

## iA (intelligent Auto) H.265 Network Camera

Panasonic WV-S2231L captures the highest quality images automatically even in very challenging and fast-changing surveillance environments. Intelligent Auto (iA) monitors scene dynamics and motion to adjust key camera settings automatically in real-time reducing distortion such as motion blur on moving objects. New industry-leading 144dB 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. Adopting H.265 Smart Coding technology, intelligently reduces bandwidth efficiency of up to an average 75 percent over H.264 for longer recording and less storage. Cameras out-of-the-box, support full data encryption streaming and is compliant to FIPS 140-2 Level 1 standards to keep your video secured.

### Extreme image quality for evidence capturing under challenging conditions.

- Auto Shutter speed control for fast moving vehicles
- Sharp and clear image of a walking person day & night
- Outstanding low light performance in true color with low noise for night time applications
- Super Dynamic 144dB for backlit situation and shadows on the streets at night

### Extreme H.265 compression with new Smart Coding

- Longer recording, less storage compared to any H.264 based compression techniques
- New self-learning ROI\* encoding (Auto VIQS) dynamically detect motion areas to keep vehicles and human in good picture quality while lowering your bandwidth
- New "Smart Facial Coding" adds more bandwidth reduction for ID camera applications mainly capturing faces

\* Region of Interest

### Extreme Data Security

- Full encryption SD card edge recording to keep your data safe
- FIPS 140-2 Level 1 compliant
- Full end-to-end system encryption with supported VMS and devices to protect from IP snooping/spoofing and detect data alteration

### Key Features

- Full HD 1080p 60fps
- iA (intelligent Auto)
- Extreme Super Dynamic 144dB
- Color night vision (0.0008 to 0.012 lx)
- H.265 Smart Coding
- FIPS 140-2 Level 1 compliant

### Applications

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



## Specifications

<b>Camera</b>	Image Sensor	Approx. 1/3 type MOS image sensor
	Minimum Illumination	Color : 0.012 lx, BW : 0.006 lx (F1.6, Maximum shutter : Max. 1/30s, AGC : 11) BW : 0 lx (F1.6, Maximum shutter : Off(1/30 s), AGC : 11, when the IR LED is lit) Color : 0.0008 lx, BW : 0.0004 lx (F1.6, 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)
	Shutter Speed	Off(1/30) to 1/10000 *1/30 Fix to 2/100 Fix is available during 30 fps mode only. *2/120 Fix is available during 60 fps mode only.
	Intelligent Auto	On / Off
	Super Dynamic <sup>2</sup>	On / Off, the level can be set in the range of 0 to 31.
	Dynamic Range	144 dB (Super Dynamic : On)
	Adaptive Black Stretch	The level can be set in the range of 0 to 255.
	Black light compensation / High light compensation	BLC (Black light compensation) / HLC (High light compensation) / Off (Only when Super dynamic and Intelligent Auto : Off)
	Fog compensation	On / Off (Only when Intelligent Auto : Off)
	Maximum gain (AGC)	The level can be set in the range of 0 to 11.
	Day/Night (ICR)	Off / On / Auto1 (Normal) / Auto2 (IR Light) / Auto3 (SCC)
	IR LED	Off / Auto (High / Mid / Low) irradiation distance : 30 m (98 feet)
	Digital Noise Reduction	The level can be set in the range of 0 to 255.
	Video Motion Detection	On / Off, 4 areas available
	Image Stabilizer	On / Off (available only in the 30 fps mode)
	Privacy Zone	On / Off (up to 8 zones available)
	Image rotation <sup>3</sup>	0° / 90° / 180° / 270°
	Camera Title (OSD)	On / Off Up to 20 characters (alphanumeric characters, marks)
	Focus Adjustment	Auto back focus / Manual
<b>Lens</b>	Focal length	2.8 - 10 mm (1/8 inches - 13/32 inches)
	Zoom ratio	3.6 x (Motorized zoom / Auto Focus)
	Angular Field of View	[16 : 9 mode] Horizontal : 30° (TELE) - 110° (WIDE) Vertical : 17° (TELE) - 59° (WIDE) [4 : 3 mode] Horizontal : 25° (TELE) - 90° (WIDE) Vertical : 19° (TELE) - 66° (WIDE)
	Maximum Aperture Ratio	1 : 1.6 (WIDE) - 1 : 3.4 (TELE)
	Focusing Range	0.3 m (11-13/16 inches) - ∞
<b>Adjusting Angle</b>	Horizontal : -240 to +120°, Vertical : -30 to +85°, Yaw : ±100°	
<b>Browser GUI</b>	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
<b>Network</b>	Network IF	10Base-T / 100Base-TX, RJ45 connector
	Image Resolution	<b>*2 mega pixel [16 : 9] (30/60 fps)</b> 1,920 x 1,080 / 1,280 x 720 / 640 x 360 / 320 x 180 <b>*3 mega pixel [4 : 3] (30 fps)</b> 2,048 x 1,536 <sup>1</sup> / 1,280 x 960 / 800 x 600 / 640 x 480 / 400 x 300 / 320 x 240 <sup>1</sup> Used by super resolution techniques
	H.265/ H.264 <sup>4</sup>	Transmission Mode : Constant bit rate / Variable bit rate / Frame rate / Best effort Transmission Type : Unicast / Multicast
	JPEG	Image Quality : 10 steps
	Smart Coding	Smart Facial Coding : On (Smart Facial Coding) / On (Auto VIQS) / Off *Smart Facial Coding is only available with Stream(1). GOP (Group of pictures) : On (Advanced) / On (Low) / On (Mid) / Off *On(Advanced) is only available with H.265.

