WV-X15501A-Z3L

5MP AI Outdoor IR Bullet Camera (30x zoom)

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- 5MP Bullet camera
- Up to 9 Edge AI analytic apps
- 30x optical zoom
- Built-in IR LED (180m/591ft)
- IP66, IP67, IK10 Compliant
- Built-in FIPS 140-3 Level 3, CC EAL6+ Compliant Secure Element (NXP® EdgeLock® SE052F)
- NDAA Compliant

SPECIFICATIONS

Camera	
Image Sensor	Approx. 1/2.8 type CMOS image sensor
Scanning Area	5.12 mm (H) × 3.84 mm (V) {3/16 inches (H) × 5/32 inches (V)}
Minimum Illumination	Color : 0.06 lx (30IRE, F1.8, 1/30s, AGC:11)* 0.08 lx (50IRE, F1.8, 1/30s, AGC:11) 0.0050 lx (50IRE, F1.8, 16/30s, AGC:11)* BW : 0 lx (50IRE, F1.8, 1/30s, AGC:11, IR LED: On) 0.05 lx (50IRE, F1.8, 1/30s, AGC:11) 0.0031 lx (50IRE, F1.8, 16/30s, AGC:11)* *Converted value
White Balance	ATW1/ ATW2/ AWC
Shutter Speed	[60 fps mode] 1/60 Fix to 1/10000 Fix [30 fps mode] 1/30 Fix to 1/10000 Fix [50 fps mode] 1/50 Fix to 1/10000 Fix [25 fps mode] 1/25 Fix to 1/10000 Fix
Maximum Shutter	[60 fps mode] Max. 1/4000 s to Max. 16/30 s [30 fps mode] Max. 1/4000 s to Max. 16/30 s [50 fps mode] Max. 1/4000 s to Max. 16/25 s [25 fps mode] Max. 1/4000 s to Max. 16/25 s
Intelligent Auto	On/Off
Super Dynamic	On/Off (Range : 0 to 31)
Dynamic Range	Max. 132 dB (Super Dynamic: On, Level: 31, 15 fps*) * The frame rate is limited to 15 fps for level 30 or higher.
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 (Range : 0 to 31) *only when Super Dynamic/ Intelligent Auto: Off
Fog Compensation	On/Off (Range : 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)/ Auto4(LPR)
IR LED Light	High／Middle／Low／Off Maximum irradiation distance: When using PoE++ 180 m {Approx. 591 ft} (30IRE)* 130 m {Approx. 427 ft} (50IRE) When using PoE+ 120 m {Approx. 394 ft} (30IRE)* 85 m {Approx. 279 ft} (50IRE) When using DC12V 85 m {Approx. 279 ft} (30IRE)* 60 m {Approx. 196 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 area available

Audio Detection	On/ Off
AI Sound Classification	Selectable from Gunshot, Yell, Vehicle horn, Glass break
Analytics	AI Video Motion Detection, AI Privacy Guard, AI Face Detection, AI People Detection, AI Vehicle Detection, AI Occupancy Detection, AI Scene Change Detection, AI On-site Learning, AI Processing Relay, License Plate Recognition/MMC classification (3rd party application)*1 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
Max. Number of Applications	9
Privacy Zone	On/Off, Up to 8 zones available Color : gray/white/blue/green/red/black, or mosaic
VIQS	On/Off, Up to 8 zones available
Image Rotation	0° (Off)/ 90°/ 180° (Upside-down)/ 270°
Image Stabilizer	On/Off (Built-in gyro sensor) Available only in the 30/25 fps mode
Camera Title (OSD)	On/Off Up to 40 characters, Up to 2 lines (alphanumeric characters, marks)

Lens	
Optical Zoom	30x (Motorized zoom / Motorized focus)
Digital (electronic) Zoom	max 480x
Focal Length	4.5 mm – 135 mm {11/64 inches – 5-5/16 inches}
Angular Field of View	[16:9 mode] Horizontal: 2.3° (TELE) – 58° (WIDE) Vertical: 1.3° (TELE) – 34° (WIDE) [4:3 mode] Horizontal: 2.3° (TELE) – 58° (WIDE) Vertical: 1.7° (TELE) – 45° (WIDE)
Adjusting Angle	Ceiling mounting Horizontal : ±180 ° (PAN rotation part) Vertical : 0 ° to 100 ° (TILT rotation part) Yaw : –240 ° to +100 ° (YAW rotation part) Wall mounting Horizontal : ±100 ° (TILT rotation part)* Vertical : ±100 ° (TILT rotation part)* Yaw : –240 ° to +100 ° (YAW rotation part) * You can change between horizontal and vertical angles by adjusting the PAN rotation part.
Maximum Aperture Ratio	1:1.8 (WIDE) – 1:4.7 (TELE)
Focus Range	3.0 m {118-1/8 inches} – ∞
Aperture Range	F1.8 – Close

