

BinoVue Maestro

BVM-2000

Teacher Camera



DESCRIPTION

The BinoVue Maestro (BVM-2000) is a flagship AI-powered teacher tracking camera purpose-built for next-generation classrooms, hybrid learning environments, and lecture capture studios. It integrates a dual-lens architecture — an 8.29MP UHD close-up lens optimized for crystal-clear instructor imaging, and a 4.93MP panoramic lens designed to cover the entire classroom with precision.

Powered by advanced computer vision, AI auto-tracking, and framing algorithms, the BVM-2000 intelligently identifies the teacher, dynamically adjusting pan, tilt, and zoom to ensure continuous framing — without requiring additional positioning systems or external sensors.

With its seamless dual-stream capability, the Maestro simultaneously outputs 4K close-up teaching views and panoramic classroom perspectives, ensuring every lecture is captured in full context. Its professional connectivity suite — including USB 3.0, 3G-SDI, LAN/PoE, and Line-In/Out audio — guarantees flexible deployment across AV ecosystems, from recording servers and OPS PCs to live-streaming platforms.

FEATURES

- **Dual-Lens Intelligent Design**

Integrated 8.29MP UHD close-up lens + 4.93MP panoramic lens ensures both instructor detail and classroom context.

- **AI-Driven Teacher Tracking & Framing**

Advanced algorithms detect teachers in real time, maintaining continuous focus and framing during lectures without manual intervention.

- **Ultra HD 4K Imaging**

Native 4K resolution at up to 30fps (close-up) combined with wide panoramic capture for lifelike, broadcast-grade video.

- **Micro Pan-Tilt + E-PTZ Hybrid**

Horizontal $\pm 40^\circ$ pan range and tilt $+5^\circ$ to -30° supported by electronic stabilization deliver smooth, accurate movements.

- **Multi-Stream Output**

Simultaneous streaming of panoramic (up to 5MP) and close-up (up to 4K UHD) video, adaptable for recording and remote teaching platforms.

- **Low-Light Excellence**

Operates at 0.5 lux, with 2D/3D Digital Noise Reduction and WDR for clarity even in dimly lit auditoriums.

- **Professional Connectivity**

USB 3.0, 3G-SDI, RJ-45 with PoE, Line-In/Out audio, supporting direct integration with recording servers, conferencing systems, and live streaming.

- **Seamless Protocol Support**

RTSP, RTMP, SRT, Onvif, HTTP/HTTPS, NDI® (optional) — ensuring compatibility across enterprise networks.

- **Enterprise Reliability**

Fanless design, 30,000h MTBF, CE/FCC/RoHS/BIS certifications, and 3-year standard warranty (extendable to 5 years).

