# WV-X67310-Z4-1

2MP AI Rugged PTZ Camera (40x zoom)

## 2MP AI Rugged PTZ Camera (40x zoom)

- 2MP 40x Aero PTZ camera
- Built-in wiper and Auto defroster
- Up to 2 Edge AI analytic apps
- AI Auto tracking
- 24V AC/DC Power supply
- Wind resistance (Up to 270km/h, 167mph)
- Wide range of ambient temperatures supported (-50 °C to +60 °C {-58 °F to +140 °F})
- IP66, IP68, IK10 certified
- Built-in FIPS 140-2 Level 3 Compliant SecureElement (EdgeLock® SE050F NXP® Semiconductors)
- NDAA Compliant

i-PRO

# 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 :<br>0.011 lx (30IRE, F1.6, 1/30s, AGC:11)*<br>0.015 lx (50IRE, F1.6, 1/30s, AGC:11)<br>0.001 lx (50IRE, F1.6, 16/30s, AGC:11)*<br>BW :<br>0.006 lx (50IRE, F1.6, 1/30s, AGC:11)<br>0.0004 lx (50IRE, F1.6, 16/30s, AGC:11)*<br>*Converted value |
| White Balance | ATW1/ ATW2/ AWC |
| Shutter Speed | [60 fps mode] 1/60 Fix to 1/10000 Fix<br>[30 fps/ 15 fps mode] 1/30 Fix to 1/10000 Fix<br>[50 fps mode] 1/50 Fix to 1/10000 Fix<br>[25 fps/ 12.5 fps mode] 1/25 Fix to 1/10000 Fix |
| Maximum Shutter | [60 fps mode] Max. 1/4000 s to Max. 16/30 s<br>[30 fps/ 15 fps mode] Max. 1/4000 s to Max. 16/30 s<br>[50 fps mode] Max. 1/4000 s to Max. 16/25 s<br>[25 fps/ 12.5 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. 144 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 (Range : 0 to 31)<br>*only when Super Dynamic/ Intelligent Auto: Off |
| Fog Compensation | On/Off (Range : 0 to 8)<br>*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/ Auto1/ Auto2/ Auto3(SCC) |
| IR LED Light | - |
| Digital Noise Reduction | The level can be set in the range of 0 to 255. |
| Video Motion Detection (VMD) | On/ Off<br>4 areas available |
| Scene Change Detection (SCD) | On/ Off<br>1 area available |
| Audio Detection | On/ Off |
| AI Sound Classification | Selectable from Gunshot, Yell, Vehicle horn, Glass break |

| | |
|---|---|
| Analytics | AI Video Motion Detection, AI Face Detection, AI Privacy Guard, AI People Detection, AI Vehicle Detection, AI Occupancy Detection<br><br>For details:<br>https://i-pro.com/products_and_solutions/en/surveillance/products/analytics-software<br>3rd party applications are also available.<br>https://i-pro.com/products_and_solutions/en/surveillance/solutions/edge-ai-platform/application-list |
| Max. Number of Applications | 2 |
| Privacy Zone | On/Off<br>Up to 32 zones available |
| VIQS | On/Off<br>Up to 8 zones available |
| Image Stabilizer | On/Off (Built-in gyro sensor)<br>Available only in the 30/25 fps mode (Built-in gyro sensor) |
| Camera Title (OSD) | On/Off<br>Up to 40 characters, Up to 2 lines (alphanumeric characters, marks) |

| **Lens** | |
|---|---|
| Optical Zoom | 40x |
| Extra Zoom | - |
| Digital (electronic) Zoom | 40x - 640x |
| Focal Length | 4.25 mm – 170 mm {5/32 inches – 6-11/16 inches} |
| Angular Field of View | [16:9 mode]<br>Horizontal: 1.9° (TELE) – 66° (WIDE)<br>Vertical: 1.1° (TELE) – 39° (WIDE)<br>[4:3 mode]<br>Horizontal: 1.4° (TELE) – 51° (WIDE)<br>Vertical: 1.1° (TELE) – 39° (WIDE) |
| Adjusting Angle | (PAN) angle : 360° turning<br>(TILT) angle : -90° - +90°<br>(YAW) angle : ±0° |
| Maximum Aperture Ratio | 1:1.6 (WIDE) – 1:4.95 (TELE) |
| Focus Range | 3.0 m {118-1/8 inches} – ∞ |
| Aperture Range | F1.6 – Close |

