

PROJECT NUMBER _____

PROJECT NAME _____

DATE _____

PROJECT LOCATION _____

TECHNICAL SPECIFICATIONS

SECTION 28 23 00 – VIDEO SURVEILLANCE

SECTION 28 23 23 - VIDEO SURVEILLANCE SYSTEMS INFRASTRUCTURE

TYPE VH1656 UNSHIELDED TWISTED PAIR ACTIVE VIDEO RECEIVER HUB

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 16 channel active video receiver, shall be a NITEK Model VH1656 or approved equivalent, and shall be capable of receiving baseband type monochrome or color video signals over 16 separate unshielded twisted pair (UTP) telephone cables, Category 3 or better, 24 gauge or heavier up to a maximum cable length of 3,000 feet (900 meters), when connected to any NITEK Passive Video Transceiver (or approved equivalent) at the opposite end of the UTP.
- 2.2.2 The Twisted pair active video receiver hub, shall be capable of receiving baseband type monochrome or color video signals over cables as specified in Paragraph 2.2.1 to a maximum cable length of 6,000 feet (1,800 meters), when connected to a NITEK Model TT560 active Video Transmitter (or approved equivalent) at the opposite end of the UTP.
- 2.2.3 Receiving video signals, as described in paragraph 2.2.1 and 2.2.2 shall mean that the active video receiver shall be capable of delivering a monochrome or color video signal of 525 lines at the maximum specified distances.
- 2.2.4 The active receiver shall be provided with a power pack capable of operating the unit. The power pack shall have provisions to plug directly into an AC wall outlet and shall provide two wires (2 foot minimum in length) to connect to the receiver power terminals.

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TYPE VH1651 UNSHIELDED TWISTED PAIR ACTIVE VIDEO RECEIVER HUB

PART 2 – PRODUCTS

2.2 SPECIFICATIONS (continued)

- 2.2.5 The active receiver hub shall have a snap-on removable front panel. Front panel removal shall provide access to 16 dual in-line (DIP) switches, one for each video receiver channel. The switches shall provide frequency equalization and compensation for varying cable lengths from 100 to 3,000 feet, when a NITEK passive transmitter (or approved equivalent) is used and from 500 to 6,000 feet when a NITEK TT560 active transmitter is used. The effect of the frequency compensation shall be to both equalize and to amplify the video signal thereby providing loss compensation for video as cable length is increased.
- 2.2.6 Each channel of the active receiver hub shall be capable of equalizing a color video signal of NTSC standard 525 lines or PAL standard 625 lines and shall deliver a baseband video signal capable of driving a 75 ohm impedance load.
- 2.2.7 The active receiver hub shall have built-in transient protection.
- 2.2.9 Video connection to the active receiver hub shall be by means of 16 BNC type female connector. connection to UTP cable shall be by means of two sixteen circuit terminal blocks, with 2 circuits for each pair. Each circuit shall provide a slotted head screw for securing the wire. The screw terminals shall be plated with a rust preventive material to prevent corrosion.
- 2.2.10 The active receiver hub shall also operate as specified in paragraph 2.2.1 when used as a receiver for any commercially available UTP equipped camera, camera enclosure and/or dome in which a NITEK Model VB24 (or approved equivalent) is installed as a transmitter device.
- 2.2.11 The active receiver hub 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 or 2.2.2.
- 2.2.12 The active receiver hub shall be covered by a Limited Two Year Warranty.

2.3 PERFORMANCE SPECIFICATIONS

- 2.3.1 The active receiver hub unit shall meet or exceed the following performance specifications:
 - A. With a symmetrical and balanced composite input from the transmitter unit and using cables as specified in paragraph 2.2.1, at a cable length of 3,000 feet, the output shall be a 1 Vpp composite video signal into 75 ohms.

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PART 2 – PRODUCTS

2.3 PERFORMANCE SPECIFICATIONS (continued)

- B. With a symmetrical and balanced composite input from the transmitter unit and using cables as specified in paragraph 2.2.2, at a cable length of 6,000 feet, the output shall be a 1 Vpp composite video signal into 75 ohms.
- C. The receiver unit shall be capable of receiving RS170, NTSC, PAL, SECAM and CCIR video formats (color or monochrome).
- D. Operating frequency range: DC to 10 MHz.
- E. Common mode rejection to be > 70 dB.
- F. Voltage requirements: 12 – 24VAC/VDC, 550MA.
- G. The 16 channel active hub shall have one printed circuit board for all 16 receiver channels. The printed circuit board shall be mounted in a 19" Rack mountable cabinet; Size: 17" w x 5" d x 1.75" h (one rack unit high). The cabinet shall have a black finish.
- H. Temperature: System must operate in an ambient temperature of –40 Degrees C to +85 degrees C, 0 to 98% non-condensing.