PART 2 - PRODUCTS

2.01 GENERAL

A. All equipment and materials used shall be standard components that are regularly manufactured and utilized in the manufacturer’s system.

B. All systems and components shall have been thoroughly tested and proven in actual use.

C. All systems and components shall be provided with the availability of a toll-free (U.S and Canada), 24-hour technical assistance program (TAP) from the manufacturer. The TAP shall allow for immediate technical assistance for either the dealer/installer or the end user at no charge.

D. All systems and components shall be provided with a one-day turnaround repair express and 24-hour parts replacement. The repair and parts express shall be guaranteed by the manufacturer on warranty and non-warranty items.

2.02 MICROPROCESSOR-BASED, CROSS-POINT VIDEO MATRIX SWITCHING SYSTEM

A. The microprocessor-based, cross-point video matrix switching and control system shall consist of an integrated CPU/controller, matrix switcher, interface for control keyboard(s), dry contact alarming inputs programmable for N.O./N.C., isolated relay control outputs, built-in software for Coaxitron® (up-the-coax) and RS-422 serial port PTZ control and Genex® multiplexer control, built-in video loss detection alerts, and all software and graphics accessories necessary to make a complete operating video switching and control system. The following optional equipment for expanding functions shall be available: Alarm Interface Unit and Relay Interface Unit. The matrix and all optional equipment shall be capable of being mounted in standard EIA 19-inch racks.

B. The system shall be configured for a maximum of 32 looping video inputs, 6 video outputs, and 10 keyboard controllers.

C. The matrix switcher/controller shall meet or exceed the following design and performance specifications:

1. The matrix switcher/controller shall utilize an embedded microprocessor running a real-time operating system.
2. The matrix switcher/controller shall include a bit-mapped character generator for each analog output, which displays system status and programming in NTSC/PAL formats.
3. The matrix switcher/controller shall include a Windows®-based software management system that speeds system setup; enables system users to program the switcher remotely; allows for external storage of all setup items in the switcher; and logs system activity, including events and alarms.
4. The matrix switcher/controller shall provide password protection for control of system operations and programming.
5. The matrix switcher/controller shall provide 32 looping video inputs and 6 video outputs through BNC connections.
6. The matrix switcher/controller shall provide user-enabled/selectable character displays that show the following: time in 24-hour or AM/PM format, date in four different modes, camera number, and a 20-character title for ease of identification on the video screen. Each of these on-screen segments shall be independently selectable (on/off) for each monitor.

7. The matrix switcher/controller shall allow configuration, set-up, and programming from any system keyboard.

8. The matrix switcher/controller shall provide three RS-485 I/O ports, one PTZ control port programmable by the user, one port with power to operate a keyboard, and two RS-232 I/O ports. The ports shall be programmable from the system keyboard or MGR software for all communication parameters without having to remove the switcher/controller cover or set any switches or jumpers.

9. The matrix switcher/controller shall provide two auxiliary relay outputs rated at 0.5 amp @ 125 VAC, 1 amp @ 30 VDC, 60 milliohms contact resistance. There shall be one open collector (TTL) output rated at 15 VDC maximum, 25 mA maximum. Two additional relay output devices may be connected to provide an additional 128 relay outputs.

10. The matrix switcher/controller shall provide for a password to prevent unauthorized access to system programming.

11. Programming shall be available in English, Spanish, French, German, Portuguese, Italian, Polish, and Russian.

12. The matrix/switcher controller shall provide for logical camera numbering, in which the user can assign his own reference numbers to physical camera inputs.

13. The matrix/switcher shall have event timers to activate sequences or macros automatically.

14. The matrix/switcher controller shall use flash technology for firmware updates in the field.

15. The matrix/switcher controller shall provide eight internal alarm inputs on the rear panel. Up to 128 external alarms can be added by connecting ALM2064 Alarm Interface Units. Alarms shall be assigned to one or more alarm groups and shall be defined as high or low priority. Each alarm group shall be assigned to one or more monitors for display processing.

16. The matrix switcher/controller shall feature the capability of pre-programming commonly occurring events through macro programming. Macros shall be activated manually via keyboard control or automatically by alarm inputs or at a specific time.

17. The matrix switcher/controller shall be capable of 32 macros, each capable of 72 steps.

18. The matrix switcher/controller shall accept ASCII data, allowing for direct communication with external equipment, such as computer-based access control, fire, burglar, and PLC systems, to activate alarms, to select cameras, and to activate preset positions, auxiliaries, and macros. The matrix must be capable of generating an ASCII output of all alarm events as they occur.

19. The matrix switcher/controller shall provide a video bandwidth of 15 MHz, a flat frequency response to 8 MHz and ±1 dB to 13 MHz, and a signal-to-noise ratio of –50 dB with adjacent channel crosstalk limit of –55 dB typical at 3.58 MHz.

20. The matrix switcher/controller shall provide for differential gain of 0.03% and a differential phase of 0.24° typical.

21. The matrix switcher/controller shall operate on either 120 VAC or 230 VAC, 50/60 Hz.
22. The matrix switcher/controller shall have an operating temperature range of 20°C to 120°F (-7° to 49°C).

23. The matrix switcher/controller shall have a humidity rating of 10-90% non-condensing.

24. The matrix switcher/controller shall be rack-mountable in a standard EIA 19-inch rack.

25. The matrix switcher/controller shall measure 5.25 (H) x 17.4 (W) x 12.25 (D) inches (13.34 x 44.20 x 31.12 cm).

26. The matrix switcher/controller shall weigh a maximum of 12.7 lb.

27. The matrix switcher/controller shall be CE, FCC, UL, and cUL compliant.

D. The matrix switcher/controller shall be the Pelco CM6800-32x6 or approved equal.