



Network

PTZ

# TNP-A6550RW

2MP AI Ruggedized PTZ Camera



## Key Features

- Max 2MP 55x
- IP66, IP68, NEMA4X
- IR viewable length 600m
- NEMA TS-2 (2.2.7.2-8, 2.2.8, 2.2.9)
- Wind load max.160 mph
- Operating temperature : -50 ~60°C
- Analytics events based on AI engine : Object detection (Person/Face/Vehicle/License plate), IVA (Virtual line/Area, Enter/Exit, Loitering, Direction, Intrusion),Slip&Fall detection, Motion detection
- Support BestShot and full attributes
- Support Dynamic Privacy Masking
- extremeWDR, WiseNR II (Based on AI engine), WiseStream(Based on AI engine)
- Support Wisepower(Power monitoring, ECO mode)
- Device certificate(Hanwha Vision Root CA), Secure storage (Secure element with FIPS 140-3 level3/CC EAL6+ certified), SBOM

## Compatible Devices



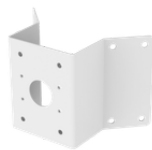
SBP-004PBW



SBP-004WMW



SBP-150PMW



SBP-156KMW



SPP-K004EP



SPP-C00402EP



SPP-C00405EP



SPP-C00410EP

## TNP-A6550RW

2MP AI Ruggedized PTZ Camera



### Specifications

#### Video

Imaging Device	Size	1/2.8"
	Type	CMOS
Resolution	1920x1080, 1280x1024, 1280x960, 1280x720, 1024x768, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360, 320x240	
Max. Framerate	H.265/H.264	60fps/50fps(60Hz/50Hz)(WDR off) / 30fps/25fps(60Hz/50Hz)(WDR on)
	MJPEG	30fps
Min. Illumination (Lux)	Color(1/30sec, 30IRE)	0.02Lux(F1.6, 1/30sec)
	BW(1/30sec, 30IRE)	0.002 lux (1/30sec,F1.6), 0Lux(IR LED On)

#### Lens

Focal Length (mm)	4.75~261.4	
Zoom Ratio	Optical	55
	Digital	1760
Max Aperture Ratio (F number)	Wide	F1.6
	Tele	F6.5
Angular Field of View	Horizontal	58.6°(Wide)~1.23°(Tele)
	Vertical	34.8°(Wide)~0.71°(Tele)
	Diagonal	65.5°(Wide)~1.39°(Tele)
Min. Object Distance	5m(16.4ft)	
Focus Control	Auto, Manual, Oneshot AF, Focus save	
Lens Type	DC auto iris	

#### Pan / Tilt / Rotate

Pan / Tilt / Rotate Range	Pan	360° Endless
	Tilt	Upright: 140°(50°~-90°), Canted: 165°(75°~-90°), Inverted: 140°(90°~-50°)
Pan Speed	Preset	Max. 160°/sec
	Manual	0.024°/sec~160°/sec
Tilt Speed	Preset	Max. 160°/sec
	Manual	0.024°/sec~160°/sec

## Pan / Tilt / Rotate

Sequence	Preset(300ea), Swing, Group(6ea), Trace, Tour, Auto Run, Schedule
Preset Accuracy	±0.07°

