

# AI Camera



The Ultra HD 4K camera offers perfect functions, superior performance and rich interfaces. The features include advanced ISP processing algorithms to provide vivid images with a strong sense of depth, high resolution, and fantastic color rendition. It supports for H.265/H.264 coding, making the image smooth and clear even in low-bandwidth.

- **4K Ultra HD:** 1/2.8 inch high quality 4K SONY CMOS sensor; 8.50 megapixel, resolution is up to 4K (3840x2160) at 30 FPS.
- **Optical Zoom:** 12X optical zoom with 70°viewing angle.
- **Advanced Auto Focus Technology:** Advanced auto focus technology allows the camera to move fast, accurately, and stably.
- **Low Noise and High SNR:** Low noise CMOS provides the high SNR. The use of leading 2D 3D noise reduction technology further reduce the noise while not comprising the clarity of image.
- **Multiple Connections:** It supports for HDMI, SDI, USB3.0, wired LAN and PoE. USB3.0 supports dual stream and SDI supports 100 meters transmission at 1080P60.
- **Multiple Audio Compression Formats:** It supports for YUY2、 MJPEG、 H.264、 H.265、 NV12 video coding formats. And the resolution of 3840X2160 at 30FPS is available under MJPEG、 H.264、 H.265 formats. Audio compression formats: AAC、 MP3、 G.711A

- **Audio Input Jack:** It supports audio coding in AAC、MP3、G.711A. And the sampling rate of 16000、32000、44100、48000 are available under AAC, MPS formats.
- **Built-in Gravity Sensor:** It is built in gravity sensor, supports for PTZ auto flip, easier for engineer to set up.
- **Multiple Network Protocols:** It supports for protocols of ONVIF、GB/T28181、RTSP、RTMP、VISCA OVER IP、IP VISCA、RTMPS、SRT, RTMP Push Mode, RTP multi-broadcasting mode, making it easy to link with stream media server(Wowza、FMS)
- **Control Jack:** RS422 compatible with RS485, RS232-IN, RS232-OUT, RS232 jack is capable of cascading.
- **Multiple Control Protocols:** It supports for control protocols of VISCA, PELCO-D, PELCO-P, and able to automatically identify the protocols.
- **Super Quiet PTZ Movement:** Adopting step driving motor mechanism and motor drive controller with high precision is to ensure PTZ works smoothly with low speed and without noise.
- **Low-power Sleep Mode:** It supports for low-power sleep/wake up. The power consumption in sleep mode is less than 400mW.
- **Multiple Presets:** It supports for 255 presets(10 presets called via remote control)
- **IR & Wireless Remote Control:** IR and Wireless Remote Control are available for options.
- **AI Human Detection:** Boasting high speed processor and advanced image processing and analytic algorithm, the camera supports for real-time tracking and zone-tracking.
- **Wide Application:** Applied in remote teaching, conference system, online training, and tele-medicine.

## Technical Specification

Parameter/Model	12X
Device/Lens	
Image Sensor	1/2.8 Inch SONY CMOS Sensor
Effective Pixels	851M、16: 9
Video Format	<b>HDMI:</b> 4KP30、4KP25、1080P30、1080P25、1080P29.97; <b>SDI:</b> 1080P30、1080P25、1080P29.97; <b>USB3.0:</b> <b>Main Stream:</b> YUY2/NV12: 1920×1080/1280×720/1024×576/800×600/800×448/640×360/ 480×270/320×180@10/5fps; MJPG/H264: 3840*2160/1920×1080/1600×896/1280×720/1024×576/960×540/800×600/800×448/720×576/720×480/640×360/640×480/480×270/352×288/320×240@30/25/20/15/10/5fps; <b>Secondary Stream:</b> YUY2/NV12: 1280×720/1024×576/800×600/800×448/640×360/640×480/480×270/320×180@30/25/20/15/10/5fps; MJPG/H264: 1920×1080/1600×896/1280×720/1024×576/960×540/800×600/800×448/720×576/720×480/640×360/640×480/480×270/352×288/320×240@30/25/20/15/10/5fps;
Optical Zoom	12X
Viewing Angle	Horizontal: 6.5° (N) ~70.9° (W)
Iris Value	F1.6 ~ F2.8±5%
Digital Zoom	X15
Minimum Illumination	0.5Lux(F1.8, AGC ON)
DNR	2D & 3D

