

# WV-S65501-Z1

5MP 10x Outdoor PTZ Network Camera

## S-series PTZ camera with AI Engine



- 5MP
- 10x optical zoom
- Intelligent Auto (with AI Engine)
- Super Dynamic 132dB
- Color night vision (0.007 to 0.11 lx)
- Durable Pan/Tilt gear mechanism
- IP66, IK10 certified
- Built-in FIPS 140-2 Level 3 Certified SecureElement (EdgeLock® SE050F 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 : 0.11 lx (50IRE, F1.6, 1/30s) Color : 0.007 lx (50IRE, F1.6, 16/30s) BW : 0.06 lx (50IRE, F1.6, 1/30s) BW : 0.004 lx (50IRE, F1.6, 16/30s)
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
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) *When the level is set more than 30, frame rate is limited to 15fps
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 / Auto1 / Auto2 / Auto3 (SCC)
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)
Camera Title (OSD)	On / Off, Up to 40 characters (alphanumeric characters, marks)
Focus Adjustment	Auto focus
Lens	
Optical zoom	10x (Motorized zoom / Motorized Focus)
Extra zoom	Max. 15x (10 to 15x : When resolution is 1280 x 720)

Focal Length	4.7 - 47 mm {3/16 inches - 1-27/32 inches}
Angular Field of View	[16 : 9 mode] Horizontal : 6.2° (TELE) – 58° (WIDE), Vertical : 3.5° (TELE) – 34° (WIDE) [ 4 : 3 mode] Horizontal : 6.2° (TELE) – 58° (WIDE), Vertical : 4.6° (TELE) – 44° (WIDE)
Maximum Aperture Ratio	1 : 1.6 (WIDE) – 1 : 3.0 (TELE)
Focus Range	1.5 m {59-1/16 inches} –∞

## DORI

Detect (25ppm / 8ppf)	Wide: 92.4 m / 110.8 m ( 303 ft / 363.7 ft), Tele: 945.4 m / 1134.5 m (3101.6 ft / 3722 ft)
Observe (62.5ppm / 19ppf)	Wide: 36.9 m / 44.3 m (121.2 ft / 145.5 ft), Tele: 378.2 m / 453.8 m (1240.7 ft / 1488.8 ft)
Recognize (125ppm / 38ppf)	Wide: 18.5 m / 22.2 m ( 60.6 ft / 72.7 ft), Tele: 189.1 m / 226.9 m ( 620.3 ft / 744.4 ft)
Identify (250ppm / 76ppf)	Wide: 9.2 m / 11.1 m ( 30.3 ft / 36.4 ft), Tele: 94.5 m / 113.4 m ( 310.2 ft / 372.2 ft)

## System on Chip (SoC)

System on Chip (SoC)	Ambarella CV22
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## Adjusting Angle

Adjusting Angle	Horizontal : 360° Endless Panning, Vertical : -15° to +195°, Yaw : 0°
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## Pan/tilt

Panning Range	360° Endless Panning
Panning Speed	Manual: Approx. 0.065°/s – 150°/s Preset: Up to approx. 500 °/s (PoE+) Preset: Up to approx. 350 °/s (DC12V, PoE)
Tilting Range	Operational -15 – +195°
Tilting Speed	Manual: Approx. 0.065°/s –150°/s Preset: Up to approx. 500 °/s (PoE+) Preset: Up to approx. 300 °/s (DC12V, 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

## Browser GUI

Camera Control	Brightness, AUX On / Off
Audio	Mic (Line) Input : On / Off Volume adjustment : Low / Middle / High Audio Output : On / Off Volume adjustment : Low / Middle / High
GUI / Setup Menu Language	English, Italian, French, German, Spanish, Portuguese, Russian, Chinese, Japanese
Browser	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)] 3072x1728, 2560x1440, 1920x1080, 1280x720, 640x360, 320x180 [4 : 3 mode (30 fps mode)], [4 : 3 mode (25 fps mode)] 3072x2304, 2560x1920, 1280x960, 800x600, VGA, 400x300, 320x240
H.265/H.264	[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 Coding: Auto VIQS: On/Off
Audio Compression	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, SFTP, MQTT, LLDP 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, SFTP, 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	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	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 k (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 (monaural output) Output impedance : Approx. 600 (unbalanced) Output level : -20 dBV
External I/O Terminals	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	Yes (for adjustment) Φ3.5mm stereo mini jack, NTSC or PAL signal can be output from camera *WV-QCA501A is required

