WV-X45701-F1L

12.5MP Sensor AI Outdoor IR Fisheye Camera

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- 12.5MP Sensor AI Outdoor IR Fisheye Camera
- AI Free Text Detection
- AI Noise Reduction
- IR LED (21m/69ft)
- White LED (14m/46ft)
- IP66, IP67, IP69, IK11 Certified
- FIPS 140-3 Level 3, CC EAL6+ (NXP® EdgeLock® SE052F)
- NDAA Compliant

SPECIFICATIONS

Camera	
Image Sensor	Approx. 1/1.6 type CMOS image sensor
Scanning Area	7.04 mm (H) × 7.04 mm (V) {9/32 inches (H) × 9/32 inches (V)}
Minimum Illumination	Color : 0.08 lx (30IRE, F2.0, 1/30 s, AGC: 11)* 0.11 lx (50IRE, F2.0, 1/30 s, AGC: 11) 0.007 lx (50IRE, F2.0, 16/30 s, AGC: 11)* * Converted value BW : 0 lx (50IRE, F2.0, 1/30 s, AGC: 11, IR LED: On) 0.06 lx (50IRE, F2.0, 1/30 s, AGC: 11) 0.004 lx (50IRE, F2.0, 16/30 s, AGC: 11)* * Converted value
Maximum Shutter	[30 fps mode] Max. 1/10000 s to Max. 16/30 s [25 fps mode] Max. 1/10000 s to Max. 16/25 s
AI Auto Exposure	On/Off
AI Noise Reduction	On/Off
Super Dynamic	On/Off (Range : 0 to 31)
Dynamic Range	Max. 120 dB (Super Dynamic: On, Level: 31, 15 fps*) * The frame rate is limited to 15 fps for level 30 or higher.
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 Maximum irradiation distance: When using DC12V / DC24V / PoE+ 21 m {Approx. 69 ft} (30IRE)* 15 m {Approx. 49 ft} (50IRE) When using PoE 7 m {Approx. 23 ft} (30IRE)* 5 m {Approx. 16 ft} (50IRE) * Converted value
White LED Light	High/Middle/Low/Off Maximum irradiation distance: When using DC12V / DC24V / PoE+ 14 m {Approx. 46 ft} (30IRE)* 10 m {Approx. 33 ft} (50IRE) When using PoE 4 m {Approx. 13 ft} (30IRE)* 3 m {Approx. 10 ft} (50IRE) * Converted value
Video Motion Detection (VMD)	On/ Off (4 areas available)
Scene Change Detection (SCD)	On/ Off (1 area available)
Audio Detection	On/ Off
AI Sound Classification	Selectable from Gunshot, Yell, Vehicle horn, Glass break

Analytics	AI-VMD, AI Scene Change Detection, AI On-site Learning, AI Processing Relay, AI Privacy Guard, AI Free Text Detection, For details : https://i-pro.com/products_and_solutions/en/surveillance/products/analytics-software 3rd party applications are also available. https://i-pro.com/products_and_solutions/en/surveillance/solutions/edge-ai-platform/application-list
Maximum No. of Applications	9 (AI app)
Docker	Yes
Privacy Zone	On/Off (Up to 8 zones available) mosaic
VIQS	On/Off (Up to 8 zones available)
Image Rotation	0° (Off)/ 90°/ 180° (Upside-down)/ 270° *Fisheye mode only 0° (Off)/ 180° (Upside-down) *Except Fisheye mode
Camera Title (OSD)	On/ Off Up to 20 characters (alphanumeric characters, marks)

Lens	
Optical Zoom	-
Digital (electronic) Zoom	-
Focal Length	1.7 mm {1/15 inches}
Angular Field of View	Horizontal: 181° Vertical: 181°
Adjusting Angle	- 170° to +170 °
Maximum Aperture Ratio	F2.0
Focus Range	0.5 m {19-11/16 inches} - ∞
Aperture Range	F2.0

DORI	
Distance to the object in the center of the image	Detect (25ppm / 8ppf) : 34.0 m {111.5 ft} Observe (62.5ppm / 19ppf) : 13.6 m {44.6 ft} Recognize (125ppm / 38ppf) : 6.8 m {22.3 ft} Identify (250ppm / 76ppf) : 3.4 m {11.2 ft}
Coverage radius when mounted at a height of 3 m (10 ft)	Detect (25ppm / 8ppf) : 64.2 m {210.5 ft} Observe (62.5ppm / 19ppf) : 23.9 m {78.3 ft} Recognize (125ppm / 38ppf) : 10.1 m {33.2 ft} Identify (250ppm / 76ppf) : 2.3 m {7.5 ft}

