

### WV-S85702-F3L1

2 x 4K IR Outdoor Multi-directional Network Camera with AI Engine

### Multi-directional dual sensor camera



- 2 x 4K Multi-directional camera
- One IP address, One VMS license
- Up to 4 Edge AI analytic apps
- Built-in IR-LED (40m, 131ft)
- Wide angle of view (Horizontal 104°)
- Corridor mode (90 degrees or 270 degrees in image rotation)
- IP66, IP67, IK10 certified
- Built-in FIPS 140-2 Level 3 Certified SecureElement (EdgeLock® SE050F NXP® Semiconductors)
- NDAA Compliant

Learn More





















# **SPECIFICATIONS**

Camera		
Image Sensor	2x 1/2.8 type CMOS image sensor	
Scanning Area	5.56 mm(H) x 3.13 mm(V) {7/32 inches(H) × 1/8 inches(V)}	
Minimum Illumination	Color: 0.084 lx (30IRE,F1.44, 1/30 s) Color: 0.12 lx (50IRE,F1.44, 1/30 s) BW: 0.05 lx {50IRE, F1.44,1/30 s} BW: 0 lx {50IRE, F1.44, 1/30 s with IR LED}	
White Balance	ATW1/ ATW2/ AWC	
Maximum shutter	15 fps mode: Max.1/10000s to Max.16/30s 12.5 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	120 dB max. (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/ HLC/ Off The level can be set in the range of 0 to 31. (only when Super Dynamic/ Intelligent Auto: Off)	
Fog Compensation	On/ Off The level can be set in the range of 0 to 8. (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:  40 m {Approx. 131 ft} (30IRE)*  30 m {Approx. 99 ft} (50IRE)  * Converted value	
Digital Noise Reduction	The level can be set in the range of 0 to 255.	
Video Motion Detection (VMD)	On / Off, 4 areas available	
Scene Change Detection (SCD)	On / Off, 1 areas available	
Audio Detection	On/Off	
Al Sound Classification	Selectable from Gunshot, Yell, Vehicle horn, Glass break	
Al Analytics	Al Video Motion Detection, Al Face Detection, Al People Detection, Al Vehicle Detection, Al Non mask Detection, Al Occupancy Detection, Al Scene Change 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	
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	-	
Lens		
Optical zoom	1x	
Extra zoom	max 6x (when resolution is 640x360)	
Focal length	3.1mm {1/8 inches}	
Angular Field of View	Horizontal: 104° Vertical: 56°	
Maximum Aperture Ratio	1:1.4	
Focus range	3 m {9.84 ft} - ∞	
DORI		
Detect (25ppm / 8ppf)	60.0 m / 196.9 ft	
Observe (62.5ppm / 19ppf)	24.0 m / 78.7 ft	
Recognize (125ppm / 38ppf)	12.0 m / 39.4 ft	
Identify (250ppm / 76ppf)	6.0 m / 19.7 ft	
System on Chip (SoC)		
System on Chip (SoC)	Ambarella CV2	
Adjusting Angle  Adjusting Angle	Camera 1, 2: Horizontal: -50° to +230° (Adjust by horizontal (PAN) angle) Vertical: -10° to +105° (Adjust by vertical (TILT) angle)	
	Yaw: ±90° (Adjust by azimuth (YAW) angle)	
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 *1	
Network		
Network IF	10BASE-T/100BASE-TX/1000BASE-T, RJ45 connector	
Resolution H.265/ H.264/ JPEG (MJPEG)	[16:9 mode] 3840×2160 / 2560×1440 / 1920×1080 / 1280×720 / 640×360 / 320×180	
H.265/H.264	[Transmission Mode] Constant bit rate / VBR / Frame rate / Best effort [Transmission Type]	
	Unicast port (AUTO) / Unicast port (MANUAL) / Multicast	

