

VIDEO MATRIX SWITCHER SPECIFICATIONS

The following specifications define the minimum acceptable characteristics for a video matrix switching system that will be used by the Colorado Department of Transportation in their wide area traffic surveillance applications. This video matrix shall be fully compatible with the video cameras that are selected for CDOT's applications. Both simple fixed lens cameras, and complex pan-tilt-zoom cameras shall be fully supported. The matrix system shall have a flexible architecture that is scalable from fewer than 100 inputs and outputs, to a system with more than 8000 inputs and 1000 outputs. The matrix shall be capable of switching any video input to any video output(s).

The matrix shall have the ability to be configured for as many as 128 operator control ports from up to 128 different locations. The system shall be capable of communication with remote controllers using either Ethernet or RS-485 protocol. The matrix system shall have the ability to limit operator access to the system as described below:

- Operators shall have passwords that allow access to the system.
- The system shall have the capability to limit the number of system controllers (keyboards, etc.) that a given operator can log on to.
- The system shall have the capability to limit the number of cameras that can be selected by any given operator.
- The system shall have the ability to limit the cameras that can be selected or controlled from any operator control location.
- The system shall have the ability to limit the monitors that can be viewed from any operator control location.
- The system shall have the ability to limit the cameras that can be shown on any particular monitor.

When given access to the system, the operator shall be able to perform the following basic functions:

- Switch camera video signals to monitors.
- Operate camera functions such as pan, tilt, zoom, and focus.
- Activate preprogrammed group presets. (Set groups of cameras to previously selected positions.)
- Activate previously established camera tour sequences.
- Acknowledge and reset alarms.
- Activate auxiliary contacts.
- Access camera specific features by camera menu.

Selected operators shall have the ability to program automated sequences as described below:

- Group Presets: Up to 16 camera preset positions (including camera to monitor selections).
- Tour Sequences: Preprogrammed camera display sequences in both forward and backward direction. Each step of the sequence consists of camera number, dwell time, camera position preset, and auxiliary control state.
- Group Tour Sequences: Multiple group camera presets may be linked together with a dwell time.

Selected operators shall have the ability to program alarm events where an external system may be activated by an internal matrix system alarm originating from either video loss, alarm inputs, or cameras with motion detection capability. The system shall also have the ability to activate a single camera or multiple cameras when an alarm event is detected. Camera tours, where inputs from various cameras are automatically cycled through and displayed on a monitor, may also be activated by an alarm event. Alarms shall be cleared when they are manually acknowledged by the operator. The system shall also have an automated alarm acknowledge feature. The system shall be capable of being configured to accommodate more than 1000 alarm inputs, and more than 1000 alarm outputs.

The system shall be UL listed. The minimum ambient operating temperature range shall be 14 degrees F. to 122 degrees F. System power shall be 110VAC at 60 Hz.