

# WV-S8544L

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

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



- 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)
- 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

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

# SPECIFICATIONS

Camera	
Image Sensor	4 x 1/2.7 type CMOS image sensor
Scanning Area	5.38 mm(H) x 3.02 mm(V) {7/32 inches(H) x 1/8 inches(V)}
Minimum Illumination	Color : 0.21 lx {30IRE, F2.0, 1/30 s} , Color : 0.3 lx {50IRE, F2.0, 1/30 s} BW : 0.12 lx {50IRE, F2.0, 1 /30 s} , 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 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 Maximum irradiation distance : 20 m {Approx. 66 ft} (30IRE) 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: 180 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	AI Video Motion Detection, AI Privacy Guard, AI Face Detection, AI People Detection, AI Vehicle Detection, AI Non mask Detection, AI Occupancy Detection, AI Scene Change Detection  For details : <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> 3rd party applications are also available. <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 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
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## Adjusting Angle

Adjusting Angle	<p>Camera 1, 2, 3, 4 :</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. The adjustable range of each camera varies according to the positional relationship with other cameras.</p>
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## Browser GUI

Camera Control	Brightness, AUX On / Off
Audio	Mic (Line) Input : On / Off Volume adjustment : Low / Middle / High 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] 2688 x 1520 / 2560 x 1440 / 1920x1080 / 1280 x 720 / 640x360 / 320x180
H.265/H.264	[Transmission Mode] Constant bit rate / VBR / Frame rate / Best effort [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 *On (Frame rate control) and On (Advanced) are only available with H.265. Smart VIQS: On(High)/On(Low)/Off, Smart P-picture control: On/Off
Audio Compression	G.726 (ADPCM) : 16 kbps / 32 kbps G.711 : 64 kbps 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 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 : Manual REC / Alarm REC (Pre/Post) / Schedule REC / Backup upon network failure JPEG recording : Manual REC / Alarm REC (Pre/Post) / Backup upon network failure Compatible SDXC/SDHC/SD Memory Card : microSDXC memory card : 64 GB, 128 GB, 256 GB, 512 GB microSDHC memory card : 4 GB, 8 GB, 16 GB, 32 GB 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  For microphone input : Recommended applicable microphone : Plug-in power type (Sensitivity of microphone : -48 dB±3 dB (0 dB=1 V/Pa, 1 kHz)) Input impedance : Approx. 2 kΩ (unbalanced) Supply voltage : 2.4 V ±0.5 V  For line input : Input level: Approx. -10 dBV
Audio Output	ø3.5 mm stereo mini jack (monaural output) Output impedance : Approx. 600 Ω (unbalanced) Output level : -20 dBV
External I/O Terminals	ALARM IN 1 (Alarm input 1/ Black & white input/ Auto time adjustment input) (x1) 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): 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} (Power On range: -20 °C to +60 °C {-4 °F to 140 °F}) 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 : 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 Outer fixing screws : Stainless steel (Corrosion-resistant treatment) 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-Q105A  
Mount Bracket



