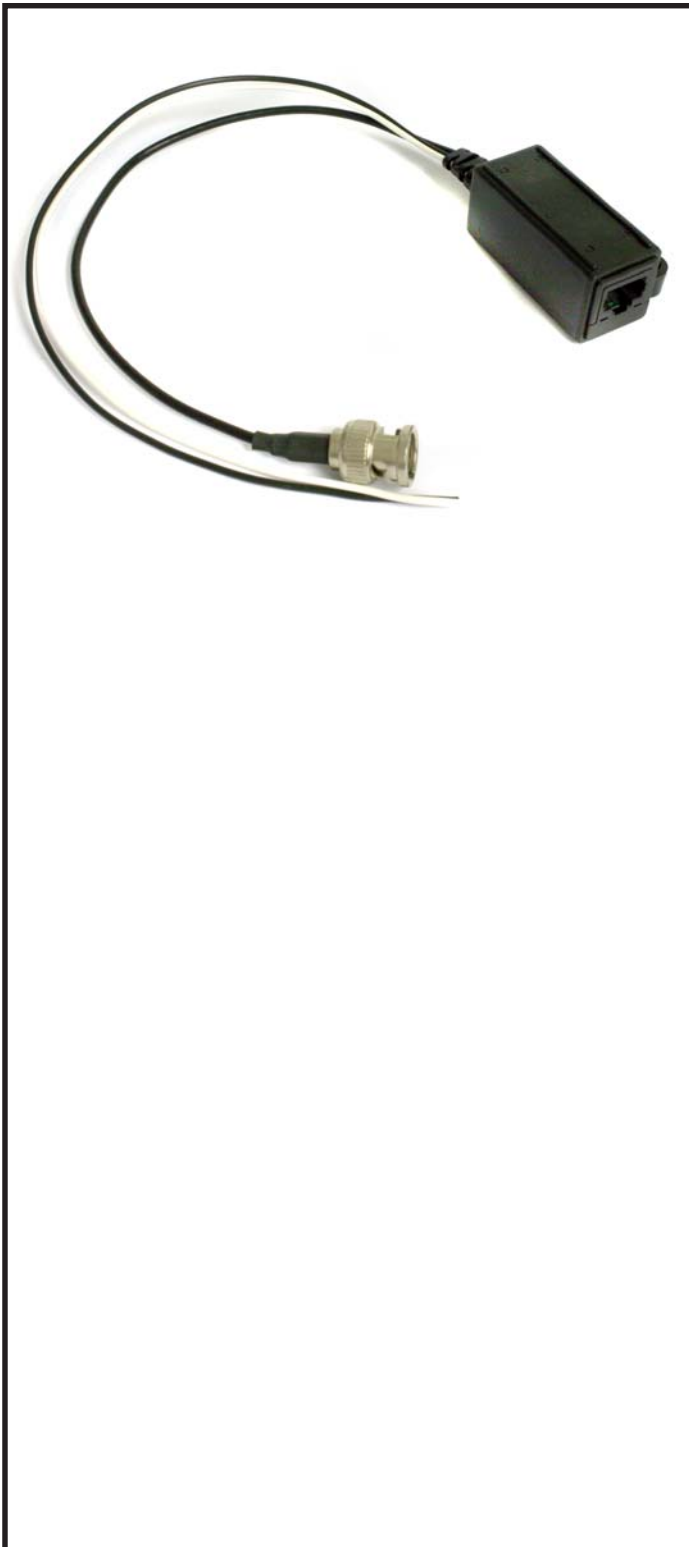


PRODUCT SPECIFICATION

| | | |
|---------------------------|------------------------|---|
| DOCUMENT NUMBER VB31AT | MODEL VB31AT | Video Balun Combiner for Twisted Pair up to 750 feet (228 meters) Combine Video and Power over a Single Category Cable Component of the UTPLinks™ System |
| REVISION NUMBER 011608 | | |



Description

Video Balun Combiner for twisted pair up to 750 feet (228 meters) in conventional UTP applications, 100 meters in TIA/EIA 568 applications.

The VB31AT is a unique transmission device which provides an economical means of sending video and camera power over a standard Category cables. Video is sent over one pair and camera power is sent over the two of the remaining pairs. A mini-coax pigtail with male BNC is used on the VB31AT. A pair of wires are provided for power power connection. Connections to the Category cable are made via an RJ45 connector. The VB31AT Video Balun provides the same high immunity to noise and interference as all of the Nitek baluns.

This simplified wiring scheme provides a convenient method of powering the camera, allowing for quicker and easier installations. The RJ45 modular jack uses standard 568B wiring so spare network cables can be used.

Features

- Superior video over ordinary twisted pair cable
- Immunity to noise and interference
- Lifetime warranty
- Built-in surge suppression
- Passive devices - do not require power
- Convenient connection to Category cables for video and power
- Easier to install than coax

Applications

- Intra-building CCTV installations (instead of coaxial cable)
- Structured cabling environments
- Multi-camera applications through conduit (more cameras through a smaller diameter)

NITEK®

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VB31AT

TECHNICAL SPECIFICATION

Transceiver Unit

| | |
|--------------------|--|
| Size | 0.9"H x 1.0"W x 2.0"D |
| Power Requirements | NONE REQUIRED |
| Power Pass Through | 250mA @ 1,000 feet on 24 AWG 1 Amp @ 100 feet on 24 AWG |
| Video Input | 1 vpp composite video Monochrome or Color |
| Output | Balanced low voltage current loop |
| Modular Jack | Standard RJ45 |

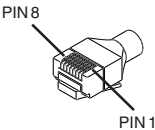
System (2 combiners required)

| | |
|-------------------------|---|
| Video Format | RS170, NTSC, PAL, SECAM, CCIR (Color or B/W) |
| Video Input | 1 Vpp composite video Monochrome or Color |
| Operating Frequency | DC to 10 MHz |
| Common Mode | >60 dB typ. |
| Rejection | |
| Wire Spec | 24 to 22 AWG Unshielded Twisted Pair (UTP) |
| DC Loop Resistance | 51 Ohms/1,000 ft (max) |
| Nominal Capacitance | 17pF/ft. |
| Impedance | 100 Ohms +/- 20% |
| UTP Category | 2 or better |
| Temperature Range | 0 degrees C to +85 degrees C |
| Humidity Range | 0 to 98%, non-condensing |
| Twisted Pair Connection | RJ45 modular connector |
| Transient Immunity | Built-in |

Wire and Cable Recommendations

The VB31AT is recommended for use with **unshielded twisted pair** (UTP) wiring. The system will operate over wire gauges from 24 AWG through 22 AWG. Individually shielded pairs should be avoided, as they drastically reduce the operating range of the systems. Multi-pair cable (25-pair or more) with an overall shield are acceptable. Video can be operated in the same communication cable coexistent with telephone, computer, control signals, power voltages and other video signals. While video may be routed through telephone punch-down block terminals, any bridge-taps, also called T-taps and any resistive, capacitive or inductive devices **MUST BE** removed from the pair. For more specific information regarding wire types, gauges and proper installation techniques, please call (800) 528-4343 for technical assistance.

Recommended Wiring: 568B



| PIN | Color Code | Signal |
|-----|------------|--------------|
| 1 | WHT/ORG | VIDEO + |
| 2 | ORG/WHT | VIDEO - |
| 3 | WHT/GRN | 24V COM (1) |
| 4 | BLU/WHT | N/A |
| 5 | WHT/BLU | N/A |
| 6 | GRN/WHT | 24V LINE (1) |
| 7 | WHT/BRN | 24V COM (2) |
| 8 | BRN/WHT | 24V LINE (2) |