Smart Coding  COPIC Copy of picture () control to further, (Frame rate control () Analytic (COP + 15) (Anamacd (Phed COP 60 seconds with 1 second key frame() Frame rate control () Analot (COP + 15) (Anamacd (Phed COP 60 seconds with 1 second key frame() Frame rate control () Analot (COP + 15) (Analot (COP + 15) (Anamacd (Phed COP 60 seconds with 1 second key frame () Copy of picture () Copy				
Audio Transmission Mode Off J Mic (Une) Input / Audio output / Interactive (Half duples)   Interactive (Half duples)   Supported Protocol IPPS : TCP/IR UDP/IR HTTP, HTTPS, SSI/TLS,SMTP,DNS,MTP,SMMPn/1/2/v3,DHCPV6,RTP,MLD,CMP,ARP/IEE 802.NS,OMSFerv,LDP,MQTTP, HTTPS, SSI/TLS,SMTP,DNS,MTP,SMMPn/1/2/v3,DHCPV6,RTP,MLD,CMP,ARP/IEE 802.NS,OMSFerv,LDP,MQTTP, HTTPS, SSI/TLS,SMTP,DNS,MTP,SMMPn/1/2/v3,DHCPV6,RTP,MLD,CMP,ARP/IEE 802.NS, OMSFerv,LDP,MQTTP, HTTPS, SSI/TLS,SMTP,DNS,MTP,SMMPn/1/2/v3,DHCPV6,RTP,MLD,CMP,ARP/IEE 802.NS, OMSFerv,LDP,MQTP, LDP,MCP,MCP,MCP,MCP,MCP,MCP,MCP,MCP,MCP,MC	Smart Coding	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:		
Supported Protocol  IPv6 : TCP/IFL UDP/IP. HTTP. HTTPS, SSL/TLS.SMTP.DNS.NTR.SMMPVI.v2/v3,DHCPv6,RTP.MLD.JCMP.ARP.IEEE  802.XC.DITServ.LLD.PM.QTT  24 [Number of sessions that can connect to cameras at the same time)  24 [Number of sessions that can connect to cameras at the same time)  25 Escure  IPPS 404-2 level 3 [NXP8 of Equitocities S105097]. Device Certificate GlobalSign® pre-installed. IFERROILX, System log., Impact parts installed. In Hotal Suthentication, Alteration detection  5DXC/SDHC/SD Memory Card  microSDXC memory card : 64 CB, 128 CB, 25 CB, 25 CB microSD memory card : 4 CB, 8 CB, 15 CB, 23 CB microSDMC memory card : 4 CB, 8 CB, 15 CB, 25 CB microSDMC memory card : 4 CB, 8 CB, 15 CB, 25 CB microSDMC memory card : 4 CB, 8 CB, 15 CB, 25 CB microSDMC memory card : 4 CB, 8 CB, 15 CB, 25 CB microSDMC memory card : 64 CB, 128 CB, 25 CB, 25 CB microSDMC memory card : 4 CB, 8 CB, 15 CB, 25 CB microSDMC memory card : 4 CB, 8 CB, 15 CB, 25 CB microSDMC memory card : 4 CB, 8 CB, 15 CB, 25 CB microSDMC memory card : 4 CB, 8 CB, 15 CB, 25 CB microSDMC memory card : 4 CB, 8 CB, 15 CB, 25 CB microSDMC memory card : 4 CB, 8 CB, 15 CB, 25 CB microSDMC memory card : 4 CB, 8 CB, 15 CB, 25 CB microSDMC memory card : 4 CB, 8 CB, 15 CB, 25 CB microSDMC memory card : 4 CB, 8 CB, 15 CB, 25 CB microSDMC memory card : 4 CB, 8 CB, 15 CB, 25 CB microSDMC memory card : 4 CB, 8 CB, 15 CB, 25 CB microSDMC memory card : 4 CB, 8 CB, 15 CB, 25 CB microSDMC memory card : 4 CB, 8 CB, 15 CB, 25 CB microSDMC memory card : 4 CB, 8 CB, 15 CB, 25 CB, 25 CB microSDMC memory card : 4 CB, 8 CB, 15 CB, 25 CB, 25 CB microSDMC memory card : 4 CB, 8 CB, 25 CB,	Audio Compression			
Mo. of Simultaneous Users	Audio Transmission Mode	Off / Mic (Line) input / Audio output / Interactive (Half duplex) / Interactive (Full duplex)		
Secure   FIPS 140-2 level 3 (NXP® EdgeLock® 5050P), Device Certificate GlobalSign® pre-installed, HTTPS, User authentication, Digest authentication, Nats authentication, Alteration detection    SDXC/SDHC/SD Memory Card   microSDXC memory card : 64 C8,128 G8,256 G8,512 C8 microSDPIC memory card : 4 G8 C8,126 G8,32 G8 microSDPIC memory card : 4 G8 C8,126 G8,32	Supported Protocol			
HTTPS, User authentication, Digest authentication, Hast authentication, EIEEBOXEX, System log, Image transmission log, Brute-force protection, Alteration detection  SDXC/SDHC/SD Memory Card  microSDXC memory card : 4 4 GB, 28 GB, 25 GB, 512 CB microSDHC memory card : 4 GB, 8 GB, 15 GB, 32 GB microSDHC memory card : 4 GB, 8 GB, 15 GB, 32 GB microSDHC memory card : 4 GB, 8 GB, 15 GB, 32 GB Mobile Terminal Compatibility  IPad / IPhone (IOS 8.0 or laten), AndroidTM terminals  ONVIE® Profile  G / M / S / T  Alarm  Alarm Source  Alarm Source  SDXC/SDHC/SD memory recording, E-mail notification, HTTP alarm notification alarm Audio detection alarm  Alarm Actions  SDXC/SDHC/SD memory recording, E-mail notification output  Input/Output  Input/Output  Input/Output (for Adjustment)  - Audio input *3  Ø 3.5 mm stereo mini jack For microphone input: Recommended applicable microphone: Plug-in power type (Sensitivity of microphone: -4 Bds; 36 G GB+ 17/PB, 1 Hzh)) Input Impedance: Approx. 2 kΩ (unbalanced) Supply voltage: 2 4 ¥ 40.5 V For line input: Input Level: Approx10 dBV  Audio Output *3  ALARM IN 1 (Alarm input 1/ Black & white input/ Auto time adjustment input) (x1) ALARM IN 2 (Alarm input 2/ ALARM OUT) (x1)  General  Safety  UL (UL62368-1), c-UL (CSA C22.2 No.62368-1), C.E. IEC62368-1  ENC  POE** (FCC (Partis ClassA), ICES-003 ClassA, ENS5035  Power Source and Power Consumption  Poli** (IEEBOZ.3a compliant):	No. of Simultaneous Users	24 (Number of sessions that can connect to cameras at the same time)		
