Panasonic BUSINESS



Anti-severe weather PTZ network camera WV-SUD638 *AeroPTZ*

Extreme performance - under - Extreme conditions

The AeroPTZ is an environmentally rugged camera designed to meet extreme weather conditions.

Using the latest aerodynamic technology and salt-air corrosion resistant glass fiber body, the *AeroPTZ* can withstand the beating from tropical storms, extreme hot and cold temperatures, and gale-force winds.

Additionally, a unique Panasonic Video Stability Augment System (SAS) delivers superior, high-class hybrid image stabilization for extreme scenes with vibration.

Making the *AeroPTZ* well-suited for ports, cities, highway, transit, airports and other outdoor mission critical environments where failure is not an option.

Key Features

- Full HD (1080p) 60fps, 30x zoom lens
- Built-in wiper and Auto defroster
- Wind load durability 216 km/h (135 mph)* (operation)
 288 km/h (180 mph) (non-destructive)
- Video SAS (Stability Augment System) for high-class image stabilization
- "Sphere vision" provides **360° 3D viewing** (Pan: 360° endless, tilt: 90° to -90°)
- Temperature -50 °C to +60 °C (-58 °F to +140 °F)*
 - * Natural Silver model only. Not available IR LED Unit when the temperature is over 55 °C (131 °F). Gray & Brown model : up to +55 °C (131 °F).
- IP67, IP66, IK10 certified
- Optional IR LED light (up to 150 m/500 feet, zoom interlocking)
- Anti-salt air corrosion protection ideal for seaside operations
- Smart Coding mode for additional compression





WV-SUD638 (Natural Silver) WV-SUD638-H (Gray) WV-SUD638-T (Brown)



IR LED Unit: Optional
WV-SUD6FRL1 (Natural Silver)
WV-SUD6FRL-H (Gray)
WV-SUD6FRL-T (Brown)

Industry examples











Railwav

Traffic

Safe city Port facility

Critical Infrastructure Airport

Notice: Do not install this product in locations subject to continuous or large vibration. Failure to observe this may cause a drop resulting in injury or accident.

