**::i·PRO** 

# The new Standard by i-PRO video surveillance

# 2MP (1080p) Vandal Resistant Indoor Dome Network Camera with AI engine

The S-Series network cameras offer a new standard in i-PRO video surveillance with drastically improved image quality with advanced technology. It comes with pre-installed Al analytics applications that detects people and vehicles with accuracy, allowing you to easily start state-of-the-art video surveillance.

The camera can be configured while keeping the unit in the box with the acclaimed "Easy Kitting Packaging", making the installation process smooth and easy.

The black color is easily fits into an installation space.

# **Key Features**

- Drastically improved image quality by advanced technology and AI intelligent Auto
- Pre-installed Al analytics applications to detect human and vehicles. Ready for installing 3rd party applications
- Detecting suspicious sound like Gunshot, Yell, Vehicle horn, and Glass break, with external microphones
- Easy Kitting Package enabling installers to configure cameras easily while keeping the unit in the box
- i-PRO Configuration Tool "iCT" can set up 1024 cameras at the same time. (iCT page: https://i-pro.com/global/en/surveillance/tools/ict)

# **Key i-PRO Spec.**

- 2MP (1080p)
- Intelligent Auto (with Al Engine)
- Super Dynamic 144dB
- Color night vision (0.007 to 0.009 lx)
- Smart Coding (with AI Engine)
- Built-in IR LED
- Vandal Resistant
- ONVIF® Profile G / M / S / T \*ONVIF is a trademark of ONVIF, Inc.

# **Industry examples**

- Airport (Passport control / Security checkpoint / Ticket counter)
- Retail / Bank / Education / Hospital / Building