<b>White Balance</b>	Auto/Manual/One-Push/Specified Temperature
<b>Focus Mode</b>	Auto/Manual/One-push
<b>Exposure Mode</b>	Auto, Manual, Shutter Priority, Iris Priority, Bright Priority
<b>Iris</b>	F1.8 ~ F11、CLOSE
<b>Shutter Speed</b>	1/25~1/20000
<b>BLC</b>	On/Off
<b>Dynamic Range</b>	Off、1 ~ 8
<b>Video Adjustment</b>	Brightness, Color, Saturation, Contrast, Sharpness, B/W mode, Gamma curve
<b>SNR</b>	>50dB
<b>Interface</b>	
<b>Back Panel</b>	HDMI、SDI、LAN(POE)、USB3.0、A-IN、RS232-IN、 RS232-OUT、RS422(Compatible with RS485)、DC12V power supply, dial switch, power switch
<b>Video Output</b>	HDMI、SDI、LAN、USB3.0
<b>Video Compression Formats</b>	LAN: H.264、H.265  USB 3.0: MJPG、H264、YUY2、NV12
<b>Audio Input Jack</b>	Dual channel 3.5mm linear input
<b>Audio Output Jack</b>	HDMI、SDI、LAN、USB3.0
<b>Audio Compression Format</b>	AAC、MP3、G.711A
<b>Network Port</b>	10M/100M/1000M adaptive Ethernet, supports for POE, audio/video output

<b>Network Protocols</b>	RTSP、RTMP、ONVIF、GB/T28181、VISCA OVER IP、IP VISCA、RTMPS、SRT, Support remote upgrade, remote reboot, remote reset.
<b>Control Jacks</b>	RS232-IN、RS232-OUT、RS422 compatible with RS485
<b>Serial Port Protocols</b>	VISCA/Pelco-D/Pelco-P; Baudrate: 115200/38400/9600/4800/2400
<b>USB Communication Protocols</b>	UVC (Video communication protocol) , UAC (Audio communication protocol)
<b>Power Interface</b>	HEC3800 power socket(DC12V)
<b>Power Adapter</b>	Input AC110V~AC220V; OutputDC12V/2.5A
<b>Voltage</b>	DC12V±10%
<b>Currency</b>	<1A
<b>Power Consumption</b>	<12W
<b>PTZ</b>	
<b>Pan</b>	-170°~+170°
<b>Tilt</b>	-30°~+90°
<b>Pan Speed</b>	0.1°/s~60°/s
<b>Tilt Speed</b>	0.1°/s~45°/s
<b>Preset Speed</b>	Pan: 60°/s, Tilt: 45°/s
<b>Preset Quantity</b>	255 presets (10 via remote control)
<b>Other</b>	

<b>Storage Temperature</b>	-10℃～+70℃
<b>Storage Humidity</b>	20%～95%
<b>Working Temperature</b>	-10℃～+50℃
<b>Working Humidity</b>	20%～80%
<b>Dimension</b>	181 (L) mm×115mm (W) ×149mm (D)
<b>Weight(Approximate)</b>	1.2kg
<b>Environment</b>	Indoor
<b>Accessory</b>	
<b>Standard Accessory</b>	Power adapter, RS232 control cable, USB3.0 cable, remote control, user manual.
<b>Optional Accessory</b>	Brackets
<b>AI Function</b>	
<b>Real-time Tracking</b>	Maximum tracking range is 6-7 meters, allowing speakers to move at speed of 3-4 meters.
<b>Zone Tracking</b>	4 tracking zones can be set and the zones range need to -170° ～+170° in horizontal and -30° ～+90° in vertical.