



Autoscope Image Sensor - AIS-IV

Description

The *Autoscope Image Sensor – AIS-IV* is a light-weight color zoom camera, designed for the rigors of the traffic intersection or freeway environment.

Optimized as a video source for the *Autoscope* stand-alone Machine Vision Processor (MVP) product suite, the *AIS-IV* produces consistent quality video in all weather, lighting, and traffic congestion conditions common to the traffic industry. The image sensor has high sensitivity for accurate vehicle detection at night and during other low light level conditions. The solid-state design provides maximum hardware reliability and reliable 24-hour operation. The color image sensor minimizes streaking and blooming from bright light sources such as headlights and wet pavement that could adversely affect detection performance.

During setup, the 22x zoom auto-iris lens can be easily adjusted to a field-of-view best suited for detection objectives. Focus is factory pre-set and zoom is adjusted via a hand-held controller or a coax modem and laptop computer. Control of the zoom is over the coax cable, thus minimizing the number of wires along the pole. Approached with cost-effective maintenance in mind, the new *AIS-IV* features an optional sealed and pressurized enclosure for protecting the image sensor against the outdoor environment.

Additionally, no window wipers will be needed to keep water from building up on the lens or creating spotting effects. The camera faceplate has a hydrophilic coating that causes water to

sheet over the glass. An adjustable weather shield helps minimize rain, snow, and ice on the heated faceplate, reducing glare and improving video contrast. A variety of available mounting brackets allow easy installation of the *AIS-IV* on existing poles, mast arms, or other structures. The unique bracket design speeds installation by minimizing loose parts and eliminating steps in the set up process.

Features

- Designed for most wide-area machine vision vehicle detection applications
- 22x zoom lens and color imager
- Zoom and setup control over coax
- No streaking or blooming from bright light sources (headlights)
- Easy mounting from bucket truck
- Rugged, environmentally-sealed enclosure
- Technologically advanced faceplate heater
- Low power consumption
- High sensitivity for accurate detection at low light levels
- Hydrophilic faceplate coating
- Auto-gain circuitry for improved detection in varying light conditions
- Low maintenance
- Long life

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 less power.

Zoom Control

“Control-over-Coax” technology is used to adjust the zoom lens, eliminate adapter cables, or extra control wires in the pole, simplifying installation. Zoom and camera controls travel to the AIS along the coax cable. Adjustments are made via a hand-held zoom controller or a coax modem that plugs into the coax cable, allowing the user to adjust the lens via a laptop computer.

Color or Black & White

The AIS-IV can be ordered with output video pre-set to color or black & white. For RackVision™ and 2020™ MVP

products, order with color video output. For use with *Autoscope* 2004 MVP, black & white video must be used. The video output can be switched by the user via the zoom control setup software.

EasyLock Connection Option

This connector is an excellent choice for easy field installation. It eliminates “pig tail” camera cables and splicing by allowing the installer to pull power and coax cable directly to the camera. Connectors are easily installed for reliable, waterproof connections.

Hydrophilic Faceplate Coating

This new faceplate coating fills the porous surface of the face plate, preventing airborne contaminants and water from striking and sticking to the surface of the lens. The coating maintains image quality and reduces the need for maintenance.

Lens

- 22x continuous-focus zoom
- Horizontal: 2.2° to 47.3°
- Vertical: 1.65° to 36.45°

Imaging Device

- ¼ in. color CCD

Video Formats Supported

- NTSC/RS170
- PAL/CCIR

Resolution

- NTSC/RS170: 470 TVL Horizontal @ center, 400 TVL Vertical @ center

Synchronization

- Crystal lock

Sensitivity At Lens

- Full video, no AGC, 2.0 lux

Signal to Noise Ratio

- 50 dB

Interface Power & Video

- Options are:
 - MS 14-18P, round, Mil SPEC
 - EasyLock™ connector
 - Separate power and video connection

Housing & Sunshield

- Mounting: Standard camera bracket tilt-top provided
- Zoom lens image sensor sealed in waterproof and dust-tight housing
- Housing meets NEMA 4 and IP 66 standards
- Hydrophilic faceplate coating
- Optional pressurized enclosure (MS connector only)
- Technologically advanced faceplate heater
- Adjustable weather & sunshield with drip guard

Power

- Input power options:
 - 85-265VAC-40-440Hz
 - 24VAC, 47-440Hz
 - 12-14VDC
- 10W max
- 5W nominal

Dimensions

- Housing Enclosure: 3.5 in. D x 10.3 in. L (8.89 cm D x 26.2 cm L)
- Weather sunshield: 14.5 in. L (36.8 cm L)

Weight

- 4 lb (1.8 kg)

Ambient Temperature Limits

- -40°F to +140°F (-40°C to +60°C)

Humidity Limits

- Up to 100% relative humidity per MIL-E-5400T paragraph 4.3.24.4

Options

- EasyLock or MS Connector
- NTSC / PAL
- Color/Black & White
- AC or DC operation
- Sealed or pressurized enclosure (EasyLock connector sealed only)

Warranty

- Three-year standard warranty
- Extended warranty available (up to five years)

Product Support

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

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