Specifications

Camera	Image sensor	Approx. 1/3 type MOS image sensor
	Minimum illumination	Color: 0.06 lx (F1.6, Maximum shutter: Off(1/30 s), AGC: High)
		0.004 lx (F1.6, Maximum shutter : max. 16/30 s, AGC : High)*
		BW : 0.02 lx (F1.6, Maximum shutter : Off(1/30 s), AGC : High)
		0.001 lx (F1.6, Maximum shutter : max. 16/30 s, AGC : High)*
		0 lx (F1.6, Maximum shutter : Off(1/30 s), AGC : High,
		when the IR LED (Optional) is lit)
		* Converted value
	Super Dynamic*1	Dynamic Range 105 dB typ.
	Image settings	Gain (AGC), White balance
	Image compensation	Adaptive black stretch, Back light compensation (BLC),
		Fog compensation, High light compensation (HLC),
		Digital noise reduction
	Shutter speed	[2 mega pixel [16 : 9] (60 fps mode)]
		Off(1/60) to 1/10000
		Other than [2 mega pixel [16:9](60 fps mode)]
		Off(1/30) to 1/10000
	Day/Night (ICR)	Off / On / Auto1(Normal) / Auto2(IR Light) / Auto3(SCC)
	IR LED Light (Optional)	Off / Auto (High / Mid / Low) irradiation distance : 150 m (500 feet)
	Image stabilization	On / Off *Hybrid image stabilizer
	Privacy zone	Gray / Mosaic / Off (up to 32 zones available)
	Camera title on screen	Up to 20 characters (alphanumeric characters, marks)
	Video Motion Detection (VMD)	On / Off, 4 areas available
Lens	Zoom Ratio	30x / 45x with HD extra optical zoom (at 1280 x 720)
		(Motorized zoom / Auto Focus)
	Digital (electronic) zoom	24x
	Focal length	4.3 mm - 129 mm {3/16 inches - 5-3/32 inches}
	Maximum Ratio Aperture	1 : 1.6 (WIDE) - 1 : 4.7 (TELE)
	Focus range	2.0 m - ∞
	Aperture range	F1.6 (WIDE) - Close
	Angular field of view	[16 : 9 mode] Horizontal : 2.3° (TELE) – 64° (WIDE)
	7 mgalar noid or viou	Vertical : 1.3° (TELE) – 38° (WIDE)
		[4 : 3 mode] Horizontal : 1.8° (TELE) – 50° (WIDE)
D /////	n : n	Vertical : 1.3° (TELE) – 38° (WIDE)
Pan/tiit unit	Panning Range	360° endless
	Panning Speed	Manual: approx. 0.065°/s to 100°/s
		Preset : up to approx. 200°/s
		(Except when IR LED Unit is equipped, forward tilt mount, frozen.)
	Tilting Range	Upright : -45° to +90°
		Forward tilt: -90° to +90°
		Hanging : -90° to +30°
	Tilting Speed	Manual: approx. 0.065°/s to 100°/s
		Preset : up to approx. 200°/s
		(Except when IR LED Unit is equipped, forward tilt mount, frozen.)
	Preset Positions	256 positions
	Auto Mode	Auto track / Auto pan / Preset sequence / 360 map-shot /
	Auto Mode	Preset map-shot / Patrol
	0.15	
	Self Return	10 s to 60 min
	Tilt flip	10 s to 60 min On / Off
	Tilt flip Map Shot	10 s to 60 min On / Off 360° map shot / preset map shot
Network	Tilt flip Map Shot Network IF	10 s to 60 min On / Off 360° map shot / preset map shot 10Base-T7 / 100Base-TX, RJ45 connector
Network	Tilt flip Map Shot	10 s to 60 min On / Off 360° map shot / preset map shot
Network	Tilt flip Map Shot Network IF	10 s to 60 min On / Off 360° map shot / preset map shot 10Base-T7 / 100Base-TX, RJ45 connector
Network	Tilt flip Map Shot Network IF Image Resolution	10 s to 60 min On / Off 360° map shot / preset map shot 10Base-T / 100Base-TX, RJ45 connector •2 mega pixel [16:9] (60 fps mode / 30 fps mode)
Network	Tilt flip Map Shot Network IF Image Resolution H.264	10 s to 60 min On / Off On / Off 360° map shot / preset map shot 10Base-T / 100Base-TX, RJ45 connector •2 mega pixel [16: 9] (60 fps mode / 30 fps mode) H.264: Maximum 1,920 x 1080
