



Compact Optically Scanning Enhanced (COSE) Zoom Pinhole Lens

Using a patented optical scanning technique the COSE lens offers up to 120° pan, tilt and 10x zoom capability through a 1mm pinhole with no lens movement. It can scan and zoom onto any target subject within the wide angle field of view of the lens. The scanning is purely optical meaning full image brightness and quality are preserved. COSE can be easily integrated with many cameras and control systems.



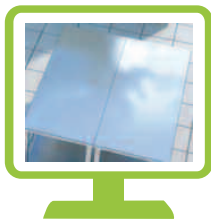
- Huge FOV up to 120 degrees
- 10 x Zoom
- Operates through 1mm pinhole
- Patented all optics approach
- No external moving parts
- Small physical size
- Stands back 2mm from pinhole
- Near silent operation
- Straight through and right angle head versions
- Standard Pelco control protocols
- Choice of serial connectors (RS422/485, RS232, USB)
- Low power
- Interfaces to any good low light C-Mount 1/3" B/W or colour camera
- Goes to user defined location on power-up allowing for flexible fixed view operation
- Negligible power draw when not zooming or scanning



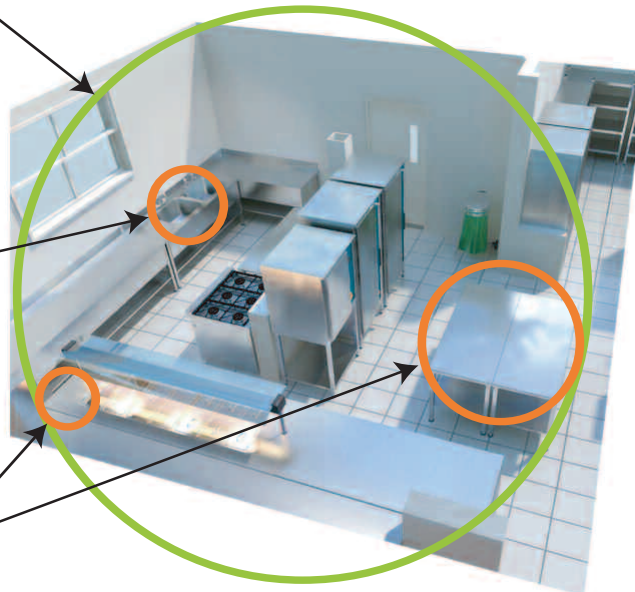
Massive FOV up to 120°



Up to 10 x Zoom



Pan and tilt anywhere in wide angle FOV



All through a 1mm pinhole

The COSE lens offers unparalleled imaging performance in a small package



NOVEL OPTICAL DESIGN

Current pinhole PTZ solutions require the camera to be moved behind the pinhole to face the point of interest. The COSE lens uses a patented arrangement of prisms to allow it to optically scan and zoom over its entire field of view, allowing it to remain stationary behind the pinhole.

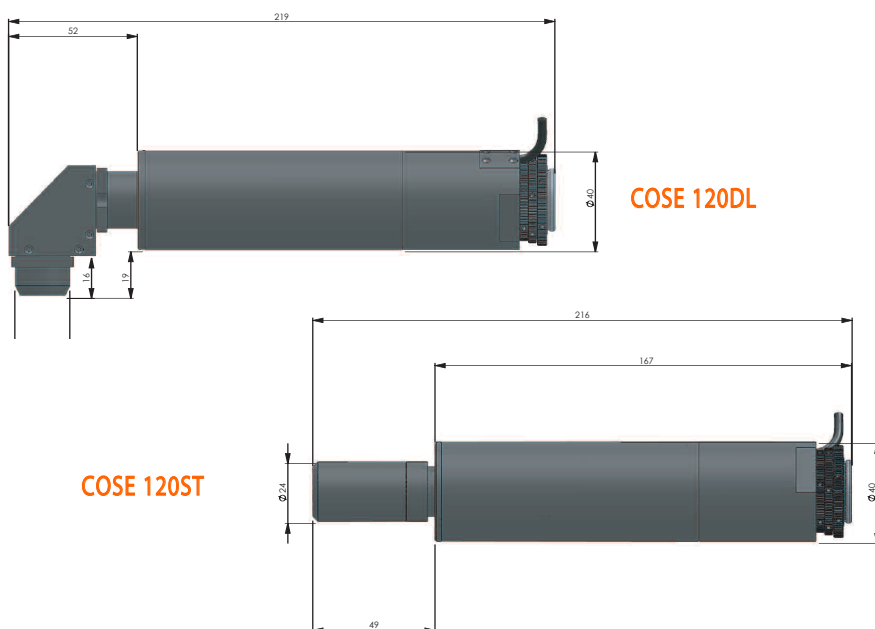
By using an optical solution the quality of image obtained is significantly greater than with solutions based on scanning only a portion of the sensor image (i.e. digital PTZ). An additional benefit of the COSE design is the ability to stand the lens off from the pinhole by up to 2mm with no loss of field of view, making the lens harder to detect.

EASE OF INSTALLATION

As the COSE lens remains stationary, the size of the aperture required to mount the lens can be up to 10x smaller than conventional moving pinhole lens arrangements. Additionally, the COSE lens can be fitted with a choice of four heads that allow for either lateral or perpendicular mounting and enhanced fields of view. The pinhole size required for the COSE lens, at 1mm, is smaller than that required by traditional moving lens solutions. This translates directly into increased ease of installation and reduced chance of detection.

EASY TO INTEGRATE

The COSE lens uses the industry standard Pelco D protocols over RS-422/RS-485, RS232 or USB depending on interface cable selected. It is equipped with a standard C-mount and is designed to operate with a low light 1/3" sensor cameras such as Sony Ex-View or Wattec 902H3.



TECHNOLOGY BRIEF

The COSE Lens comes in four versions with either 90° or 120° field of view. The 90ST and offers superior resolution and lower levels of distortion, while the 120ST offers a huge field of view. The 90RA and 120DL use a right angle head to allow the lens to be mounted perpendicular to the pinhole.

• SPECIFICATION COSE-90ST/RA

- Focal Length: 3.8mm to 38mm
- Field of View: 90°
- Pan and tilt scan angle: 80°
- Zoom: 10x
- Stand-off distance : 2mm
- Dimensions:
 - ST: 210mm x 40mm x 40mm
 - RA: 214mm x 40mm x 40mm
- Camera: C Mount 1/3" sensor
- Resolution: >570 TV lines at WA

• SPECIFICATION COSE-120ST/DL

- Focal Length: 2.8mm to 28mm
- Field of View: 120°
- Pan and tilt scan angle: 108°
- Zoom: 10x
- Stand-off distance : 2mm
- Dimensions:
 - ST: 220mm x 40mm x 40mm
 - DL: 219mm x 59mm x 40mm
- Camera: C Mount 1/3" sensor
- Resolution: >570 TV lines at WA

• INTERFACE OPTIONS

- Protocol: Pelco D (subset)
- Interfaces: RS422/485 or RS232 or USB
- Power: 12v 50mA or USB (5v) 100mA
- Windows control software included

• MOUNTING KIT OPTION

- End cap to aid hole positioning and make-good after installation
- Carrier tube for easy insertion and withdrawal with flange and clamps for secure positioning



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