| **DORI** | |
|---|---|
| Detect (25ppm / 8ppf) | 2315.7 m {7597.6 ft} (TELE) 59.1 m {164.0 ft} (WIDE) |
| Observe (62.5ppm / 19ppf) | 926.3 m {3039.0 ft} (TELE) 23.7 m {77.6 ft} (WIDE) |
| Recognize (125ppm / 38ppf) | 463.1 m {1519.5 ft} (TELE) 11.8 m {38.8 ft} (WIDE) |
| Identify (250ppm / 76ppf) | 231.6 m {759.8 ft} (TELE) 5.9 m {19.4 ft} (WIDE) |

| **System on Chip** | |
|---|---|
| System on Chip (SoC) | Ambarella CV25M |

| **Pan/Tilt** | |
|---|---|
| Panning Range | 360° Endless panning |
| Panning Speed | Manual : Approx. 0.065 °/s – 150 °/s *<br>*Except when frozen<br><br>Preset : Up to approx. 200 °/s *<br>*Except when leaning forward, frozen, or in strong winds |

| | |
|---|---|
| Tilting Range | Operating range:<br>- Upright: -45° to +90° (level - upward)<br>- Leaning forward: -90° to +90° (downward - level - upward)<br>- Hanging: -30° to +90° (level - downward) |
| Tilting Speed | Manual: Approx. 0.065 °/s – 150 °/s *<br>*Except when frozen<br><br>Preset: Up to approx. 200°/s<br>*Except when leaning forward, frozen, or in strong winds |
| Preset Positions | 256 |
| 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,<br>10 min, 20 min, 30 min, 60 min |

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

| **Network** | |
|---|---|
| Network IF | 10BASE-T/100BASE-TX, RJ45 connector |
| Resolution | [16:9 mode(60 fps mode)][16:9 mode(30 fps mode)]<br>[16:9 mode(50 fps mode)][16:9 mode(25 fps mode)]<br>1920×1080/ 1280×720/ 640×360/ 320×180<br>[4:3 mode(30 fps mode)] [4:3 mode(25 fps mode)]<br>1280×960/ VGA/ QVGA<br>[4:3 mode(15 fps mode)] [4:3 mode(12.5 fps mode)]<br>2048×1536 */ 1280×960/ VGA/ QVGA |
| H.265/H.264 Transmission Mode/Type | [Transmission Mode]<br>Constant bit rate/ VBR/ Frame rate/ Best effort<br>[Transmission Type]<br>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) controll]<br>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)<br>*Advanced and Frame rate control are only available with H.265.<br>[Smart VIQSI]<br>On (High)/ On (Low)/ Off<br>[Smart P-picture controll]<br>On/Off |
| Audio Compression Method | G.726 (ADPCM): 16 kbps/ 32 kbps<br>G.711: 64 kbps<br>AAC-LC : 64 kbps/ 96 kbps/ 128 kbps |
| Audio Transmission Mode | Off / 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<br>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, NTCIP |
| No. of Simultaneous Users | Up to 14 users (Depends on network conditions) |

| | |
|---|---|
| Secure | FIPS 140-2 level 3 (NXP® EdgeLock® SE050F),<br>Device Certificate GlobalSign® pre-installed, HTTPS,<br>User authentication, digest authentication, Host authentication,<br>IEEE802.1X, System log, Image transmission log, brute-force protection,<br>Alteration Detection, Signed firmware |
| SDXC/SDHC/SD Memory Card (Option) | - |
| Mobile Terminal Compatibility | iPad / iPhone (iOS 8.0 or later), Android™ terminals |
| ONVIF®Profile | M / S / T |

