

# WV-S4556LA

5MP Sensor Outdoor 360 Fisheye Network Camera with AI engine

## Edge AI 360-degree fisheye camera for video surveillance and business intelligence



- 5MP Outdoor 360-degree fisheye camera
- Up to 3 Edge AI analytic apps
- Built-in IR-LED(14m, 45ft)
- IP66, IK10 certified
- Built-in FIPS 140-2 Level 3 Compliant SecureElement (EdgeLock® SE050F NXP® Semiconductors)
- NDAA Compliant

# SPECIFICATIONS

| Camera                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Image Sensor                 | Approx. 1/3 type 5MP CMOS image sensor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Minimum Illumination         | Color :<br>0.11 lx (30IRE, F2.4, 1/30s, AGC:11)*<br>0.15 lx (50IRE, F2.4, 1/30s, AGC:11)<br>0.01 lx (50IRE, F2.4, 16/30s, AGC:11)*<br><br>BW :<br>0 lx (50IRE, F2.4, 1/30s, AGC:11, IR LED: On)<br>0.02 lx (50IRE, F2.4, 1/30s, AGC:11)<br>0.0013 lx (50IRE, F2.4, 16/30s, AGC:11)*<br>*Converted value                                                                                                                                                                                                                                                                                                                                                             |
| Intelligent Auto             | On / Off                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Maximum Shutter              | max. 16/30s to Max. 1/10000s                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Super Dynamic                | On / Off, The level can be set in the range of 0 to 31.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Dynamic Range                | Max.120 dB (Super Dynamic : On, level : 31)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Image Settings               | Gain (AGC), White balance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Image Compensation           | Adaptive black stretch, Back light compensation (BLC), Fog compensation, High light compensation (HLC), Digital noise reduction                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Color/BW (ICR)               | Off / On (IR Light Off) / On (IR Light On) / Auto1 (IR Light Off) / Auto2 (IR Light On) / Auto3 (SCC)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| IR LED Light                 | High* / Middle / Low / Off<br>*Maximum irradiation distance : 14 m{Approx. 45 ft}(30IRE), 10 m {Approx. 33 ft}<br>(Mounting height : Approx. 3 m, Peripheral intensity control : On)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Video Motion Detection (VMD) | On / Off, 4 areas available                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Scene Change Detection (SCD) | On / Off, 1 areas available                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Audio Detection              | On / Off                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| AI Sound Classification      | Gunshot, Yell, Vehicle horn, Glass break                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| AI Analytics                 | AI-VMD/AI People Counting for 360-degree fisheye camera, AI Privacy Guard for 360-degree fisheye camera, AI Non mask Detection (prior to V2.70), AI Scene Change Detection<br><br>For details :<br><a href="https://i-pro.com/products_and_solutions/en/surveillance/products/analytics-software">https://i-pro.com/products_and_solutions/en/surveillance/products/analytics-software</a><br>3rd party applications are also available.<br><a href="https://i-pro.com/products_and_solutions/en/surveillance/solutions/edge-ai-platform/application-list">https://i-pro.com/products_and_solutions/en/surveillance/solutions/edge-ai-platform/application-list</a> |
| Privacy Zone                 | On / Off, Up to 8 zones available                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Camera Title (OSD)           | On / Off, Up to 20 characters (alphanumeric characters, marks)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Fixing angle adjustment      | -5°, 0°, +5°                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Lens                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Zoom Ratio                   | 1x                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

|                           |                                       |
|---------------------------|---------------------------------------|
| Digital (Electronic) Zoom | Choose from 3 levels of x1, x2, x4    |
| Focal Length              | 0.84 mm {1/32 inches}                 |
| Maximum Aperture Ratio    | 1:2.4                                 |
| Focus Range               | 0.3 m {11-13/16 inches} - ∞           |
| Angular Field of View     | Horizontal : 186°,<br>Vertical : 186° |

### DORI

|                                                         |                                                                                                                                                                                             |
|---------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Distance to the object in the center of the image       | Detect (25 ppm / 8 ppf) : 20.7 m / 68.0 ft , Observe (62.5 ppm / 19 ppf) : 8.3 m / 27.2 ft<br>Recognize (125 ppm / 38 ppf) : 4.1 m / 13.6 ft , Identify (250 ppm / 76 ppf) : 2.1 m / 6.8 ft |
| Coverage radius when mounted at a height of 3 m (10 ft) | Detect (25 ppm / 8 ppf) : 38.0 m / 124.6 ft , Observe (62.5 ppm / 19 ppf) : 13.2 m / 43.3 ft<br>Recognize (125 ppm / 38 ppf) : 4.3 m / 14.1 ft , Identify (250 ppm / 76 ppf) : –            |

### System on Chip (SoC)

|                      |                |
|----------------------|----------------|
| System on Chip (SoC) | Ambarella CV22 |
|----------------------|----------------|

### Browser GUI

|                           |                                                                                                                                        |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Camera Control            | Brightness, AUX On / Off                                                                                                               |
| Audio                     | Mic (Line) Input : On / Off Volume adjustment : Low / Middle / High<br>Audio Output : On / Off Volume adjustment : Low / Middle / High |
| GUI / Setup Menu Language | English, Italian, French, German, Spanish, Portuguese, Russian, Chinese, Japanese                                                      |

