

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

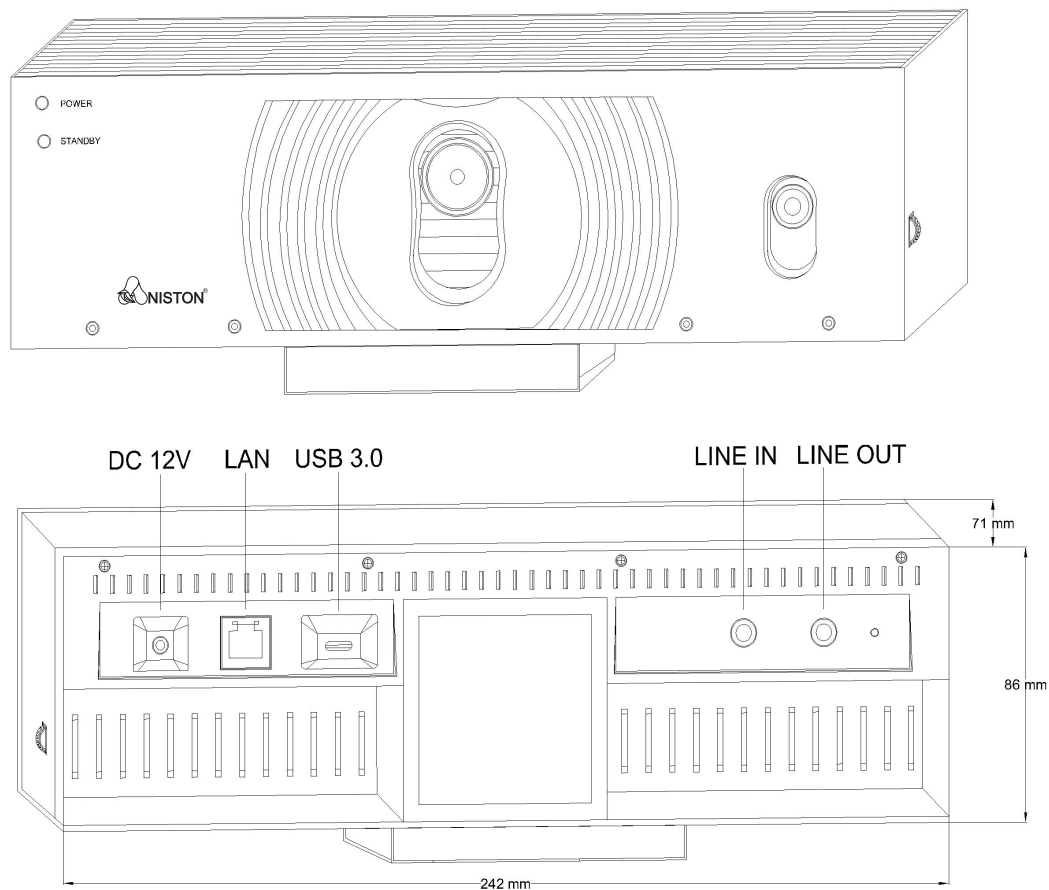
- Dual-Lens Intelligent Design**
 Integrated 8.29MP UHD close-up lens + 4.93MP panoramic lens ensures both instructor detail and classroom context.
- AI-Driven Teacher Tracking & Framing**
 Advanced algorithms detect teachers in real time, maintaining continuous focus and framing during lectures without 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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