Network	Tilt flip Map Shot Network IF Image Resolution H.264	10 s to 60 min On / Off 360° map shot / preset map shot 10Base-T7 / 100Base-TX, RJ45 connector *2 mega pixel [16: 9] (60 fps mode / 30 fps mode) H.264: Maximum 1,920 x 1080 *1.3 mega pixel [4: 3] (30 fps mode)
Network	Tilt flip Map Shot Network IF Image Resolution H.264	10 s to 60 min On / Off 360° map shot / preset map shot 10Base-T / 100Base-TX, RJ45 connector •2 mega pixel [16: 9] (60 fps mode / 30 fps mode) H.264: Maximum 1,920 x 1080 JPEG: Maximum 1,920 x 1080 •1.3 mega pixel [4: 3] (30 fps mode) H.264: Maximum 1,280 x 960
Network	Tilt flip Map Shot Network IF Image Resolution H.264 JPEG (MJPEG)	10 s to 60 min On / Off 360° map shot / preset map shot 10Base-T / 100Base-TX, RJ45 connector •2 mega pixel [16: 9] (60 fps mode / 30 fps mode) H_264: /Maximum 1,920 x 1080 JPEG: Maximum 1,920 x 1080 •1.3 mega pixel [4: 3] (30 fps mode) H_264: /Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960
Network	Tilt flip Map Shot Network IF Image Resolution H.264	10 s to 60 min On / Off 360° map shot / preset map shot 10Base-T / 100Base-TX, RJ45 connector •2 mega pixel [16: 9] (60 fps mode / 30 fps mode) H.264: Maximum 1,920 x 1080 JPEG: Maximum 1,920 x 1080 •1.3 mega pixel [4: 3] (30 fps mode) H.264: Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960 H.264 H.264
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Network	Tilt flip Map Shot Network IF Image Resolution H.264 JPEG (MJPEG)	10 s to 60 min On / Off 360° map shot / preset map shot 10Base-T / 100Base-TX, RJ45 connector •2 mega pixel [16: 9] (60 fps mode / 30 fps mode) H.264: / Maximum 1,920 x 1080 JPEG: Maximum 1,920 x 1080 •1.3 mega pixel [4: 3] (30 fps mode) H.264: / Maximum 1,820 x 960 JPEG: Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960 H.264 Transmission Mode: Constant bit rate / Variable bit rate / Frame rate priority /
Network	Tilt flip Map Shot Network IF Image Resolution H.264 JPEG (MJPEG)	10 s to 60 min On / Off 360" map shot / preset map shot 10Base-T / 100Base-TX, RJ45 connector 22 mega pixel [16: 9] (60 fps mode / 30 fps mode) H.264: Maximum 1,920 x 1080 JPEG: Maximum 1,920 x 1080 JPEG: Maximum 1,920 x 1080 1-3 mega pixel [4: 3] (30 fps mode) H.264: Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960 H.264 Transmission Mode: Constant bit rate / Variable bit rate / Frame rate priority / Best effort / Advanced VBR
Network	Tilt flip Map Shot Network IF Image Resolution H.264 JPEG (MJPEG)	10 s to 60 min On / Off 360° map shot / preset map shot 10Base-T / 100Base-T X, RJ45 connector •2 mega pixel [16: 9] (60 fps mode / 30 fps mode) H.264: Maximum 1,920 x 1080 JPEG: Maximum 1,920 x 1080 •1.3 mega pixel [4: 3] (30 fps mode) H.264: Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960 H.264 Transmission Mode: Constant bit rate / Variable bit rate / Frame rate priority / Best effort / Advanced VBR Transmission type: Unicast / Multicast