DORI	
Detect (25ppm / 8ppf)	92.4 m {303.0 ft} (WIDE) 2550.6 m {8368 ft} (TELE)
Observe (62.5ppm / 19ppf)	36.9 m {121.2 ft} (WIDE) 1020.2 m {3347.2 ft} (TELE)
Recognize (125ppm / 38ppf)	18.5 m {60.6 ft} (WIDE) 510.1 m {1673.6 ft} (TELE)
Identify (250ppm / 76ppf)	9.2 m {30.3 ft} (WIDE) 255.1 m {836.8 ft} (TELE)

System on Chip	
System on Chip (SoC)	Ambarella CV52

Preset Positions	
No. of Preset Positions	8
Auto Mode	Preset sequence

Self Return	10 s, 20 s, 30 s, 1 min, 2 min, 3 min, 5 min, 10 min, 20 min, 30 min, 60 min

Browser GUI	
GUI / Setup Menu Language	English, Italian, French, German, Spanish, Portuguese, Russian, Chinese, Japanese
Browser *2	Microsoft Edge, Firefox, Google Chrome

Network	
Network IF	10BASE-T/100BASE-TX, RJ45 connector
Resolution	[16:9mode(60fps mode)][16:9mode(50fps mode)] 3072x1728*/2560x1440 [16:9mode(30fps mode)][16:9mode(25fps mode)] 3072x1728*/2560x1440/1920x1080/1280x720/640x360/320x180 [4:3mode(60fps mode)][4:3mode(50fps mode)] 3072x2304*/2560x1920 [4:3mode(30fps mode)][4:3mode(25fps mode)] 3072x2304*/2560x1920/1280x960/800x600/640x480/400x300/320x240 *By super resolution techniques
H.265/H.264 Transmission Mode/Type	[Transmission Mode] 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: 0(SUPER FINE) - 9(LOW)
Smart Coding	[GOP(Group of pictures) control] Off/ Low (Variable GOP 1s-8s)/ Mid (Variable GOP 4s-16s)/Frame rate control (Variable GOP 4s-16s with frame rate control) *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 *3	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 (Depends 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
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	-
Audio Input *4	ø3.5 mm stereo mini jack For microphone input: Recommended applicable microphone: Plug-in power type (Sensitivity of microphone: –51 dB to –38 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: Input level: Approx. -10 dBV
Audio Output *4	ø3.5 mm stereo mini jack (Audio output is monaural.) Output impedance: Approx. 600 Ω (unbalanced) Output level: -20 dBV
External I/O Terminals *4	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) Pin jack, NTSC or PAL signal can be output from camera

General	
Safety	UL (UL62368-1), c-UL (CSA C22.2 No.62368-1), CE, IEC62368-1
EMC	FCC (Part15 ClassA), ICES-003 ClassA
Power Source/Power Consumption *4	[Power Source] DC12V PoE+(IEEE802.3at compliant) PoE++(IEEE802.3bt compliant) [Power Consumption] DC12V ：1.3A／ Approx. 15.6 W PoE+ DC 54 V ：460 mA／ Approx. 24.8 W（Class 4 device） PoE++ DC 54 V ：600 mA／ Approx. 32.4 W（Class 5 device）
Ambient Operating Temperature	-40 °C to +60 °C {-40 °F to +140 °F}(PoE++) (Power On range: -30 °C to +60 °C {-22 °F to +140 °F}) * When using with the IR LED light lit, the upper limit of the operating temperature range is +50 °C {+122 °F}. *When using DC12V, the lower limit of the operating temperature range is -30°C {-22 °F}.
Ambient Operating Humidity	10 % to 100 % (no condensation)
Storage Temperature & Humidity	Storage temperature: -30 °C to +60 °C {-22 °F to +140 °F} Storage humidity: 10 % to 95 % (no condensation)
Water and Dust Resistance	IP66/ IP67 (IEC 60529), Type 4X (UL50E), NEMA 4X compliant
Shock Resistance	IK10(IEC 62262)
Vibration Resistance	IEC 60721-3-4 4M4 compliant
Wind Resistance	Up to 40 m/s {approx. 89 mph}
Dimensions	When the sunshade is in its initial position Φ168 mm x 403 mm (D) {Φ6-5/8 inches x 15-7/8 inches(D)} When moving the sunshade forward Φ168 mm x 456 mm (D) {Φ6-5/8 inches x 17-15/16 inches(D)}
Mass (approx.)	Approx. 3.6kg {8.0 lbs} (Including accessories)
Finish	Main body: Aluminum die cast, i-PRO white Outer fixing screws: Stainless steel (Corrosion-resistant treatment) Front panel: PC resin, Clear
Easy Kitting	Supported

NOTES

*1 Vaxtor LPR application (VaxALPR) is pre-installed with a 30-day free trial license.
At the conclusion of the free trial period, a valid license must be purchased in order to continue using the application.