### Network

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Network IF                  | 10Base-T / 100Base-TX, RJ45 connector                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Resolution <Ceiling> <Wall> | •Fisheye mode (max. 30 fps/25 fps) : 2192×2192 / 1280×1280 / 640×640 / 320×320<br>•Quad PTZ mode (max. 30 fps/25 fps), Single PTZ mode (max. 30 fps/25 fps)<br>1600×1200 / 1280×960 / 800×600 / VGA / QVGA                                                                                                                                                                                                                                                                                                                                                                                    |
| Resolution <Ceiling>        | •Double Panorama mode (max. 30 fps/25 fps) : 1920×1080 / 1280×720 / 640×360 / 320×180<br>•Fisheye + Double Panorama mode (max. 30 fps/25 fps)<br>(Fisheye) 2192×2192 / 1280×1280 / 640×640 / 320×320<br>(Double Panorama) 1280×720 / 640×360 / 320×180<br>•Fisheye + Quad PTZ mode (max. 30 fps/25 fps)<br>(Fisheye) 2192×2192 / 1280×1280 / 640×640 / 320×320<br>(Quad PTZ) 1280×960 / 800×600 / VGA / QVGA<br>•Quad streams mode<br>(Single PTZ (Quad streams)) 1280×960 / 800×600 / VGA / QVGA (max. 30 fps/25 fps)<br>(Quad PTZ) 1600×1200 / 1280×960 / 800×600 / VGA / QVGA (max. 5 fps) |
| Resolution <Wall>           | •Panorama mode (max. 30 fps/25 fps) : 1920×1080 / 1280×720 / 640×360 / 320×180<br>•Fisheye + Panorama mode (max. 30 fps/25 fps)<br>(Fisheye) 2192×2192 / 1280×1280 / 640×640 / 320×320<br>(Panorama) 1280×720 / 640×360 / 320×180                                                                                                                                                                                                                                                                                                                                                             |
| H.265/H.264                 | [Transmission Mode] Constant bit rate / VBR / Frame rate / Best effort<br>[Transmission Type] Unicast port (AUTO)/ Unicast port (MANUAL)/ Multicast                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| JPEG                        | [Image Quality] 10 steps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Smart Coding                | GOP (Group of pictures) control : On (Frame rate control)* / On (Advanced)* / On (Mid) / On (Low) / Off<br>*On (Frame rate control) and On (Advanced) are only available with H.265. Auto VIQS : On / Off                                                                                                                                                                                                                                                                                                                                                                                     |
| Audio Compression           | G.726(ADPCM) : 16kbps / 32kbps, G.711: 64kbps, AAC-LC : 64kbps / 96kbps / 128kbps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Supported Protocol          | IPv6 : TCP/IP, UDP/IP, HTTP, HTTPS, SSL/TLS, SMTP, DNS, NTP, SNMPv1/v2/v3, DHCPv6, RTP, MLD, ICMP, ARP, IEEE 802.1X, DiffServ, FTP, SFTP, MQTT, LLDP<br>IPv4 : TCP/IP, UDP/IP, HTTP, HTTPS, SSL/TLS, RTSP, RTP, RTP/RTCP, SMTP, DHCP, DNS, DDNS, NTP, SNMPv1/v2/v3, UPnP, IGMP, ICMP, ARP, IEEE 802.1X, DiffServ, SRTP, FTP, SFTP, MQTT, LLDP                                                                                                                                                                                                                                                 |

|                                   |                                                                                                                                                                                                                                                                                                                        |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Max. concurrent access number     | Up to 14 users<br>(Depends on network conditions)                                                                                                                                                                                                                                                                      |
| Secure                            | FIPS 140-2 level 3 (NXP® EdgeLock® SE050F), Device Certificate GlobalSign® pre-installed, HTTPS, User authentication, Digest authentication, Host authentication, IEEE802.1X, System log, Image transmission log, Brute-force protection, Alteration detection, Signed Firmware                                        |
| SDXC/SDHC/SD Memory Card (Option) | H.265 / H.264 recording : Manual REC / Alarm REC (Pre/Post) / Schedule REC<br>JPEG recording : Manual REC / Alarm REC (Pre/Post)<br>Compatible SDXC/SDHC/SD card :<br>2 GB, 4 GB*, 8 GB*, 16 GB*, 32 GB*, 64 GB**, 128 GB**, 256 GB**, 512 GB**model<br>*SDHC card, ** SDXC card (except miniSD card and microSD card) |
| Mobile Terminal Compatibility     | iPad / iPhone, Android™ terminals                                                                                                                                                                                                                                                                                      |
| ONVIF Profile                     | G / M / S / T                                                                                                                                                                                                                                                                                                          |

### Alarm

|               |                                                                                                                                  |
|---------------|----------------------------------------------------------------------------------------------------------------------------------|
| Alarm Source  | 3 terminals input, VMD, Command alarm                                                                                            |
| Alarm Actions | SDXC/SDHC/SD memory recording, E-mail notification, HTTP alarm notification Indication on browser, TCP alarm notification output |

