

# WV-S8543L

3x4MP(12MP) Outdoor Multi-Sensor Network Camera with AI Engine

\*As of February 2022, based on i-PRO own research.

## Industry thinnest\* multi-sensor cameras with AI Engine



- 3 x 4MP(12MP) 2688x1520 up to 30fps
- 270° coverage with one IP address
- Intelligent Auto (with AI Engine)
- Super Dynamic 108dB
- Color night vision (0.21 to 0.3 lx)
- Smart Coding (with AI Engine)
- Built-in 360° IR LED
- Remote zoom and focus
- Continuous view assistance
- Wide range tilt angle adjustment mechanism
- Built-in FIPS 140-2 Level 3 Certified Secure Element with TPM functionality (EdgeLock® SE050F NXP® Semiconductors)
- NDAA Compliant



# SPECIFICATIONS

| Camera  |  |
|---|--|
| Image Sensor                                    | 3x 1/2.7 type CMOS image sensor  |
| Minimum Illumination                            | Color : 0.21 lx {30IRE, F1.44, 1/30 s}<br>Color : 0.3 lx {50IRE, F1.44, 1/30 s}<br>BW : 0.12 lx {50IRE, F1.44, 1/30 s}<br>BW: 0 lx {50IRE, F2.0, 1/30 s with IR LED} |
| White Balance                                   | ATW1/ ATW2/ AWC  |
| Maximum shutter                                 | 30 fps mode: Max.1/10000s to Max.16/30s<br>25 fps mode: Max.1/10000s to Max.16/25s   |
| Intelligent Auto                                | On / Off   |
| Super Dynamic                                   | On / Off, The level can be set in the range of 0 to 31.  |
| Dynamic Range                                   | Max. 108 dB(Super Dynamic: On, Level: 31)  |
| Adaptive Black Stretch                          | The level can be set in the range of 0 to 255.   |
| Back Light Compensation/High Light Compensation | BLC (Back light compensation) / HLC (High light compensation) / Off (only when Super dynamic / Intelligent Auto : Off)   |
| Fog Compensation                                | On / Off (only when Intelligent auto / auto contrast adjust : Off)   |
| Maximum Gain (AGC)                              | The level can be set in the range of 0 to 11.  |
| 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 : 20 m {Approx. 66 ft} (30IRE)<br>15 m {Approx. 49 ft} (50IRE)   |
| Digital Noise Reduction                         | The level can be set in the range of 0 to 255.   |
| Panorama  | Panorama mode (H: 170 deg.)  |
| 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                         | Selectable from Gunshot, Yell, Vehicle horn, Glass break   |
| AI Analytics                                    | Yes  |
| Privacy Zone                                    | On / Off, Up to 8 zones available  |
| VIQS  | On / Off, Up to 8 zones available  |
| Image Rotation                                  | 0° (Off) / 90° / 180° (Upside-down) / 270°   |
| Camera Title (OSD)                              | On / Off, Up to 40 characters, Up to 2 Lines (alphanumeric characters, marks)  |
| Focus Adjustment                                | Auto focus   |
| Lens  |  |
| Optical zoom                                    | 2.5x (Motorized zoom / Motorized focus)  |
| Extra zoom                                      | max 10.5x (2.5x – 10.5x when resolution is 640x360)  |

|                        |   |
|------------------------|---|
| Focal length           | 2.9 mm {1/8 inches} – 7.3 mm {1/4 inches}                           |
| Angular Field of View  | Horizontal: 43°(TELE) - 100°(WIDE), Vertical: 24°(TELE) - 56°(WIDE) |
| Maximum Aperture Ratio | 1 : 2.0(WIDE) – 1 : 3.0(TELE)                                       |
| Focus range            | 1 m {3.28 ft} – ∞   |