| **Input/Output** | |
|---|---|
| Audio Input *2 | Pre-stripped wires |
| Audio Output *2 | Output impedance: Approx. 600 Ω (unbalanced)<br>Output level: -20 dBV |
| External I/O Terminals *2 | ALARM IN1<br>(Alarm input 1/ Black & white input/ Auto time adjustment input) (x1)<br>ALARM IN2 (Alarm input 2/ ALARM OUT) (x1)<br>ALARM IN3 (Alarm input 3/ AUX OUT) (x1)<br>Relay (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 ClassA, EN55032 ClassA, EN55035, EN61000-6-2, EN50121-4, IEC62236-4 |
| Power Source/Power Consumption | [Power Source]<br>24V AC 50Hz/60Hz<br>24V DC<br>90W PoE++ (IEEE802.3bt Type4 Class 8 compliant)<br>60W PoE++ (IEEE802.3bt Type3 Class 6 compliant)<br>[Power Consumption]<br>Ambient operating temperatute -50 to 65℃:<br>24 V AC 50Hz/60Hz : 3.8 A / Approx. 61 W<br>24 V DC ：2.5 A / Approx. 60 W<br>90W PoE++ DC 54 V : 1.0 A / Approx. 54 W (Class 8 device)<br>Ambient operating temperatute -30 to 65℃:<br>60W PoE++ DC 54 V : 930 mA / Approx. 50.2 W (Class 6 device) |
| Ambient Operating Temperature | -50 °C to +60 °C {-58 °F to +140 °F} *<br>(Power On range: -30 °C to +60 °C {-22°F to +140°F})<br>(24V AC/DC, PoE++ Class 8)<br>-30 °C to +60 °C {-22 °F to +140°F} *<br>(Power On range: -20 °C to +60 °C {-4 °F to +140°F})<br>(PoE++ Class 6)<br><br>* The upper limit of the operating temperature range is +60°C for the black color model. |
| Ambient Operating Humidity | 10 % to 100 % (no condensation) |
| Storage environment | Storage temperature: −30 °C to +65 °C (−22 °F to +149 °F)<br>Storage humidity: 10 % to 95 % (no condensation) |
| Water and Dust Resistance | IP68/IP66 (IEC60529), NEMA 4X/NEMA 6P (NEMA250),<br>Type 4X/Type 6P (UL50E),MIL-STD-810-H, 506.6 Rain compliant |
| Shock Resistance | IK10(IEC62262)*, IEC60068-2-75(20J) compliant, IEC60068-2-27 compliant, NEMA TS2 2.2.9 compliant<br>*Excluding front glass and LED cover |
| Vibration Resistance | IEC60068-2-6 compliant, NEMA TS2 2.2.8 compliant |
| Corrosion Resistance | ISO14993 compliant, ISO12944-6 C5-M compliant, MIL-STD-810-H, 509.7 Salt Fog compliant |

| | |
|---|---|
| Wind Resistance | Upright, Hanging:<br>Operable<br>Up to 75 m/s {approx. 167 mph}<br>Non-destructive<br>Up to 90 m/s {approx. 201 mph}<br><br>Leaning forward:<br>Operable<br>Up to 60 m/s {approx. 134 mph}<br>Non-destructive<br>Up to 90 m/s {approx. 201 mph} |
| Wiper | Continuous (High) / Continuous (Low) / 1 shot / Washer<br>*1 shot will automatically stop after 7 reciprocating movements. |
| Defroster | Glass Heater (Transparent heater type)<br>Auto: ON (Approx. 5°C) / OFF (Approx. 10°C)<br>Manual: ON (manual) / OFF (5 – 182 min. timer)<br>*Outside temperature is a converted value from the internal thermal sensor and may fluctuate due to rain, wind, and snow |
| Environmental Resistance | [Temperature / Humidity]<br>IEC60068-2-1 compliant, IEC60068-2-2 compliant, IEC60068-2-14 compliant, IEC60068-2-30 compliant, IEC60068-2-78 compliant, MIL-STD-810-H, 501.7 High Temperature compliant, MIL-STD-810-H, 502.7 Low Temperature compliant, MIL-STD-810-H, 503.7 Temperature Shock compliant, MIL-STD-810-H, 507.6 Humidity compliant, NEMA TS2 2.2.7 compliant<br>[Solar Radiation]<br>MIL-STD-810-H, 505.7 Solar Radiation compliant<br>[Low Pressure Altitude]<br>MIL-STD-810-H, 500.6 Low Pressure Altitude compliant |
| Dimensions | 226 mm (W) x 450 mm (H) x 266 mm (D) {8-29/32 inches (W) x 17-23/32 inches (H) x 10-15/32 inches (D)}<br>(excluding the mounting and bump parts) |
| Mass (approx.) | Approx. 8.1 kg {17.9 lbs}<br>(excluding attachments) |
| Finish | Body: High-strength salt-resistant resin, die-cast, Black (Munsell N1 semi-gloss)<br>Clear front cover: Clear glass |
| Easy Kitting | Yes |
| Other | Tamper-resistant enclosure*3<br>NEMA TS2 Compliant<br>Maximum temperature according to NEMA TS 2 (2.2.7): 74 °C (165 °F)<br>Heavy salt damage resistance specifications (ISO 14993 compliant) |