WV-QCL101-W  
Mount Bracket



WV-QCL501-W  
Mount Bracket



WV-QCN500-W  
Mount Bracket



WV-QIB503-W  
Base Bracket



WV-QPL500-W  
Mount Bracket



WV-QSR503-W  
Mount Bracket



WV-QSR503F1-W  
Mount Bracket



WV-QSR503M1-W  
Mount Bracket



WV-QWL501-W  
Mount Bracket



PACA4W  
Corner Mount Adapter  
Bracket



PAPM4W  
Pole Mount Bracket



PPRM35AW  
Parapet Mount Bracket



PWM25W  
Gooseneck Wall Mount



PWM40AW  
Wall Mount Bracket



WV-QCA501A  
I/O Cable

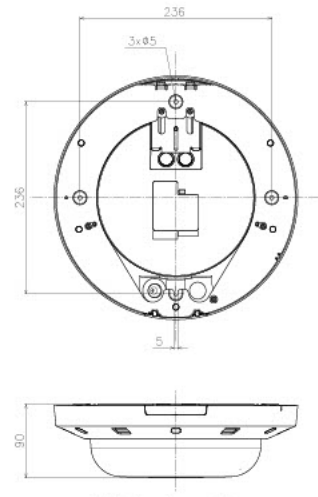
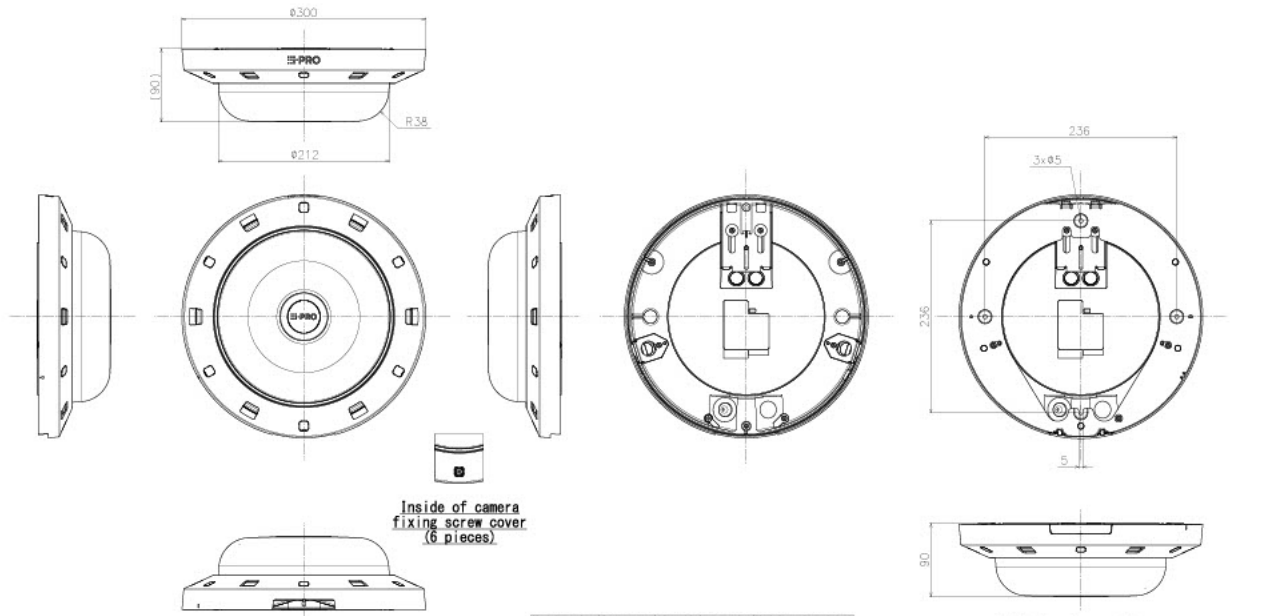


WV-QDC501G  
Dome Cover



WV-PM500  
Compact microphone  
unit for surveillance  
cameras

# APPEARANCE

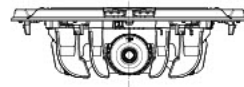
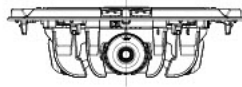
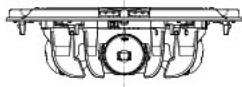


With Attachment Plate

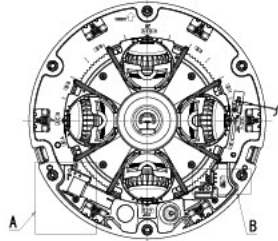
侧面図/Side-view	投影面積/Projected area
	0.021 (m <sup>2</sup> )

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

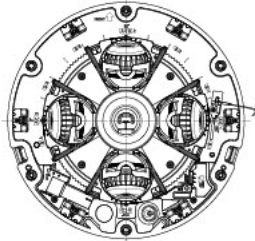
Model number	Dome type	ClearSight coating	Model number	label
WV-S8574L	Clear dome	No		No
WV-S8574LN	Clear dome	Yes		Yes
WV-S8574LG	Smoke dome	No		Yes
WV-S8564L	Clear dome	No		No
WV-S8564LN	Clear dome	Yes		Yes
WV-S8564LG	Smoke dome	No		Yes
WV-S8544L	Clear dome	No		No
WV-S8544LN	Clear dome	Yes		Yes
WV-S8544LG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