## Operational

Direction Indicator	Support	
Day & Night	Auto(ICR)	
Backlight Compensation	BLC, HLC, WDR, SSSDR	
Wide Dynamic Range (dB)	120	
Digital Noise Reduction	WiseNR II (Based on AI engine), SSNR V	
Digital Image Stabilization	Support(built-in gyro sensor)	
Defog	Support	
Motion Detection	Quantity	8ea
	Shape	8point Polygonal zones
Privacy Masking	Quantity	32ea
	Shape	4point Quadrangle zones
	Color / Option	Gray, Green, Red, Blue, Black, White, Mosaic
	Dynamic Privacy Masking: Color / Option	Gray, Green, Red, Blue, Black, White, Mosaic, Purple, Yellow
Gain Control	Off, Max gain, Manual	
White Balance	ATW, NarrowATW, AWC, Manual, Indoor, Outdoor, Mercury, Sodium	
Electronic Shutter	Mode	Minimum, Maximum, Anti flicker, Prefer shutter control(Based on AI engine)
	Speed Range	2~1/30,000sec
Video Rotation	Flip&Mirror	
Installation Direction	Upright, Inverted, Canted	
Alarm Interface	Others	Support alarm I/O via optional I/O box
Alarm Triggers	Analytics, Network disconnect, Alarm input, Time schedule, MQTT subscription	
Alarm Events When Alarm Trigger Occurred	File upload(image): e-mail/FTP, File upload(video clip): FTP/SFTP, Notification: e-mail, Recording: SD/SDHC/SDXC or NAS recording at event triggers.Alarm output, Handover: PTZ preset,send message by HTTP/HTTPS/TCP,Audio clip playback, MQTT: publication	
Audio In	Support via optional I/O box	
Audio Out	Support via optional I/O box	
Light Type	IR LED	
Light Viewable Length	IR	600m(1,968.50ft)
IR Wavelength	850nm	
Water Removal	Support(with Wiper)	
Ice Removal	Window, Pan	

## Operational

<b>Auto Tracking</b>	Support, Object auto tracking(Person/Vehicle), Target lock tracking
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## Analytics

<b>Classified Object Type</b>	Person, Face, Vehicle, License plate	
<b>Attributes</b>	Person	Upper/Lower clothes color, Gender, Bag
	Vehicle	Type(car, bus, truck, motorcycle, bicycle), Color
	Face	Age, Gender, Face mask, Glasses
<b>Thumbnail</b>	BestShot	
<b>Analytics Events</b>	Based on AI Engine	Object detection, Virtual line(Crossing/Direction), Motion detection, Slip & fall detection, Virtual area(Loitering/Intrusion/Enter/Exit/Appear/Disappear), Auto tracking
	Normal	Tampering, Audio detection, Shock detection

## Network

<b>Ethernet</b>	RJ-45 Push-pull Connector(10/100BASE-T)	
<b>Video Compression</b>	H.265/H.264: Main/Baseline/High, MJPEG	
<b>Smart Codec</b>	WiseStream(Based on AI engine)	
<b>Bitrate Control</b>	H.265/H.264: CBR or VBR, MJPEG: VBR	
<b>Streaming</b>	Unicast	Up to 20 users
	Multicast	Support
	Multiple Streaming	Up to 10 profiles
<b>Protocol</b>	IPv4, IPv6, TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, FTP, SFTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, UPnP, Bonjour, LLDP, CDP, SRTP(TCP, UDP Unicast), MQTT, NTCIP 1205, Syslog	
<b>Application Programming Interface</b>	ONVIF	S, G, T, M
	Others	SUNAPI(HTTP API), Hanwha Vision Open Platform
<b>Direct Cloud Connection</b>	Support	

## Security

<b>OS / Firmware Protect</b>	Encrypted firmware, Secure boot, Signed firmware
<b>User authentication</b>	Digest authentication, Prevent brute-force attack
<b>Network authentication</b>	IEEE 802.1X(EAP-TLS, EAP-LEAP, EAP-PEAP, MSCHAPv2)
<b>Secure Communication</b>	HTTPS, WSS(WebSocket Secure), SRTP
<b>Access Control</b>	IP-based access control, MAC-based access control, Auto logout
<b>Data Protect</b>	Encryption credentials, Encrypt compress for live recording file export
<b>Audit</b>	Access / System / Event Log management
<b>Device ID</b>	Device certificate(Hanwha Vision Root CA)
<b>Secure Storage</b>	SDcard partition encrypt(AES-256), Secure element
<b>Supply Chain Security</b>	SBOM

## Security

Security Certificate	Secure element(FIPS 140-3 level3, CC EAL6+), Consumer IoT Security Standard (ETSI EN 303 645)
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## General

SoC	Type	Wisenet 9
	Dual NPU	Support
Memory	RAM	4GB
	Flash	8GB eMMC
Edge Storage	Micro SD/SDHC/SDXC	Max. 1TB x 1slot
Edge Storage(OnCloud)	Micro SD/SDHC/SDXC	Max. 1TB x 1slot *Hanwha Vision branded microSD cards have been certified and recommended for OnCloud edge recording.