Network	Tilt flip Map Shot Network IF Image Resolution H.264 JPEG (MJPEG)	10 s to 60 min On / Off 360° map shot / preset map shot 10Base-T / 100Base-TX, RJ45 connector •2 mega pixel [16: 9] (60 fps mode / 30 fps mode) H.264: / Maximum 1,920 x 1080 JPEG: Maximum 1,920 x 1080 •1.3 mega pixel [4: 3] (30 fps mode) H.264: / Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960 H.264 Transmission Mode: Constant bit rate / Variable bit rate / Frame rate priority / Best effort / Advanced VBR Transmission type: Unicast / Multicast JPEG
Network	Tilt flip Map Shot Network IF Image Resolution H.264 JPEG (MJPEG)	10 s to 60 min On / Off 360" map shot / preset map shot 10Base-T / 100Base-TX, RJ45 connector •2 mega pixel [16: 9] (60 fps mode / 30 fps mode) H.264: Maximum 1,920 x 1080 JPEG: Maximum 1,920 x 1080 JPEG: Maximum 1,920 x 1080 •1.3 mega pixel [4: 3] (30 fps mode) H.264: Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960 H.264 Transmission Mode: Constant bit rate / Variable bit rate / Frame rate priority / Best effort / Advanced VBR Transmission type: Unicast / Multicast JPEG Image Quality: 10 steps
Network	Tilt flip Map Shot Network IF Image Resolution H.264 JPEG (MJPEG)	10 s to 60 min On / Off 360° map shot / preset map shot 10Base-T / 100Base-T X, RJ45 connector •2 mega pixel [16: 9] (60 fps mode / 30 fps mode) H.264: Maximum 1,920 x 1080 JPEG: Maximum 1,920 x 1080 •1.3 mega pixel [4: 3] (30 fps mode) H.264: Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960 H.264 Transmission Mode: Constant bit rate / Variable bit rate / Frame rate priority / Best effort / Advanced VBR Transmission type: Unicast / Multicast JPEG Image Quality: 10 steps Multiple streams individually configurable
Network	Tilt flip Map Shot Network IF Image Resolution H.264 JPEG (MJPEG)	10 s to 60 min On / Off 360" map shot / preset map shot 10Base-T / 100Base-TX, RJ45 connector •2 mega pixel [16: 9] (60 fps mode / 30 fps mode) H.264: Maximum 1,920 x 1080 JPEG: Maximum 1,920 x 1080 JPEG: Maximum 1,920 x 1080 •1.3 mega pixel [4: 3] (30 fps mode) H.264: Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960 H.264 Transmission Mode: Constant bit rate / Variable bit rate / Frame rate priority / Best effort / Advanced VBR Transmission type: Unicast / Multicast JPEG Image Quality: 10 steps
Network	Tilt flip Map Shot Network IF Image Resolution H.264 JPEG (MJPEG) Image compression method	10 s to 60 min On / Off 360° map shot / preset map shot 10Base-T / 100Base-TX, RJ45 connector •2 mega pixel [16: 9] (60 fps mode / 30 fps mode) H.264: Maximum 1,920 x 1080 JPEG: Maximum 1,920 x 1080 •1.3 mega pixel [4: 3] (30 fps mode) H.264: Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960 H.264 Transmission Mode: Constant bit rate / Variable bit rate / Frame rate priority / Best effort / Advanced VBR Transmission type: Unicast / Multicast JPEG Image Quality: 10 steps Multiple streams individually configurable Smart coding, VIOS (ROI)
Network	Titt flip Map Shot Network IF Image Resolution H.264 JPEG (MJPEG) Image compression method	10 s to 60 min On / Off On / Off 360° map shot / preset map shot 10Base-T / 100Base-TX, RJ45 connector •2 mega pixel [16: 9] (60 fps mode / 30 fps mode) H.264: Maximum 1,920 x 1080 JPEG: Maximum 1,920 x 1080 JPEG: Maximum 1,920 x 1080 •1.3 mega pixel [4: 3] (30 fps mode) H.264: Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960 H.264 Transmission Mode: Constant bit rate / Variable bit rate / Frame rate priority / Best effort / Advanced VBR Transmission type: Unicast / Multicast JPEG Image Quality: 10 steps Multiple streams individually configurable Smart coding, VIQS (ROI) G.726 (ADPCM): 16 kbps / 32 kbps
