

# WV-X66700-Z3LK

4K Outdoor 30x PTZ Network Camera with AI engine

## Rapid PTZ camera with AI engine and IR-LED



- 4K 30x PTZ camera
- Innovative New Form Factor PTZ
- Up to 3 Edge AI analytic apps
- AI auto tracking
- Built-in IR-LED (200m/656ft)
- High speed Pan/Tilt drive (Pan: 700deg./s, Tilt: 500deg./s)
- Heavy salt damage resistance specifications (ISO 14993 compliant)
- IP66, IK10 certified
- Built-in FIPS 140-2 Level 3 Certified SecureElement (EdgeLock® SE050F NXP® Semiconductors)
- NDAA Compliant

### Precautions for heavy salt damage resistance



# SPECIFICATIONS

Camera	
Image Sensor	Approx. 1/2.8 type CMOS image sensor
Scanning Area	5.57 mm (H) × 3.13 mm (V) {7/32 inches (H) × 1/8 inches (V)}
Minimum Illumination	Color : 0.13 lx (30IRE, F1.8, 1/30s) Color : 0.19 lx (50IRE, F1.8, 1/30s) BW : 0 lx (50IR, F1.8, 1/30s with IR LED) BW : 0.1 lx (50IRE, F1.8, 1/30s)
White Balance	ATW1 / ATW2 / AWC
Shutter Speed	[30 fps mode] 1/30 Fix to 1/10000 Fix [25 fps mode] 1/25 Fix to 1/10000 Fix
Maximum shutter	[30 fps Mode]Max.1/4000s to Max.16/30s [25 fps Mode]Max.1/4000s 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.132 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 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 : 280 m {Approx. 920 ft} (30IRE)* 200 m {Approx. 660 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
AI Sound Classification	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 32 zones available
VIQS	On / Off, Up to 8 zones available
Image Stabilizer	On / Off (Built-in gyro sensor)
Image Rotation	On / Off
Camera Title (OSD)	On / Off, Up to 40 characters (alphanumeric characters, marks)

Lens	
Optical zoom	30x (Motorized zoom / Motorized focus)
Extra zoom	Max. 90x (30x - 90x when resolution is 1280x720)
Focal length	4.5mm - 135mm (3/16 inches - 5-5/16 inches)
Angular Field of View	[16 : 9 mode] Horizontal : 2.5° (TELE) – 62° (WIDE), Vertical : 1.4° (TELE) – 37° (WIDE)
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)	Wide: 127.8 m / 419.3 ft, Tele: 3519.7 m / 11547.6 ft
Observe (62.5ppm / 19ppf)	Wide: 51.1 m / 167.7 ft, Tele: 1407.9 m / 4619.0 ft
Recognize (125ppm / 38ppf)	Wide: 25.6 m / 83.9 ft, Tele: 703.9 m / 2309.5 ft
Identify (250ppm / 76ppf)	Wide: 12.8 m / 41.9 ft, Tele: 352.0 m / 1154.8 ft

System on Chip (SoC)	
System on Chip (SoC)	Ambarella CV22

Adjusting Angle	
Adjusting Angle	Horizontal : 360° Endless Panning, TILT : -20° to +90°, Yaw : 0°

Pan /tilt	
Panning Range	360° Endless panning
Panning Speed	Manual: Approx. 0.065°/s – 150°/s Preset: Up to approx. 700°/s
Tilting Range	Operational range -20° – +90°
Tilting Speed	Manual: Approx. 0.065°/s –150°/s Preset: Up to approx. 500°/s
Preset Positions	256 positions
Auto Mode	Auto track/ Auto pan/ Preset sequence/ Patrol
Self Return	10 s/ 20 s/ 30 s/ 1 min/ 2 min/ 3 min/ 5 min/ 10 min/ 20 min/ 30 min/ 60 min
Active ClearSight	Yes

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 H.265/ H.264/ JPEG (MJPEG)	[16:9 mode (30 fps mode) ] [16:9 mode (25 fps mode) ] 3840x2160/ 2560x1440/ 1920x1080/ 1280x720/ 640x360/ 320x180
H.265/H.264 Transmission Mode / Type *2	[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: Off / Low (Variable GOP 1s-8s) / Mid (Variable GOP 4s-16s) / Advanced (Fixed GOP 60s w/1s 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 *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 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, MQTT, NTCIP
No. of Simultaneous Users	Up to 14 users (Depends on network conditions)
Secure	FIPS 140-2 level 3 (NXP® EdgeLock® SE050F), Device Certificate GlobalSign® pre-installed, HTTPS, User authentication, Digest authentication, Host authentication, IEEE802.1X, System log, Image transmission log, Brute-force protection, Alteration detection, Signed Firmware (V2.50 or later)
SDXC/SDHC/SD Memory Card (Option)	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 (iOS 8.0 or later), Android™ terminals
ONVIF® Profile	G / M / S / T

#### Alarm

Alarm Source	3 terminals input, VMD 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

Audio Input *4	ø3.5 mm stereo mini jack Recommended applicable microphone: Plug-in power type (Sensitivity of microphone: -51dB to -38dB (0 dB=1 V/Pa, 1 kHz)) Input impedance: Approx. 2 kΩ (unbalanced) Supply voltage: 4.0V±0.5V 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 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/ AUX OUT) (x1)
Monitor Output	-