## Environmental & Electrical

Operating Condition	Temperature	-50°C~+60°C(-58°F~+140°F)
	Humidity	0~100% RH(condensing)
	Others	+74°C(+165°F)(Max) based on NEMA-TS 2(2.2.7), Start up should be done at above -30°C, Humidity control with AIR vent
Storage Condition	Temperature	-50°C~+60°C(-58°F~+140°F)
	Humidity	0~90% RH(non-condensing)
Wind Load		Sustained 257km/h (160mph)
EPA(Effective Projected Area)		0.095m <sup>2</sup>
Input Voltage		PoE++(IEEE802.3bt type4, Class8)
Power Consumption	PoE	Max. 71W, typical 28.3W
WisePower		Power mode, Power monitoring, Eco mode

## Mechanical

Color		White, Black
Material		Aluminum, PC(Polycarbonate), ITO Glass
Material Management	Declaration	RoHS(EU RoHS directive 2011/65/EU and IEC/EN 63000:2018), REACH(Regulation (EC) No. 1907/2006), Conflict mineral policy(Section 1502 of US Dodd Frank Act)
RAL Code		RAL9003, RAL9005
Product Dimensions		Upright Normal/Inverted : 293.4(W)x205.6(D)x399.9(H)mm (11.55x8.09x15.74") Upright Canted : 293.4(W)x301.9(D)x363.6.9(H)mm (11.55x11.89x14.31")
Product Weight		10.4kg(9.4kg: Excluding installation part)

## Certifications & Standards

EMC		EN 50121-4, FCC 47 CFR 15 Subpart B Class A, ICES-3(A)/NMB-3(A), CE/UKCA - EN55032 Class A, EN 50130-4, VCCI CISPR 32 Class A, RCM AS-NZS CISPR 32 Class A, KS C 9832 Class A, KS C 9835, EN 55035
Safety		UL 62368-1, CAN/CSA C22.2 NO. 62368-1, IEC 62471, IEC/EN/UL 62368-1 GS UL cUL CE FCC VCCI CB

## Certifications & Standards

Environment	IEC 60529 IP66, IEC 60529 IP68, IEC 62262 IK10, NEMA TS 2-2013 (2.2.7, 2.2.8, 2.2.9), NEMA 250 type 4X, IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-14, IEC 60068-2-27, IEC 60068-2-78, MIL-STD-810H 501.7, MIL-STD-810H 502.7, MIL-STD-810H 503.7, MIL-STD-810H 505.7, MIL-STD-810H 506.6, MIL-STD-810H 507.6, MIL-STD-810H 509.7, MIL-STD-810H 510.7, MIL-STD-810H 521.4, IEC 60068-2-52:2017, NEMA TS2, 2.1.9, NEMA TS2, 2.1.10, NEMA TS2, 2.2.4, NEMA 250, 5.6, ASTM B117
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## DORI (EN62676-4 standard)

Detect (25PPM/ 8PPF)	Wide	68.4m(224.5ft)
	Tele	3577.4m(11736.7ft)
Observe (63PPM/ 19PPF)	Wide	27.4m(89.8ft)
	Tele	1430.9m(4694.7ft)
Recognize (125PPM/ 38PPF)	Wide	13.7m(44.9ft)
	Tele	715.5m(2347.3ft)
Identify (250PPM/ 76PPF)	Wide	6.8m(22.5ft)
	Tele	357.7m(1173.7ft)