Network	Tilt flip Map Shot Network IF Image Resolution H.264 JPEG (MJPEG) Image compression method	10 s to 60 min On / Off 360° map shot / preset map shot 10Base-T / 100Base-T X, RJ45 connector •2 mega pixel [16: 9] (60 fps mode / 30 fps mode) H.264: Maximum 1,920 x 1080 JPEG: Maximum 1,920 x 1080 •1.3 mega pixel [4: 3] (30 fps mode) H.264: Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960 H.264 Transmission Mode: Constant bit rate / Variable bit rate / Frame rate priority / Best effort / Advanced VBR Transmission type: Unicast / Multicast JPEG Image Quality: 10 steps Multiple streams individually configurable Smart coding, VIGS (ROI) G.726 (ADPCM): 16 kbps / 32 kbps G.711: 64 kbps
Network	Tilt flip Map Shot Network IF Image Resolution H.264 JPEG (MJPEG) Image compression method	10 s to 60 min On / Off On / O
Network	Tilt flip Map Shot Network IF Image Resolution H.264 JPEG (MJPEG) Image compression method Intelligent compression Audio compression	10 s to 60 min On / Off On / Off 360° map shot / preset map shot 10Base-T / 100Base-TX, RJ45 connector •2 mega pixel [16: 9] (60 fps mode / 30 fps mode) H.264: Maximum 1,920 x 1080 JPEG: Maximum 1,920 x 1080 JPEG: Maximum 1,920 x 1080 -1.3 mega pixel [4: 3] (30 fps mode) H.264: Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960 H.264 Transmission Mode: Constant bit rate / Variable bit rate / Frame rate priority / Best effort / Advanced VBR Transmission type: Unicast / Multicast JPEG Image Quality: 10 steps Multiple streams individually configurable Smart coding, VILOS (ROI) G.726 (ADPCM): 16 kbps / 32 kbps G.711: 64 kbps AAC-LC(High quality)²: 64 kbps / 96 kbps / 128 kbps
Network	Tilt flip Map Shot Network IF Image Resolution H.264 JPEG (MJPEG) Image compression method	10 s to 60 min On / Off 360° map shot / preset map shot 10Base-T / 100Base-T X, RJ45 connector •2 mega pixel [16: 9] (60 fps mode / 30 fps mode) H.264: Maximum 1,920 x 1080 JPEG: Maximum 1,920 x 1080 •1.3 mega pixel [4: 3] (30 fps mode) H.264: Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960 H.264 Transmission Mode: Constant bit rate / Variable bit rate / Frame rate priority / Best effort / Advanced VBR Transmission type: Unicast / Multicast JPEG Image Quality: 10 steps Multiple streams individually configurable Smart coding, VIGS (ROI) G.726 (ADPCM): 16 kbps / 32 kbps G.711: 64 kbps AAC-LC("2: 64 kbps, AAC-LC("16) quality)"2: 64 kbps / 96 kbps / 128 kbps IPve: TCPI/P, UDP/I/P, HTTP, HTTPS, FTP, SMTP, DNS, NTP,
Network	Tilt flip Map Shot Network IF Image Resolution H.264 JPEG (MJPEG) Image compression method Intelligent compression Audio compression	10 s to 60 min On / Off On / Off 360° map shot / preset map shot 10Base-T / 100Base-TX, RJ45 connector 22 mega pixel [16 : 9] (60 fps mode / 30 fps mode) H.264 : Maximum 1,920 x 1080 JPEG : Maximum 1,920 x 1080 JPEG : Maximum 1,920 x 1080 1-3 mega pixel [4 : 3] (30 fps mode) H.264 : Maximum 1,280 x 960 JPEG : Maximum 1,280 x 960 JPEG : Maximum 1,280 x 