

# WV-X15302-Z1L

2MP AI Outdoor IR Bullet LPR Camera (10x zoom)

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- 2MP Bullet camera
  - Up to 9 Edge AI analytic apps
  - 10x optical zoom
  - Built-in IR LED (250m/820ft)
  - Embedded LPF (Long Pass Filter)
  - Optimized for license plate recognition
  - IP66, IP67, IK10 certified
  - Built-in FIPS 140-2 Level 3 Compliant SecureElement (EdgeLock® SE050F NXP® Semiconductors)
  - NDAA Compliant
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# 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>0.0001 lx (50IRE, F1.6, 16/30s, AGC:11)*<br>BW :<br>0 lx (50IRE, F1.6, 1/30s, AGC:11, IR LED: On)<br>*Converted value  |
| White Balance                                   | ATW1/ ATW2/ AWC  |
| Shutter Speed                                   | [60 fps mode] 1/60 Fix to 1/10000 Fix<br>[30 fps mode] 1/30 Fix to 1/10000 Fix<br>[50 fps mode] 1/50 Fix to 1/10000 Fix<br>[25 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 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 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(IR Light Off)/ On(IR Light On)/ Auto1(IR Light Off)/ Auto2(IR Light On)/ Auto4(LPR)  |
| IR LED Light                                    | High/Middle/Low/Off<br>Maximum irradiation distance:<br>When using PoE++<br>250 m {Approx. 820 ft} (30IRE)*<br>180 m {Approx. 591 ft} (50IRE)<br><br>When using PoE+<br>170 m {Approx. 557 ft} (30IRE)*<br>120 m {Approx. 394 ft} (50IRE)<br><br>When using DC12V<br>120 m {Approx. 394 ft} (30IRE)*<br>85 m {Approx. 279 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 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<br><br>For details:<br><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><br>3rd party applications are also available.<br><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> |
| Max. Number of Applications | 9  |
| Privacy Zone                | On/Off, Up to 8 zones available<br>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)<br>Available only in the 30/25 fps mode  |
| Camera Title (OSD)          | On/Off<br>Up to 40 characters, Up to 2 lines (alphanumeric characters, marks)  |

### License Plate Recognition \*2

|                                     |  |
|-------------------------------------|--|
| Vehicle Speed (Daytime/Nighttime)   | Up to 130 km/h {81 mph} *<br>(Distance : 30 m {98 ft})<br>*For nighttime, when using PoE++   |
| Detection Range (Daytime/Nighttime) | 20 m to 55 m {66 ft to 180 ft}<br>(Vehicle speed : Stopped)<br>*For nighttime, when using PoE++  |
| Installation                        | [Height]<br>Up to 10 m {33 ft}<br>[Angle]<br>Max. Vertical Angle : 30°<br>Max. Horizontal Angle : 25°<br>Max. Roll Angle : 25°<br>[Horizontal off set from road]<br>Up to 10 m {33 ft} |

### Lens

|                           |   |
|---------------------------|---|
| Optical Zoom              | 10x (Motorized zoom / Motorized focus)  |
| Digital (electronic) Zoom | max 160x  |
| Focal Length              | 4.7 mm – 47 mm {3/16 inches – 1-27/32 inches}   |
| Angular Field of View     | [16:9 mode]<br>Horizontal: 6.6° (TELE) – 62° (WIDE)<br>Vertical: 3.7° (TELE) – 37° (WIDE)<br>[4:3 mode]<br>Horizontal: 5.0° (TELE) – 48° (WIDE)<br>Vertical: 3.7° (TELE) – 37° (WIDE)   |
| Adjusting Angle           | Ceiling mounting<br>Horizontal : ±180 ° (PAN rotation part)<br>Vertical : 0 ° to 100 ° (TILT rotation part)<br>Yaw : -240 ° to +100 ° (YAW rotation part)<br>Wall mounting<br>Horizontal : ±100 ° (TILT rotation part)*<br>Vertical : ±100 ° (TILT rotation part)*<br>Yaw : -240 ° to +100 ° (YAW rotation part)<br>* You can change between horizontal and vertical angels by adjusting the PAN rotation part. |
| Maximum Aperture Ratio    | 1:1.6 (WIDE) – 1:3.0 (TELE)   |
| Focus Range               | 1.5 m {59-1/16 inches} – ∞  |
| Aperture Range            | F1.6 – Close  |