System on Chip	
System on Chip (SoC)	Ambarella CV72

Browser GUI	
GUI / Setup Menu Language	English, Italian, French, German, Spanish, Portuguese, Russian, Chinese, Japanese
Browser *1	Microsoft Edge, Firefox, Google Chrome

Network	
Network IF	10BASE-T/100BASE-TX, RJ45 connector
Resolution <Ceiling> <Wall>	•Fisheye mode (max. 30 fps/25 fps) 3520×3520 / 2992×2992 / 2192×2192 / 1280×1280 / 640×640 / 320×320 •Quad PTZ mode (max. 30 fps/25 fps), 3584x2688 / 2560×1920 / 2048×1536 / 1600×1200 / 1280×960 / 800×600 / VGA / QVGA •Fisheye + Single PTZ mode (max. 30 fps/25 fps) (Fisheye) 2992×2992 / 2192×2192 / 1280×1280 / 640×640 / 320×320 (Single PTZ) 1600x1200 / 1280×960 / 800×600 / VGA / QVGA

Resolution <Ceiling>	•Double Panorama mode (max. 30 fps/25 fps) 3840x2160 / 2560×1440 / 1920×1080 / 1280×720 / 640×360 / 320×180 •Corridor mode (max. 30 fps/25 fps) 3840x2160 / 2560×1440 / 1920×1080 / 1280×720 / 640×360 / 320×180 •Fisheye + Double Panorama mode (max. 30 fps/25 fps) (Fisheye) 2992×2992 / 2192×2192 / 1280×1280 / 640×640 / 320×320 (Double Panorama) 1920x1080 / 1280×720 / 640×360 / 320×180 •Fisheye + Corridor (max. 30 fps/25 fps) (Fisheye) 2992×2992 / 2192×2192 / 1280×1280 / 640×640 / 320×320 (Corridor) 1920x1080 / 1280×720 / 640×360 / 320×180 •Fisheye + Quad PTZ mode (max. 30 fps/25 fps) (Fisheye) 2992×2992 / 2192×2192 / 1280×1280 / 640×640 / 320×320 (Quad PTZ) 1600x1200 / 1280×960 / 800×600 / VGA / QVGA •Quad streams mode (4:3) (Single PTZ (Quad streams)) 1280×960 / 800×600 / VGA / QVGA (max. 30 fps/25 fps) (Quad PTZ) 3584x2688 / 2560×1920 / 2048×1536 / 1600×1200 / 1280×960 / 800×600 / VGA / QVGA (max. 30 fps/25 fps) •Quad streams mode (16:9) (Single PTZ (Quad streams)) 1920×1080 / 1280x720 / 640x360/ 320x180 (max. 30 fps/25 fps) (Quad PTZ) 3840x2160 / 2560x1440 / 1920x1080 / 1280x720 / 640x360 / 320x180 (max. 30 fps/25 fps)
Resolution <Wall>	•Panorama mode (max. 30 fps/25 fps) 3840x2160 / 2560×1440 / 1920×1080 / 1280×720 / 640×360 / 320×180 •Fisheye + Panorama mode (max. 30 fps/25 fps) (Fisheye) 2992×2992 / 2192×2192 / 1280×1280 / 640×640 / 320×320 (Panorama) 1920x1080 / 1280×720 / 640×360 / 320×180
H.265/H.264 Transmission Priority/Type	[Transmission priority] Constant bit rate/ VBR/ Frame rate/ Best effort [Transmission type] Unicast port (AUTO)/ Unicast port (MANUAL)/ Multicast
No. of Stream	4
JPEG (MJPEG)	Image Quality:10 steps
Smart Coding	[GOP(Group of pictures) control] Off/ Low (Variable GOP 1s-8s)/Mid (Variable GOP 4s-16s)/ Advanced (Fixed GOP 60 seconds with 1 second Key frame)/ Frame rate control (Variable GOP 4s-16s with frame rate control) *Advanced and Frame rate control are only available with H.265. [Smart VIQS] On (High)/ On (Low)/ Off [Smart P-picture control] On/Off
Audio Compression Method *2	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, FTP, SFTP, 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, FTP, SFTP, LLDP, MQTT
No. of Simultaneous Users	Up to 14 users (Depending on network conditions)
Secure	FIPS 140-3 level 3, CC EAL6+ (NXP® EdgeLock® SE052F), Device Certificate GlobalSign® pre-installed, HTTPS, User authentication, digest authentication, Host authentication, IEEE802.1X, System log, Image transmission log, brute-force protection, Alteration Detection, Secure boot, Signed firmware
SDXC/SDHC/SD Memory Card (Option)	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 (iOS 8.0 or later), Android™ terminals
ONVIF®Profile	G / M / S / T

