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VITEK DOME CAMERA

DIVISION 28 – ELECTRONIC SAFETY AND SECURITY

28 20 00 ELECTRONIC SURVEILLANCE

28 23 00 VIDEO SURVEILLANCE

28 23 29 VIDEO SURVEILLANCE REMOTE DEVICES AND SENSORS

This specification is intended for use by the design/constructing professional and any user of Vitek security products to assist in developing project specifications for security and video surveillance systems.

This specification can and should be modified as necessary to accommodate individual project conditions.

PART 1 GENERAL

1.01 SUMMARY **1.02 WARRANTY**

- A. Provide manufacturer's standard warranty

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Vitek Industrial Video Products, Inc.
- B. Provide Video Surveillance Camera from single source manufacturer.

2.02 WIDE DYNAMIC RANGE DAY AND NIGHT DOME CAMERA

A. General

- (1) Product specifically designed for closed circuit television viewing.
- (2) The unitized camera assembly shall be a self-contained unit that incorporates an integral lens, on-screen display controller and zoom and focus controller.
- (3) The unitized camera housing shall consist of polycarbonate and cast aluminum.
- (4) The unitized camera shall provide optional Infrared Light Emitting Diodes (IR LEDs) for extended night vision application.
- (5) The unitized camera shall include a true wide dynamic range function.



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B. Camera Module

- (1) The Image Sensor shall be a third inch (1/3") Pixim D8800C Seawolf Digital Imaging System CMOS.
- (2) The resolution shall be seven hundred fifty-eight (758) by five hundred forty (540) pixels.
- (3) The video standard shall be selectable NTSC or PAL.
- (4) The horizontal resolution shall be seven hundred (700) TV lines.
- (5) The Minimum Illumination shall be zero-point-zero-zero-zero-eight (0.0008) lux in black and white or zero (0) lux with optional thirty-five (35) Infrared Light Emitting Diodes.
- (6) The Synchronization system shall be selectable internal one (1) or internal two (2).
- (7) The Scanning System shall be two-to-one ratio (2:1) interlaced.
- (8) The Scanning Frequency shall be fifty-nine-point-nine-four (59.94) vertical hertz and fifteen-point-seven-three-four (15.734) kilohertz horizontal.
- (9) The signal-to-Noise ratio shall be more than fifty-two (50) decibels (dB) with Automatic Gain Control turned off at fifty (50) percent on the Institute of Radio engineers (IRE) scale.
- (10) The video output shall consist of one (1) volt peak-to-peak composite signal at seventy-five (75) Ohms.

C. Day and Night

- (1) The unitized camera shall include Infrared Cut-Filter Removable based day & night (true day & night).
- (2) The Day & Night mode shall consist of Automatic mode, forced day mode and forced night mode.
- (3) The Day & Night mode shall provide a selectable burst on or off mode.
- (4) Day to night vision mode switch sensitivity shall range from one (1) to twenty (20).
- (5) Night to day vision mode switch sensitivity shall range from one (1) to ten (10).

D. Exposure Adjustment

- (1) The Exposure setting shall include adjustable Color Roll Compensation, Lens Select, Automatic Exposure Preference, Sense-up, Shutter Speed, Wide Dynamic Range Control, Digital Noise Reduction, and White Balance.
- (2) Color Roll Compensation shall include selectable Manual Iris mode, Automatic Iris mode or Off.
- (3) Automatic Exposure Preference shall include selectable Highlights priority or Shadows priority.
- (4) Wide Dynamic Range control shall include selectable Low, Normal, Medium and High Presets and Custom mode.
- (5) Wide Dynamic Range Custom mode shall include Safe Area, Center one-third (1/3), Lower two-thirds (2/3), and manual mode.
- (6) Wide Dynamic Range Custom mode Range shall be from zero (0) to thirty-six (36).
- (7) Wide Dynamic Range Custom mode Bias shall be from negative thirty (-30) to thirty (30).
- (8) Sense-up shall include selectable Automatic mode or Off.
- (9) Sense-up automatic mode shall include selectable limit of two (2) times at thirty (30) frames per second, four (4) times at fifteen (15) frames per second, eight (8) times at eight (8) frames per second, sixteen (16) times at four (4) frames per second, thirty-two (32) times at two (2) frames per second and sixty-four (64) times at two (2) frame per second in NTSC mode, and two (2) times at twenty-five (25) frames per second, four (4) times at twelve (12) frames per second, eight (8) times at six (6) frames per second, sixteen (16) times at three (3) frames per second, thirty-two (32) times at one (1) frame per second and sixty-four (64) times at one (1) frame per second in PAL mode.
- (10) The Automatic Iris Threshold shall range from negative forty-eight (48) to sixty (60).



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- (11) The White Balance shall include selectable and adjustable Automatic Tracking White Normal, Automatic Tracking White Desaturated, Automatic Tracking White Extended and Manual modes.
- (12) The Automatic Tracking White shall include adjustable speed and delay count ranging from zero (0) to two hundred fifty-five (255).
- (13) The Manual White Balance Control shall include adjustable value in Kelvin ranging from two thousand (2,000) degrees to eleven thousand (11,000) degrees in increments of one hundred (100) degrees.
- (14) The Manual White Balance Control shall include adjustable Red and Blue color adjustments ranging from negative twenty (-20) to twenty (20).

