

PRODUCT SPECIFICATION

DOCUMENT NUMBER VB31PT	MODEL VB31PT Video Balun Transceiver for Twisted Pair up to 500 feet with Passive Transceivers up to 3,000 feet with Active Receivers
REVISION NUMBER 051304	



Description

Video Balun Transceiver with pigtail coax and male BNC for twisted pair operation with other balun transceivers or active receivers.

The **VB31PT** Video Balun Transceiver is a video transmission device that provides a low cost means of sending live video over unshielded twisted pair, point-to-point wiring for distances of up to 500 feet with other passive balun transceivers, up to 1,500 feet with TR515 single channel and model 51 Series hubs, and up to 3,000 feet with TR560 and model 56 Series hubs. The VB31PT is compatible with all of the "up-the-coax" control systems. A basic system uses (2) video balun transceivers, one at each end of a twisted pair of wires. These units are intended for use over existing in house telephone wiring, Category 5 wiring or other twisted pair cable runs to provide a convenient, cost-effective alternative to coax. The VB31PT is designed to provide superior immunity from noise and interference even when running next to line power! The VB31PT also provides a unique mounting tab and strain relief.

Features

- Quality video over ordinary twisted pair cable
- Immunity to noise and interference
- Passive devices - do not require power
- Video & P/T/Z over a single pair (with "up-the-coax" systems)
- Mini-coax pigtail for in-camera or dome mounting
- Weather resistant design
- Easier to install than coax
- Compatible with all twisted pair equipped cameras, enclosures and domes
- Video and P/T/Z over a single pair (with "up-the-coax" systems)
- Pigtail coax allows in-camera mounting in most dome cameras

Applications

- Intra-building CCTV installations
(instead of coaxial cable)
- Structured cabling (Cat 5) environments
- To eliminate requirement for Plenum Coax
- Multi-camera applications through conduit (more cameras through a smaller diameter)

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VB31PT

TECHNICAL SPECIFICATION

Transceiver Unit

Size	0.9"H x 1.0"W x 1.75"D (not including coax)
Power Requirements	NONE REQUIRED
Input	1 vpp composite video Monochrome or Color
Output	Balanced low voltage current loop

System (2 transceivers 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 Rejection	>60 dB typ.
Wire Size	26 to 12 AWG Unshielded Twisted Pair
UTP Category	Unshielded Category 2 or better
Temperature Range	-10 degrees C to +85 degrees C
Humidity Range	0 to 98%, non-condensing
Twisted Pair Connection	Screw Terminals

SYSTEM COMPONENTS

Two VB31PT devices or one VB31PT in combination with any of the other NITEK transceiver or active receiver models are required for transmission over a single UTP.

Wire and Cable Recommendations

The VB31PT is recommended for use with **unshielded twisted pair** (UTP) wiring. The systems will operate over wire gauges from 26AWG through 12AWG. Category 2, 3, 4 or 5 cable may be used. Individually shielded pairs should be avoided, as they drastically reduce the operating range of the systems. Multi-pair cable with an overall shield is 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. More information is also available on the CCTV System Design Guide Sheet.

Ordering Information

PART	DESCRIPTION
VB31PT	9" Pigtail with Male BNC Connector; up to 500 ft.
<i>VB31PT works with the following NITEK equipment</i>	
VB37M	BNC Male Video Balun; up to 1,000 ft.
VB37F	BNC Female Video Balun; up to 1,000 ft.
VB39M	BNC Male Video Balun w/surge suppression; up to 1,000 ft.
VB39F	BNC Female Video Balun w/surge suppression; up to 1,000 ft.
TR515	Active Receiver w/surge suppression; up to 1,500 ft.
TR560	Active Receiver w/surge suppression; up to 3,000 ft.
VB41x4	4 Balun Card w/surge suppression for Rack; up to 1,000 ft.
TR515x4	Active Receiver w/surge suppression for Rack; up to 1,500 ft.
TR560x4	Active Receiver w/surge suppression for Rack; up to 3,000 ft.
VH439	4 Port UTP Video Balun Mini-Hub w/surge suppression; up to 1,000 ft.
VH839	8 Port UTP Video Balun Hub w/surge suppression; up to 1,000 ft.
VH1639	16 Port UTP Video Balun Hub w/surge suppression; up to 1,000 ft.
VH3239	32 Port UTP Video Balun Hub w/surge suppression; up to 1,000 ft.
VH451	4 Port UTP Video Balun Mini-Hub w/surge suppression; up to 1,500 ft.
VH851	8 Port Active UTP Receiver Hub w/surge suppression; up to 1,500 ft.
VH1651	16 Port Active UTP Receiver Hub w/surge suppression; up to 1,500 ft.
VH3251	32 Port Active UTP Receiver Hub w/surge suppression; up to 1,500 ft.
VH456	4 Port UTP Video Balun Mini-Hub w/surge suppression; up to 3,000 ft.
VH856	8 Port Active UTP Receiver Hub w/surge suppression; up to 3,000 ft.
VH1656	16 Port Active UTP Receiver Hub w/surge suppression; up to 3,000 ft.
VH3256	32 Port Active UTP Receiver Hub w/surge suppression; up to 3,000 ft.