Alarm	
Alarm Source	3 terminals input, VMD alarm, SCD alarm, Command alarm, Audio detection alarm, Casing open detection

Alarm Actions	SDXC/SDHC/SD memory recording, E-mail notification, HTTP alarm notification Indication on browser, TCP alarm notification output, MQTT alarm notification, FTP/SFTP image transfer, SNMP trap notification

Input/Output	
Built-in Microphone	Nondirectional electret condenser microphone (removable)
Audio Input *3	[For microphone] 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: 2.5 V ±0.5 V [For line] Input level: Approx. -10 dBV
Audio Output *3	ø3.5 mm stereo mini jack (Audio output is monaural.) Output impedance: Approx. 600 Ω (unbalanced) Output level: -20 dBV
External I/O Terminals *3	ALARM IN1 (Alarm input 1/ Black & white input/ Auto time adjustment input) (x1) ALARM IN2 (Alarm input 2/ ALARM OUT) (x1) ALARM IN3 (Alarm input 3/ AUX OUT) (x1)
Monitor Output	Yes(for adjustment) Φ3.5mm stereo mini jack NTSC or PAL signal can be output from camera (either press the INITIAL SET button quickly (within 1 second) or use software to select NTSC or PAL signal)

General	
Safety	UL62368-1 3Ed, CAN/CSA C22.2 NO.62368-1-19, IEC62368-1 3Ed.
EMC	FCC Part15 Subpart B, ClassA, SDoC, ICES-003 Issue 7 ClassA, EN55032:2015/A11 ClassA, EN55035:2017/A11
Power Source / Power Consumption *3	[Power Source] DC12 V DC24 V PoE (IEEE802.3af compliant) PoE+ (IEEE802.3at compliant) [Power Consumption] DC12 V : 1660 mA / Approx. 19.9 W DC24 V : 830 mA / Approx. 19.9 W PoE DC 48 V : 270 mA / Approx. 12.95 W (Class 0 device) PoE+ DC 54 V : 370 mA / Approx. 20 W (Class 4 device)
Ambient Operating Temperature	-40 °C to +60 °C {-40 °F to +140 °F} * (Power On range: -20 °C to +60 °C {-4 °F to +140 °F}) * When using the [IR/White] LED light and AI Noise Reduction continuously, the upper limit of the operating temperature range is +50°C (+122°F). In addition, when powered by PoE, the lower limit of the operating temperature range is −30°C (−22°F).
Ambient Operating Humidity	10 % to 95 % (no condensation)
Water and Dust Resistance	IP69/IP66/IP67 (IEC 60529), Type 4X (UL50E), NEMA 4X compliant
Shock Resistance	50J (IEC 60068-2-75 compliant), IK11 (IEC 62262)* *Except for IR LED / White LED window (4 places)
Vibration Resistance	IEC 60068-2-6(compliant)
Wind Resistance	Up to 40 m/s {approx. 89 mph}
Dimensions	ø154 mm × 77mm (H) {ø6-1/16 inches × 3-1/32 inches (H)} Dome radius 35 mm {1-3/8 inches} (excluding standard accessories other than attachment plate)
Mass (approx.)	Approx. 1.75 kg {3.86 lbs} (including attachments)
Finish	Main body: Aluminum die cast, i-PRO white Outer fixing screws: Stainless steel (Corrosion-resistant treatment) Dome cover: Polycarbonate resin, Clear(with Anti-reflective Coating)

Easy Kitting	Yes

NOTES

*1 For information on the operation verification of the web browsers, refer to our support website <Control No.: C0132>.
*2 When recording audio on an SD memory card, only use AAC-LC (Advanced Audio Coding - Low Complexity) .
*3 The audio output can be switched to the monitor output. Refer to the “Operating Instructions” on our support website for descriptions of how to switch the output.
*4 Refer to our technical information website <Control No.: C0106> for further information about Power source and Power consumption information.

