

# WV-U21550-V3L

5MP AI Indoor IR Dome Camera (3.2x zoom)

## U-series dome camera with edge AI image analytics

---



- 5MP Indoor dome camera
- AI-based image analytics using AI-VMD app
- Audio recording
- 3.2x optical zoom
- Built-in IR LED (28m/92ft)
- IP42 compliant
- Built-in FIPS 140-3 Level 3 Certified SecureElement (EdgeLock® SE052F NXP® Semiconductors)
- 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 : 0.07 lx (30IRE, F1.6, 1/30 s, AGC: 11)* 0.10 lx (50IRE, F1.6, 1/30 s, AGC: 11) 0.006 lx (50IRE, F1.6, 16/30 s, AGC: 11)* BW : 0 lx (50IRE, F1.6, 1/30 s, AGC: 11, IR LED: On) 0.04 lx (50IRE, F1.6, 1/30 s, AGC: 11) 0.003 lx (50IRE, F1.6, 16/30 s, AGC: 11)* * Converted value
White Balance	ATW1/ ATW2/ AWC
Shutter Speed	[30 fps/ 15 fps mode] 1/30 Fix to 1/10000 Fix [25 fps/ 12.5 fps mode] 1/25 Fix to 1/10000 Fix
Maximum Shutter	[30 fps/ 15 fps mode] Max. 1/4000 s to Max. 16/30 s [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. 120 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	Back light compensation (BLC) / High light compensation (HLC) / 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) / Auto3(SCC)
IR LED Light	Maximum irradiation distance: 28 m {Approx. 92 ft} (30IRE)* 20 m {Approx. 66 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
Maximum No. of Applications	1 (Non AI app)
Privacy Zone	On/Off (Up to 8 zones available)
VIQS	On/Off (Up to 8 zones available)
Image Rotation	0° (Off) / 90°/ 180° (Upside-down) / 270°

Camera Title (OSD)	On/Off Up to 40 characters, Up to 2 lines (alphanumeric characters, marks)
<b>Lens</b>	
Optical Zoom	3.2x (Motorized zoom / Motorized focus)
Digital (electronic) Zoom	max 12.8x
Focal Length	3.2 mm – 10.2 mm {1/8 inches – 13/32 inches}
Angular Field of View	[16:9 mode] Horizontal: 28° (TELE) – 101° (WIDE) Vertical: 16° (TELE) – 52° (WIDE) [4:3 mode] Horizontal: 28° (TELE) – 102° (WIDE) Vertical: 21° (TELE) – 73° (WIDE)
Adjusting Angle	Horizontal(PAN) angle: -105 ° to +255 ° Vertical(TILT) angle: -30 ° to +85 ° Azimuth(YAW) angle: -100 ° to +100 °
Maximum Aperture Ratio	1:1.6 (WIDE) – 1:3.2 (TELE)
Focus Range	2.0m {78-3/4 inches} – ∞
Aperture Range	F1.6 – close
<b>DORI</b>	
Detect (25ppm / 8ppf)	205.4m {673.7ft} (TELE) 42.2m {138.5ft} (WIDE)
Observe (62.5ppm / 19ppf)	82.1m {269.5ft} (TELE) 16.9m {55.4ft} (WIDE)
Recognize (125ppm / 38ppf)	41.1m {134.7ft} (TELE) 8.4m {27.7ft} (WIDE)
Identify (250ppm / 76ppf)	20.5m {67.4ft} (TELE) 4.2m {13.8ft} (WIDE)
<b>System on Chip</b>	
System on Chip (SoC)	Ambarella CV25M
<b>Browser GUI</b>	
GUI / Setup Menu Language	English, Italian, French, German, Spanish, Portuguese, Russian, Chinese, Japanese
Browser *1	Microsoft Edge, Firefox, Google Chrome
<b>Network</b>	
Network IF	10BASE-T/100BASE-TX, RJ45 connector
Resolution	[16:9mode(30fps mode)] [16:9mode(25fps mode)] 2560x1440/1920x1080/1280x720/640x360/320x180 [4:3mode(30fps mode)] [4:3mode(25fps mode)] 2592x1944/2560x1920/1280x960/640x480/320x240 [4:3mode(15fps mode)] [4:3mode(12.5fps mode)] 2592x1944/2560x1920/1280x960/800x600/640x480/400x300/320x240
H.265/H.264 Transmission Priority/Type	[Transmission priority] 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) / Advanced (Fixed GOP 60 seconds with 1 second 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 *2	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 (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	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

### Input/Output

Audio Input	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	ø3.5 mm stereo mini jack (Audio output is monaural.) Output impedance: Approx. 600 Ω (unbalanced) Output level: -20 dBV
External I/O Terminals	-
Monitor Output	-

### General

Safety	UL (UL62368-1 3Ed), c-UL (CAN/CSA C22.2 NO.62368-1-19), IEC62368-1 3Ed.
EMC	FCC Part15 Subpart B ClassA, ICES-003 Issue 7 ClassA, EN55032 ClassA, EN55035
Power Source / Power Consumption	[Power Source] PoE (IEEE802.3af Compliant) [Power Consumption] PoE DC 48 V : 200 mA / Approx. 9.6 W (Class 0 device)
Ambient Operating Temperature	-10 °C to +50 °C {+14 °F to +122 °F}
Ambient Operating Humidity	10 % to 90 % (no condensation)
Water and Dust Resistance	IP42 Conformity
Dimensions	ø129.5 mm x 102 mm (H) {ø5-3/32 inches x 4-1/32 inches (H)} Dome radius 40 mm {1-9/16 inches}
Mass (approx.)	Approx. 380 g {0.84 lbs}
Finish	Main body: ABS resin, i-PRO white) Dome cover: Acrylic resin, Clear

## NOTES

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

\*2 When recording audio on an SD memory card, only use AAC-LC (Advanced Audio Coding - Low Complexity) .

### 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 / March 2025

## OPTIONAL ACCESSORIES

Select a compatible accessory

[Accessory Selector \(i-pro.com\).](http://Accessory Selector (i-pro.com).)



**WV-QWL500-W**  
Mount Bracket



**WV-QSR100-W**  
Sun Shade



**WV-QPL500-W**  
Mount Bracket



**WV-QJB500-W**  
Mount Bracket



**WV-QEM100-W**  
Mount Bracket



**WV-QCN500-W**  
Mount Bracket



**WV-QCL101-W**  
Mount Bracket



**WV-QCL100-W**  
Mount Bracket



**WV-Q105A**  
Mount Bracket



**WV-QDC101C**  
Dome Cover



**WV-PM500**  
Compact microphone  
unit



**WV-CF5SA**  
Dome Cover



**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

## APPEARANCE

