

# WV-S8544

4x4MP(16MP) Outdoor Multi-Directional Network Camera with AI Engine.

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

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- 4 x 4MP(16MP) 2688x1520 up to 30fps
- 360° 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)
- Remote zoom and focus
- Continuous view assistance
- Wide range tilt angle adjustment mechanism
- Built-in FIPS 140-2 Level 3 Certified Secure Element  
(EdgeLock® SE050F NXP® Semiconductors)
- NDAA Compliant

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

# SPECIFICATIONS

| Camera  |  |
|---|--|
| Image Sensor                                    | 4x 1/2.7 type CMOS image sensor  |
| Scanning Area                                   | 5.38 mm(H) x 3.02 mm(V)<br>{7/32 inches(H) x 1/8 inches(V)}  |
| Minimum Illumination                            | Color : 0.21 lx {30IRE, F2.0, 1/30 s}<br>Color : 0.3 lx {50IRE, F2.0, 1/30 s}<br>BW : 0.12 lx {50IRE, F2.0, 1/30 s}  |
| 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,<br>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)<br>HLC (High light compensation)<br>Off (only when Super dynamic / Intelligent Auto : Off)   |
| Fog Compensation                                | On / Off<br>(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 / Auto1(Normal) / Auto2(IR Light) / Auto3(SCC)  |
| IR LED Light                                    | —  |
| Digital Noise Reduction                         | The level can be set in the range of 0 to 255.   |
| Panorama  | Panorama mode (H: 180 deg.)  |
| Video Motion Detection (VMD)                    | On / Off<br>4 areas available  |
| Scene Change Detection (SCD)                    | On / Off<br>1 areas available  |
| Audio Detection                                 | On / Off   |
| AI Sound Classification                         | Selectable from Gunshot, Yell, Vehicle horn, Glass break   |
| AI Analytics                                    | AI Video Motion Detection, AI Privacy Guard, AI Face Detection,<br>AI People Detection, AI Vehicle Detection,<br>AI Non mask Detection, AI Occupancy Detection, 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  |
| VIQS  | On / Off, Up to 8 zones available  |
| Image Rotation                                  | 0° (Off)/ 90°/ 180° (Upside-down)/ 270°  |
| Camera Title (OSD)                              | On / Off<br>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)<br>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 | Camera 1, 2, 3, 4 :<br>Horizontal : ±125° (Adjust by horizontal (PAN) angle)<br>Vertical : +10° to +105° (Adjust by vertical (TILT) angle)<br>Yaw : ±90° (Adjust by azimuth (YAW) angle)<br>Twist : ±30°<br>*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. |

| 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 / 1920x1080 /1280 x 720 / 640x360 / 320x180   |
| 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,<br>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,<br>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>For microphone input : 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)<br>Supply voltage : 2.4 V ±0.5 V<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, EN55035  |
| Power Source and Power Consumption | PoE+ (IEEE802.3at compliant):<br>DC 54 V : 320 mA/Approx. 17.3 W (Class 4 device)  |
| Ambient Operating Temperature      | -40 °C to +60 °C {-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)   |
| Wind Resistance                    | Up to 40 m/s {approx. 89 mph}  |
| Other standard support             | NEMA TS 2 (2.2.7-2.2.9)  |
| Dimensions                         | When using the attachment plate only : ø300 mm × 90 mm (H) {ø11-13/16 inches ×3-17/32 inches (H)}  |
| Mass (approx.)                     | When using the attachment plate only : Approx. 3.3 kg {7.28 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              |