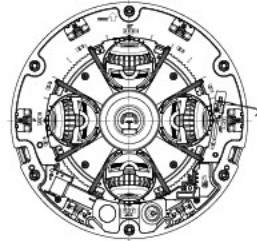
Removing Dome cover



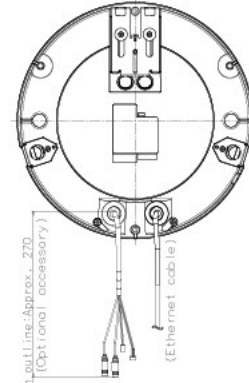
Lens type : 4K, 6MP



Lens type : 4MP

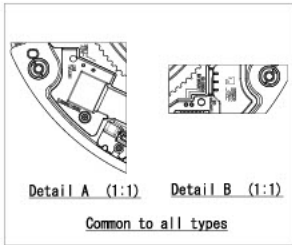


Lens type : 4MP (No IR-LED)



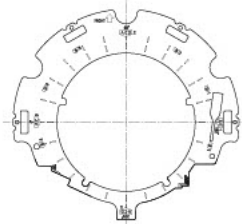
Cable Length from outlet: Approx. 270  
(Optional accessory)

(Ethernet cable)

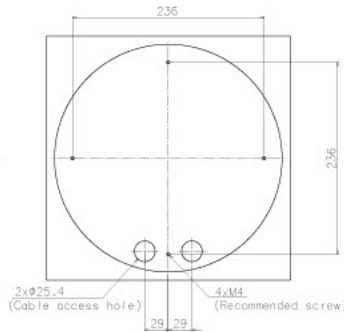


Detail A (1:1) Detail B (1:1)

Common to all types



Position adjust sheet



2x $\phi$ 25.4  
(Cable access hole)

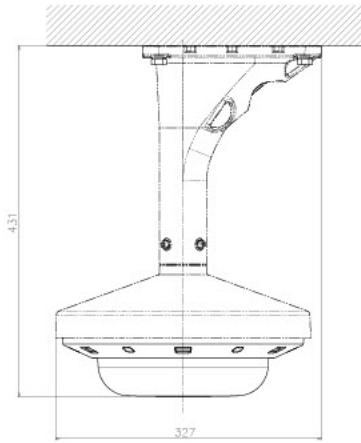
4xM4  
(Recommended screw)

29 29

Template for mounting

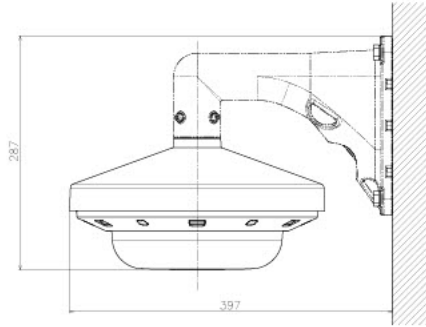
Model number	Lens type	IR-LED
WV-S8574L	4K	Yes
WV-S8574LN		
WV-S8574LE		
WV-S8564L	6MP	Yes
WV-S8564LN		
WV-S8564LE		
WV-S8544L	4MP	No
WV-S8544LN		
WV-S8544LE		
WV-S8544G		





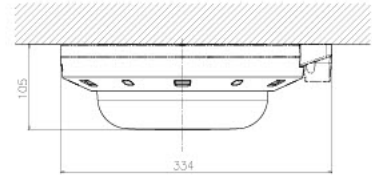
投影面積/Projected area	
正面圖/Front-view	0.052 (m <sup>2</sup> )
側面圖/Side-view	0.06 (m <sup>2</sup> )

Attach to WV-QSR503-W & WV-QCL501-W



投影面積/Projected area	
正面圖/Front-view	0.051 (m <sup>2</sup> )
側面圖/Side-view	0.062 (m <sup>2</sup> )

Attach to WV-QSR503-W & WV-QWL501-W



投影面積/Projected area	
正面圖/Front-view	0.026 (m <sup>2</sup> )
側面圖/Side-view	0.027 (m <sup>2</sup> )

Attach to WV-QJB503-W

Model number
WV-S8574L
WV-S8574LN
WV-S8574LG
WV-S8564L
WV-S8564LN
WV-S8564LG
WV-S8544L
WV-S8544LN
WV-S8544LG
WV-S8544
WV-S8544N
WV-S8544G