# NOTES

*1 For information on the operation verification of the web browsers, refer to our support website <Control No.: C0132>.
*2 When using with them, WV-QCA502 cable is required.
*3 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.
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 / September 2024

# OPTIONAL ACCESSORIES

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

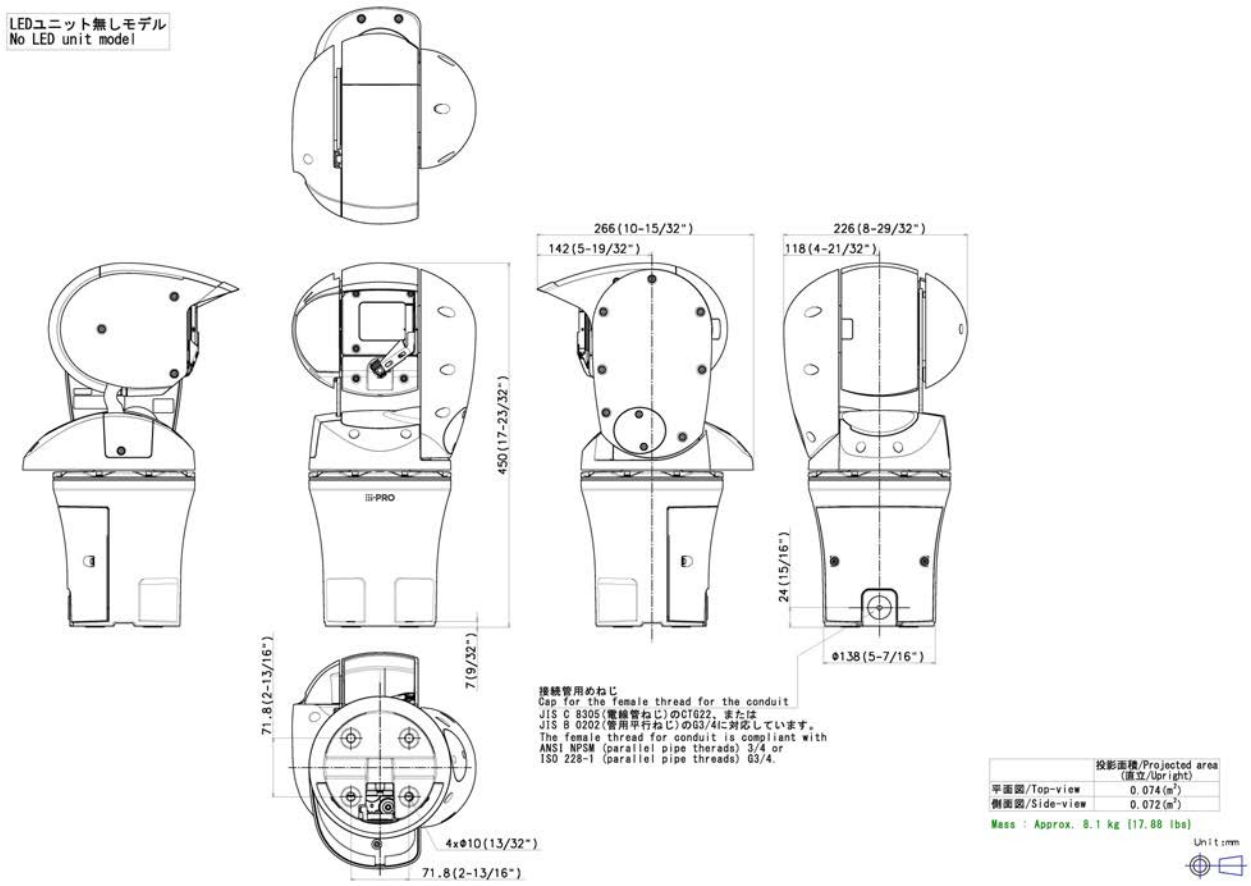
WV-QWL503-B
Mount Bracket

WV-QWL503S-B
Mount Bracket

WV-QCN500-B
Mount Bracket

WV-QCA502
I/O Cable for Aero PTZ camera

# APPEARANCE




| | 投影面積/Projected area (直立/Upright) |
|---|---|
| 平面図/Top-view | 0.074($m^2$) |
| 側面図/Side-view | 0.072($m^2$) |

Mass : Approx. 8.1 kg (17.88 lbs)

Unit:mm