### DORI

|                       |   |
|-----------------------|---|
| Detect (25ppm / 8ppf) | 63.7 m {208.8 ft} (WIDE) 666 m {2185 ft} (TELE) |
|-----------------------|---|

|                                    |   |
|------------------------------------|---|
| Observe (62.5ppm / 19ppf)          | 25.5 m {83.5 ft} (WIDE) 266.4 m {874 ft} (TELE)   |
| Recognize (125ppm / 38ppf)         | 12.7 m {41.8 ft} (WIDE) 133.2 m {437 ft} (TELE)   |
| Identify (250ppm / 76ppf)          | 6.4 m {20.9 ft} (WIDE) 66.6 m {218.5 ft} (TELE)   |
| <b>System on Chip</b>              |   |
| System on Chip (SoC)               | Ambarella CV52  |
| <b>Preset Positions</b>            |   |
| 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  |
| <b>Browser GUI</b>                 |   |
| GUI / Setup Menu Language          | English, Italian, French, German, Spanish, Portuguese, Russian, Chinese, Japanese   |
| Browser *3                         | Microsoft Edge, Firefox, Google Chrome  |
| <b>Network</b>                     |   |
| Network IF                         | 10BASE-T/100BASE-TX, RJ45 connector   |
| Resolution                         | [16:9mode(60fps mode)][16:9mode(50fps mode)]<br>1920x1080/1280x720/640x360/320x180<br>[16:9mode(30fps mode)][16:9mode(25fps mode)]<br>1920x1080/1280x720/640x360/320x180<br>[4:3mode(60fps mode)][4:3mode(50fps mode)]<br>2048x1536*/1280x960/640x480/320x240<br>[4:3mode(30fps mode)][4:3mode(25fps mode)]<br>2048x1536*/1280x960/640x480/320x240<br>*By super resolution techniques |
| 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) control]<br>Off/ Low (Variable GOP 1s-8s)/ Mid (Variable GOP 4s-16s)/Frame rate control (Variable GOP 4s-16s with frame rate control)<br>*Frame rate control are only available with H.265.<br>[Smart VIQS]<br>On(High)/On(Low)/Off<br>[Smart P-picture control]<br>On/Off  |
| Audio Compression Method *4        | 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 / 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<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   |
| 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, Secure boot, Signed firmware  |
| SDXC/SDHC/SD Memory Card (Option)  | 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 / 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 *5            | <p>ø3.5 mm stereo mini jack</p> <p>For microphone input:</p> <p>Recommended applicable microphone: Plug-in power type<br/>(Sensitivity of microphone: -51 dB to -38 dB (0 dB=1 V/Pa, 1 kHz))<br/>Input impedance: Approx. 2 kΩ (unbalanced)<br/>Supply voltage: 2.5 V ±0.5 V</p> <p>For line input:</p> <p>Input level: Approx. -10 dBV</p> |
| Audio Output *5           | <p>ø3.5 mm stereo mini jack (Audio output is monaural.)</p> <p>Output impedance: Approx. 600 Ω (unbalanced)</p> <p>Output level: -20 dBV</p>  |
| External I/O Terminals *5 | <p>ALARM IN1<br/>(Alarm input 1/ Black &amp; white input/ Auto time adjustment input) (x1)</p> <p>ALARM IN2 (Alarm input 2/ ALARM OUT) (x1)</p> <p>ALARM IN3 (Alarm input 3/ AUX OUT) (x1)</p>  |
| Monitor Output            | <p>Yes (for adjustment)</p> <p>Pin jack, NTSC or PAL signal can be output from camera</p>   |

### 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 *5 | <p>[Power Source]</p> <p>DC12V</p> <p>PoE+(IEEE802.3at compliant)</p> <p>PoE++(IEEE802.3bt compliant)</p> <p>[Power Consumption]</p> <p>DC12V : 1.3A / Approx. 15.6 W</p> <p>PoE+ DC 54 V : 460 mA / Approx. 24.8 W (Class 4 device)</p> <p>PoE++ DC 54 V : 600 mA / Approx. 32.4 W (Class 5 device)</p>                                      |
| Ambient Operating Temperature     | <p>-40 °C to +60 °C {-40 °F to +140 °F}(PoE++, PoE+)</p> <p>(Power On range: -30 °C to +60 °C {-22 °F to +140 °F})</p> <p>* When using with the IR LED light lit, the upper limit of the operating temperature range is +50 °C {+122 °F}.</p> <p>*When using DC12V, the lower limit of the operating temperature range is -30°C {-22 °F}.</p> |
| Ambient Operating Humidity        | 10 % to 100 % (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                        | <p>When the sunshade is in its initial position</p> <p>Φ168 mm x 403 mm (D) {Φ6-5/8 inches x 15-7/8 inches(D)}</p> <p>When moving the sunshade forward</p> <p>Φ168 mm x 456 mm (D) {Φ6-5/8 inches x 17-15/16 inches(D)}</p>   |
| Mass (approx.)                    | Approx. 3.6kg {8.0 lbs} (Including accessories)   |