microSDHC memory card: 3 GB,	Secure	HTTPS, User authentication, Digest authentication, Host authentication,		
AndroidTM terminals  ORVIF® Profile  C / M / S / T  Alarm  Alarm Source  3 terminals input, VMD alarm, Command alarm, Audio detection alarm  Alarm Actions  SSXC/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 *3  Audio input *3  Audio alarm, and alarm input 3 / Alarm, and alarm, and alarm input 3 / Alarm, and alarm input 3 / Alarm, and alarm, and alarm, and alarm input 3 / Alarm input 3 / Alarm, and alarm	SDXC/SDHC/SD Memory Card	microSDHC memory card: 4 GB,8 GB,16 GB,32 GB		
Alarm Source Street Str	Mobile Terminal Compatibility			
Alarm Source  3 terminals input, VMD alarm, SCD alarm, Command alarm, Audio detection alarm Alarm Actions  5DXC/SDHC/SD memory recording, E-mail notification, HTTP alarm notification indication on browser, TCP alarm notification output  Input/Output  Monitor Output (for Adjustment)	ONVIF® Profile	G / M / S / T		
VMD alarm, SCD alarm, CCommand alarm, Audio detection alarm Audio input VDU  Input/Output  Monitor Output (for Adjustment)  — Audio input *3  ### ### ### ### ### ### ### ### ### #	Alarm			
Input / Output (for Adjustment)  Audio input *3  Audio input *3  Audio input *3  Audio Output (for Adjustment)  Audio input *3  Audio Output (for Adjustment)  Audio input *3  Audio input *3  Audio input *3  Audio input impedance : Approx. 2 kΩ (unbalanced) Supply voltage : 2.4 v ± 0.5 v For line input : Input level: Approx. –10 dBv  Audio Output *3  Audio Output impedance: Approx. 600 Ω (unbalanced) Output impedance: Appr	Alarm Source	VMD alarm, SCD alarm, Command alarm,		
Monitor Output (for Adjustment)  Audio input *3  Audio Output impedance : Approx. 2 kΩ (unbalanced) Supply voltage : 2.4 v ±0.5 V For line input : Input level: Approx10 dBV  Audio Output *3  Audio Output *3  Audio Output *3  Audio Output impedance Approx. 600 Ω (unbalanced) Output impedance Approx. 600 Ω (unbalanced)  Output impedance Approx. 600 Ω (unbalanced)  Output level: -20 dBV  External I/O Terminals *3  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)  ALARM IN 3 (Alarm input 3/ ALARM OUT /AUX OUT) (x1)  ALARM IN 3 (Alarm input 3/ ALARM OUT /AUX OUT) (x1)  ALARM IN 5 (Alarm input 3/ ALARM OUT /AUX OUT) (x1)  Before the control of the control	Alarm Actions			
Monitor Output (for Adjustment)  Audio input *3  Audio Output impedance : Approx. 2 kΩ (unbalanced) Supply voltage : 2.4 v ±0.5 V For line input : Input level: Approx10 dBV  Audio Output *3  Audio Output *3  Audio Output *3  Audio Output impedance Approx. 600 Ω (unbalanced) Output impedance Approx. 600 Ω (unbalanced)  Output impedance Approx. 600 Ω (unbalanced)  Output level: -20 dBV  External I/O Terminals *3  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)  ALARM IN 3 (Alarm input 3/ ALARM OUT /AUX OUT) (x1)  ALARM IN 3 (Alarm input 3/ ALARM OUT /AUX OUT) (x1)  ALARM IN 5 (Alarm input 3/ ALARM OUT /AUX OUT) (x1)  Before the control of the control	Input/Output			
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 *3  ### ### ### ### ### ### ### ### ### #		_		
Output impedance: Approx. 600 Ω (unbalanced) Output level: -20 dBV  External I/O Terminals *3  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):	Audio input *3	For microphone input: Recommended applicable microphone : Plug-in power type (Sensitivity of microphone : $-48 \text{ dB}\pm3 \text{ dB}$ (0 dB=1 V/Pa, 1 kHz)) Input impedance : Approx. 2 k $\Omega$ (unbalanced) Supply voltage : $2.4 \text{ V} \pm0.5 \text{ V}$ For line input :		
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):	Audio Output *3	Output impedance: Approx. 600 $\Omega$ (unbalanced)		
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):	External I/O Terminals *3	ALARM IN 2 (Alarm input 2/ ALARM OUT) (x1)		
EMC FCC (Part15 ClassA), ICES-003 ClassA, EN55032 ClassA, EN55035  Power Source and Power Consumption PoE+ (IEEE802.3at compliant):	General			
Power Source and Power Consumption PoE+ (IEEE802.3at compliant) :	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			

