::i-PRO

WV-S3512LM

HD In-vehicle Compact Dome Network Camera

The WV-S3512LM is a compact & simple design multifunction camera that achieves high visibility even under extreme conditions and can be placed in a small space without damaging the landscape. Intelligent Auto (iA) allows the camera to automatically adjust the key settings in real-time depending on the scenery and movement, reducing distortion such as motion blur and moving objects. New industry-leading 134dB dynamic range delivers balanced scene exposure in dynamic and extreme-backlit lighting environments. In addition, color night vision provides outstanding low-light performance with accurate color rendition and saturation from i-Pro's 1/3" sensor, rivaling the performance of costlier 1/2" sensor cameras in the market. By adopting H.265 Smart Coding technology, intelligently reduces bandwidth efficiency of up to 95%* more than conventional H.264 for longer recording and less storage. Cameras out-of-the-box, use an encryption module standardized by FIPS Publication 140-2 for secure video streaming.
*Value in Advanced mode with Smart Facial Coding depends on scene.

Extreme image quality allows evidence to be captured even under challenging conditions

- Auto Shutter speed control for fast moving vehicles with Intelligent Auto
- Sharp and clear images of a walking person day & night
- Outstanding low light performance in true color with low noise for night time applications
- Super Dynamic 134dB for backlit situations involving headlights and shadows on night streets
- Built-in IR LED to produce a clear monochrome image in 0 lux conditions with 15 m (49 feet) irradiation distance
- Wide area surveillance even in compact design. moreover, corridor mode to survey vertically long area.
- Environmental durability : IP66, IK10, EN50155

Extreme bandwidth compression with new H.265 Smart Coding

- Longer recording and less storage compared to any H.264 based compression techniques
- New self-learning ROI* encoding (Auto VIQS) detects movement within the image and compresses the areas with little motion in order to reduce transmitted data while maintaining the quality of the image.
- New "Smart Facial Coding" adds more bandwidth reduction for ID camera applications mainly capturing faces
    *Region of Interest

Extreme Data Security

- Full encryption microSDXC/microSDHC/microSD card edge recording to keep your data safe
- FIPS140-2 CAVP compliant *Using encryption module standardized by FIPS publication 140-2
- Full end-to-end system encryption with supported VMS and devices to protect from IP snooping/spoofing and detect data alteration

Key Features

- HD 720p up to 60fps
- iA (intelligent Auto)
- Extreme Super Dynamic 134dB
- Color night vision (0.0013 to 0.02 lx)
- H.265 Smart Coding
- Built-in IR LED
- Corridor mode
    (90 degrees or 270 degrees in image rotation)
- i-VMD License Bundled
- ONVIF® Profile G / S / T *ONVIF is a trademark of ONVIF, Inc.

Industry examples

- Train
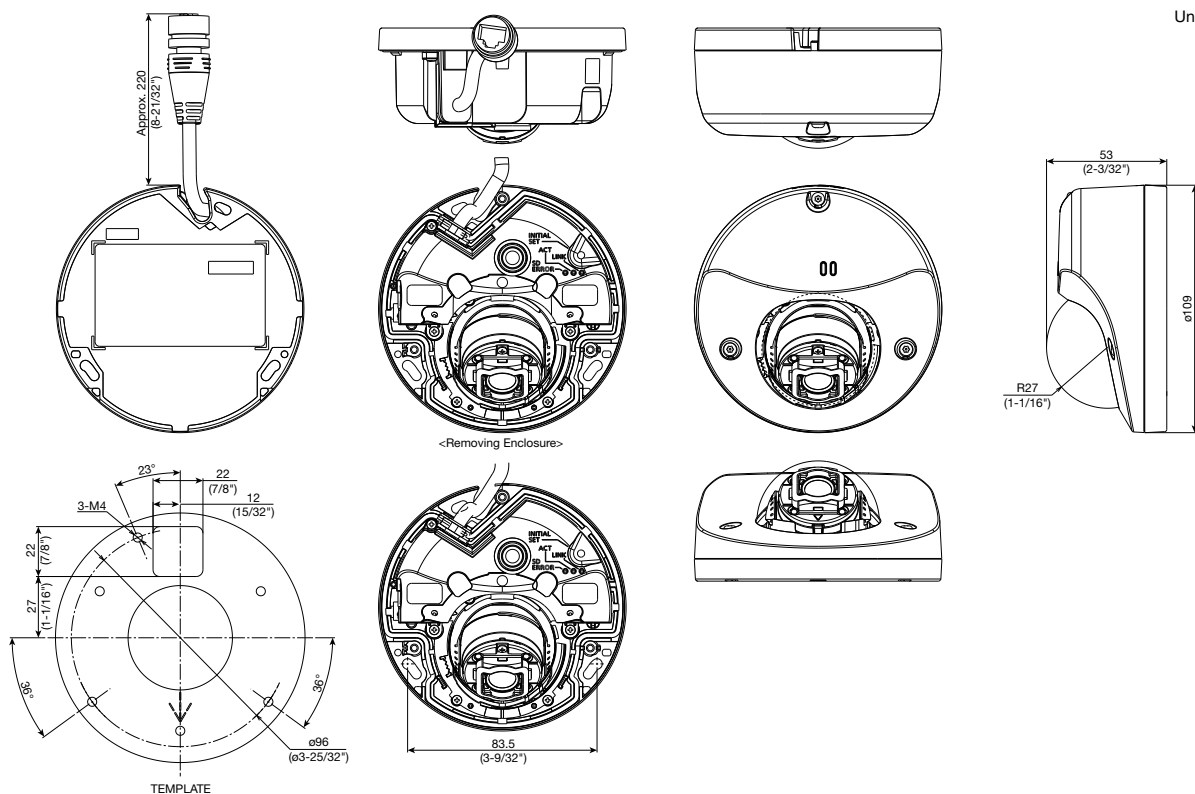- Light rail transit
- Subway car
- Bus
- Railroad Crossing