<b>Network</b>	Audio Compression	G.726 (ADPCM) : 32 kbps / 16 kbps, G.711 : 64 kbps, AAC-LC <sup>5</sup> : 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, RTP, FTP, SMTP, DNS, NTP, SNMP, DHCPv6, MLD, ICMP, ARP, DiffServ IPv4 : TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTP/RTCP, FTP, SMTP, DHCP, DNS, DDNS, NTP, SNMP, UPnP, IGMP, ICMP, ARP, DiffServ
	No. of Simultaneous Users	Up to 14 users (Depends on network conditions)
	SDXC/SDHC/SD Memory Card (Option)	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 SD (SDHC/SDXC) card : Panasonic 2 GB, 4 GB <sup>1</sup> , 8 GB <sup>1</sup> , 16 GB <sup>1</sup> , 32 GB <sup>1</sup> , 64 GB <sup>1</sup> , 128 GB <sup>1</sup> model <sup>1</sup> SDHC card, <sup>2</sup> SDXC card (except miniSD card and microSD card)
	Mobile Terminal Compatibility	iPad, iPhone, Android™ mobile terminals
<b>Alarm</b>	Alarm Source	3 terminals input, VMD, Command alarm, Audio detection alarm
	Alarm Actions	SDXC/SDHC/SD memory recording, E-mail notification, HTTP alarm notification Indication on browser, FTP image transfer, Panasonic protocol output
<b>Input/ Output</b>	Monitor Output (for adjustment)	VBS : 1.0 V [p-p] / 75 Ω, composite, Pin jack An NTSC or PAL signal can be outputted from camera
	Microphone/Line Input	ø3.5 mm stereo mini jack (Applicable microphone : Plug-in power type) Supply voltage : 2.5 V ±0.5 V
	Audio Output	ø3.5 mm stereo mini jack (monaural output) Output impedance : Approx. 600 Ω (unbalanced)
<b>General</b>	External I/O Terminals	ALARM IN 1 (DAY/NIGHT IN, Auto time adjustment) (x1), ALARM IN 2 (ALARM OUT) (x1), ALARM IN 3 (AUX OUT) (x1)
	Power Source and Power Consumption	DC power supply : DC12 V / 560 mA / Approx. 6.8 W PoE (IEEE802.3af compliant) Device : DC48 V / 150 mA / Approx. 7.2 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)
	Shock Resistance	Compliant with IK10 (IEC 62262)
	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.)	Approx. 750 g (1.65 lbs)
	Finish	Main body : Aluminum die cast, sail white Dome section : Clear polycarbonate resin

\*1 Converted value

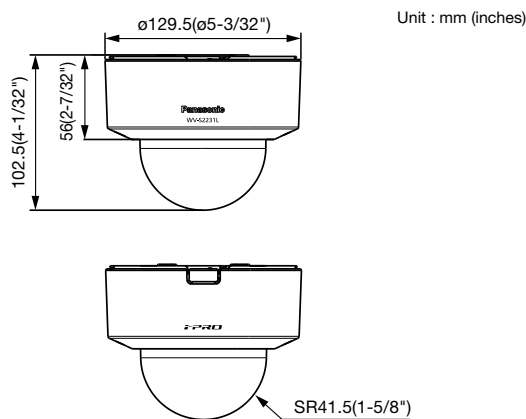
\*2 Super Dynamic function is automatically set off on 60 fps mode.

\*3 When "3 mega pixel [4 : 3](30fps mode)" is selected for "Image capture mode", "90 °" and "270 °" cannot be selected.

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

\*5 Only use AAC-LC (Advanced Audio Coding - Low Complexity) when recording audio on an SD memory card.

## Appearance



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• Masses and dimensions are approximate. • Specifications are subject to change without notice.

## Optional Accessories

<b>Ceiling Mount Bracket</b> <b>WV-Q105A</b> 	<b>Embedded Ceiling Mount Bracket</b> <b>WV-Q174B</b> 	<b>Smoke Dome Cover</b> <b>WV-CR1S</b> 
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### Important

- Safety Precaution : Carefully read the Important Information, Installation Guide and operating instructions before using this product.
- Panasonic cannot be responsible for the performance of the network and/or other manufacturers' products used on the network.

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