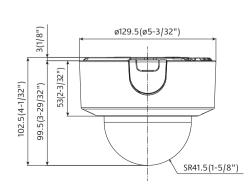


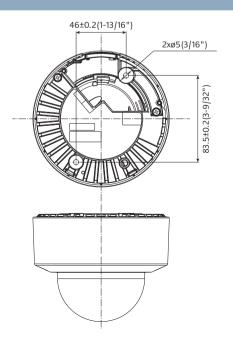
# Specifications

Camera	Image Sensor	Approx. 1/2.8 type CMOS image sensor		
	Minimum Illumination	Color: 0.007 lx (30IRE, F1.3, 1/30s) *1		
	William manimation	Color : 0.007 lx (30IRE, F1.3, 1/30s)       Color : 0.009 lx (50IRE, F1.3, 1/30s)		
		BW: 0.006 lx (50IRE, F1.3, 1/30s)		
	14d 11 D 1	BW: 0 lx(50IRE, F1.3,1/30s with IR LED)		
	White Balance	ATW1 / ATW2 / AWC		
	Shutter Speed	[60 fps Mode] 1/60 Fix to 1/10000 Fix, [30fps/15fps mode] 1/30 Fix to 1/10000 Fix		
		[50 fps Mode] 1/50 Fix to 1/10000 Fix, [25fps/12.5fps mode] 1/25 Fix to 1/10000 F		
	Intelligent Auto	On / Off		
	Super Dynamic*2	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 /	BLC (Back light compensation) / HLC (High light compensation) /		
	High light compensation	Off (only when Super dynamic / Intelligent Auto : Off)		
	Fog compensation	On / Off (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,		
	IN LED LIGHT	Maximum irradiation distance : 70 m {Approx. 230 ft} (30IRE) *1		
	D: 21 IN 2 D I 12	50 m {Approx. 164 ft} (50IRE)		
	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		
	Al Sound Classification	Gunshot, Yell, Vehicle horn, Glass break		
	Al Analytics	Yes		
	Privacy Zone	On / Off, Up to 8 zones available		
	VIQS	On / Off, Up to 8 zones available		
	Image rotation*3	0°/90°/180°/270°		
	Camera Title (OSD)	On / Off, Up to 40 characters (alphanumeric characters, marks)		
	Focus Adjustment	Auto focus / Manual		
Lens	Optical zoom	3.1 x (Motorized zoom / Motorized Focus)		
Lens	Extra zoom			
	Focal length	3.1x - 9.3x (when resolution is 640 x 360) 2.9 - 9 mm {1/8 inches - 11/32 inches}		
	Angular Field of View	[16 : 9 mode] Horizontal : 36° (TELE) – 114° (WIDE), Vertical : 20° (TELE) – 60° (WIDE)		
	Aligulal Field of View			
		[ 4:3 mode] Horizontal: 27° (TELE) – 82° (WIDE), Vertical: 20° (TELE) – 60° (WIDE)		
	Maximum Aperture Ratio	1: 1.3 (WIDE) - 1: 2.5 (TELE)		
	Focus Range	0.3 m {11-13/16 inches} - ∞		
DORI	Detect (25ppm / 8ppf)	Wide: 24.9 m / 81.8 ft, Tele: 118.2 m / 387.7 ft		
	Observe (62.5ppm / 19ppf)	Wide: 10.0 m / 32.7 ft, Tele: 47.3 m / 155.1 ft		
	Recognize (125ppm / 38ppf)	Wide: 5.0 m / 16.4 ft, Tele: 23.6 m / 77.5 ft		
	Identify (250ppm / 76ppf)	Wide: 2.5 m / 8.2 ft, Tele: 11.8 m / 38.8 ft		
System o	n Chip (SoC)	Ambarella CV25M		
Adjusting	g Angle	Horizontal: -240 to +120°, Vertical: -30 to +85°, Yaw: ±100°		
Browser	Camera Control	Brightness, AUX On / Off		
GUI	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 *4	Microsoft Edge, Firefox, Google Chrome		
Network		10Base-T / 100Base-TX, RJ45 connector		
Network	Resolution			
		[16:9 mode (60 fps mode)]*2, [16:9 mode (30 fps mode)],		
	H.265/ H.264/ JPEG (MJPEG)	[16:9 mode (50 fps mode)]*2, [16:9 mode (25 fps mode)]		
		1920x1080, 1280x720, 640x360, 320x180		
		[4:3 mode (30 fps mode)], [4:3 mode (25 fps mode)]		
		1280x960, VGA, QVGA		
		[4:3 mode (15 fps mode)], [4:3 mode (12.5 fps mode)]		
		2048x1536*5 , 1280x960, VGA, QVGA		
		2040x1550 , 1200x500, vari, Qvari		
	H.265/ Transmission Mode	Constant bit rate / VBR / Frame rate / Best effort		
	'	Constant bit rate / VBR / Frame rate / Best effort		
	H.264*6 Transmission Type	Constant bit rate   VBR   Frame rate   Best effort Unicast port (AUTO)   Unicast port (MANUAL)   Multicast		
	H.264*6 Transmission Type JPEG Image Quality	Constant bit rate   VBR   Frame rate   Best effort Unicast port (AUTO)   Unicast port (MANUAL)   Multicast 10 steps		
	H.264*6 Transmission Type	Constant bit rate   VBR   Frame rate   Best effort Unicast port (AUTO)   Unicast port (MANUAL)   Multicast 10 steps GOP (Group of pictures control):		
	H.264*6 Transmission Type JPEG Image Quality	Constant bit rate   VBR   Frame rate   Best effort Unicast port (AUTO)   Unicast port (MANUAL)   Multicast 10 steps GOP (Group of pictures control): Off  Low (Variable GOP 1s-8s)   Mid (Variable GOP 4s-16s)		
	H.264*6 Transmission Type JPEG Image Quality	Constant bit rate   VBR   Frame rate   Best effort Unicast port (AUTO)   Unicast port (MANUAL)   Multicast 10 steps GOP (Group of pictures control): Off  Low (Variable GOP 1s-8s)   Mid (Variable GOP 4s-16s)   Advanced (Fixed GOP 60s w/1s key-frame)		
	H.264*6 Transmission Type JPEG Image Quality	Constant bit rate   VBR   Frame rate   Best effort Unicast port (AUTO)   Unicast port (MANUAL)   Multicast 10 steps  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)		
	H.264*6 Transmission Type JPEG Image Quality	Constant bit rate   VBR   Frame rate   Best effort Unicast port (AUTO)   Unicast port (MANUAL)   Multicast 10 steps GOP (Group of pictures control): Off  Low (Variable GOP 1s-8s)   Mid (Variable GOP 4s-16s)   Advanced (Fixed GOP 60s w/1s key-frame)		