960 H.264 Transmission Mode : Constant bit rate / Variable bit rate / Frame rate priority / Best effort / Advanced VBR Transmission type : Unicast / Multicast JPEG Image Quality : 10 steps Multiple streams individually configurable Smart coding, VIGS (ROI) G.726 (ADPCM) : 16 kbps / 32 kbps G.711 : 64 kbps AAC-LC'2: 64 kbps, AAC-LC'2: 64 kbps, AAC-LC'2: 64 kbps, AAC-LC'CHigh quality'? : 64 kbps / 96 kbps / 128 kbps IPv6 : TCP/IP, UDP/IP, HTTP, HTTPS, FTP, SMTP, DNS, NTP, SMMP, DHCPv6, RTP, MLD, ICMP, ARP, DiffServ
Network	Tilt flip Map Shot Network IF Image Resolution H.264 JPEG (MJPEG) Image compression method Intelligent compression Audio compression	10 s to 60 min On / Off 360° map shot / preset map shot 10Base-T / 100Base-T X, RJ45 connector •2 mega pixel [16: 9] (60 fps mode / 30 fps mode) H.264: Maximum 1,920 x 1080 JPEG: Maximum 1,920 x 1080 •1.3 mega pixel [4: 3] (30 fps mode) H.264: Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960 H.264 Transmission Mode: Constant bit rate / Variable bit rate / Frame rate priority / Best effort / Advanced VBR Transmission type: Unicast / Multicast JPEG Image Quality: 10 steps Multiple streams individually configurable Smart coding, VIGS (ROI) G.726 (ADPCM): 16 kbps / 32 kbps G.711: 64 kbps AAC-LC("2: 64 kbps, AAC-LC("16) quality)"2: 64 kbps / 96 kbps / 128 kbps IPV6: TCP/IP, UDP/IP, HTTP, HTTPS, FTP, SMTP, DNS, NTP,
Network	Tilt flip Map Shot Network IF Image Resolution H.264 JPEG (MJPEG) Image compression method Intelligent compression Audio compression	10 s to 60 min On / Off On / Off 360° map shot / preset map shot 10Base-T / 100Base-TX, RJ45 connector 22 mega pixel [16 : 9] (60 fps mode / 30 fps mode) H.264 : Maximum 1,920 x 1080 JPEG : Maximum 1,920 x 1080 - 13. mega pixel [4 : 3] (30 fps mode) H.264 : Maximum 1,280 x 960 JPEG : Maximum 1,280 x 960 JPEG : Maximum 1,280 x 960 H.264 Transmission Mode : Constant bit rate / Variable bit rate / Frame rate priority / Best effort / Advanced VBR Transmission type : Unicast / Multicast JPEG Image Quality : 10 steps Multiple streams individually configurable Smart coding, VIGS (ROI) G.726 (ADPCM) : 16 kbps / 32 kbps G.711 : 64 kbps AAC-LC'2: 64 kbps, AAC-LC'2: 64 kbps, AAC-LC'2: 64 kbps, AAC-LC'CHigh quality'? : 64 kbps / 96 kbps / 128 kbps IPv6 : TCP/IP, UDP/IP, HTTP, HTTPS, FTP, SMTP, DNS, NTP, SMMP, DHCPv6, RTP, MLD, ICMP, ARP, DiffServ
Network	Tilt flip Map Shot Network IF Image Resolution H.264 JPEG (MJPEG) Image compression method Intelligent compression Audio compression	10 s to 60 min On / Off 360° map shot / preset map shot 10Base-T / 100Base-TX, RJ45 connector •2 mega pixel [16: 9] (60 fps mode / 30 fps mode) H.264: Maximum 1,920 x 1080 JPEG: Maximum 1,920 x 1080 JPEG: Maximum 1,920 x 1080 -1.3 mega pixel [4: 3] (30 fps mode) H.264: Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960 H.264 Transmission Mode: Constant bit rate / Variable bit rate / Frame rate priority / Best effort / Advanced VBR Transmission type: Unicast / Multicast JPEG Image Quality: 10 steps Multiple streams individually configurable Smart coding, VIQS (ROI) G.726 (ADPCM): 16 kbps / 32 kbps G.711: 64 kbps AAC-LC(High quality)* 2: 64 kbps / 96 kbps / 128 kbps IPV6: TCP/IP, UDP/IP, HTTP, HTTPS, FTP, SMTP, DNS, NTP, SNMP, DHCPV6, RTP, MLD, ICMP, ARP, DiffServ
