

## 2019 Product Line Comparison

|                                                                                    |                                                                                     |                                                                                      |                                                                                                                                       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
|   |    |    | <p><i>High-definition video camera systems designed for the performance requirements of critical infrastructure installations</i></p> |
|  |   |   |                                                                                                                                       |
|  |  |  |                                                                                                                                       |

# CohuHD PTZ Camera Comparison

RISE



RISE



RISE



Helios



| Product Series      |                            | 4220HD Series                                     |  | 4260HD Series                                                    |                                        | 4290HD Series                              |                                       | 8800HD Series |  |
|---------------------|----------------------------|---------------------------------------------------|--|------------------------------------------------------------------|----------------------------------------|--------------------------------------------|---------------------------------------|---------------|--|
| Visible Camera      | Resolution                 | Full HD, 1920 x 1080, 1080p60                     |  |                                                                  |                                        | Full HD, 1920 x 1080, 1080p30              |                                       |               |  |
|                     | Sensor                     | 1/2.8" Exmor R CMOS                               |  |                                                                  |                                        | 1/2.7" CMOS                                |                                       |               |  |
|                     | Type                       | Day/Night                                         |  |                                                                  |                                        | Day/Night                                  |                                       |               |  |
|                     | Sensitivity                | 0.00008 fc (Mono, f1.6, 1/2 Shutter, 30 IRE)      |  |                                                                  |                                        | 0.035 fc (Mono, f3.5, 1/8 Shutter, 30 IRE) |                                       |               |  |
|                     | Image Defog                | Auto/Manual [3 levels]                            |  |                                                                  |                                        | No                                         |                                       |               |  |
|                     | Image Adjustments          | BLC, WDR, WB                                      |  |                                                                  |                                        | BLC, WB                                    |                                       |               |  |
|                     | Digital Zoom               | 12x                                               |  |                                                                  |                                        | No                                         |                                       |               |  |
| Visible Camera Lens | Type                       | Motorized Zoom                                    |  |                                                                  |                                        | Motorized Zoom                             |                                       |               |  |
|                     | Focal Length               | 4.3mm-129mm                                       |  |                                                                  |                                        | 16.7 - 1,000mm / 2,000mm w/2x extender     |                                       |               |  |
|                     | Magnification              | 30x                                               |  |                                                                  |                                        | 60x / 120x [w/2x extender]                 |                                       |               |  |
|                     | Iris                       | Auto/Manual                                       |  |                                                                  |                                        | Auto/Manual                                |                                       |               |  |
|                     | Focus                      | Auto/Manual                                       |  |                                                                  |                                        | One Shot Auto/Manual                       |                                       |               |  |
|                     | Horizontal Angular FoV     | 63.4° to 2.1°                                     |  |                                                                  |                                        | 19.7 ° to 0.17°                            |                                       |               |  |
| Thermal Camera      | Resolution                 | See 4290HD or 3490HD                              |  |                                                                  | VGA, 640 x 480, 480i30                 |                                            | See 4290HD or 3490HD                  |               |  |
|                     | Sensor                     |                                                   |  |                                                                  | 17um, Vox Microbolometer               |                                            |                                       |               |  |
|                     | Type                       |                                                   |  |                                                                  | LWIR, 8-14 um                          |                                            |                                       |               |  |
|                     | Sensitivity                |                                                   |  |                                                                  | <50mK, F1.0                            |                                            |                                       |               |  |
| Thermal Camera Lens | Type                       |                                                   |  |                                                                  | Athermalized, Hard Carbon              |                                            |                                       |               |  |
|                     | Focal Lengths              |                                                   |  |                                                                  | 25, 50, 100mm fixed, DFoV, 4x, 6x Zoom |                                            |                                       |               |  |
|                     | Focus                      |                                                   |  |                                                                  | Fixed Focus or Manual, One Shot Auto   |                                            |                                       |               |  |
|                     | Maximum Horiz. Angular FoV |                                                   |  |                                                                  | Fixed [25° or 12°], Zoom 4.1°          |                                            |                                       |               |  |
| IP Video            | Video Codec                |                                                   |  |                                                                  | H.264[BP, MP, HP], H.265 [MP] MJPEG    |                                            |                                       |               |  |
