

## 40x Intelligent Zoom Stabilization iA PTZ Camera with Heavy salt damage resistance

The WV-X6531NS captures the highest quality images automatically even in very challenging and fast-changing surveillance environments. It has outstanding Intelligent Zoom Stabilization which increases visibility under blurry conditions. 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. The adopted H.265 Smart Coding technology, intelligently reduces bandwidth efficiency of up to 95%\* more than H.264 for longer recording and less storage. The Anti-salt air corrosion protection ideal for seaside situations. \*Value in Advanced mode. It depends on the scene.

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

- Long-distance vision with high power 40x zoom lens and Intelligent Zoom Stabilization with gyroscope
- Sharp and clear images of fast moving vehicles with Intelligent Auto and ClearSight Coating
- Outstanding low light performance in true color with low noise for night time applications
- Super Dynamic 144dB for backlit situations involving headlights and shadows on night streets
- Environmental durability: IP66, IK10, long life Pan/Tilt gear mechanism, wide range of operating temperatures up to 60 °C (140 °F) and Dehumidification device

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

- Longer recording and less storage compared to 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. \*Region of Interest

### Extreme Data Security

- Full encryption SD 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

- Full-HD 1920x1080 60fps
- Intelligent Zoom Stabilization with 40x optical zoom
- ClearSight Coating
- Durable Pan/Tilt gear mechanism
- iA (intelligent Auto)
- Extreme Super Dynamic 144dB
- Color night vision (0.001 to 0.015 lx)
- Salt-air corrosion resistant
- IP66, IK10 certified
- Wider operating temperature range  
-50 °C to +60 °C (-58 °F to +140 °F)
- i-VMD License Bundled

### Industry examples

- Port
- Critical infrastructure
- Traffic
- Airport
- Safe city
- Stadium
- Railway



# Specifications

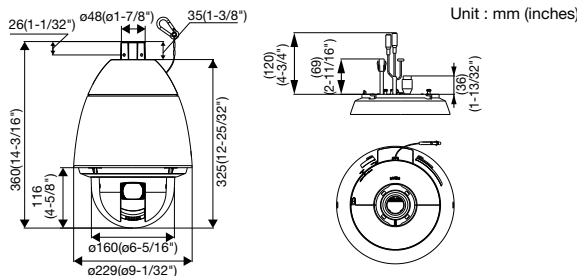
<b>Camera</b>	Image Sensor	Approx. 1/2.8 type MOS image sensor	
	Minimum Illumination	Color : 0.015 lx, BW : 0.006 lx (F1.6, Maximum shutter : Off (1/30s), AGC : 11) Color : 0.001 lx, BW : 0.0004 lx (F1.6, Maximum shutter : max. 16/30s, AGC : 11) <sup>*1</sup>	
	Intelligent Auto	On / Off	
	Shutter Speed	1/30 Fix to 1/10000 Fix <sup>*1</sup> 1/30 Fix to 2/120 Fix is available during 30 fps mode only. <sup>*1</sup> 1/60 Fix is available during 60 fps mode only.	
	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)	
	Image Settings	Gain (AGC), White balance	
	Image Compensation	Adaptive black stretch, Back light compensation (BLC), Fog compensation, High light compensation (HLC), Digital noise reduction	
	Color/BW (ICR)	Off / On / Auto1 (Normal) / Auto2 (IR Light) / Auto3 (SCC)	
	Video Motion Detection (VMD)	On / Off, 4 areas available	
	Intelligent VMD (i-VMD) <sup>*3</sup>	Type4 <sup>*</sup> Bundled License	
	Stabilizer <sup>*3</sup>	On / Off (available only in the 30 fps mode)	
	Privacy Zone	Filling / Pixelate / Off (up to 32 zones available)	
	Camera Title (OSD)	On / Off / Up to 20 characters (alphanumeric characters, marks)	
<b>Lens</b>	Zoom Ratio	40x Optical 60x HD Extra Optical Zoom (when resolution is 1280x720)	
	Digital (electronic) zoom	16x	
	Focal length	4.25 mm – 170 mm (5/32 inches – 6-11/16 inches)	
	Maximum Aperture Ratio	1 : 1.6 (WIDE) – 1 : 4.95 (TELE)	
	Focus range	3.0 m (9 ft 10-1/8 inches) – ∞	
	Angular Field of view	[16 : 9 mode] Horizontal : 2.1 ° (TELE) – 65 ° (WIDE) Vertical : 1.2 ° (TELE) – 39 ° (WIDE) [4 : 3 mode] Horizontal : 1.6 ° (TELE) – 51 ° (WIDE) Vertical : 1.2 ° (TELE) – 39 ° (WIDE)	
	<b>Pan/tilt</b>	Panning Range	360° Endless panning
Panning Speed		Manual : Approx. 0.065°/s – 120°/s Preset : Up to approx. 300°/s	
Tilting Range		Operational range : -15° – 195° (level – downward – level) Recommended range : 0° – 180° Selectable tilting angle : 10° / 5° / 3° / 0° / -3° / -5° / -10° / -15° <sup>*4</sup>	
Tilting Speed		Manual : Approx. 0.065°/s – 120°/s Preset : Up to approx. 300°/s	
Preset Positions		256 positions	
Auto Mode		Auto track <sup>*3</sup> / 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	
<b>Browser GUI</b>		Camera Control	Pan/Tilt, Zoom, Focus, Auto mode, Brightness, Preset, AUX, Rec. on SD, Log, Viewer software
		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	
	Resolution	<b>*2 mega pixel [16 : 9] (30/60 fps)</b> 1920x1080 / 1280x720 / 640x360 / 320x180	
	H.265 / H.264 JPEG (MJPEG)	<b>*3 mega pixel [4 : 3] (30 fps)</b> 2048x1536 / 1280x960 / 800x600 / VGA / 400x300 / QVGA <sup>*</sup> Used by super resolution techniques	
	H.265 / H.264 <sup>*5</sup>	Transmission Mode Constant bit rate / VBR / Frame rate / Best effort	
	H.264 <sup>*5</sup> JPEG	Transmission Type Unicast / Multicast Image Quality 10 steps	