### DORI

|                            |   |
|----------------------------|---|
| Detect (25ppm / 8ppf)      | Wide : 45.1 m / 148.0 ft, Tele : 136.5 m / 447.8 ft |
| Observe (62.5ppm / 19ppf)  | Wide : 18.0 m / 59.2 ft, Tele : 54.6 m / 179.1 ft   |
| Recognize (125ppm / 38ppf) | Wide : 9.0 m / 29.6 ft, Tele : 27.3 m / 89.6 ft     |
| Identify (250ppm / 76ppf)  | Wide : 4.5 m / 14.8 ft, Tele : 13.6 m / 44.8 ft     |

### System on Chip (SoC)

|                      |               |
|----------------------|---------------|
| System on Chip (SoC) | Ambarella CV2 |
|----------------------|---------------|

### Adjusting Angle

|                 |  |
|-----------------|--|
| Adjusting Angle | <p>Camera 1, 2, 3 :</p> <p>Horizontal : ±125° (Adjust by horizontal (PAN) angle)</p> <p>Vertical : +10° to +105° (Adjust by vertical (TILT) angle)</p> <p>Yaw : ±90° (Adjust by azimuth (YAW) angle)</p> <p>Twist : ±30°</p> <p>*The above is the adjustable range of a single camera.<br/>The adjustable range of each camera varies according to the positional relationship with other cameras.</p> |
|-----------------|--|

### 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  |
| Browser                   | Microsoft Edge, Firefox, Google Chrome   |

### Network

|                                       |   |
|---------------------------------------|---|
| Network IF                            | 10Base-T / 100Base-TX / 1000Base-T, RJ45 connector  |
| Resolution H.265/ H.264/ JPEG (MJPEG) | [16 : 9 mode]<br>2688 x 1520 / 2560 x 1440 / 1920×1080 / 1280 x 720 / 640×360 / 320×180   |
| H.265/H.264                           | [Transmission Mode]<br>Constant bit rate / VBR / Frame rate / Best effort<br>[Transmission Type]<br>Unicast port (AUTO) / Unicast port (MANUAL) / Multicast   |
| JPEG                                  | [Image Quality]<br>10 steps   |
| Smart Coding                          | GOP (Group of pictures) control :<br>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.<br>Smart VIQS: On(High)/On(Low)/Off, Smart P-picture control: On/Off  |
| Audio Compression                     | G.726 (ADPCM) : 16 kbps / 32 kbps<br>G.711 : 64 kbps<br>AAC-LC : 64 kbps / 96 kbps / 128 kbps   |
| Audio Transmission Mode               | Off / Mic (Line) input / Audio output / Interactive (Half duplex) / Interactive (Full duplex)   |
| 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, LLDP, MQTT<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, LLDP, MQTT |

|                               |  |
|-------------------------------|--|
| No. of Simultaneous Users     | Up to 24 users (Depends on network conditions)   |
| Secure                        | FIPS 140-2 level 3 Certified Secure Element (NXP® EdgeLock® SE050F), Device Certificate GlobalSign® pre-installed, User authentication, Host authentication, HTTPS, 802.1X Support, Data encryption  |
| SDXC/SDHC/SD Memory Card      | H.265 / H.264 recording :<br>Manual REC / Alarm REC (Pre/Post) / Schedule REC / Backup upon network failure<br>JPEG recording :<br>Manual REC / Alarm REC (Pre/Post) / Backup upon network failure<br>Compatible SDXC/SDHC/SD Memory Card :<br>microSDXC memory card : 64 GB, 128 GB, 256 GB, 512 GB<br>microSDHC memory card : 4 GB, 8 GB, 16 GB, 32 GB<br>microSD memory card : 2 GB |
| Mobile Terminal Compatibility | iPad, iPhone, Android™ terminals   |
| ONVIF® Profile                | G / M / S / T  |