|              |   |
|--------------|---|
| Finish       | Main body: Aluminum die cast, i-PRO white<br>Outer fixing screws: Stainless steel (Corrosion-resistant treatment)<br>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 Performance when using Vaxtor LPR app (VaxALPR). Recognition performance could be affected by the installation environment.

\*3 For information on the operation verification of the web browsers, refer to our support website <Control No.: C0132>.

\*4 When recording audio on an SD memory card, only use AAC-LC (Advanced Audio Coding - Low Complexity) .

\*5 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 \(i-pro.com\)](http://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

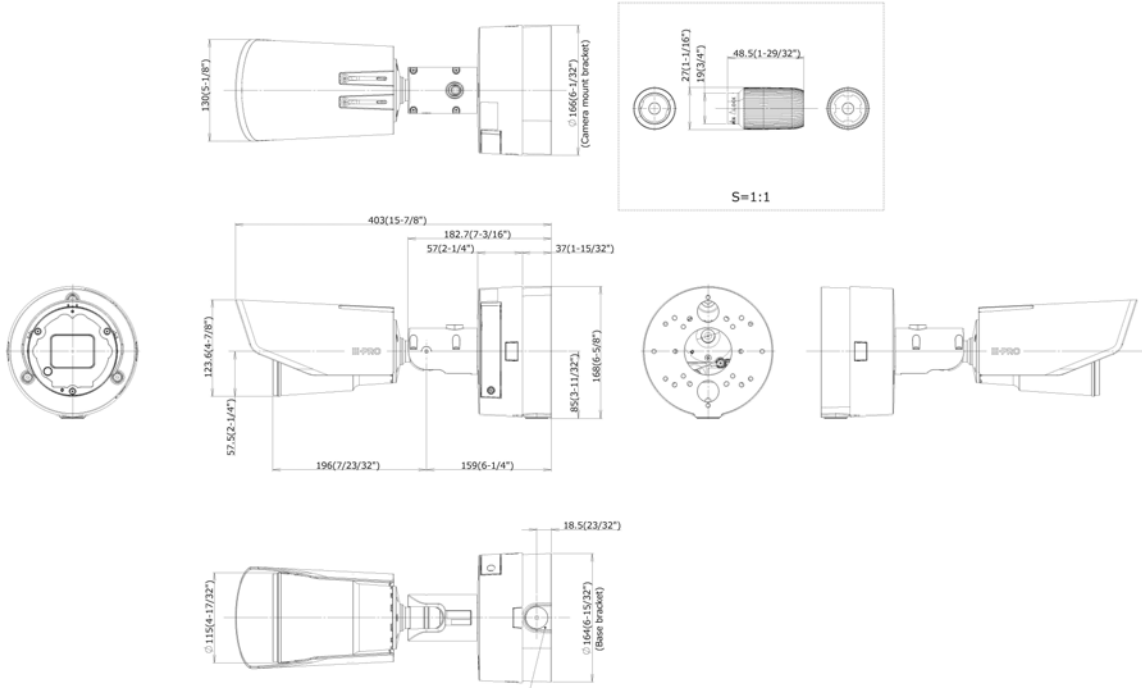


WJ-PU201P  
PoE Injector



WJ-PU201/G  
PoE Injector

# APPEARANCE



接続管用φ32  
 Cap for the female thread for the conduit  
 JIS C 8305(電線管φ32)にCTG22. 8.7は  
 JIS B 0202(管用平行径φ32)にCT14.4です。  
 The female thread for conduit is compliant with  
 ANSI NPSM (parallel pipe threads) 3/4 or  
 ISO 228-1 (parallel pipe threads) G3/4.

| 投影面積 / Projected area            |                        |
|----------------------------------|------------------------|
| 平面図 / Top-view                   | 0.045(m <sup>2</sup> ) |
| 側面図 / Side-view                  | 0.041(m <sup>2</sup> ) |
| Mass : Approx. 3.6 kg (7.95 lbs) |                        |

Unit:mm