

# UNSHIELDED TWISTED PAIR PASSIVE VIDEO TRANSCEIVER – TYPE VB37M

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## TECHNICAL SPECIFICATIONS

## SECURITY SYSTEM

### DIVISION 16 – ELECTRICAL

### SECTION 16 \_ \_ \_ - CLOSED CIRCUIT TELEVISION (CCTV) SYSTEM

#### PART 2 – PRODUCTS

##### 2.1 GENERAL

- 2.1.1 All equipment to be supplied under this specification shall be new and the current model of a standard product of an OEM of record. An OEM of record shall be defined as a company whose main occupation is the manufacture for sale of the equipment supplied and which:
  - A. Maintains a factory production line for the item submitted.
  - B. Maintains a stock of replacement parts for the item submitted..
  - C. Maintains engineering drawings, specifications, and operating manuals for the items submitted.
  - D. Has published and distributed descriptive literature and equipment specifications on the items of equipment submitted.
- 2.1.2 Specifications of equipment as set forth herein are salient and minimum requirements, unless otherwise stated and shall not be construed as limiting the overall quality, quantity or performance characteristics of items furnished.
- 2.1.3 Systems and components shall have been thoroughly tested and proven in actual use.
- 2.1.4 All systems and components shall be provided with the availability of a toll free (U.S. and Canada) technical support number from the manufacturer. The number shall provide technical assistance for either the dealer/installer or the end user at no charge

##### 2.2 SPECIFICATIONS

- 2.2.1 The Twisted pair passive video balun transceiver, shall be a Northern Information Technology, Inc. (NITEK) Model VB37M or approved equivalent, and shall be capable of transmitting and receiving baseband type monochrome or color video signals over unshielded twisted pair (UTP) telephone cables, Category 3 or better, 24 gage or heavier up to a maximum cable length of 1,000 feet (300 meters), with the transceiver device connected at both ends of the cable, except as specified in paragraph 2.2.2.
- 2.2.2 The maximum distance for transmitting and receiving shall be 750 feet (228 meters) when the output of the receiving device is coupled to a Digital Video Recorder (DVR) input.
- 2.2.3 The transceiver devices shall not require power to operate as specified.
- 2.2.4 The transceiver used as a transmitting device shall be designed to accept a baseband video signal from a 75 ohm impedance source and the transceiver used as a receiving device shall deliver a baseband video signal capable of driving a 75 ohm impedance load.
- 2.2.5 The transceiver device shall support bi-directional signal transmission, i.e.; video from the video source to the receiving equipment and control from the receiving end to the video source equipment over a single unshielded twisted pair (UTP)

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#### PART 2 – PRODUCTS (continued)

#### 2.2 GENERAL SPECIFICATIONS (continued)

- 2.2.5 (continued) using equipment that provides such bi-directional operation during the vertical interval. This operation is also referred to as “up-the-coax” control and the maximum UTP cable distances for this operation shall be as specified in paragraphs 2.2.1 and 2.2.2.
- 2.2.6 Video connection to the transceiver device shall be by means of a BNC type male connector and connection to UTP cable shall be by means of two Phillips type head screw terminals. The screw terminals shall be plated with a rust preventive material to prevent corrosion.
- 2.2.7 The transceiver device shall be capable of driving an active (powered) Companion UTP receiver, Northern Information Technology, Inc. (NITEK) Model TR560, (or approved equivalent) operating at a distance of up to 3,000 feet (1,000 meters) over cables specified in paragraph 2.2.1. The combination of the transceiver device and the active transmitter shall provide a minimum of 500 lines of video resolution.
- 2.2.8 The transceiver device shall also operate as specified in paragraphs 2.2.1 and 2.2.2 when used as a receiver for any commercially available UTP equipped camera, camera enclosure and/or dome in which a Northern Information Technology, Inc. (NITEK) Model VB22 (or approved equivalent) is installed as a transmitter device.
- 2.2.9 The transceiver devices shall operate within specifications without causing interference or interfering with any other base band video, communication, data and/or other low-voltage signals operating in multi-twisted pair UTP cables as specified in paragraph 2.2.1.
- 2.2.10 The transceiver device shall be covered by a Limited Lifetime Warranty.

#### 2.3 PERFORMANCE SPECIFICATIONS

- 2.3.1 The transceiver shall meet or exceed the following performance specifications:
- A. The transceiver device shall be capable of driving a color video signal of NTSC standard 525 lines or PAL standard 625 lines.
  - B. Input: 0.6 to 1.6 Vpp composite color or black and white video signal into 75 Ohms.
  - C. Operating frequency range: DC to 10 MHz.
  - D. Common mode rejection to be > 60 dB.
  - E. Voltage requirements: No Power Supply is required.
  - F. Power consumption: None.
  - G. Size: Enclosure to be Black Cylolac ABS Flame Retardent Thermoplastic with a maximum size of 1.25”h x 1.5”w x .75”d (w = 2.25” including BNC connector).
  - H. Temperature: System must operate in an ambient temperature of –40 degrees C to +85 degrees C, 0 to 98% non-condensing.

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