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
Power Source and Power Consumption	DC12 V, PoE (IEEE802.3af), PoE+ (IEEE802.3at) When using at TILT rotation speed 300dps DC12 V : 1.3 A / approx. 15.4 W PoE DC 48 V : 270 mA / approx. 12.95 W (Class 0 device) When using at TILT rotation speed 500dps PoE+ DC 54 V : 350 mA / approx. 18.9 W (Class 4 device)

Ambient Operating Temperature	-30 °C to +55 °C (-22 °F to +131 °F) (Power On range : -20 °C to +55 °C {-4 °F to +131 °F}) Maximum temperature according to NEMA TS2(2.2.7) : 74 °C(165 °F)
Ambient Operating Humidity	10 to 100 % (no condensation)
Anti-Condensation System	Temish element
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}
Other standard support	NEMA TS2(2.2.7-2.2.9)
Dimensions	ø165 mm x 139 mm (H) {ø6-1/2 inches x 5-15/32 inches (H)}
Mass (Approx.)	Approx. 1.6 kg {3.53 lbs.}
Finish	Main body : Aluminum die cast, Black polycarbonate resin, i-PRO white Outer fixing screws : Stainless steel (Corrosion-resistant treatment) Dome section : Polycarbonate resin, Clear

## NOTES

### 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-QWL501-W  
Mount Bracket



WV-QWL500-W  
Mount Bracket



WV-QSR501M1-W  
Mount Bracket



WV-QSR501M-W  
Mount Bracket



WV-QSR501F1-W  
Mount Bracket



WV-QSR501F-W  
Mount Bracket



WV-QSR501-W  
Mount Bracket



WV-QPL500-W  
Mount Bracket



WV-QJB504-W  
Base Bracket



WV-QJB501-W  
Base Bracket



WV-QJB500-W  
Mount Bracket



WV-QEM503-W  