Network	Audio Compression	G.726 (ADPCM) : 16 kbps / 32 kbps		
		G.711 : 64 kbps		
		AAC-LC*7 : 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**, LLDP**  Up to 14 users (Depends on network conditions)  H.265 / H.264 recording:		
	No. of Simultaneous Users			
	SDXC/SDHC/SD			
	Memory Card	Manual REC / Alarm REC (Pre/Post) / Schedule REC / Backup upon network failure JPEG recording: Manual REC / Alarm REC (Pre/Post) / Backup upon network failure		
		Available 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, 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/	Monitor Output	VBS: 1.0 V [p-p] / 75 Ω, composite, Pin jack		
Output	(for adjustment)	An NTSC or PAL signal can be outputted from camera		
	Audio input	ø3.5 mm stereo mini jack		
	For microphone input :	Recommended applicable microphone : Plug-in power type		
		(Sensitivity of microphone : -48 dB±3 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 (monaural output)		
		Output impedance : Approx. 600 Ω (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)		
General	Safety	UL (UL62368-1), c-UL (CSA C22.2 No.62368-1), CE, IEC62368-1		
	EMC	FCC (Part15 ClassA), ICES-003 ClassA, EN55032 ClassB, EN55035		
	Power Source and	DC power supply : DC12 V 720 mA, Approx. 8.6 W		
	Power Consumption	PoE (IEEE802.3af compliant) Device : DC48 V 180 mA, Approx. 8.7 W (Class 0 device)		
	Ambient Operating	-10 °C to +50 °C (14 °F to 122 °F)		
	Temperature			
	Shock Resistance	IK10 (IEC 62262)		
	Ambient Operating Humidity	10 to 90 % (no condensation)		
	Dimensions	ø129.5 mm x 102.5 mm (H) {ø5-3/32 inches x 4-1/32 inches (H)}		
		Dome radius 41.5 mm {1-5/8 inches}		
	Mass (approx.)	Dome radius 41.5 mm {1-5/8 inches} 570 g {1.26 lbs.}		

# Appearance





Unit: mm (inches)

<sup>\*1</sup> Converted value

\*2 When 60 fps or 50 fps is selected, the Super Dynamic function is automatically set to off.

\*3 When the 60 fps mode, 50 fps mode, 15 fps mode or 12.5 fps mode is used, the "90°" and "270" settings are not available.

When the 320x180 resolution is used, the "90°" and "270°" settings are not available.

\*4 For information on the operation verification of the supported web browsers, refer to our support website <Control No.: C0132>.

\*5 Used by super resolution techniques.

\*6 Transmission for 4 streams can be individually set.

\*7 When recording audio on an microSD memory card, only use AAC-LC (Advanced Audio Coding - Low Complexity).

# Al Analytics applications

https://i-pro.com/global/en/surveillance/products/i-pro-ai-application

## AI Video Motion Detection (AI-VMD)

Advanced video analysis technology detects objects (faces, people, cars, motorcycles) in a specified area. (Intruder Detection, Loitering Detection, Direction Detection, Cross Line Detection)

### **Al Privacy Guard**

To protect privacy and portrait rights, it is possible to automatically apply a mosaic the entire face and figure of a person photographed by the camera.

#### **AI Face Detection**

Detects faces with high precision even in low-light, backlit, and mask-wearing environments.

### Al People Detection

Extract the characteristics of human face / clothing and classify them into meaningful categories such as gender, age, and clothing color.

 $\label{lem:complex} \begin{tabular}{ll} 3rd party applications are also available. \\ https://i-pro.com/global/en/surveillance/i-pro-application-platform/application-list application-list application-platform/application-list application-platform/application-list application-platform/application-list application-platform/application-list application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/application-platform/appl$ 

## **Al Vehicle Detection**

Extract vehicle characteristics and classify them into meaningful categories such as type and color.

## **AI Non mask Detection**

Deep-learning and proprietary image processing technologies recognize mask and detect people who are not wearing them.

#### **Al Occupancy Detection**

Detecting the congestion via network camera with AI engine enables that information to be used direct visitors in advance or help store staff work more efficiently.

# **Optional Accessories**

#### Mount Bracket / Other

	Modiff Blacket / Other								
	W	ALL	POLE	CORNER					
	1	2	1	1					
combination	Wall Mount Bracket WV-QWL500-B (Black)	Wall Mount Bracket WV-QWL501-B (Black)	Pole Mount Bracket WV-QPL500-B (Black)	Corner Mount Bracket PACA4W (i-PRO white)					
	Adapter Box WV-QJB500-W (i-PRO white)	Mount Bracket WV-QSR501-B (Black)	Wall Mount Bracket WV-QWL500-B(Black) (+ WV-QJB500-W) +	Wall Mount Bracket WV-QWL500-B(Black) (+ WV-QJB500-W)  +					

	HAN	GING 2	CEILING 1 2		
combination	Ceiling Mount Bracket WV-QCL501-W (i-PRO white)	Ceiling Mount Bracket WV-QCL101-B *1 (Black)	Ceiling Mount Bracket WV-Q105A	Ceiling Mount Bracket (Embedded) WV-QEM100-B (Black)	
сош	Mount Bracket WV-QSR501-B (Black)	This bracket requires 1 ½" NPT pipe.			

\*1: It's possible to be used on the camera side and ceiling side. If used on both side, 2pieces are required.

### Dome Cover



### Trademarks and registered trademarks

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- Android is a trademark of Google LLC.
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### 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.

