# WV-S66300-Z3L

2MP Outdoor 32x PTZ Network Camera with AI engine

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

- 2MP 32x PTZ camera
- Innovative New Form Factor PTZ
- Up to 2 Edge AI analytic apps
- AI auto tracking
- Built-in IR-LED (250m/820ft)
- High speed Pan/Tilt drive (Pan: 700deg./s, Tilt: 500deg./s)
- IP66, IK10 certified
- Built-in FIPS 140-2 Level 3 Compliant SecureElement (EdgeLock® SE050F NXP® Semiconductors)
- NDAA Compliant
- Support POE+ (IEEE 802.3at compliant) Function-limited mode for flexibility and enabling wider installation choices

# SPECIFICATIONS

| Camera | |
|---|---|
| Image Sensor | Approx. 1/2.8 type CMOS image sensor |
| Scanning Area | 5.57 mm (H) × 3.13 mm (V)<br>{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><br>BW :<br>0 lx (50IRE, F1.6, 1/30s, AGC:11, IR LED: On)<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 | [60fps mode] 1/60 Fix to 1/10000 Fix,<br>[50fps mode] 1/50 Fix to 1/10000 Fix |
| Maximum shutter | 60 fps/30 fps/15 fps mode: Max.1/4000s to Max.16/30s<br>50 fps/25 fps/12.5 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.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<br>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<br>Maximum irradiation distance:<br>350 m {Approx. 1150 ft} (30IRE)*<br>250 m {Approx. 820 ft} (50IRE)<br>*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 Face Detection,<br>AI People Detection, AI Vehicle Detection,<br>AI Non mask Detection (prior to V2.70), AI Occupancy Detection, AI Scene Change 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 |

| | |
|---|---|
| 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) |
| Camera Title (OSD) | On / Off, Up to 40 characters (alphanumeric characters, marks) |

| Lens | |
|---|---|
| Optical zoom | 32x (Motorized zoom / Motorized Focus) |
| Extra zoom | Max.48x(32x-48x when resolution is 1280x720) |
| Digital (electronic) Zoom | 48x - 512x |
| Focal length | 4.25 - 136 mm {5/32 inches - 5-11/32 inches} |
| Angular Field of View | [16 : 9 mode] Horizontal : 2.4° (TELE) – 65° (WIDE), Vertical : 1.4° (TELE) – 39° (WIDE)(TBD)<br>[ 4 : 3 mode] Horizontal : 1.9° (TELE) – 51° (WIDE), Vertical : 1.4° (TELE) – 39° (WIDE)(TBD) |
| Maximum Aperture Ratio | 1 : 1.6 (WIDE) – 1 : 4.4 (TELE) |
| Focus range | 3.0 m {118-1/8 inches} –∞ |
| Aperture range | F1.6 - close |

| DORI | |
|---|---|
| Detect (25ppm / 8ppf) | Wide: 60.3 m / 197.8 ft,<br>Tele: 1833.2 m / 6014.4 ft |
| Observe (62.5ppm / 19ppf) | Wide: 24.1 m / 79.1 ft ,<br>Tele: 733.3 m / 2405.8 ft |
| Recognize (125ppm / 38ppf) | Wide: 12.1 m / 39.6 ft,<br>Tele: 366.6 m / 1202.9 ft |
| Identify (250ppm / 76ppf) | Wide: 6.0 m / 19.8 ft,<br>Tele: 183.3 m / 601.4 ft |