|                     | Unique Video Streams       | 8                                                 |  |                                                                  |                                        |                                            | 2                                     |               |  |
|                     | Streaming Methods          | RTSP, RTSP Interleave, HTTP Tunneling, Multi-cast |  |                                                                  |                                        |                                            | RTSP, RTSP Interleave, HTTP Tunneling |               |  |
|                     | Multi-cast                 | Yes                                               |  |                                                                  |                                        |                                            |                                       |               |  |
| Positioner          | Pan/Tilt Range             | 360° continuous pan, 190° tilt                    |  | 360° continuous pan, 360° tilt                                   |                                        |                                            | 360° continuous pan, 60° tilt         |               |  |
|                     | Accuracy                   | +/- 0.1°                                          |  | +/- 0.05°                                                        |                                        |                                            | +/- 0.05°                             |               |  |
|                     | Presets                    | 256                                               |  |                                                                  |                                        |                                            | 64                                    |               |  |
|                     | Tours                      | 256                                               |  |                                                                  |                                        |                                            | 8                                     |               |  |
|                     | Privacy Zones              | 24                                                |  |                                                                  |                                        |                                            | No                                    |               |  |
|                     |                            |                                                   |  |                                                                  |                                        |                                            |                                       |               |  |
| Network             | Security/Authentication    | Yes                                               |  |                                                                  |                                        |                                            |                                       |               |  |
|                     | Web Server                 | Edge, Firefox, Chrome (HTML5 video)               |  |                                                                  |                                        |                                            | IE11                                  |               |  |
|                     | Open Connectivity          | ONVIF Profile S and T                             |  |                                                                  |                                        |                                            | Profile S                             |               |  |
| Analog Interface    | Composite Analog Video     | Yes                                               |  |                                                                  |                                        |                                            | No                                    |               |  |
|                     | Serial PTZ Control         | RS422 4 wire                                      |  |                                                                  |                                        |                                            | No                                    |               |  |
| On Screen Display   | IP Video OSD               | Yes                                               |  |                                                                  |                                        |                                            |                                       |               |  |
|                     | Analog Video OSD           | Yes                                               |  |                                                                  |                                        |                                            | No                                    |               |  |
| Event Management    | Input Trigger              | 2                                                 |  |                                                                  |                                        |                                            | 0                                     |               |  |
|                     | Output Trigger             | 2                                                 |  |                                                                  |                                        |                                            | 1                                     |               |  |
|                     | Video Analytics            | Optional, ITS Standard and Advanced Packages      |  |                                                                  |                                        |                                            | No                                    |               |  |
| Environmental       | Ingress Protection         | IP68 [Lifetime Warranty on Ingress]               |  | IP68 Camera Head [Lifetime Warranty on Ingress], IP66 Positioner |                                        |                                            | IP68 Camera Head, IP67 Positioner     |               |  |
|                     | Temperature                | -40° to 75°C, NEMA TS2 profile                    |  |                                                                  |                                        |                                            | -32° to 60°C                          |               |  |
|                     | Faceplate Wiper            | No                                                |  | Optional                                                         |                                        | Optional [Visible Camera Only]             |                                       | Optional      |  |
|                     | Mechanical Protection      | Nema TS2 [Shock/Vib]                              |  |                                                                  |                                        |                                            | Nema TS2 [Shock/Vib]                  |               |  |
|                     | Certifications             | FCC, CE, RoHS, NEMA TS2                           |  |                                                                  |                                        |                                            | FCC, CE, RoHS                         |               |  |
| Electrical          | Voltage                    | PoE+, PoE++, 24Vac/dc                             |  | PoE++, 24Vac/dc, 120Vac                                          |                                        |                                            | 24Vdc                                 |               |  |
|                     | Power                      | Up to 25.5W or 60W                                |  | Up to 60W                                                        |                                        |                                            | Up to 250W                            |               |  |
| Opticore Management | Compatibility              | Yes                                               |  |                                                                  |                                        |                                            | No                                    |               |  |