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

| Input/Output                    |  |
|---------------------------------|--|
| Monitor Output (for Adjustment) | —  |
| Audio input                     | ø3.5 mm stereo mini jack<br><br>For microphone input : Recommended applicable microphone : Plug-in power type (Sensitivity of microphone : -48 dB±3 dB (0 dB=1V/Pa, 1 kHz))<br>Input impedance : Approx. 2 kΩ (unbalanced)<br>Supply voltage : 2.4 V ±0.5 V<br><br>For line input : Input level: Approx. -10 dBV |
| Audio Output                    | ø3.5 mm stereo mini jack (monaural output)<br>Output impedance : Approx. 600 Ω (unbalanced)<br>Output level : -20 dBV  |
| External I/O Terminals          | ALARM IN 1 (Alarm input 1/ Black & white input/ Auto time adjustment input) (x1)<br>ALARM IN 2 (Alarm input 2/ ALARM OUT) (x1), ALARM IN 3 (Alarm input 3/ ALARM OUT/ AUX OUT) (x1)  |

| General                            |  |
|------------------------------------|--|
| Safety                             | UL (UL62368-1), c-UL (CSA C22.2 No.62368-1), CE, IEC62368-1  |
| EMC                                | FCC (Part15 ClassA), ICES-003 ClassA, EN55032 ClassA, EN55024  |
| Power Source and Power Consumption | PoE+ (IEEE802.3at compliant):<br>DC 54 V: 470 mA/Approx. 25.4 W (Class 4 device)   |
| Ambient Operating Temperature      | -40 °C to +60 °C*7 {-40 °F to 140 °F}<br>(Power On range: -20 °C to +60 °C {-4 °F to 140 °F})<br>Maximum temperature according to NEMA TS 2 (2.2.7): 74 °C(165 °F) |
| Ambient Operating Humidity         | 10 to 100 % (no condensation)  |
| Anti-Condensation System           | Temish element + Heater + moisture absorption gel  |
| Water and Dust Resistance          | IP67/IP66 (IEC 60529), Type 4X (UL50E), NEMA 4X compliant  |
| Shock Resistance                   | IK10 (IEC 62262)   |
| Other standard support             | NEMA TS 2 (2.2.7-2.2.9)  |
| Dimensions                         | When using the attachment plate only :<br>ø300 mm × 90 mm (H) {ø11-13/16 inches ×3-17/32 inches (H)}   |
| Mass (approx.)                     | When using the attachment plate only : Approx. 3.1 kg {6.83 lbs}   |

|        |   |
|--------|---|
| Finish | Main body : Aluminum die cast, i-PRO white<br>Outer fixing screws : Stainless steel (Corrosion-resistant treatment)<br>Dome cover : PC resin, Clear |
|--------|---|

| AI Analytics applications          |     |
|------------------------------------|-----|
| AI Video Motion Detection (AI-VMD) | YES |
| AI Face Detection                  | YES |
| AI People Detection                | YES |
| AI Vehicle Detection               | YES |
| AI Non mask Detection              | YES |
| AI Occupancy Detection             | YES |

