



Vitek Industrial Video Products, Inc.
28492 Constellation Road
Valencia, CA 91355
Phone: (661) 294-8043
Fax: (661) 294-8044
e-mail: sales@vitekcctv.com

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 plastic body for indoor applications.
- (4) The unitized camera housing shall consist of polycarbonate and cast aluminum body for outdoor applications.
- (5) The unitized camera shall consist of optional Infrared Light Emitting Diodes (IR LEDs) for extended night vision application.
- (6) 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") Sony SuperHAD II CCD.
- (2) The resolution shall be eight hundred eleven (811) by five hundred eight (508) pixels.
- (3) The horizontal resolution shall be six hundred twenty (620) TV lines.
- (4) The Minimum Illumination shall be zero-point-one (0.35) lux in color, zero-point-zero-zero-zero-zero (0.00001) lux in black and white with Sense-up feature activated and zero (0) lux with thirty-five (35) infrared light emitting diodes (LED).
- (5) The Synchronization system shall be selectable internal or adjustable vertical phase automatic modes.
- (6) The V-Phase shall range from zero (0) to one hundred ninety-nine (199).
- (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 (52) decibels (dB) with Automatic Gain Control turned off.
- (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 module shall include Electronic filter based day & night mode (software day & night).
- (2) The Day & Night mode shall consist of Automatic mode, forced day mode, forced night mode and CDS sensor mode.
- (3) The Day & Night mode shall provide a selectable burst on or off mode.
- (4) The Infrared Control shall include Automatic and Manual modes.
- (5) The Manual mode Infrared intensity adjustment shall be between zero (0) and forty-nine (49).
- (6) Day to night vision mode switch sensitivity shall range from twelve (12) to two hundred fifty-five (255).
- (7) Night to day vision mode switch sensitivity shall range from zero (0) to two hundred thirteen (213).
- (8) The time delay of vision mode switch shall range from one (1) to thirty (30) seconds.

D. Exposure Adjustment

- (1) The Exposure setting shall include adjustable Lens modes, Shutter Speed, Backlight Compensation, Wide Dynamic Range control, Three Dimensional (3D) Digital Noise Reduction, Automatic Gain Control, Sense-Up, White Balance and Color adjustments.
- (2) The Manual Shutter Speed shall range from one-sixtieth (1/60)0, one-one-hundredth (1/100) Flicker, one-one-hundred-twentieth (1/120), one-two-hundred-fiftieth (1/250), one-five-hundredth (1/500), one-two-thousandth (1/2,000), one-five-thousandth (1/5,000), one-ten-thousandth (1/10,000) and one-hundred-thousandth (1/100,000) of a second.
- (3) The Flicker mode shall be at about 30% of normal sensitivity at low light.
- (4) The Backlight Compensation shall include selectable Low, Middle and High.
- (5) The Wide Dynamic Range shall have selectable On or Off modes.
- (6) The Wide Dynamic Range shall have threshold of zero (0) to twenty (20).
- (7) The Three Dimensional Digital Noise Reduction shall have selectable Low, Middle, High or Off.
- (8) The Automatic Gain Control shall include selectable Low, Middle, High or Off.
- (9) The Sense-up shall range from two (2) times normal amplification to two hundred fifty-six (256) times normal amplification.
- (10) The White Balance shall have Selectable Automatic Tracking White, Automatic White Control, Push and adjustable manual modes.



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- (11) The Manual White Balance shall have adjustable Red and Blue colors ranges of zero (0) to two hundred fifty-five (255).
- (12) The Color adjustment shall include R-Y and B-Y gain ranges of zero (0) to two hundred fifty-five (255).

E. Picture Optimization

- (1) The Picture Optimization shall include adjustable Sharpness Control and Gamma Correction.
- (2) The Sharpness shall range from zero (0) to forty-nine (49).
- (3) The Gamma Correction shall include selectable zero-point-four-five (0.45), zero-point-six (0.6), to one-point-zero (1.0) or User modes.

F. Lens

- (1) The fixed lens model shall provide F stop one-point-two (F1.2) three-point-six (3.6) millimeter lens.
- (2) The variable focus model lens shall provide infrared corrected F stop one-point-two (F1.2) two-point-eight (2.8) millimeters to twelve (12) millimeters with automatic iris control.
- (3) The variable focus model DC Level shall range from zero (0) to ninety-nine (99).
- (4) The manual lens mode shall include adjustable level of zero (0) to ninety-nine (99).

