

**UNSHIELDED TWISTED PAIR MODULAR CROSSOVER & DISTRIBUTION SYSTEM
TYPE CXM22 – CROSSOVER, RS422 & POWER INSERTION CARD**

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 System and components shall have been thoroughly tested and proven in actual use.
- 2.1.4 System and components shall be UL Listed and CE compliant.
- 2.1.5 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 Unshielded Twisted Pair four (4) channel Video Crossover, RS422 and Power Distribution Card, shall be a NITEK Model CXM22 or approved equivalent and shall provide a "crossover" means for distribution of up to 4 video signals using one pair of a four pair Category 5 or greater unshielded twisted pair cable, up to 1,000 feet (305 meters) in length.
- 2.2.2 The Crossover Card shall receive a single RS422 data signal and provide distribution of four (4) - RS422 data signals (1 in and 4 out) using a second pair of the four pair Category 5 or greater cables specified in paragraph 2.2.1.
- 2.2.3 The Crossover Card shall be capable of sliding into and shall mount in and make connection to any one of four (4) available PC card slots in a NITEK Model CX452 (or approved equivalent) powered 19" rack assembly.

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PART 2 – PRODUCTS

2.2 SPECIFICATIONS (continued)

2.2.4 The Crossover Card shall receive supply voltage from a NITEK Model PS105 (or approved equivalent), Power Supply through one of five connectors provided at the rear of the CX452 rack assembly. The Crossover Card shall provide distribution of the supply voltage to 4 CCTV cameras using a third and fourth pairs of the four pair Category 5 or greater cable specified in paragraph 2.2.1.

2.2.5 The Crossover Card shall be designed to be compatible with the TIA/EIA 568B standards for structured cabling systems.

2.2.6 Video signals and distribution of power over cables specified in paragraph 2.2.1 shall be by means of four (4) - RJ45 type modular receptacles, which shall provide connection to the cables. Each receptacle shall be wired so that one twisted pair may be used for video transmission to and from the transceiver device and two twisted pairs may be used to provide supply voltage to the camera. The wiring of each connector shall be as illustrated in paragraph 2.2.6.

2.2.7 RJ45 Modular Connector Wiring to be coded TIA/EIA 568B per the following Key:

Pin 1	-	Video 2 +
Pin 2	-	Video 2 –
Pin 3	-	24V Com (1)
Pin 4	-	RS422 – (unused)
Pin 5	-	RS422 + (unused)
Pin 6	-	24V Line (1)
Pin 7	-	24V Com (2)
Pin 8	-	24V Line (2)

2.2.8 Video signals shall be connected to the Crossover Card through the PC slots in the CX452 Rack assembly then to a fifty (50) pin Telco type connector at the rear of the Model CX452. The Telco connector shall provide a means to connect a 25 pair, Category 3 or better, 24 gage or heavier, unshielded twisted pair cable. The Crossover Card shall operate with a cable of up to 3,000 feet (900 meters). Maximum length of this cable shall be determined by the UTP Video Receiver type to be used at the “Head-End”.

2.2.9 The Crossover Card shall be capable of interconnecting baseband type monochrome or color video over cables as specified in paragraph 2.2.1 and paragraph 2.2.5 with no signal modification or degradation.

2.2.10 The Crossover Card shall be capable of interconnecting baseband type monochrome or color video over cables as specified in paragraph 2.2.1 and paragraph 2.2.5 without causing interference or interfering with any other base band video, communication, data and/or other low-voltage signals

2.2.11 The Crossover Card shall be covered by a Limited Two Year Warranty.

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2.3 PERFORMANCE SPECIFICATIONS

- 2.3.1 The Unshielded Twisted Pair Crossover & Distribution Unit shall meet or exceed the following performance specifications:
- A. Using a NITEK Model TS560 (or approved equivalent) UTP video system; with a symmetrical and balanced composite input from the transmitter unit and using cables as specified in paragraph 2.2.1, 2.2.5 and 2.2.7, at a cable length of 3,000 feet, the output shall be a 1 Vpp composite video signal into 75 ohms, with the Crossover Card connected into a Model CX452 Rack assembly and the system powered with a Model PS105 Power Supply..
 - B. With the Crossover Card connected as specified in paragraph 2.3.1.A the UTP receiver unit shall be capable of receiving RS170, NTSC, PAL, SECAM and CCIR video formats (color or monochrome).
 - C. With the Crossover Unit connected as specified in paragraph 2.3.1.A the UTP video system operating frequency range shall be DC to 10 MHz.
 - D. Voltage requirements: Provided by external power supply NITEK Model PS105 (or approved equivalent).
 - H .Temperature: System must operate in an ambient temperature of –40 Degrees C to +85 degrees C, 0 to 98% non-condensing.