## 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-QDC501G  
Dome Cover



WV-QWL501-W  
Mount Bracket



WV-QSR503-W  
Mount Bracket



WV-QSR503F1-W  
Mount Bracket



PACA4W  
Corner Mount Adapter  
Bracket



WV-QCL501-W  
Mount Bracket



WV-QCL101-W  
Mount Bracket



WV-QSR503M1-W  
Mount Bracket



WV-QIB503-W  
Base Bracket

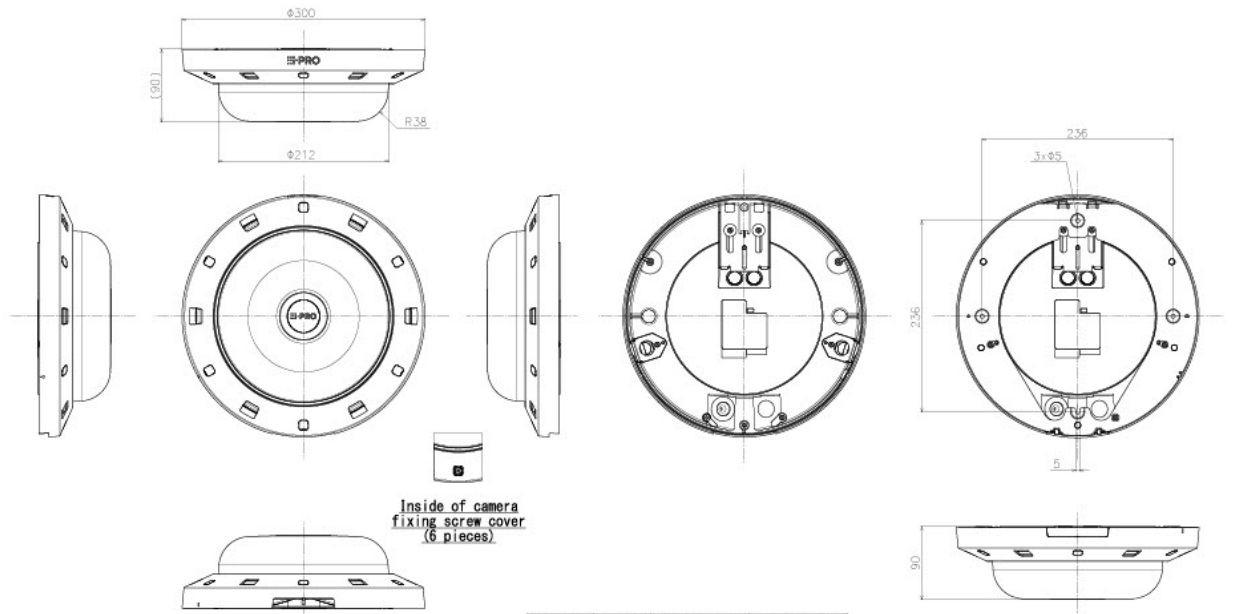


WV-Q105A  
Mount Bracket



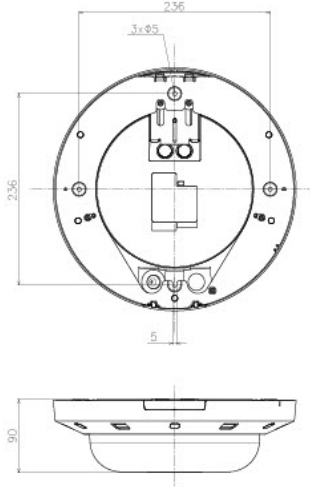
WV-QCA501A  
I/O Cable

# APPEARANCE



Inside of camera  
fixing screw cover  
(6 pieces)

| Model number | Dome type  | ClearSight coating | Model number | label |
|--------------|------------|--------------------|--------------|-------|
| WV-S8573L    | Clear dome | No                 |              | No    |
| WV-S8573LN   | Clear dome | Yes                |              | Yes   |
| WV-S8573LG   | Smoke dome | No                 |              | Yes   |
| WV-S8563L    | Clear dome | No                 |              | No    |
| WV-S8563LN   | Clear dome | Yes                |              | Yes   |
| WV-S8563LG   | Smoke dome | No                 |              | Yes   |
| WV-S8543L    | Clear dome | No                 |              | No    |
| WV-S8543LN   | Clear dome | Yes                |              | Yes   |
| WV-S8543LG   | Smoke dome | No                 |              | Yes   |
| WV-S8543     | Clear dome | No                 |              | No    |
| WV-S8543N    | Clear dome | Yes                |              | Yes   |
| WV-S8543G    | Smoke dome | No                 |              | Yes   |



With Attachment Plate

| 侧面图/Side-view | 投影面积/Projected area     |
|---------------|-------------------------|
|               | 0.021 (m <sup>2</sup> ) |

Mass - Approx. 3.1 kg (6.84 lbs) (When using the attachment plate)