## CohuHD Fixed Camera Comparison

SCTIMA



SCTIMA



SCTIMA



| Product Series      |                            | 3430HD Series                              | 3440HD Series                                 | 3490HD Series                                       |
|---------------------|----------------------------|--------------------------------------------|-----------------------------------------------|-----------------------------------------------------|
| Visible Camera      | Resolution                 | Full HD, 1920 x 1080, 1080p60              | (4x) Full HD, 1920 x 1080, 1080p30            | HD, 1280 x 720, 720p30                              |
|                     | Sensor                     | 1/2.8" CMOS                                | (4x) 1/2.9" CMOS                              | 1/4" CMOS                                           |
|                     | Type                       | Day/Night                                  | (4x) Day/Night                                | Color                                               |
|                     | Sensitivity                | 0.0002 lux (Mono, f1.6, 1/2 Shtrr, 30 IRE) | (4x) 0.01 fc (Mono, f1.2, 1/30 Shtrr, 30 IRE) | 0.1 fc (Color, f1.4, 1/30, 30 IRE)                  |
|                     | Image Defog                | On/Off                                     | No                                            | No (Use Thermal Camera Channel)                     |
|                     | Image Adjustments          | BLC, WDR, WB, NR                           | Yes                                           | Yes                                                 |
|                     | Digital Zoom               | 16x                                        | No                                            | No                                                  |
| Visible Camera Lens | Type                       | Motorized Zoom                             | (4x) Motorized Zoom                           | Fixed Focal Lens                                    |
|                     | Focal Length               | 4.5 mm to 135 mm                           | (4x) 2.8 to 8mm                               | 3.5mm                                               |
|                     | Magnification              | 30x                                        | 3x                                            | 1x                                                  |
|                     | Iris                       | Auto/Manual                                | Auto                                          | Auto                                                |
|                     | Focus                      | Auto/Manual                                | Auto                                          | Fixed                                               |
|                     | Horizontal Angular FoV     | 62.9° to 2.1°                              | Approx. 90° to 35°                            | Approx. 54°                                         |
| Thermal Camera      | Resolution                 | See 3490HD                                 | See 3490HD                                    | 640 x 512 or 384 x 288                              |
|                     | Sensor                     |                                            |                                               | 17um, Vox Microbolometer                            |
|                     | Type                       |                                            |                                               | LWIR, 8-14 um                                       |
|                     | Sensitivity                |                                            |                                               | <50mK, F1.0                                         |
| Thermal Camera Lens | Type                       |                                            |                                               | Athermalized, Hard Carbon                           |
|                     | Focal Lengths              |                                            |                                               | 8.5mm, 14mm, 19mm, 25mm, 35mm, 50mm, 60mm           |
|                     | Focus                      |                                            |                                               | Fixed Focus (Focused to Infinity at Factory)        |
|                     | Maximum Horiz. Angular FoV |                                            |                                               | 73° to 6.2°, Sensor Resolution and Lens Dependent   |
| IP Video            | Video Codec                | H.264, H.265, MJPEG                        | H.264                                         | H.264                                               |
|                     | Unique Video Streams       | 3                                          | (4x) 2 Per Camera Channel                     | 2                                                   |
|                     | Streaming Methods          | RTSP, RTSP Interleave, HTTP Tunneling      | RTSP, HTTP Tunneling, Mulit-Cast              | RTSP                                                |
|                     | Multi-cast                 | Yes                                        | Yes                                           | No                                                  |
| Positioner          | Pan/Tilt Range             | Fixed Position Only                        | 100° pan, 90° tilt                            | Fixed Position Only                                 |
|                     | Accuracy                   |                                            | Set and Forget Remote Positioning             |                                                     |
|                     | Presets                    |                                            |                                               |                                                     |
|                     | Tours                      |                                            |                                               |                                                     |
|                     | Privacy Zones              |                                            |                                               |                                                     |
| Network             | Security/Authentication    | Yes                                        | Yes                                           | Yes                                                 |
|                     | Web Server                 | IE11                                       | Edge                                          | Chrome                                              |
|                     | Open Connectivity          | ONVIF Profile S Support                    |                                               |                                                     |
| On Screen Display   | IP Video OSD               | Yes                                        | Yes                                           | No                                                  |
| Event Management    | Input Trigger              | 2                                          | No                                            | Yes                                                 |
|                     | Output Trigger             | 2                                          | No                                            | Yes                                                 |
|                     | Video Analytics            | Video Motion Detection                     | No                                            | Video Motion Detection                              |
| Environmental       | Ingress Protection         | IP68                                       | IP66                                          | IP66                                                |
|                     | Temperature                | -40°F to 149°F (-40°C to 65°C)             | -4°F to 131°F (-20°C to 55°C)                 | -40°C to 75°C Per Nema TS-2 Test Profile figure 2.1 |
|                     | Faceplate Wiper            | No                                         | No                                            | No                                                  |
|                     | Certifications             | FCC, CE, RoHS                              | FCC, CE, RoHS                                 | FCC, CE, RoHS                                       |
| Electrical          | Voltage                    | PoE+                                       | PoE+                                          | PoE+                                                |
|                     | Power                      | Up to 25.5W                                | Up to 25.5W                                   | Up to 25.5W                                         |



## The CohuHD Costar Difference



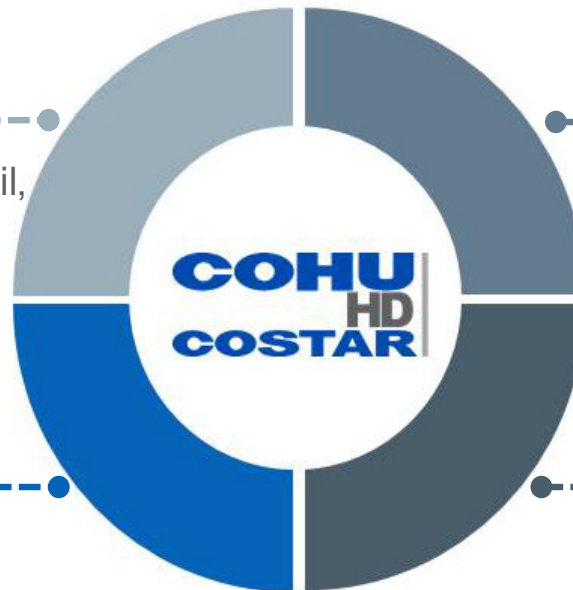
### ADVANCED OPTICS

See farther, with greater detail,  
thru haze, with less light



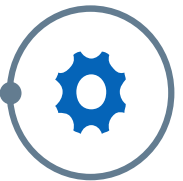
### EXPERIENCE

Proudly Designed &  
Assembled in the USA for  
Over 70 Years, with 1,000's  
of Satisfied Customers World  
Wide



### INTEROPERABILITY

Open Standards,  
Non-Proprietary,  
Seamless Operation



### RUGGED DESIGN

Reliable and Versatile,  
Electrical, Mechanical,  
Environmental Performance