Network	Tilt flip Map Shot Network IF Image Resolution H.264 JPEG (MJPEG) Image compression method Intelligent compression Audio compression	10 s to 60 min On / Off On / Off On / Off On / Off S60" map shot / preset map shot 10Base-T / 100Base-TX, RJ45 connector 2* mega pixel [16: 9] (60 fps mode / 30 fps mode) H.264: Maximum 1,920 x 1080 JPEG: Maximum 1,920 x 1080 JPEG: Maximum 1,920 x 1080 JPEG: Maximum 1,280 x 960 H.264: Maximum 1,280 x 960 H.264 Transmission Mode: Constant bit rate / Variable bit rate / Frame rate priority / Best effort / Advanced VBR Transmission type: Unicast / Multicast JPEG Image Quality: 10 steps Multiple streams individually configurable Smart coding, VIGS (ROI) G.726 (ADPCM): 16 kbps / 32 kbps G.711: 64 kbps AAC-LC'2: 64 kbps, AAC-LC'2: 64 kbps, AAC-LC'4: 64 kbps / 36 kbps / 128 kbps IPV6: TCP/IP, UDP/IP, HTTP, HTTPS, FTP, SMTP, DNS, NTP, SMMP, DHCPV6, RTP, MLD, ICMP, ARP, DiffServ IPV4: TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTP/RTCP, FTP, SMTP, DHCP, DNS, DNS, NTP, SMMP, UPNP, IGMP, IGMP, ARP, DiffServ
Network	Titt flip Map Shot Network IF Image Resolution H.264 JPEG (MJPEG) Image compression method Intelligent compression Audio compression Protocol	10 s to 60 min On / Off 360° map shot / preset map shot 10Base-T / 100Base-TX, RJ45 connector •2 mega pixel [16: 9] (60 fps mode / 30 fps mode) H.264: Maximum 1,920 x 1080 JPEG: Maximum 1,920 x 1080 •1.3 mega pixel [4: 3] (30 fps mode) H.264: Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960 JPEG: Maximum 1,280 x 960 H.264 Transmission Mode: Constant bit rate / Variable bit rate / Frame rate priority / Best effort / Advanced VBR Transmission type: Unicast / Multicast JPEG Image Quality: 10 steps Multiple streams individually configurable Smart coding, V105 (ROI) G.726 (ADPCM): 16 kbps / 32 kbps G.711: 64 kbps AAC-LC(*): 64 kbps AAC-LC(*): 64 kbps, / 96 kbps / 128 kbps IPV6: TCP/IP, UDP/IP, HTTP, HTTPS, FTP, SMTP, DNS, NTP, SNMP, DHCPv6, RTP, MLD, CMP, ARP, DiffServ IPv4: TCP/IP, UDP/IP, HTTP, HTTPS, FTP, STP, FTP, FTP, FTP, SMTP, DHCP, DNS, DDNS, NTP, SNMP, UPnP, IGMP, ICMP, ARP, DiffServ Up to 14 users
Network	Tilt flip Map Shot Network IF Image Resolution H.264 JPEG (MJPEG) Image compression method Intelligent compression Audio compression	10 s to 60 min On / Off S60° map shot / preset map shot 10Base-T / 100Base-TX, RJ45 connector 22 mega pixel [16:9] (60 fps mode / 30 fps mode) H.264: Maximum 1,920 x 1080 JPEG: Maximum 1,920 x 1080 JPEG: Maximum 1,920 x 1080 JPEG: Maximum 1,280 x 960 H.264 : Maximum 1,280 x 960 H.264 Transmission Mode: Constant bit rate / Variable bit rate / Frame rate priority / Best effort / Advanced VBR Transmission type: Unicast / Multicast JPEG Image Quality: 10 steps Multiple streams individually configurable Smart coding, VIGS (ROI) G.726 (ADPCM): 16 kbps / 32 kbps G.711: 64 kbps AAC-LC'2: 64 kbps, AAC-LC'2: 64 kbps, AAC-LC'4: 64 kps, AAC-LC'4: 10DP/IP, HTTP, HTTPS, FTP, SMTP, DNS, NTP, SMMP, DHCPv6, RTP, MLD, ICMP, ARP, DiffServ IPv4: TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTP/RTCP, FTP, SMTP, DHCP, DNS, DNS, NTP, SMMP, UPnP, IGMP, ICMP, ARP, DiffServ