#### General

Safety	UL (UL62368-1), c-UL (CSA C22.2 No.62368-1), CE, IEC62368-1
EMC	FCC (Part15 ClassA), ICES-003 Issue 7 ClassA, EN55032 ClassA, EN55035
Other Standard	NEMA-TS2
Power Source and Power Consumption	PoE++ (IEEE802.3bt compliant) DC 54 V : 850 mA/Approx. 45.9 W (Class 6 device)
Ambient Operating Temperature	-50 °C to 60 °C * {-58 °F to 140 °F} (Power On range: -30 °C to +60 °C {-22 °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)

Water and Dust Resistance	IP66, IEC60529 measuring standard compatible, Type 4X(UL50E), NEMA 4X compliant
Shock Resistance	IK10 (IEC 62262)
Wind Resistance	Up to 40 m/s {approx. 89 mph}
Dimensions	Maximum diameter: $\phi$ 167mm $\times$ 205 mm (H) { $\phi$ 6-9/16 inches $\times$ 8-1/16 inches (H) } Dome radius SR 77.5 mm {SR 3-1/16 inches} (excluding an attachment for the conduit portion and protruding parts)
Mass (approx.)	Approx. 3 kg (without attachment)
Finish	Main body : Aluminum die cast (Heavy-salt damage resistance coating), i-PRO white Outer fixing screws : Stainless steel (Corrosion-resistant treatment) Dome cover: Polycarbonate resin, Clear (with ClearSight coating)
Other	Tamper-resistant enclosure *5

## NOTES

\*1 For information on the operation verification of the web browsers, refer to our support website <Control No.: C0132>.

\*2 Transmission for 4 streams can be individually set.

\*3 When recording audio on an SD memory card, only use AAC-LC (Advanced Audio Coding - Low Complexity) .

\*4 When using with them, WV-QCA501A cable is required.

\*5 Component that has a structure on which the screws that are accessible after installation cannot be screwed or unscrewed using an ordinary screwdriver.

### 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-QWL501S-W  
Wall Mount Bracket



WV-QSR506S-W  
Mount Bracket



WV-QCL501S-W  
Ceiling 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-QDC508G  
Dome Cover



WV-QDC508C  
Dome Cover



WV-QDC508CN  
Dome Cover



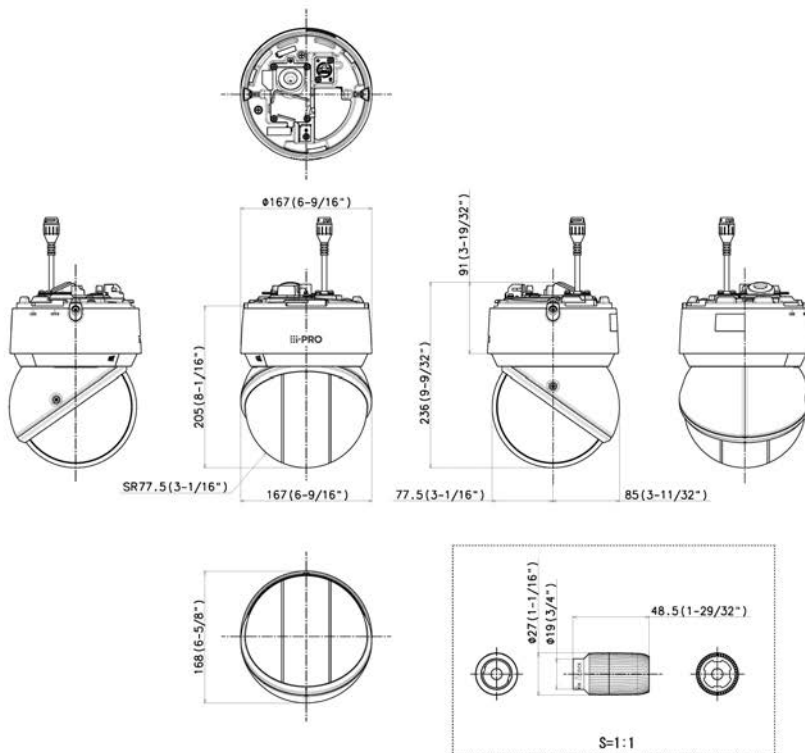
WV-QCA501A  
I/O Cable



WV-PM500  
Compact microphone  
unit for surveillance  
cameras

# APPEARANCE

耐重塩害モデル  
Heavy salt damage version



Model number	Model number
WV-X66700-Z3LS	WV-X66700-Z3LK
WV-X66700-Z3LSJ	WV-X66700-Z3LKJ
WV-X66700-Z3S	WV-X66700-Z3K
WV-X66700-Z3LSV	WV-X66700-Z3LKV
WV-X66700-Z3SV	WV-X66700-Z3KV
WV-X66600-Z3LS	WV-X66600-Z3LK
WV-X66600-Z3S	WV-X66600-Z3K
WV-X66600-Z3LSV	WV-X66600-Z3LKV
WV-X66600-Z3SV	WV-X66600-Z3KV
WV-X66300-Z4LS	WV-X66300-Z4LK
WV-X66300-Z4LSJ	WV-X66300-Z4LKJ
WV-X66300-Z4S	WV-X66300-Z4K
WV-X66300-Z4LSV	WV-X66300-Z4LKV
WV-X66300-Z4SV	WV-X66300-Z4KV
WV-X66300-Z3LS	WV-X66300-Z3LK
WV-X66300-Z3S	WV-X66300-Z3K
WV-X66300-Z3LSV	WV-X66300-Z3LKV
WV-X66300-Z3SV	WV-X66300-Z3KV

	投影面積/Projected area
正面図/Front-view	0.029 (sq")
側面図/Side-view	0.029 (sq")
Mass : Approx. 3 kg [6.62 lbs]	

Unit:mm