## 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-QWL501-W  
Mount Bracket



WV-QSR503M1-W  
Mount Bracket



WV-QSR503F1-W  
Mount Bracket



WV-QSR503-W  
Mount Bracket



WV-QPL500-W  
Mount Bracket



WV-QJB503-W  
Base Bracket



WV-QCN500-W  
Mount Bracket



WV-QCL501-W  
Mount Bracket



WV-QCL101-W  
Mount Bracket



WV-SDB256G  
i-PRO SD Memory Card



WV-SDB128G  
i-PRO SD Memory Card



WV-SDB064G  
i-PRO SD Memory Card



WV-SDB032G  
i-PRO SD Memory Card



WV-QDC501G  
Dome Cover



WV-QDC501C  
Dome Cover

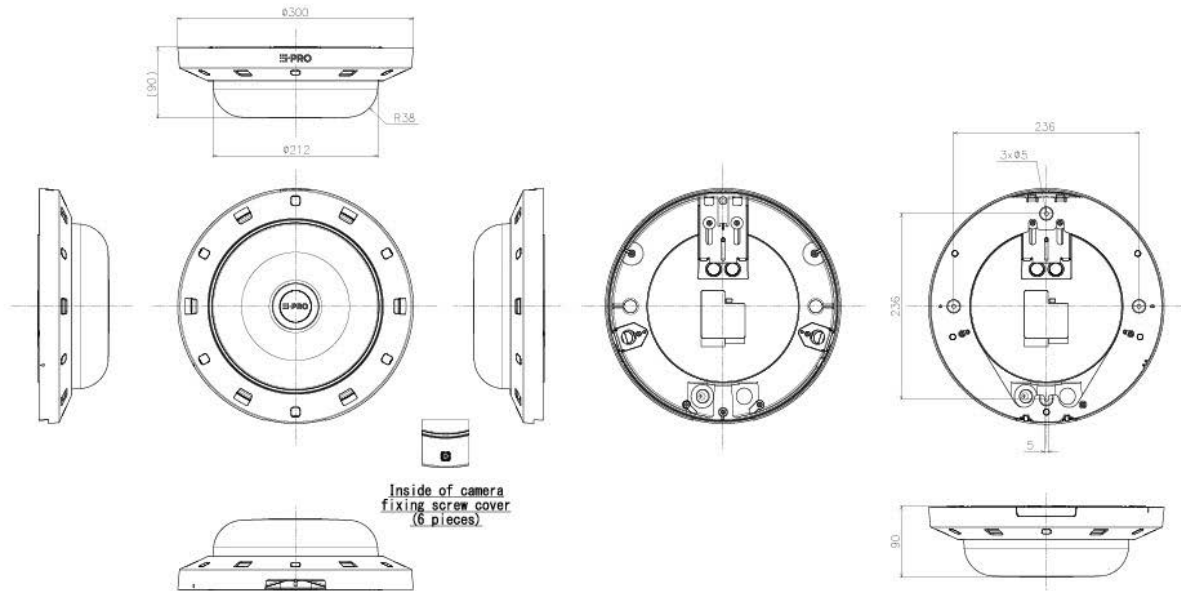


WV-QCA501A  
I/O Cable

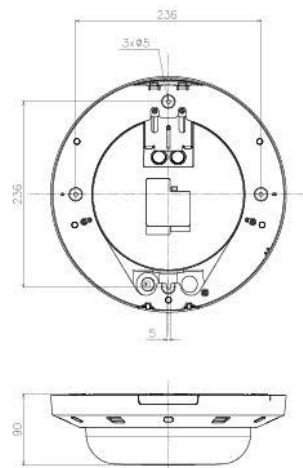


WV-PM500  
Compact microphone  
unit for surveillance  
cameras

# APPEARANCE



| Model number | Dome type  | ClearSight coating | Model number | label |
|--------------|------------|--------------------|--------------|-------|
| WV-S8574L    | Clear dome | No                 |              | No    |
| WV-S8574LN   | Clear dome | Yes                |              | Yes   |
| WV-S8574LG   | Smoke dome | No                 |              | Yes   |
| WV-S8564L    | Clear dome | No                 |              | No    |
| WV-S8564LN   | Clear dome | Yes                |              | Yes   |
| WV-S8564LG   | Smoke dome | No                 |              | Yes   |
| WV-S8544L    | Clear dome | No                 |              | No    |
| WV-S8544LN   | Clear dome | Yes                |              | Yes   |
| WV-S8544LG   | Smoke dome | No                 |              | Yes   |
| WV-S8544     | Clear dome | No                 |              | No    |
| WV-S8544N    | Clear dome | Yes                |              | Yes   |
| WV-S8544G    | Smoke dome | No                 |              | Yes   |



With Attachment Plate

| 側面圖/Side-view | 投影面積/Projected area     |
|---------------|-------------------------|
|               | 0.021 (m <sup>2</sup> ) |

Mass : Approx. 3.3 kg (7.28 lbs) (When using the attachment plate)