Please contact i-PRO regional representative.
*2 For information on the operation verification of the web browsers, refer to our support website <Control No.: C0132>.
*3 When recording audio on an SD memory card, only use AAC-LC (Advanced Audio Coding - Low Complexity) .
*4 When using a 12 V DC power supply, EXT I/O terminal, audio input, and audio output, I/O cable (WV-QCA501A) 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 any third-party products (including applications) 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)

WV-QPL500-W
Mount Bracket

WV-QCN500-W
Mount Bracket

WV-QCL101-W
Mount Bracket

WV-QCL100-W
Mount Bracket

WV-Q105A
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

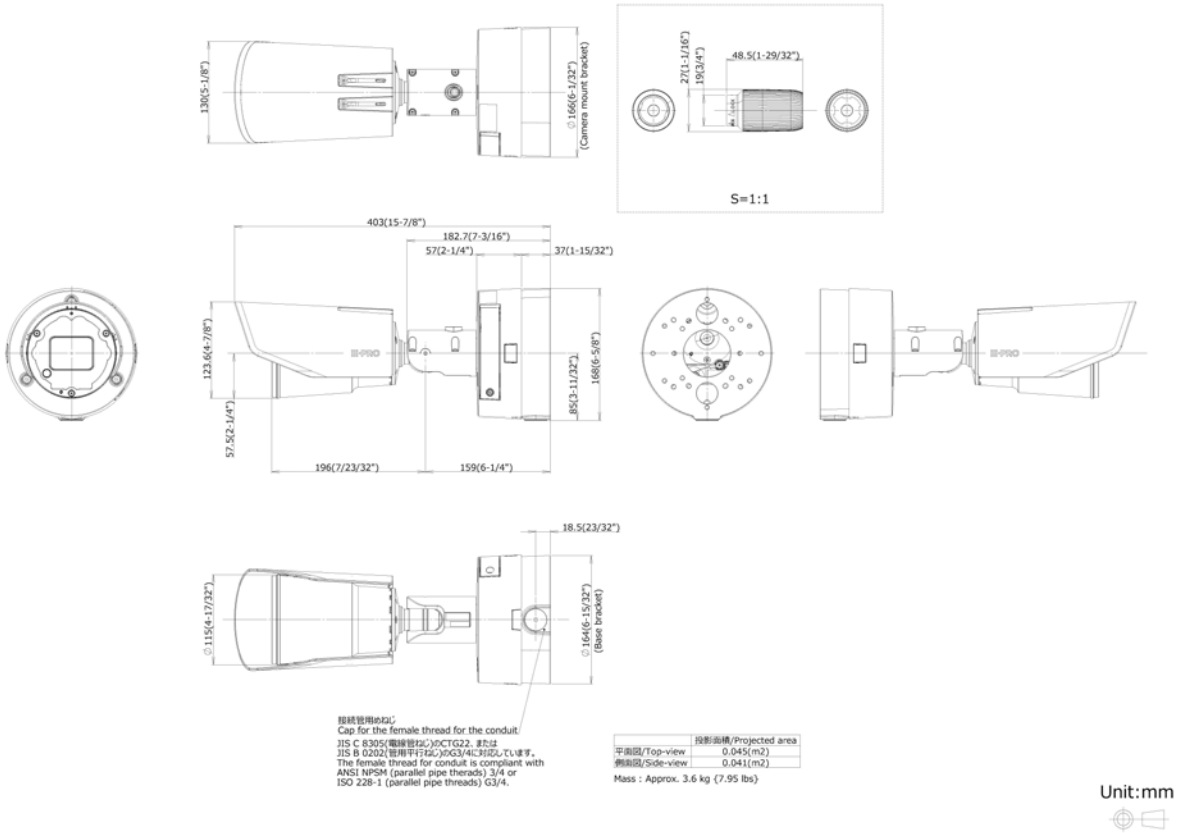
WV-QCA501A
I/O Cable

WV-PM500
Compact microphone unit

WJ-PU201P
PoE Injector

WJ-PU201/G
PoE Injector

APPEARANCE



	投影面積/Projected area
平面図/Top-view	0.045(m2)
側面図/Side-view	0.041(m2)

Mass : Approx. 3.6 kg (7.95 lbs)

Unit:mm