| System on Chip (SoC) | |
|---|---|
| System on Chip (SoC) | Ambarella CV25m |

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

| Pan /tilt | |
|---|---|
| Panning Range | 360° Endless Panning |
| Panning Speed | Manual ：Approx. 0.065 °/s – 150 °/s (PoE++), Approx. 0.065 °/s – 90 °/s (PoE+)<br>Preset ：Up to 700 °/s (PoE++), Up to 90 °/s (PoE+) |
| Tilting Range | Operational -20° – +90° |
| Tilting Speed | Manual ：Approx. 0.065 °/s – 150 °/s (PoE++), Approx. 0.065 °/s – 90 °/s (PoE+)<br>Preset ：Up to 500 °/s (PoE++), Up to 90 °/s (PoE+) |
| 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,<br>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 (60fps mode)],[16:9 mode (30fps mode)],<br>[16:9 mode (50fps mode)],[16:9 mode (25fps mode)]<br>1920x1080, 1280x720, 640x360, 320x180<br>[4:3 mode (30 fps mode)], [4:3 mode (25 fps mode)]<br>1280x960, VGA, QVGA<br>[4:3 mode (15 fps mode)], [4:3 mode (12.5 fps mode)]<br>2048x1536* , 1280x960, VGA, QVGA<br>*Used bu super resolution techniques |
| H.265/H.264 Transmission Mode/Type *2 | [Transmission Mode] Constant bit rate / VBR / Frame rate / Best effort<br>[Transmission Type] Unicast port (AUTO) / Unicast port (MANUAL) / Multicast |
| JPEG | [Image Quality] 10 steps |
| Smart Coding | GOP (Group of pictures) control:<br>Off/ Low (Variable GOP 1s-8s)/ Mid (Variable GOP 4s-16s)/<br>Advanced(Fixed GOP 60s w/1s key-frame)/<br>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 VIQS: On(High)/On(Low)/Off, Smart P-picture control: On/Off |
| Audio compression method *3 | G.726 (ADPCM) : 16 kbps / 32 kbps,<br>G.711 : 64 kbps,<br>AAC-LC*5 : 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,<br>DHCPv6, RTP, MLD, ICMP, ARP, IEEE 802.1X, DiffServ<br>IPv4 : TCP/IP, UDP/IP, HTTP, HTTPS, SSL/TLS, RTSP, RTP, RTP/RTCP, SMTP,<br>DHCP, DNS, DDNS, NTP, SNMPv1/v2/v3, UPnP, IGMP, ICMP, ARP,<br>IEEE 802.1X, DiffServ, SRTP, MQTT, NTCIP |
| No. of Simultaneous Users | Up to 14 users<br>(Depends on network conditions) |
| Secure | FIPS 140-2 level 3 (NXP® EdgeLock® SE050F), Device Certificate GlobalSign® pre-installed,<br>HTTPS, User authentication, Digest authentication, Host authentication,<br>IEEE802.1X, System log, Image transmission log, Brute-force protection, Alteration detection, Signed Firmware |
| SDXC/SDHC/SD Memory Card (Option) | H.265 / H.264 recording :<br>Manual REC / Alarm REC (Pre/Post) / Schedule REC / Backup upon network failure<br>JPEG recording :<br>Manual REC / Alarm REC (Pre/Post) / Backup upon network failure<br>Compatible SDXC/SDHC/SD Memory Card :<br>microSDXC memory card : 64 GB, 128 GB, 256 GB, 512 GB<br>microSDHC memory card : 4 GB, 8 GB, 16 GB, 32 GB<br>microSD memory card : 2 GB |
| Mobile Terminal Compatibility | iPad,<br>iPhone (iOS 8.0 or later),<br>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,<br>HTTP alarm notification Indication on browser, TCP alarm notification output |

| Input/Output | |
|---|---|
| Audio Input *4 | ø3.5 mm stereo mini jack<br>Recommended applicable microphone: Plug-in power type<br>(Sensitivity of microphone:-51dB to -38dB (0 dB=1 V/Pa, 1 kHz))<br>Input impedance: Approx. 2 kΩ (unbalanced)<br>Supply voltage: 4.0V±0.5V<br>For line input : Input level : Approx. –10 dBV |

| | |
|---|---|
| Audio Output *4 | ø3.5 mm stereo mini jack (monaural output)<br>Output impedance : Approx. 600Ω (unbalanced)<br>Output level : −20 dBV |
| External I/O Terminals *4 | ALARM IN 1 (Alarm input 1/ Black & white input/ Auto time adjustment input) (x1)<br>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 | [Power Source]<br>PoE++ (IEEE802.3bt compliant), PoE+ (IEEE802.3at compliant)<br>[Power Consumption]<br>[Ambient operating temperature -50 to 65°C ]<br>PoE++DC54V :850 mA/Approx. 45.9 W (Class 6 device)<br>[Ambient operating temperature -20 to 65°C]<br>PoE+DC54V :470 mA/Approx. 25.4 W(Class 4 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>(PoE++ Class 6)<br>-20 °C to +60 °C * {-4 °F to +140 °F}(PoE+ Class 4)<br>Maximum temperature according to NEMA TS 2 (2.2.7) : 74°C(165°F)<br>* 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:φ167mm × 205 mm (H){φ6-9/16 inches × 8-1/16 inches (H)}<br>Dome radius SR 77.5 mm {SR 3-1/16 inches}<br>(excluding an attachment for the conduit portion and protruding parts) |
| Mass (approx.) | Approx. 3 kg (without attachment) |
| Finish | Main body :<br>Aluminum die cast, i-PRO white<br>Outer fixing screws : Stainless steel (Corrosion-resistant treatment)<br>Dome cover: Polycarbonate resin, Clear |
| 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.
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 t ademark of ONVIF, Inc.
– All other t ademarks identified herein are the property of their respective owners