E. Picture Optimization

- (1) The Picture Optimization shall include Preset Colors, Sharpness Control, Saturation and Gamma Control.
- (2) Preset Colors shall include three (3) preset settings.
- (3) Sharpness shall range from negative eight (-8) to eight (8).
- (4) Saturation shall range from negative eight (-8) to eight (8).
- (5) Gamma shall range from twenty-five (25) to one hundred (100) in increments of one (1).

F. Lens

- (1) The lens shall be infrared corrected F stop one-point-two (F1.2) two-point-nine (2.9) millimeters to ten (10) millimeters with automatic iris and built-in Infrared Cut-Filter Removable.
- (2) The lens shall include a focus adjustment function with adjustable switch delay time of one (1) to seven (7) seconds.

G. Digital Enhancements

- (1) Digital Effect shall include Motion Detection, Privacy Zone, Freeze, Flip, Digital Pan Tilt and Zoom and three dimensional (3D) Motion Adaptive Noise Reduction.
- (2) The camera shall include four (4) adjustable motion detection areas
- (3) The unitized camera shall display motion detection warning where and when motion is detected.
- (4) Motion Detection Sensitivity shall range from zero (0) to two hundred fifty-five (255).
- (5) Each area shall include adjustable motion box position and size.
- (6) The unitized camera shall include six (6) adjustable privacy zones.
- (7) Each Privacy Zone shall provide adjustable position, size, and color.
- (8) Privacy Zone Masking Color shall include black, white and red.
- (9) The three dimensional (3D) Motion Adaptive Noise Reduction shall include adjustable depth ranges from zero (0) to one hundred twenty-seven (127).
- (10) The unitized camera shall include Freeze.
- (11) The unitized camera shall include Horizontal Flip, Vertical Flip, and rotate.
- (12) The unitized camera shall include digital pan tilt and zoom.
- (13) The digital zoom shall range from one (1) to twelve (12).
- (14) The digital pan shall range from negative one hundred (-100) to one hundred (100).
- (15) The digital tilt shall range from negative one hundred (-100) to one hundred (100).

H. Environmental

- (1) The operating temperature shall be between fourteen (14) degrees to one hundred twenty-two (122) degrees in Fahrenheit.
- (2) The operating temperature shall be between negative four (-4) degrees to one hundred twenty-two (122) degrees in Fahrenheit with the optional Heater Blower Kit.



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- (3) The operating temperature shall be between negative sixty (-60) to one hundred twenty-two (122) degrees in Fahrenheit with the optional Extreme Cold Heater Blower Kit.
- (4) The operating humidity shall be between zero (0) to eighty-five percent non-condensing humidity.
- (5) The unitized camera's environmental protection rating shall be Ingress Protection rating of sixty-eight (IP68).

I. Electrical

- (1) The operating voltage shall be twelve (12) volts Direct Current or twenty-four (24) volts alternating current.
- (2) The power consumption shall be one hundred (100) milliamperes at twelve (12) volts direct current, or eighty (80) milliamperes at twenty-four (24) volts alternating current.
 - (3) The power consumption shall be one (1) amp at twelve (12) volts direct current or eight hundred (800) milliamperes at twenty-four (24) volts alternating current with the optional Infrared Light Emitting Diodes (IR LEDs).

J. Dimensions and weight

- (1) The dimensions shall be five-point-seven-one (5.71) inches in diameter and four-point-four-five (4.45) inches in height.
- (2) The weight shall be approximately two-point-three (2.3) pounds (lbs.).

K. Convenience

- (1) The unitized camera shall include a selectable identification number range of one (1) through two hundred fifty-five (255).
- (2) The On Screen Display Language shall be English with optional expansion of the list based on requests.
- (3) The unitized camera shall provide a serial based communication speed of two thousand four hundred (2,400), four thousand eight hundred (4,800), nine thousand six hundred (9,600), fourteen thousand four hundred (14,400) and nineteen thousand two hundred (19,200).
- (4) The unitized camera shall use Pelco-D protocol for its serial communication.
- (5) The serial communication shall use the camera's BNC video signal output port.
- (6) The unitized camera shall include a secondary video output and its connector with a video output of one (1) volt peak-to-peak composite signal at seventy-five (75) Ohms.

L. Optional Accessories

- | | |
|------------------------------------|-------------|
| (1) Wall Mount Housing | VT-MD/WMT |
| (2) Ceiling Mount Housing | VT-MD/CMT |
| (3) Corner Mount Adaptor | VT-MD/CNMT |
| (4) Pole Mount Adaptor | VT-MD/PLMT |
| (5) Extender Mounting Plate | VT-MD/EMP |
| (6) Heater Blower Kit | VT-MD/HB24 |
| (7) Extreme Cold Heater Blower Kit | VT-MD/HB24E |
| (8) Unshielded Twisted Pair Kit | VT-MD/UTP |



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2.03 SUGGESTED PRODUCT

- A. The camera shall be a Vitek Mighty Series Dome Camera VTD-MVP2910WDR.

PART 3 EXECUTION

- 3.01 ACCEPTABLE INTEGRATORS**
- 3.02 INSTALLATION**