

## Autoscope<sup>®</sup> Image Sensor Model AIS Color Zoom

Color, zoom lens, easy set up, and optimized traffic performance accuracy in an economical *Autoscope* Image Sensor.

### Description

The *Autoscope* Image Sensor (AIS) is a high-resolution, color image sensor, especially optimized as a video source for the *Autoscope* stand-alone Machine Vision Processor (MVP) product suite.

The *Autoscope* Image Sensor produces consistent video quality in all weather, lighting, and traffic congestion levels common to the traffic industry. The image sensor provides accurate vehicle detection at night and other times of low light levels. The solid-state design provides maximum hardware reliability and consistent 24-hour operation. The color image sensor minimizes streaking and blooming from bright light sources like headlights and wet pavement that could adversely affect detection performance.

During setup, the 22x zoom auto-iris lens quickly adjusts to a field-of-view best suited for the detection objectives. A coax modem used with a laptop computer adjusts the zoom. Control of the zoom is over the coax cable.

A sealed and optionally pressurized barrel protects the image sensor against the demands of extreme outdoor environments. An adjustable weather shield helps minimize rain, snow and ice on the heated faceplate, reducing glare and improving video contrast. The barrel may be rotated to achieve the best possible field-of-view for detection accuracy.

A variety of available mounting brackets allow easy installation of the *Autoscope* Image Sensor on existing poles, mast arms, or other structures. The unique bracket design speeds installation by minimizing loose parts and eliminating steps in the setup process.



### Benefits

- Flexibility of application
- Reliable detection performance
- Ease of installation and cost-effective maintenance
- Light weight
- Uses standard AIS cables

### Features

- Designed for wide-area machine vision vehicle detection
- 22x zoom lens & color imager
- Zoom and setup control over coax
- Auxiliary color output BNC to separate coax cable
- No streaking or blooming from bright light sources (head lights)
- Easy mounting from bucket truck
- Rugged, environmentally-sealed enclosure
- Technologically advanced faceplate heater
- Low power consumption
- High resolution for accuracy
- Accurate detection at low light levels
- Auto-gain circuitry for improved detection in varying light conditions

## Faceplate Heater

New technology has greatly reduced the power consumption of the AIS. By applying heat directly to the faceplate, the AIS can keep the faceplate clear in extreme conditions with much less power. As an optical fail-safe, the *Autoscope* Supervisor Software provides contrast detectors to compensate for non-electrical failures in much the same way as the electrical fail-safe turns on detectors on failure of an electrical component.

## Zoom Control

New technology to adjust the zoom lens eliminates adapter cables or extra control wires in the pole. This greatly

simplifies installation. Zoom and camera controls travel to the AIS along the coax cable. The coax modem plugs into the coax cable allowing a laptop computer to adjust the lens field-of-view.



### Lens

- 22x continuous-focus zoom
- Horizontal: 7° to 73°
- Vertical: 5° to 58°

### Imaging Device

- 1/4 in. color CCD

### Video Formats Supported

- RS170, NTSC, CCIR and PAL

### Resolution

- NTSC: 460 TVL Horizontal @ center, 350 TVL Vertical @ center
- PAL: 450 TVL Horizontal @ center, 400 TVL Vertical @ center

### Synchronization

- Crystal lock

### Sensitivity - At Lens

- Full video, no AGC, 1.0 lux

### Signal To Noise Ratio

- 48 dB

### Interfaces

- Connector: MS 14-18P

### BS&W video output

- Connector : BNC

### Auxiliary Color Video

### Output Housing & Sunshield

- Zoom lens image sensor, sealed in waterproof and dust-tight NEMA-4 housing
- Thermostatically controlled faceplate heater
- Adjustable weather sunshield with drip guard

### Power

- RS170/NTSC: 115 VAC 60 Hz
- CCIR/PAL: 24 VAC 50 Hz
- 10 to 28 VDC
- 10 W with heater ON
- 5 W with heater OFF
- Optional lower or higher voltage

### Dimensions

- Mounting: Standard camera bracket tilt-top provided
- Housing Enclosure: 3.5 in. diam., 10.5 in. L (8.89 cm diam., 26.67 cm L)
- Weather sunshield: 16.3 in. L (41.4 cm L)

### Weight

- 3 lb, 10 oz (1.64 kg)

### Ambient Temperature Limits

- -40°F to +140°F (-34°C to +60°C)

### Humidity Limits

- Up to 100% relative humidity per MIL-E-5400T paragraph 4.3.24

### Options

- Video output
- Power source
- Sealed or pressurized enclosure

### Warranty

- Two-year warranty
- Extended warranty available (Five-year warranty package)

### Product Support

- Product support and training by team of factory-trained *Autoscope* technical support specialists

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