Specifications

Camera	Image Sensor	Approx. 1/3 type CMOS image sensor
	Minimum Illumination	Color : 0.02 lx, BW : 0.01 lx
		(F2.3, Maximum shutter : Off (1/30s), AGC : 11)
		BW : 0 lx
		(F2.3, Maximum shutter : Off (1/30 s), AGC : 11, when the IR LED is lit)
		Color : 0.0013 lx, BW : 0.0007 lx
		(F2.3, Maximum shutter : max. 16/30s, AGC : 11) *1
	White Balance	AWC (2,000 - 10,000 K), ATW1 (2,700 - 6,000 K), ATW2 (2,000 - 6,000 K)
	Maximum shutter	Max. 1/10000 s to Max. 16/30 s
	Intelligent Auto	On / Off
	Super Dynamic*2	On / Off, The level can be set in the range of 0 to 31.
	Dynamic Range	Max.134 dB typ. (Super Dynamic : On)
	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 (only when Super dynamic / Intelligent Auto : Off)
	Fog compensation	On / Off (only when Intelligent auto / auto contrast adjust : Off)
	Maximum gain	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, Maximum irradiation distance : 15 m {Approx. 49 ft}
	Digital Noise Reduction	The level can be set in the range of 0 to 255.
	Video Motion Detection (VMD)	On / Off, 4 areas available
	Intelligent VMD (i-VMD)*3	Type 4 *Bundled License
	Privacy Zone	On / Off, Up to 8 zones available
	Image rotation*4	0 ° / 90 ° / 180 °(Upside-down) / 270 °
	Mirror	On / Off
	Camera Title (OSD)	On / Off, Up to 20 characters (alphanumeric characters, marks)
Lens	Zoom Ratio	1 x Optical
	Digital (electronic) zoom	Choose from 3 levels of x1, x2, x4
	Focal length	2.8 mm {1/8 inches}
	Angular Field of View	[16 : 9 mode] Horizontal : 97°
		Vertical : 54°
		[4 : 3 mode] Horizontal : 97°
		Vertical : 72°
	Maximum Aperture Ratio	1 : 2.3
	Focus range	0.5 m {19-11/16 inches} – ∞
Adjusting Angle		Horizontal (PAN) angle : ±45°, Vertical (TILT) angle : 0 to +90°, Azimuth (YAW) angle : ±90°
Browser GUI	Camera Control	Brightness
	GUI / Setup Menu Language	English, Italian, French, German, Spanish, Portuguese, Russian, Chinese, Japanese
Network	Network IF	10Base-T / 100Base-TX, M12 connector
	Resolution H.265/ H.264 JPEG (MJPEG)	•1.3 mega pixel [16 : 9] (30/60 fps)
		1,280 x 720 / 640 x 360 / 320 x 180
		•1.3 mega pixel [4 : 3] (30 fps)
		1,280 x 960 / 800 x 600 / 640 x 480 / 400 x 300 / 320 x 240
	H.265/ H.264*5 — Transmission Mode	Constant bit rate / VBR / Frame rate / Best effort
	Transmission Type	Unicast / Multicast
	JPEG — Image Quality	10 steps
	Smart Coding	**GOP(Group of pictures) control**
		[When H.264 is selected] On(Mid) / On(Low) / Off
		[When H.265 is selected] On(Frame rate control) / On(Advanced) / On(Mid) / On(Low) / Off
		Smart Facial Coding*
		Off / On(AUTO VIQS) / On(Smart Facial Coding)
		*Smart Facial Coding is only available with Stream(1).

