



UH4001-10/12/20X Ultra HD PTZ Camera

10/12/20X Optical Zoom | 4K 30fps | AI Tracking | NDI®|HX2(Optional)

Multiple Output Ports | Free-D | PoE power supply

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-high-definition output, suitable for recording large-scale scenes. It has 8.29 million effective pixels, allowing multi-range shooting from wide-angle to close-up while maintaining lossless image quality.



Optical+Digital Double Zoom

Equipped with 10/12/20x high-quality optical zoom, combined with digital zoom, it achieves a smooth transition from wide-angle panoramas to detailed close-ups. Optical zoom preserves image quality, digital zoom extends the field of view, and the dual zoom system removes limitations on distance.



Multiple Output Interfaces

Compatible with mainstream video output interfaces, it supports ultra-high-definition 4K P30 video output via HDMI and USB 3.0. And can output 1080P30 high-definition images via LAN network.



Low-light imaging

Using an ultra-high signal-to-noise ratio CMOS image sensor, combined with advanced 2D/3D dual noise reduction algorithms, it can significantly suppress image noise even in ultra-low light environments, presenting clear and pure images, ensuring rich image details and excellent picture 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.



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.



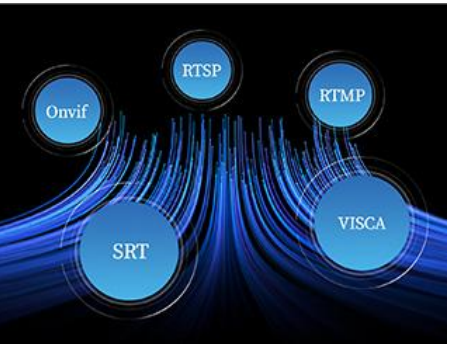
AI Tracking

Equipped with multi-mode AI tracking algorithms, it supports portrait and area recognition, can automatically complete target tracking and intelligent composition, achieve precise follow-up and image optimization, significantly reduce manual operation requirements, and is suitable for shooting scenarios such as speeches, meetings, and teaching.



Multi-format encoding and multi-protocol support

This PTZ camera supports various video encoding formats such as H.264/265. It supports network transmission protocols including ONVIF, SRT, RTSP, RTMP(S), and Free-D, covering live streaming and professional production scenarios. At the same time, it is compatible with VISCA, ONVIF, PELCO P/D, and NDI control protocols, supports automatic protocol recognition, and facilitates system 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	10/12/20X		
	Digital Zoom	16X		
Lens		10X: f=4.32mm(Wide angle)~40.9mm(Narrow angle) 12X: f=4.1mm(Wide angle)~49.2mm(Narrow angle) 20X: f=5.2mm(Wide angle)~104mm(Narrow angle)		
Horizontal Field of view		10X:67.5(W)~7.6(T)	12X:72.5(W)~6.57(T)	20X:58.7° (W)~3.2° (T)
Vertical Field of view		10X:40.2(W)~4.3(T)	12X:42.06(W)~3.76(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

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

AI Composition

Smart Tracking	Single-Person Tracking, Multi-Person Tracking, Area Tracking, Hybrid Tracking
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 Interfac	RJ45 Interface, Supports RS232/RS422: VISCA/Pelco-D/P Protocol *1 Channel
Network Interface	RJ45:10M/100M adaptive Ethernet port *1 Channel
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	Silvery white
Specifications	180*180*175mm
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(Choose either hanging installation or wall installation)

Interface Diagram



Structural Dimensions