### Input/Output

|                        |                                                                                                                                                                                                                                   |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Audio Input            | ø3.5 mm stereo mini jack, Recommended applicable microphone : Plug-in power type<br>(Sensitivity of microphone : -48 dB ±3 dB (0 dB=1 V / Pa,1 kHz))<br>Input impedance : Approx. 2 kΩ (unbalanced) Supply voltage : 2.5 V ±0.5 V |
| Audio Output           | ø3.5 mm stereo mini jack (monaural output)<br>Output impedance : Approx. 600 Ω (unbalanced) / Output level : -20 dBV                                                                                                              |
| External I/O Terminals | ALARM IN 1 (Black & white input, Auto time adjustment) (x1),<br>ALARM IN 2 (ALARM OUT) (x1), ALARM IN 3 (AUX OUT) (x1)                                                                                                            |
| Monitor Output         | Yes (for adjustment)<br>ø3.5mm stereo mini jack, NTSC or PAL signal can be output from camera                                                                                                                                     |

### General

|                                    |                                                                                                                                                                                                                                                                 |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Safety                             | UL (UL62368-1), c-UL (CSA C22.2 No.62368-1), CE, IEC62368-1                                                                                                                                                                                                     |
| EMC                                | FCC (Part15 ClassA), ICES003 ClassA, EN55032 ClassB, EN55035<br>ECE-R10, EN50498 compliant, EN50121                                                                                                                                                             |
| Power Source and Power Consumption | DC power supply : DC12 V 1.03 A, Approx. 12.4 W<br>PoE (IEEE802.3af compliant) Device : DC48 V 260 mA, Approx. 12.5 W (Class 0 device)                                                                                                                          |
| Ambient Operating Temperature      | IR LED : On -40 °C to +50 °C (-40 °F to 122 °F) / Off -40 °C to +60 °C (-40 °F to 140 °F)                                                                                                                                                                       |
| Ambient Operating Humidity         | 10 to 100 % (no condensation)                                                                                                                                                                                                                                   |
| Anti-Condensation System           | Rosahl element                                                                                                                                                                                                                                                  |
| Water and Dust Resistance          | IP66(IEC60529), Type 4X(UL50), NEMA 4X compliant                                                                                                                                                                                                                |
| Shock Resistance                   | 50J (IEC 60068-2-75 compliant), IK10 (IEC 62262)                                                                                                                                                                                                                |
| Wind Resistance                    | Up to 40 m/s {approx. 89 mph}                                                                                                                                                                                                                                   |
| Railway Application                | EN50155-TX                                                                                                                                                                                                                                                      |
| Dimensions                         | When using the attachment plate : ø154 mm × 60.3 mm (H) {ø6-1/16 inches × 2-3/8 inches (H)} , Dome radius 35 mm {1-3/8 inches}<br>When using the base bracket : ø164 mm × 96.3 mm (H) {ø6-15/32 inches × 3-25/32 inches (H)} , Dome radius 35 mm {1-3/8 inches} |
| Mass (Approx.)                     | When using the attachment plate : Approx. 870 g {1.92 lbs}<br>When using the base bracket : Approx. 1.3 kg {2.87 lbs}                                                                                                                                           |

## NOTES

### Important

- Safety Precautions : Carefully read the Basic Information, Installation Guide and Operating Instructions before using this product.
- i-PRO Co., Ltd. cannot be held responsible for the performance of the network and/or other manufacturers' products used on the network.
- Masses and dimensions are approximate.
- Specifications are subject to change without notice.

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## OPTIONAL ACCESSORIES

Select a compatible accessory

[Accessory Selector \(i-pro.com\)](http://i-pro.com)



WV-QWL506-W  
4-screw Wall Mount  
Bracket



WV-QWL506M1-W  
ANSI Male Wall Mount  
Bracket (1.5\"/>



WV-Q105A  
Mount Bracket



WV-QCL100-W  
Mount Bracket



WV-QCL101-W  
Mount Bracket



WV-QCL501-W  
Mount Bracket



WV-QCN500-W  
Mount Bracket



WV-QJB500-W  
Mount Bracket



WV-QJB504-W  
Base Bracket



WV-QPL500-W  
Mount Bracket



WV-QSR501-W  
Mount Bracket



WV-QWL500-W  
Mount Bracket



WV-QWL501-W  
Mount Bracket



WV-PM500  
Compact microphone  
unit



WV-QSR501F1-W  
Mount Bracket



WV-QSR501M1-W  
Mount Bracket



WV-QSR501F-W  
Mount Bracket



WV-QSR501M-W  
Mount Bracket



WV-QDC507C  
Dome Cover



WV-SDA512G  
i-PRO SD Memory Card



WV-SDA256G  
i-PRO SD Memory Card



WV-SDA128G  
i-PRO SD Memory Card



WV-SDA064G  
i-PRO SD Memory Card



WV-SDA032G  
i-PRO SD Memory Card

# APPEARANCE