©i-PRO Co., Ltd All rights reserved / July 2023

# 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-QWL502-W
Mount Bracket

WV-QWL501-W
Mount Bracket

WV-QSR506M1-W
Mount Bracket

WV-QSR506M-W
Mount Bracket

WV-QSR506F1-W
Mount Bracket

WV-QSR506F-W
Mount Bracket

WV-QSR506-W
Mount Bracket

WV-QPL500-W
Mount Bracket

WV-QJB505-W
Base Bracket

WV-QEM505-W
Ceiling Mount Bracket

WV-QDC508C
Dome Cover

WV-QCN500-W
Mount Bracket

WV-QCL501-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-QDC508G
Dome Cover

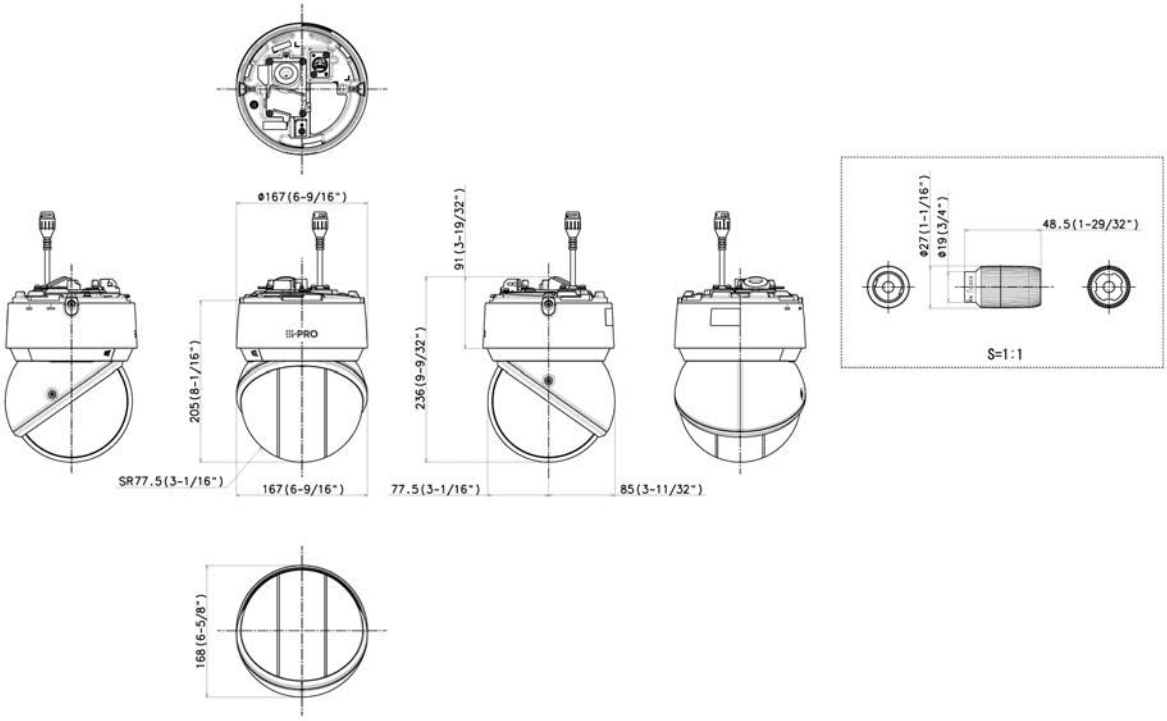
WV-QDC508CN
Dome Cover

WV-PM500
Compact microphone unit

WJ-PU201P
PoE Injector

WJ-PU201/G
PoE Injector

# APPEARANCE




| | 投影面積/Projected area |
|---|---|
| 正面図/Front-view | 0.029($m^2$) |
| 側面図/Side-view | 0.029($m^2$) |

Mass : Approx. 3 kg [6.62 lbs]

Unit:mm