<sup>\*1</sup> Converted value <sup>\*2</sup> Super Dynamic function is automatically set off on 60 fps mode.  
<sup>\*3</sup> Stabilizer, Auto track, Smart Facial Coding, i-VMD, can not be used at the same time.  
<sup>\*4</sup> If "0 °", "-3 °", "-5 °", "-10 °", or "-15 °" is selected, the area hidden by the camera housing may increase when the tilt angle of the camera is almost level. When "-15 °" is selected for "Tilt Angle", the upper half of images will be hidden.

<b>Network</b>	Smart Coding	<b>Smart Facial Coding<sup>*3</sup></b> : On(Smart Facial Coding)/ On(AUTO VIQS)/ Off <sup>*</sup> Smart Facial Coding is only available with Stream(1). <b>GOP(Group of pictures) control</b> : On(Advanced) <sup>*7</sup> / On(Mid)/ On(Low)/ Off <sup>*</sup> On(Advanced) is only available with H.265.
	Audio Compression	G.726 (ADPCM): 16 kbps / 32 kbps G.711 : 64 kbps AAC-LC <sup>6</sup> : 64 kbps / 96 kbps / 128 kbps
<b>Audio transmission mode</b>	Supported Protocol	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, IEEE 802.1X, DiffServ 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
	Maximum concurrent access number	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 SDXC/SDHC/SD Memory Card: Panasonic 2 GB, 4 GB, 8 GB, 16 GB, 32 GB, 64 GB, 128 GB, 256 GB, 512 GB model <sup>*</sup> SDHC card, <sup>**</sup> SDXC card (except miniSD card and microSD card)
<b>Mobile Terminal Compatibility</b>	iPad / iPhone, Android™ mobile terminals	
<b>Alarm</b>	Alarm Action	3 terminals input, VMD alarm <sup>7</sup> , Command alarm, Audio detection alarm, Auto track alarm
	Alarm Sources	SDXC/SDHC/SD memory recording, E-mail notification, HTTP alarm notification, Indication on browser, FTP image transfer, TCP alarm notification output
<b>Input/ Output</b>	Audio Input	ø3.5 mm stereo mini jack (monaural input) Input impedance: Approx. 2 kΩ (unbalanced) (Applicable microphone : Plug-in power type) Supply voltage : 4.0 V ±0.5 V
	Audio Output <sup>8</sup>	ø3.5 mm stereo mini jack (monaural output) Output impedance : Approx. 600 Ω (unbalanced)
<b>External I/O Terminals</b>	ALARM IN1(Alarm input 1/ Black & white input/ Auto time adjustment input), ALARM IN2(Alarm input 2/ ALARM OUT), ALARM IN3(Alarm input 3/ AUX OUT)(x1 for each)	
	General	Safety UL (UL60950-1), c-UL (CSA C22.2 No.60950-1), CE, IEC60950-1
<b>EMC</b>	Power Source and Power Consumption	AC24 V 3.4 A, Approx. 55 W PoE+ (IEEE802.3at compliant): DC 54V 470 mA, Approx. 25 W Tested POE Injector (60 W) : DC 54V 1.0 A, Approx. 50 W
	Ambient Operating Temperature	-50 °C to +60 °C (-58 °F to +140 °F) (AC 24 V/ Tested POE injector (60 W)) -30 °C to +60 °C (-22 °F to +140 °F) (PoE+ device) (Power On range: -30 °C to +60 °C (-22 °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 (IEC62262)
	Salt damage resistance	ISO14993 compliant
	Dimensions	Maximum ø229 mm x 360 (H) mm (ø9-1/32 inches x 14-3/16 inches (H))
	Mass (approx.)	Approx. 5.2 kg (11.47 lbs)
	Finish	Main body : Aluminum die cast with salt resistance painting, Metallic silver Sunshields : ABS+PC resin coating, Natural silver Outer fixing screws : SUS (Corrosion-resistant treatment) Dome cover : Polycarbonate resin (with ClearSight coating (rain wash coating)), Clear

<sup>\*5</sup> Transmission for 4 streams can be individually set.  
<sup>\*6</sup> When recording audio on an SD memory card, only use AAC-LC (Advanced Audio Coding - Low Complexity).  
<sup>\*7</sup> Including alarms from Plug-in Software  
<sup>\*8</sup> The audio output can be switched to the monitor output. Refer to the Operating Instructions on the provided CD-ROM for descriptions of how to switch the output.

## Appearance



**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.

## 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

## Optional Accessories

**Mount Bracket**

<b>Ceiling Mount Bracket</b> (Heavy salt damage resistance) <b>WV-Q121BS</b> 	<b>Wall Mount Bracket</b> (Heavy salt damage resistance) <b>WV-Q122AS</b> 
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Make sure to use a mounting bracket with heavy salt damage resistance when installing WV-X6531NS (Heavy salt damage resistance).

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