



UH4500-12/20 4K Ultra HD PTZ Camera

12/20X Optical Zoom | 4K 30fps | AI Tracking | NDI®|HX2

Multiple Output Ports | Free-D | Gesture Recognition | Audio tracking | PoE

USB 3.0 / HDMI / LAN



Core Performance

4K 30fps Video

Using the new generation 1/2.8-inch SONY high-quality sensor, it supports 4K 30fps ultra HD output, suitable for recording large scenes. With 8.29 million effective pixels, it enables multi-range shooting from wide-angle to close-up while maintaining lossless image quality.



Free-D

Built-in Free-D protocol supports real-time spatial data output from the camera, enabling dynamic control of shooting angles and perspectives. It provides precise positioning for virtual studios, AR expansion, and mixed reality production, creating a seamless and immersive audio-visual experience.



Optical & digital zoom

Equipped with 12/ 20x high-quality optical zoom, combined with 1.5x digital zoom, it achieves a smooth transition from expansive panoramas to delicate close-ups. Optical zoom maintains lossless image quality, digital zoom extends the field of view, and the dual zoom system removes limitations on near and far distances.



NDI®|HX2 Protocol

Supports NDI®|HX2 protocol for simultaneous transmission of high-quality audio, video, and control signals over a single cable—delivering low latency, high image quality, smooth PTZ control, and efficient bandwidth use in integrated IP production workflows.



Multiple Output Interfaces

Compatible with mainstream video output interfaces, supports ultra HD 4K video output via HDMI and USB 3.0, and can simultaneously output 1080P HD images through a LAN network.



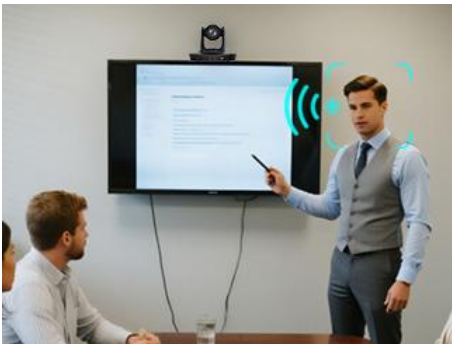
AI Tracking

Equipped with multi-mode AI tracking, it recognizes faces, gestures, sound, and areas for automatic tracking and intelligent framing—delivering precise follow-shot and image optimization with minimal manual intervention, ideal for speeches, meetings, and teaching.



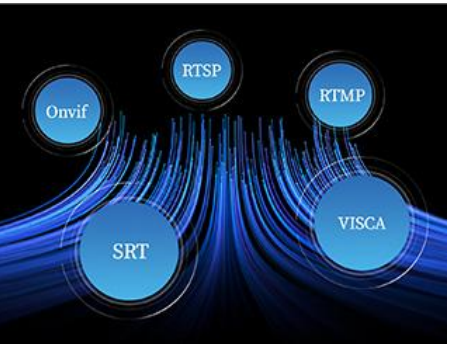
Clapper Wind Array

Equipped with a four-microphone array, it supports far-field voice pickup up to 6 meters. Combined with intelligent noise reduction and echo cancellation algorithms, it can effectively filter out environmental noise and achieve clear omnidirectional sound capture.



Multipl Ecode Smultiple Protocols

This PTZ camera supports H.264/H.265 encoding and network protocols including ONVIF, SRT, RTMP(S), and FreeD—ideal for surveillance, live streaming, professional production. It also features VISCA, ONVIF, and PELCO P/D control compatibility with auto-protocol detection for seamless integration and unified control.



Product Specifications

Camera Parameters

Sensor		1/2.8-inch SONY CMOS Sensor, approximately 8.29 million effective pixels
Zoom	Optical Zoom	12/20X
	Digital Zoom	1.5X
Lens		12x : f=4.1mm(Wide angle)~49.2mm(Narrow angle) 20X : f=5.2mm(Wide angle)~104mm(Narrow angle)
Horizontal Field of view		12X : 72.5° (W)~6.57° (T) 20X : 58.7°(W)~3.2°(T)
Vertical Field of view		12X : 42.06° (W)~3.67° (T) 20X : 32.2°(W)~1.8°(T)
Output Format	HDMI	3840*2160 p30/29.97/25; 1920*1080 p60/59.94/50/30/29.97/25; 1280*720 p60/59.94/50
	USB	MJPEG: 3840*2160, 2560*1440, 1920*1080, 1280*720, 960*540, 640*360, 480*270, 384*216, 320*180, 256*144
		YUY2: 1920*1080, 1280*720
		NV12: 1920*1080, 1280*720

Gimbal

Preset	Remote Controls: 10, Keyboards: 255, Accuracy: 0.1°±10%
Gimbal Acceleration Curve	Gentle, Standard, Fast
Horizontal Rotation Angle	-168°~ +168°
Vertical Rotation Angle	-30°~ +90°
Horizontal Rotation Speed	0.01°~ 90°/S
Vertical Rotation Speed	0.01°~ 90°/S

Image Parameters

Noise reduction	2D & 3D
Exposure	Automatic, Manual, Aperture Priority, Shutter Priority
White Balance	Auto, Indoor, Outdoor, One-touch White Balance, Auto Tracking, Manual, Color Temperature
Low light	0.1Lux
Anti-flicker	Off, 50Hz,60Hz
Focusing Method	Automatic, Manual
Gamma	Standard, Linear, Pattern, Custom
Inversion/Image Freeze	Support
Backlight Compensation	Support
Flip/Mirror	Support
Defog	Support
Shutter	1/30S ~ 1/10000S
S/N Ratio	≥50dB

Online Streaming

Video Encoding Format	H.264, H.265
Rate Control	Variable bit rate, Constant bit rate
Bitrate	Main stream 1920*1080 p30; 1280*720 p30
Supported Protocol	TCP/IP, HTTP, RTSP, RTMP, RTMPS, SRT, ONVIF, DHCP, VISCA Over IP, Free-D

Audio Information

Compression Standard	AAC
Audio Bitrate	128kbps
Microphone	4-microphone Array, Capable of Sound Localization up to 6 Meters Away

AI Composition

Smart Tracking	Single-Person Tracking, Multi-Person Tracking, Area Tracking, Hybrid Tracking, Gesture Recognition,Voice Tracking
Gesture Recognition	Turn On/Off, Switch Target,Zoom In, Zoom Out
Composition Size	Half Body / Full Body
Composition Mode	Custom, Center, Left, Right
Composition Position	Current Position ,Preset Position , Initial Position
Horizontal Lock	Support
Pitch Lock	Support
Zoom Lock	Support

Input/Output

HDMI Port	HDMI:Version 1.4 *1 Channel
USB Port	USB3.0, Type-B Socket *1 Channel
Audio Interface	3.5mm Line In audio port *1 Channel
Communication Interface	RJ45 Interface, Supports RS232/RS422: VISCA/Pelco-D/P Protocol *1 Channel
Network Interface	RJ45:10M/100M adaptive Ethernet port *1 Channel (Supports PoE (IEEE 802.3af))
Power Connector	JEITA RC-5320A Type 4

Basic Parameters

Input Voltage	DC 12V
Input Current	Up to 1.5A
Operating Temperature	0~40℃
Power Consumption	Up to 18W
Color	Black
Specifications	240*162*173mm
Weight	1.3KG
Accessory List	DC12V Power Adapter, IR Remote Control, User Manual, USB 3.0 Video Cable, RS-232 Serial Cable (Optional), HDMI Cable (Optional), Bracket

Interface Diagram



Structural Dimensions

