

Broadcasting-Grade PTZ Camera

VX90



4/3-inch CMOS
Sensor



4K UHD
60FPS



OIS



AI-Assisted
Shooting



Multiple
Interfaces

The VX90 is an upgraded broadcast-grade PTZ camera featuring a 4/3-inch CMOS sensor and an advanced image processing engine for true-to-life imaging in complex lighting. A high precision mechanical PTZ system with OIS stabilization and AI intelligent framing ensures smooth, stable tracking, while comprehensive protocol and interface support enables seamless integration into broadcast, live events, and virtual production environments.



FEATURES

4/3-INCH CMOS IMAGE SENSOR

The camera equipped with a powerful 4/3-inch UHD CMOS sensor, can effectively reduces high-brightness and low-brightness noise and output an incredible 4K@60fps(3840x2160) without any artifacts.

20X OPTICAL ZOOM

Employs a true 4K lens, with 71° HFOV and 20x optical zoom, capturing both large scenes and minute details clearly for an enriched video experience.

POWERFUL AI TRACKING

Built-in self-developed ReID and FaceID AI algorithm, can achieve high-precision subject recognition and focusing based on information such as human skeletal structure, body shape, posture, and clothing, enabling accurate tracking and shooting of moving targets even in complex environments.

VIRTUAL STUDIO

Compatible with the FreeD protocol, it sends precise camera tracking information (pan/tilt/zoom/focus) to 3D production software, seamlessly blending real-life footage with 3D virtual backgrounds and characters to create a realistic virtual studio, offering a more immersive and interactive visual experience.

FRONT AND REAR TALLY LIGHT

To ensure a smooth and error-free shooting process, the camera is equipped with 2 front and 1 rear Tally lights, which display the current status of the camera in red and green color, so that the Photographers and other people can quickly discern the camera's working status from different light.

MULTI-PROTOCOLS COMPATIBILITY

Support NDI®|HX3, Dante AV-H, SRT, TCP/IP, HTTP(S), RTSP, RTMP(S) and other protocols.

OIS STABILIZATION

Featuring newly upgraded OIS technology, the built-in physical compensation mechanism precisely counteracts hand shake, device movement, and environmental vibrations. It delivers stable, smooth video without cropping or compromising image quality, making it ideal for telephoto, high-speed, and dynamic shooting scenarios.

FOUR FILTER OPTIONS WITH ONE-BUTTON SWITCHING

Built-in ND filter with four selectable modes: OFF, 1/4, 1/16, 1/64. One-button switching for quick filter level adjustment.

HIGH-PRECISION MECHANICAL PAN-TILT HEAD

Featuring the latest high-speed, high-torque, high-precision motors and a graded dual-layer transmission mechanism, the pan-tilt head offers enhanced sensitivity. Advanced motion backlash handling and motor raft design contribute to more accurate rotation. The head can automatically adjust its horizontal rotation speed (0.1°~80°/s) based on the lens zoom, facilitating easy high-speed movements or fine shooting adjustments.

MULTIPLE INTERFACES

Supports simultaneous streaming of high-definition digital signals via HDMI, 12G-SDI, 3G-SDI, USB and LAN; supports SFP+ fiber optic transmission, XLR&Line audio signal transmission, GenLock&Time Code audio and video signal synchronization, TF Card local file storage, etc., widely applicable in radio and television live broadcasts, event live broadcasts, remote conferences, and other scenarios.

OPTIONAL INTERFACES

Except for the standard I/O, the camera also offers a range of customized I/O and protocols like Dante AV Ultra, HDBaseT, ST2110, SDVOE to cater to the diverse needs of our customers.

SPECIFICATIONS

CAMERA

Video Resolution	HDMI: 4Kp60/50/59.94/30/25/29.97fps, 1080p60/59.94/50/30/29.97/25/24/23.98fps, 1080i60/59.94/50fps, 720p60/59.94fps 3G-SDI: 1080p60/59.94/50/30/29.97/25/24/23.98fps, 1080i60/59.94/50fps, 720p60/59.94fps
Sensor	4/3-inch, CMOS, Effective Pixels: 20 MP
Scanning Mode	Progressive
Lens	20x, f 9.79mm ~ 186.5mm, F2.8 ~ F4.5
Digital Zoom	16x
Minimum Illuminance	0.5Lux @ (F1.8, AGC ON)
Shutter	1/30s ~ 1/10000s
ND Filter	Built in (OFF, 1/4、1/16、1/64)
Image Stabilization	Standard OIS, Optional EIS
White Balance	Auto, Manual, Indoor, Outdoor, One Push, VAR
Backlight Compensation	Support
Digital Noise Reduction	3D Digital Noise Reduction
Signal-to-Noise Ratio	≥55dB
HFOV	71° ~ 4.05°
VFOV	39.6° ~ 2.2°
Horizontal Rotation Range	±172°
Vertical Rotation Range	-30° ~ +120°
Pan Speed Range	0.1° ~ 80°/s
Tilt Speed Range	0.1° ~ 60°/s
Image Flip & Freeze	Support
Number of Preset	255
Preset Accuracy	0.1°