Network	Audio Compression	G.726 (ADPCM) : 16 kbps / 32 kbps
		G.711 : 64 kbps
		AAC-LC*6 : 64 kbps / 96 kbps / 128 kbps
	Supported Protocol	IPv6 : TCP/IP, UDP/IP, HTTP, HTTPS, RTP, FTP, SMTP, DNS, NTP, SNMP, DHCPv6, MLD, ICMP, ARP, IEEE 802.1X, DiffServ, SSL/TLS*7, SRTP*7, SFTP*7, MQTT*7, LLDP*7
		IPv4 : TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTP/RTCP, FTP, SMTP, DHCP, DNS, DDNS, NTP, SNMP, UPnP, IGMP, ICMP, ARP, IEEE 802.1X, DiffServ, SSL/TLS*7, SRTP*7, SFTP*7, MQTT*7, LLDP*7
	No. of Simultaneous Users	Up to 14 users (Depends on network conditions)
	microSDXC/microSDHC/ microSD Memory Card*8*9	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 microSDXC/microSDHC/microSD Memory Card :
		Panasonic 2 GB, 4 GB*, 8 GB*, 32 GB*, 64 GB**model
		*microSDHC card, **microSDXC card
	Mobile Terminal Compatibility	iPad, iPhone, Android™ terminals
	ONVIF® Profile	G / S / T
Alarm	Alarm Source	VMD alarm*10, Command alarm, Audio detection alarm
	Alarm Actions	microSDXC/microSDHC/microSD memory recording, E-mail notification, HTTP alarm notification Indication on browser, FTP image transfer, TCP alarm notification output
Input/ Output	Built-in microphone	Nondirectional electret condenser microphone
General	Safety	UL (UL60950-1 2Ed), c-UL (CAN/CSA C22. NO.60950-1-07), CE, IEC60950-1 EN45545 compliant, NFPA130*11
	EMC	FCC (Part15 Subpart B, ClassA, SDoC), ICES-003 ClassA, EN55032 ClassB, EN55024, ECE-R10, EN50498, EN50121
	Power Source and Power Consumption	PoE (IEEE802.3af compliant, alternative A) Device : DC48 V 80 mA, Approx. 3.8 W (Class 2 device)
	Ambient Operating Temperature	-40 °C to +60 °C (-40 °F to 140 °F)*12 {Power On range : –20 °C to +60 °C (–4 °F to +140 °F)}
	Ambient Operating Humidity	10 to 100 % (no condensation)
	Water and Dust Resistance	IP66 (IEC60529), Type 4X(UL50), NEMA 4X compliant
	Shock Resistance	IK10 (IEC 62262)
	Railway Application	EN50155 : 2017 Class OT2/ST2 (EN 50155 : 2007 Class TX), IEC62236-3-2
	Dimensions	ø109 mm x 53 mm (H) {ø4-9/32 inches x 2-3/32 inches (H)}
		Dome radius 27 mm {1-1/16 inches}
	Mass (approx.)	Approx. 410 g {0.91 lbs}
	Finish	Main body : Aluminum die cast, Light gray
		Dome section : Polycarbonate resin, Clear

*1 Converted value   *2 Super Dynamic function is automatically set off on 60 fps mode.
*3 Smart Facial Coding, i-VMD can not be used at the same time.
*4 Settings of [90 °] and [270 °] are only available for the [16 : 9 mode].
*5 Transmission for 4 streams can be individually set.
*6 When recording audio on an microSDXC/microSDHC/microSD memory card, only use AAC-LC (Advanced Audio Coding - Low Complexity).
*7 It may be necessary to upgrade the firmware to use these protocols
*8 The replacement cycle (target) of a microSD memory card differs from that of a standard size SD memory card. For details, check the content of the i-PRO Support website (https://i-pro.com/global/en/surveillance/training-support/support/technical-information <Control No.: C0117>).
*9 For details, check the content of the i-PRO Support Web Site (https://i-pro.com/global/en/surveillance/training-support/support/technical-information <Control No.: C0107><Control No.: C0306><Control No.: C0307>)
*10 Including alarms from Plug-in Software
*11 This product satisfies this standard except for some parts.
*12 In the environment where IR LED is always turned on or 60 fps mode, make sure that the ambient operating temperature is between –40 °C to +50 °C {–40 °F to +122 °F}.
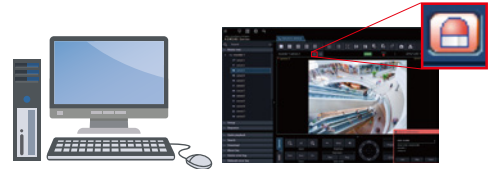
Appearance

Unit : mm (inches)

<Removing Enclosure>

TEMPLATE

Bundled License

Plug-in Software for i-VMD

i-VMD is possible to detect objects in the specified area by advanced video analysis technology.

i-VMD : Intruder Detection, Loitering Detection, Direction Detection, Scene Change Detection,
Object Detection, Cross Line Detection

Notification sent to the monitoring screen

Optional Accessories

■ Mount Bracket / Dome Cover / Other

Base bracket **WV-QJB502-G** (Gray)	Ceiling Mount Bracket **WV-QCL100-W** (i-PRO white) *For indoor installation only	Wall Mount Bracket **WV-QWL500-G** (Gray)	Adapter Box **WV-QJB500-G** (Gray)	Pole Mount Bracket **WV-Q182** (Light gray) (This bracket requires WV-QWL500-G.)	Corner Mount Bracket **WV-Q183** (Light gray) (This bracket requires WV-QWL500-G.)

Dome Cover (Smoke type) **WV-CW6SA**

•Brackets are available in four colors, Fine silver, Light gray, Gray and i-PRO white. It is possible to use them in different color combinations.

∷∷i-PRO
The Power of Truth

i-PRO Co., Ltd.
https://i-pro.com/
(2A-218EA)