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- Important

 Panasonic cannot be responsible for the performance of the network and/or other manufacturers' products used on the network.
- Design and specifications are subject to change without notice.
 Masses and dimensions are approximate.

DISTRIBUTED BY:

Environment	Water and Dust Resistance	Main body: IP66, IP67, IEC60529 measuring standard compatible,
	*3	Type 4X(UL50), NEMA 4X compliant
		Waterproof RJ45 connector, Waterproof power connector,
		Waterproof I/O connector
	Shock resistance	Compliant with IK10 (IEC 62262)
	Vibration resistance	IEC60068-2-6 compliant
	Salt damage resistance	ISO14993 compliant
	Resistance to wind	Upright
		216 km/h (135 mph) (Operation) / 288 km/h (180 mph) (non-destructive
		Forward tilt
		50 m (112 mph) (Operation) / 80 m (180 mph) (non-destructive)
General	Safety	UL (UL60950-1), c-UL (CSA C22.2 No.60950-1), CE, IEC60950-1
	FMC	FCC (Part15 ClassA), ICES003 ClassA, EN55032 ClassA, EN55024
	Power source	AC100 to 240 V, 50 Hz / 60 Hz
		Tested PoE Injector* (60 W) *with limitations
	Operating environment	Ambient operating temperature :
	operating critical interior	AC100 to 240 V : –50 °C to +60 °C {–58 °F to 140 °F}
		(Power On range : -30 °C to +60 °C {-22 °F to 140 °F})
		When using the tested PoE injector:
		-30 °C to +60 °C {-22 °F to 140 °F}
		When using the tested PoE injector and IR LED unit at the same time
		-20 °C to +55 °C {-4 °F to 131 °F})
		*The upper limit value of ambient operating temperature indicates
		the use of WV-SUD638 (natural silver). In cases of products with
		other body colors, the upper limit value is +55 °C {131 °F}.
		*When WV-SUD6FRL1 (IR LED unit) is attached, the upper limit
		value of ambient operating temperature is +55 °C {131 °F}.
		Ambient operating humidity : 10 % to 100 %
	External I/O terminals	ALARM IN 1(DAY/NIGHT IN, Auto time adjustment),
		ALARM IN 2(ALARM OUT), ALARM IN 3(AUX OUT),
		Relay connection (x1 for each)
	line input	ø3.5 mm monaural mini jack
		Input impedance : Approx. 2 kΩ (unbalanced)
	For line inpu	
	Audio output	ø3.5 mm stereo mini jack (monaural output)
		Output impedance : Approx. 600 Ω (unbalanced)
		Using Amplifier built-in external speaker
		Output level : -20 dBV
	Dimensions	220 mm (W) x 450 mm (H) x 266 mm (D)
		{8-21/32 inches (W) x 1ft 5-23/32 inches (H) x 10-15/32 inches (D)}
	Mass (approx.)	Approx. 8.5 kg {18.7 lbs}
	Finish	Main body : Glass Fiber Reinforced Plastics
		WV-SUD638 : Natural Silver
		WV-SUD638-H : Gray (N7)
		WV-SUD638-T : Brown (Environmental color)
		Front glass : Glass, Clear

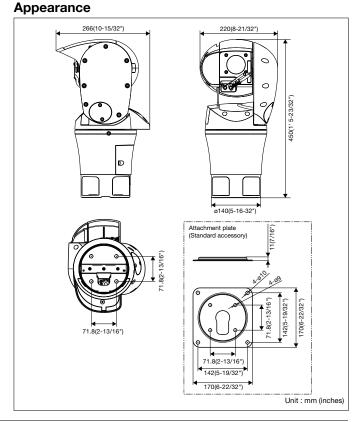
- Front glass: Glass, Clear

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

 *2 When "AAC-LC (HIGH QUALITY)" is selected, there are limitations about the following function.

 -HTTPS is not available. The maximum concurrent access number is limited to 5

 *3 Only when installation work specified in Installation Guide is properly performed and appropriate waterproof treatment is performed.



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