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}) Maximum temperature according to NEMA TS 2 (2.2.7): 74°C(165°F)  *When using with the IR LED light constantly lit, the upper limit of the operating temperature range is +50 °C {+122 °F}.	
Ambient Operating Humidity	10 % to 100 % (no condensation)	
Anti-Condensation System	Temish element	
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: 250 mm(D)×150 mm (W) × 105 mm (H) {9-27/32" inches (D) ×5-29/32 inches (W) ×4-1/8 inches (H)}	
Mass (approx.)	Approx. 1.8 kg	
Finish	Main body: Aluminum die cast, Black Outer fixing screws: Stainless steel (Corrosion-resistant treatment) Dome cover: PC resin, Clear	

#### **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 When using with them, WV-QCA501A cable is required.

#### 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.

Trademarks and registered trademarks

- iPad and iPhone are trademarks of Apple Inc., registered in the U.S. and other countries. Android is a trademark of Google LLC.
- ONVIF is a trademark of ONVIF, Inc.
- All other trademarks identified herein are the property of their respective owners ©i-PRO Co., Ltd All rights reserved / March 2023



## **OPTIONAL ACCESSORIES**

### Select a compatible accessory

Accessory Selector (i-pro.com)



WV-QWL501-B Mount Bracket



WV-QSR507M1-B Mount Bracket



WV-QSR507M-B Mount Bracket



WV-QSR507F1-B Mount Bracket



WV-QSR507F-B Mount Bracket



WV-QSR507-B Mount Bracket



WV-QSR501-B Mount Bracket



WV-QPL500-B Mount Bracket



WV-QCN500-B Mount Bracket



WV-QCL501-B Mount Bracket



WV-QCL101-B Mount Bracket



WV-QCL100-B 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-QDC504C Dome Cover



WV-QDC200C Dome Cover



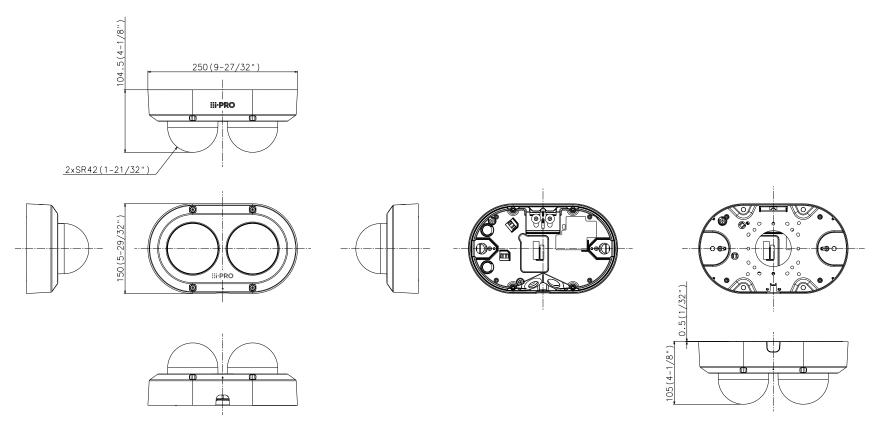
WV-QCA501A I/O Cable



WV-PM500 Compact microphone unit for surveillance cameras



WV-CW7CN Dome cover



With attachment plate



	投影面積/Projected	area
平面図/Top-view	0. 020 (m <sup>2</sup> )	
側面図/Side-view	0.011 (m <sup>2</sup> )	

Mass : Approx. 1.6 kg {3.53 lbs} (When using the attachment plate)