MATERIAL SPECIFICATIONS FOR HARDENED VIDEO ENCODER/DECODER PAIR

Hardened Video Encoder/Decoder Pair consists of one encoder unit and one decoder unit. Each unit is to conform to the following specifications:

A. Standards and Certifications
1. UL Listed
2. Institute of Electrical and Electronics Engineers (IEEE) and Operating Standards:
   a. IEEE 802.3 10Base-T
   b. IEEE 802.3u 100Base-TX
   c. IEC60068-2-1:1990 + A1:1993 + A2: 1994
   d. IEC60068-2-1:1974 + A1:1993 + A2: 1995
   e. ISO/IEC 13818
   f. ISO/IEC 14496-2
   g. IEC/EN 60950-1
   h. IEC/EN 60825
   i. IEC/EN 61000
3. Safety Certifications:
   a. Electromagnetic Emissions: Federal Communication Commission (FCC) Part 15, (Sub Part B, Class A)

B. Functional Requirements
1. The video encoder/decoder pair is to be capable of transporting NTSC video and serial data from one location to another location over the Ethernet network by encoding/decoding the video and data streams. Each video channel and data channel is to have the capability to configure to independent IP address and port number. Encoder is to provide for conversion of NTSC video and serial data to digital video (MPEG-4) and digital data for transmission over Ethernet based communication system. Decoder is to provide for conversion of digital video (MPEG-4) and digital data back to NTSC video and serial data.
2. Compatible with current NJDOT Genetec server software system.
3. Transparent serial port supporting any asynchronous serial protocol.
4. Compression: MPEG-4 simple profile, H.264, MJPEG
5. Number of video streams: Dual Streams
6. MPEG video resolution: Scalable from 176x128 to 704x480 pixels QCIF, 1CIF, 2CIF, 4CIF, 1-30 FPS user selectable for each stream.
7. Bandwidth: 30 Kbps to 6Mbps user selectable for each stream.
8. Transport Protocols: RTP/IP, UDP/IP, SAP, TCP/IP, Multicast IP, Unicast IP, RTSP
9. Other Protocols: DNS, NTP, HTTP, FTP and DHCP client
10. JPEG capture, Text overlay

C. Management
1. HTML Web Browser with Password Protection, Telnet
2. Flash memory of video codec and firmware upgrade over the network
3. HTTPS based Authentication (For Broadband and ISP applications)

D. Interface and Connectors
1. Serial Interface (PTZ): EIA RS-422/RS-485
   Transparent serial port supporting any asynchronous serial protocol.
2. Video: 1 Composite, 1Vpp into 75 ohms (NTSC), BNC female connector.
3. Ethernet Network: 10/100Base-T Cat6, RJ45 connector

E. Indicators
1. LED Indicator showing Power Status
2. LED Indicators showing status and activity of each port

F. Mechanical Specifications
1. Max. Dimension not to exceed: 9.3" L X 19"W x 1.75" H

    2.   Max. Weight not to exceed: 8 lbs

G.   Environmental Specifications (Field device in cabinet)

    1.   Operating Temperature: -22°F to +140°F

    2.   Operating Humidity: 10% to 95% non-condensing at 122°F

H.   Electrical Power

    1.   The power supply is to be equipped with a minimum of a six (6) foot power cord terminating in a standard three (3) prong line plug. Maximum power requirement is not to exceed 16 watts for each unit.

I.   Software

    1.   Provide Software License(s) with the unit.

J.   Identification

    1.   Identify Hardened Video Encoder with a metal plate containing the serial number with bar code identification. Provide phenolic nameplate with switch designation shown on Contract Documents. Provide manuals and training documentation, and electronic version of custom configurations on compact disc media.

K.   Standard Configuration

Encoder/Decoder			
Type	Minimum Number of Required Ports		
	NTSC Video	RS232/422/485	10/100 Base Tx
Type A	1	1	1
Type B	2	2	2
Type C	8	3	2

Each video channel and data channel is to have the capability to configure to independent IP address and port number.

L.   List of Equipment

    1.   Provide the following with each Hardened Video Encoder:

        a.   Documentation

        b.   External power supply (if required)

        c.   All required custom connections

        d.   Mounting brackets/shelf (if required)