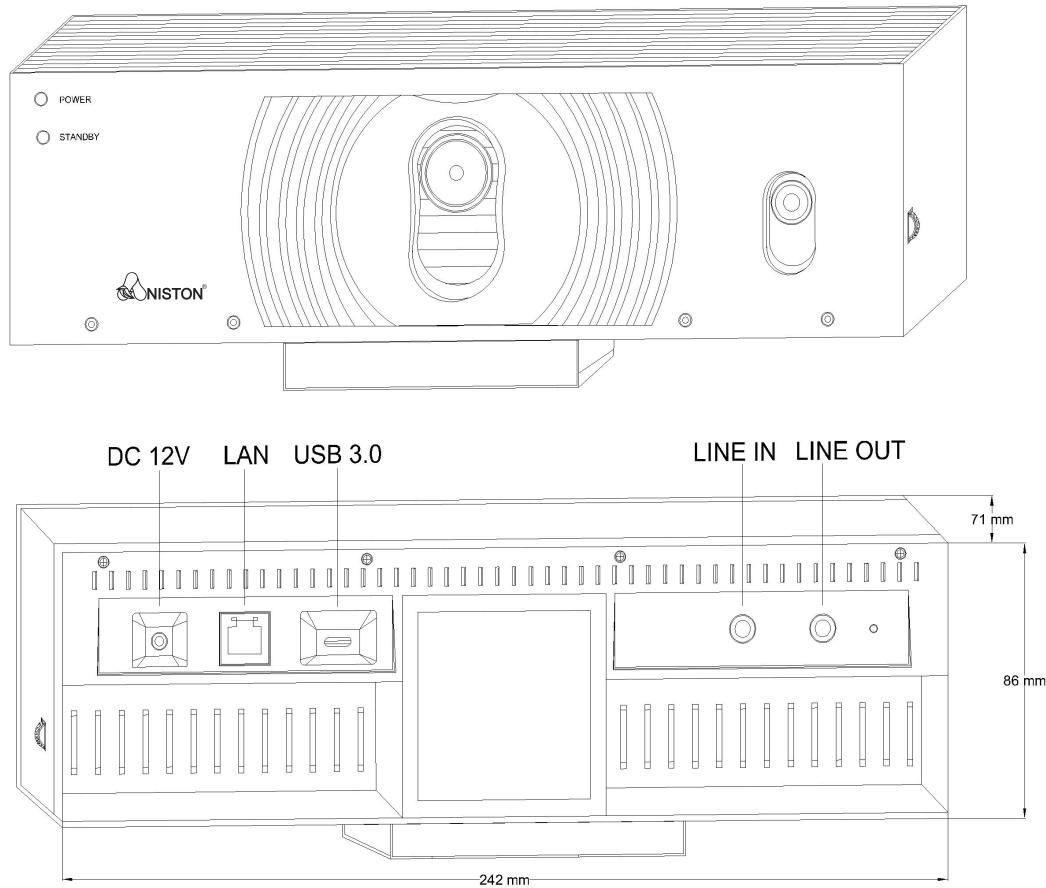


TECHNICAL SPECIFICATIONS

Product Name	BinoVue Maestro
Model Number	BVM-2000
Close-Up Camera	1/2.7" CMOS, 8.29MP, f=12.49mm, HFOV 26°
Panoramic Camera	1/2.7" CMOS, 4.93MP, f=7.37mm, HFOV 43°
Scanning Mode	Progressive
Digital Zoom	2x
Shutter	1/30s - 1/10000s
Min. Illumination	0.5 lux
S/N Ratio	≥55 dB
White Balance	Auto / Indoor / Outdoor / One-Push / Manual / VAR
Exposure Modes	Auto / Manual / Shutter Priority / Brightness
Backlight Compensation	Supported
DNR	2D + 3D
WDR	Supported
Pan Range	±40°
Tilt Range	+5° to -30°
Preset Positions	255 (0.5° accuracy)
Preset Accuracy	0.5°
Preset Speed (Pan/Tilt)	30°/s pan, 30°/s tilt
Image Flip / Freeze	Supported
Video Outputs	USB 3.0, 3G-SDI, PoE (RJ-45), HDMI (optional)
USB Formats	YUY2 / MJPEG / H.264
Network Protocols	TCP/IP, HTTP, HTTPS, RTSP, RTMP, SRT, Onvif.
Video Compression	H.265 / H.264 / MJPEG
Main Stream Resolutions:	up to 4K (3840x2160@30fps)
Sub Streams	1920x1080, 1280x720, 960x540, 640x360
Bitrate Control	VBR / CBR, 32 kbps - 16 Mbps
Audio Inputs	1 x Line In (3.5mm), USB audio
Audio Outputs:	1 x Line Out, USB / SDI / Network
Audio Compression	AAC / G.711A, 96-256 kbps
Built-in Mic	Optional (conference version)
Power Supply	DC 12V / PoE (802.3af) / PoC

Power Consumption	≤12W
Operating Temp	: 0°C ~ 40°C
Storage Temp	40°C ~ 60°C
Dimensions	242 × 86 × 71 mm
Weight	2.0 kg
Compliance	-20°C CE, FCC, RoHS, BIS
Warranty:	3 years (extendable to 5 years)

PRODUCT DIMENSION



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