Ceiling Mount Bracket



WV-QCN500-W  
Mount Bracket



WV-QCL501-W  
Mount Bracket



WV-QCL101-W  
Mount Bracket



WV-QCL100-W  
Mount Bracket



WV-QAT500-W  
Attachment pipe



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-QDC502G  
Dome Cover



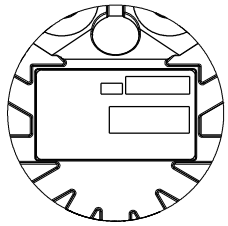
WV-QDC502C  
Dome Cover



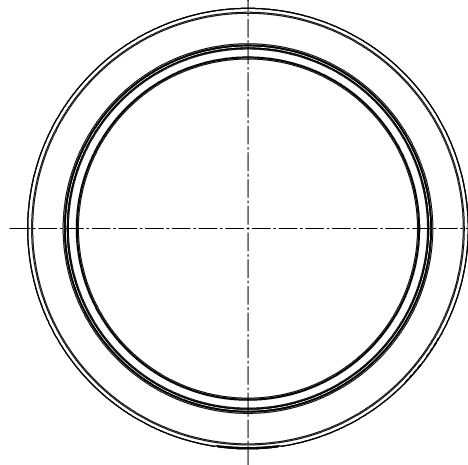
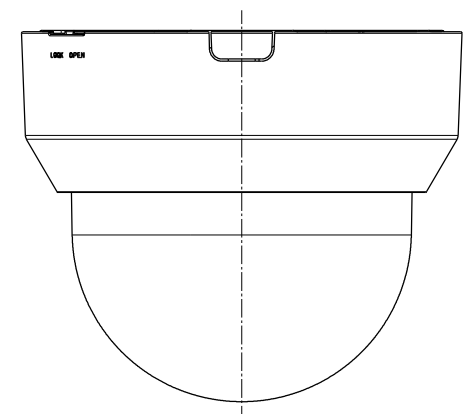
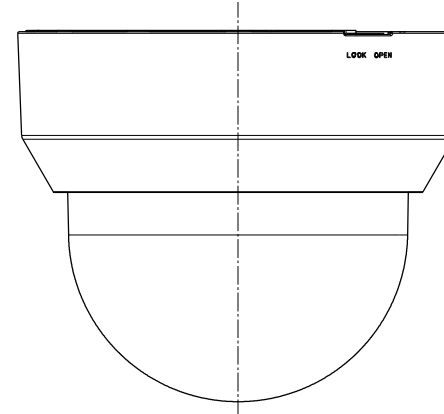
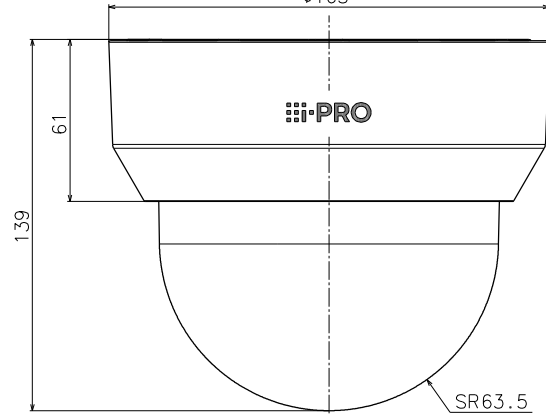
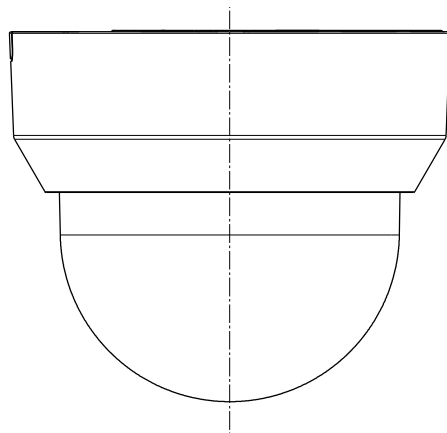
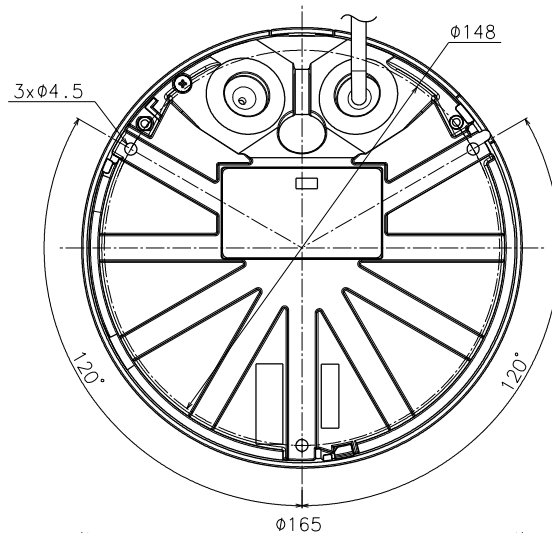
WV-QCA501A  
I/O Cable



WV-PM500  
Compact microphone  
unit for surveillance  
cameras



Object model: WV-B65301-Z1



Model number	Dome type	Coating	
		Decorative cover	Lower cover
WV-U65301-Z1	Clear dome	i-PRO white	Black
WV-U65301-Z1G	Smoke dome		
WV-B65301-Z1	Clear dome	Black	Metallic black (Heavy salt damage resistance)
WV-S65301-Z1	Clear dome		
WV-S65301-Z1G	Smoke dome	i-PRO white (Heavy salt damage resistance)	Black
WV-S65301-Z1J	Clear dome		
WV-S65301-Z1-1	Clear dome	i-PRO white (Heavy salt damage resistance)	Black
WV-S65301-Z1-IJ			
WV-S65301-Z1S	Clear dome	i-PRO white	Black
WV-S65301-Z1SJ			
WV-S65501-Z1	Clear dome	i-PRO white	Black
WV-S65501-Z1G	Smoke dome		
WV-S65501-Z1J	Clear dome	i-PRO white	Black
WV-U65301-Z1V	Clear dome		
WV-U65301-Z1GV	Smoke dome	i-PRO white	Black
WV-S65301-Z1V	Clear dome		

	投影面積/Projected area
側面図/Side-view	0.018 (m <sup>2</sup> )

Mass : Approx. 1.3 kg {2.87 lbs}