G. Digital Enhancements

- (1) The camera shall include a customizable sixteen (16) alpha numeric title.
- (2) The title position shall be adjustable without restriction.
- (3) The Digital Effect shall include Freeze, Flip, Digital Zoom, Negative Image, Motion Detection, Privacy Zones, Lens Shading Compensation, Highlight Masking and Digital Image Stabilization.
- (4) The Flip shall include Horizontal Flip, Vertical Flip and Rotate (Horizontal and Vertical Flip).
- (5) The Digital Zoom shall range from one (1) time to ten (10) times, adjustable in increments of zero-point-one (0.1) from one (1) to three (3) times and in increments of one (1) from three (3) to ten (10) zoom ratios.
- (6) The camera shall include adjustable motion detection area.
- (7) The Motion Detection area shall include selectable sixteen (16) by fifteen (15) grids.
- (8) Motion Detection Area shall include selectable All On or All Off setting.
- (9) The unitized camera shall display a motion detection icon when motion is detected.
- (10) The motion detection icon display time shall range from one (1) to fifteen (15) seconds adjustable in increments of two (2).
- (11) Motion Detection Sensitivity shall range from zero (0) to one hundred twenty (120).
- (12) The camera shall include six (6) adjustable privacy zones.
- (13) Each Privacy Zone shall include selectable On or Off setting.
- (14) Each Privacy Zone shall provide adjustable position, size, and color.
- (15) Privacy Zone Masking Color shall include black, gray, yellow, pink, red, indigo (teal) and green.
- (16) The Lens Shading Compensation shall be selectable On or Off.
- (17) The Highlight Masking shall be selectable On or Off.
- (18) The Digital Image Stabilization shall be included.

H. Environmental

- (1) The operating temperature shall be between negative four (-4) degrees to one hundred twenty-two (122) degrees in Fahrenheit.
- (2) The operating humidity shall be between zero (0) to eighty-five percent non-condensing humidity.



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- (3) The unitized camera's environmental protection rating shall be Ingress Protection rating of sixty-eight (IP68) for outdoor models.

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 twenty (120) milliamperes with the Infrared Light Emitting Diodes off, eight hundred (800) milliamperes with Infrared Light Emitting Diodes on at twelve (12) volts direct current, or seventy (70) milliamperes with Infrared Light Emitting Diodes off and five hundred (500) milliamperes with Infrared Light Emitting Diodes on at twenty-four (24) volts alternating current.

J. Dimensions and weight

- (1) The dimensions shall be as follow:
 - a) Indoor Fixed: four-point-six (4.6) inches in diameter and three-point-zero-seven (3.07) inches in height.
 - b) Indoor Varifocal: five-point-four-four (5.44) inches in diameter and three-point-six-nine (3.69) inches in height.
 - c) Indoor Varifocal with optional Infrared Light Emitting Diodes: five-point-four-four (5.44) inches in diameter and four-point-two-three (4.23) inches in height.
 - d) Outdoor Fixed/Varifocal: five-point-eight-four (5.84) inches in diameter and four-point-two-one (4.21) in height.
 - e) Outdoor Varifocal with optional Infrared Light Emitting Diodes: five-point-eight-four (5.84) inches in diameter and four-point-seven-four (4.74) in height.
- (2) The approximate weight shall be as follow:
 - a) Indoor Fixed: eight (8) ounces (oz.).
 - b) Indoor Varifocal: eleven-point-two (11.2) ounces (oz.).
 - c) Indoor Varifocal with optional Infrared Light Emitting Diodes: twelve-point-eight (12.8) ounces (oz.).
 - d) Outdoor Fixed/Varifocal: two-point-three-five (2.35) pounds (lbs.).
 - e) Outdoor Varifocal with optional Infrared Light Emitting Diodes: two-point-four-five (2.45) pounds (lbs.).

K. Convenience

- (1) The unitized camera shall include a selectable identification number range of one (1) through two hundred fifty-four (254).
- (2) The On Screen Display Language shall be English with optional expansion of the list based on requests.
- (3) The camera module mount shall be a three axis gimbal.
- (4) 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), nineteen thousand two hundred (19,200) and thirty-eight thousand four hundred (38,400) baud.
- (5) 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.



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2.03 SUGGESTED PRODUCT

A. The camera shall be a Vitek Alpha Series Dome Camera.

B. The model numbers shall be as follow:

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|--|--------------|
| (1) Indoor Fixed Lens | VTD-A4F/I |
| (2) Indoor Varifocal Lens | VTD-A2812/I |
| (3) Indoor Varifocal Lens with IR LEDs | VTD-AR2812/I |
| (4) Vandal Fixed Lens | VTD-A4F/V |
| (5) Vandal Varifocal Lens | VTD-A2812/V |
| (6) Vandal Varifocal Lens with IR LEDs | VTD-AR2812/V |

PART 3 EXECUTION

3.01 ACCEPTABLE INTEGRATORS

3.02 INSTALLATION