

**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 4 channel active video receiver, shall be a NITEK Model TR560x4 or approved equivalent, and shall be capable of 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 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 Each channel of the Twisted pair active video receiver card, 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 each channel of the active video receiver card shall be capable of delivering a monochrome or color video signal of 500 lines at the maximum specified distances
- 2.2.4 The video receiver card shall be capable of sliding into and shall mount in and make connection to any one of ten (10) available PC card slots in a NITEK Model RK400 (or approved equivalent) powered 19" rack assembly.

**UTP ACTIVE 4 CHANNEL VIDEO RECEIVER CARD – TYPE TR560x4**

**TECHNICAL SPECIFICATIONS**

**SECURITY SYSTEM**

**DIVISION 16 – ELECTRICAL**

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

**PART 2 – PRODUCTS (continued)**

**2.2 GENERAL SPECIFICATIONS (continued)**

- 2.2.5 Each channel of the active receiver card shall provide frequency equalization by means of eight dual in-line (DIP) switches. The switches shall provide 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 card 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 card shall have built-in transient protection.
- 2.2.8 Video connection to the transceiver card shall be by means of 4 BNC type female connectors.
- 2.2.9 Two alternate methods of connection to UTP cable shall be provided:
  - A. One – four circuit terminal block, with 2 circuits for each pair. Each circuit shall provide a screwless push terminal for securing the wires.
  - B. One – RJ45 modular 4 circuit connector, wired to provide four video circuits. Wiring of the modular connector shall be as specified in paragraph 2.2.9.
- 2.2.10 RJ45 Modular Connector Wiring Key:
  - Pin 1 - Video 1 +
  - Pin 2 - Video 1 –
  - Pin 3 - Video 2 +
  - Pin 4 - Video 3 –
  - Pin 5 - Video 3 +
  - Pin 6 - Video 2 –
  - Pin 7 - Video 4 +
  - Pin 8 - Video 4 –
- 2.2.11 The RJ45 modular connector specified in paragraph 2.2.8 B shall provide one LED indicator for each channel of video. The individual LED indicator shall illuminate when video is present on the channel.
- 2.2.12 Each channel of the video receiver card 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.

**PART 2 – PRODUCTS (continued)**

**2.2 GENERAL SPECIFICATIONS (continues)**

2.2.13 Each channel of the video receiver card 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.

2.2.14 The 4 channel video transceiver card shall be covered by a two year Warranty.

**2.3 PERFORMANCE SPECIFICATIONS**

2.3.1 Each channel of the video receiver card shall meet or exceed the following performance specifications:

- A. Video receiver card shall be capable of driving a color video signal of NTSC standard 525 lines or PAL standard 625 lines.
- B. Video Format compatibility: RS170, NTSC, PAL, SECAM, CCIR (Color or Monochrome)
- C. Input: 0.6 to 1.6 Vpp composite color or black and white video signal into 75 Ohms.
- D. Operating frequency range: DC to 10 MHz.
- E. 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
- F. 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.
- G. Common mode rejection to be > 70 dB.
- H. Voltage requirements: Provided by the RK400 (or equivalent) Rack Assembly.
- I. Temperature: System must operate in an ambient temperature of –40 degrees C to +85 degrees C, 0 to 98% non-condensing.
- J. Electronics to be encapsulated in UL approved fire retardant compound.