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 any third-party products (including applications) used on the network.
– Masses and dimensions are approximate.
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OPTIONAL ACCESSORIES

Select a compatible accessory
Accessory Selector (i-pro.com)

WV-QWL506-W
4-screw Wall Mount Bracket

WV-QWL506M1-W
ANSI Male Wall Mount Bracket (1.5”NPT)

WV-QWL501-W
Mount Bracket

WV-QWL500-W
Mount Bracket

WV-QSR501-W
Mount Bracket

WV-QSR501M-W
Mount Bracket

WV-QSR501M1-W
Mount Bracket

WV-QSR501F-W
Mount Bracket

WV-QSR501F1-W
Mount Bracket

WV-QPL500-W
Mount Bracket

WV-QJB507-W
Mount Bracket

WV-QJB501-W
Base Bracket

WV-QJB501A-W
Base Bracket

WV-QJB501A-B
Base Bracket

WV-QJB500-W
Mount Bracket

WV-QCN500-W
Mount Bracket

WV-QCL501-W
Mount Bracket

WV-QCL101-W
Mount Bracket

WV-QCL100-W
Mount Bracket

WV-Q105A
Mount Bracket

PPRM35AW
Parapet Mount Bracket

WV-QCA503
I/O Cable

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-PM500
Compact microphone unit

WJ-PU201P
PoE Injector

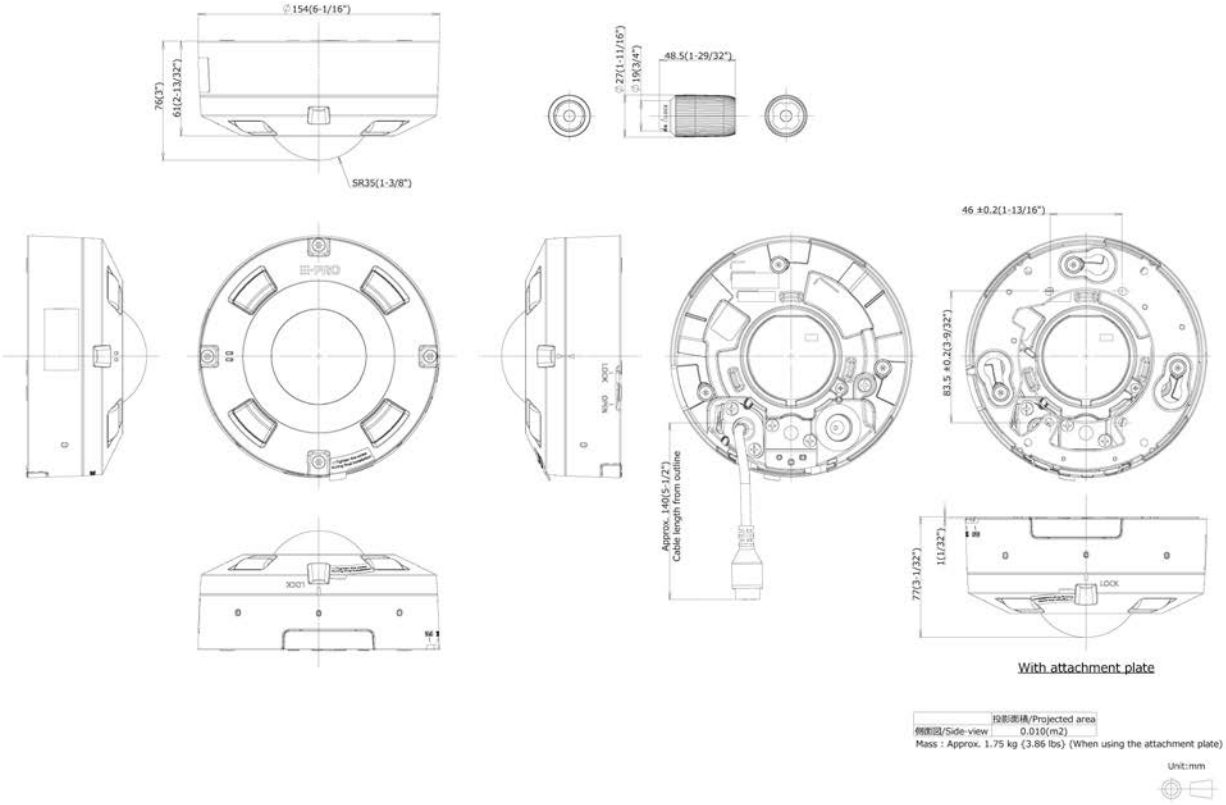
WJ-PU201F/G
PoE Injector

WJ-PU201/G
PoE Injector

WV-QDC510C

Dome Cover

APPEARANCE


Approx. 140(5-1/2")
Cable length from outline
With attachment plate
投影面積/Projected area
側面図/Side view 0.010(m2)
Mass : Approx. 1.75 kg {3.86 lbs} (When using the attachment plate)
Unit:mm

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