NETWORK SPEC

Video Compression	H.264 / H.265 / MJPEG
Video Stream	First Stream, Second Stream
First Stream Resolution	3840x2160, 1920x1080, 1280x720, 1024x576 etc.
Second Stream Resolution	720x576, 720x480, 320x240 etc.
Video Bit Rate	32kbps~81920kbps
Bit Rate Type	CBR, VBR
Frame Rate	P50: 1fps~50fps, P60: 1fps~60fps
Audio Compression	AAC, G.711A
Audio Bit Rate	96kbps, 128kbps
Support Protocols	NDI® HX3, Dante AV-H, FreeD, SRT, TCP/IP, HTTP(S), RTSP, RTMP(S), ONVIF, DHCP, Multicast, etc.

USB FEATURES

Operating System	Windows 7/8/10, macOS, Linux, Android
Color System/Compression	YUY2 / H.264 / MJPEG / H.265
Video Format	YUY2: Max.1440P30 H.264 AVC: Max.2160P60 H.265 HEVC: Max.2160P60 MJPEG: Max. 2160P60
USB Audio	Support
USB Video Class (UVC)	UVC 1.1
UVC PTZ Control	Support

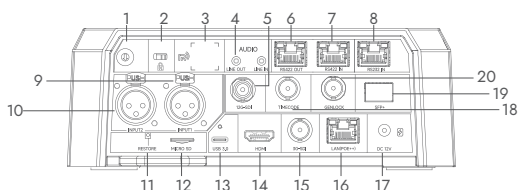
INPUT/OUTPUT INTERFACE

HD Output	1 x HDMI: 2.0 1 x 12G-SDI: BNC type, 800mVp-p, 75Ω, Comply with SMPTE 2082-1 standard 1 x 3G-SDI: BNC type, 800mVp-p, 75Ω, Comply with SMPTE 424M standard
Genlock Interface	1 x BNC type, 75Ω, Input only
Timecode Interface	1 x BNC type, 75Ω, Input only
Network Interface	1 x RJ45: 10/100/1000M bps adaptive Ethernet
Audio Interface	1 x Line In, 3.5mm Audio Interface; 1 x Line Out, 3.5mm Audio Interface; 2 x XLR interfaces; 2 x built-in mics
USB Interface	1 x USB3.0, Type-C
Communication Interface	1 x RS232 In: RJ45, VISCA/Pelco-D/Pelco-P protocol; 1 x RS485/422 in: RJ45, VISCA/Pelco-D/Pelco-P protocol; 1 x RS422 out: RJ45, VISCA/Pelco-D/Pelco-P protocol.
Memory Card Slot	1x Micro SD card slot
Restore Button	Support
Power Interface	JEITA type (DC IN 12V)
Optional I/O	1 x RJ45: Dante AV Ultra; 1 x RJ45: HDBaseT; 1 x SFP+: ST2110; 1 x SFP+: SDVOE

GENERAL SPECIFICATION

Installation	Head-up, Head-down(ceiling)
Tally Light	3 (Red and Green Dual-color)
Power Indicator	1 (Blue)
Status Indicator	2 (Green, Red)
IR Remote Control	Support
Input Voltage	DC 12V / PoE++
Input Current	5A (Max.)
Dimensions (W x D x H)	205 × 237 × 272mm
Weight	4.8 kg

INTERFACE



- 1 — Video Rotary Switch
- 2 — Security Lock
- 3 — Infrared Window
- 4 — LINE OUT/IN
- 5 — 12G-SDI
- 6 — RS422 OUT
- 7 — RS422 IN

- 8 — RS232 IN
- 9 — INPUT1
- 10 — INPUT2
- 11 — RESTORE
- 12 — MICRO SD
- 13 — USB3.0
- 14 — HDMI

- 15 — 3G-SDI
- 16 — LAN(PoE++)
- 17 — DC 12V
- 18 — TIME CODE
- 19 — SFP+
- 20 — GENLOCK