

BOLIN

Blue Line



High Quality PTZ Camera
Lines Up For Any Budget

Blue Line PTZ Camera

Bolin's newly created Blue-Line PTZ cameras, now offer gold-standard features at an affordable price. Part of Bolin's PTZ camera manufacturing principle is to never compromise on image quality, industrial video standards, and end user experience on PTZ control operation.

Bolin Blue-Line PTZ camera focuses on delivering essential pro features to clients looking to outfit a lightweight AV system. High quality video from Full HD to 4K 60p resolution and standard control protocols essential in ProAV, UC, and light broadcast applications.

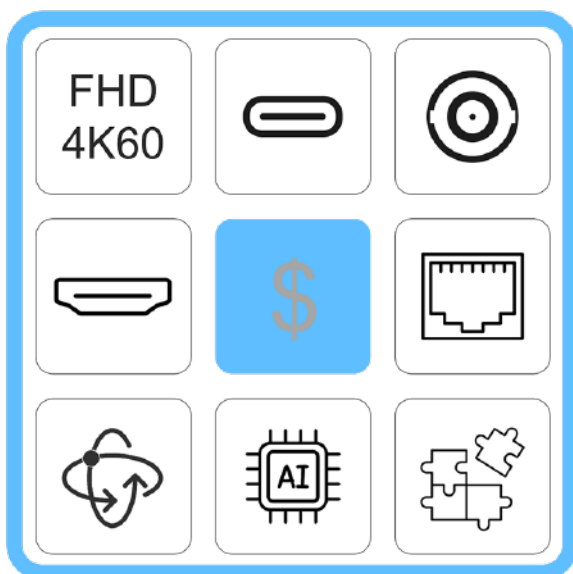
Bolin's commitment to the quality of the Blue-Line series cameras, includes the integration of cutting-edge technologies, such as an AI-powered engine - enabling precise Face Centric Smart Focus and Auto-Exposure.

In addition, the fitting of Sony's 1-inch sensor image block from our best-seller flagship product to selected blue-line camera offers to deliver pro-quality Sony DNA brilliant images to the mega-screen.

Bolin Blue-Line PTZ camera is just the beginning, and we're planning to bring many more pro-AV products to the market to bridge the gap between value and cost.



Bolin Blue-Line PTZ Camera Focus



- Gold-Standard Advantages
- Quality and Operation - No Compromises
- Standard Workflow Integration
- ProAV, UC and light broadcast application
- Feature Key Words
 - FHD/4K60
 - HDMI, SDI, USB, IP
 - Precision and Fine Control
 - AI Featured Capability
 - Compatibility and Integration
- Economical Solution

Blue Line PTZ Camera Models

B2-210/B2-220

FHD 10X/20X



B6-220/B6-420

FHD 20X/4K60 20X



B7-220

FHD 20X



B9-418

4K30/FHD 18X



| Output | SKU | B2-210 | B2-220 | B6-220 | B6-420 | B7-220 | B9-418 |
|-------------------|-----|--------|--------|--------|--------|--------|--------|
| SONY Image Block | | | | | | | √ |
| BOLIN Image Block | | √ | √ | √ | √ | √ | |
| FHD | | √ | √ | √ | √ | √ | √ |
| 4K60 | | | | | √ | | |
| 4K30 | | | | | | | √ |
| 10X Zoom | | √ | | | | | |
| 18X Zoom | | | | | | | √ |
| 20X Zoom | | | √ | √ | √ | √ | |
| HDMI 1.4 | | √ | √ | √ | | √ | √ |
| HDMI 2.0 | | | | | √ | | |
| 3G-SDI | | | √ | √ | | √ | √ |
| USB 3.0 | | | | | | | |
| USB 2.0 | | √ | √ | √ | √ | √ | |
| IP Streaming | | √ | √ | √ | √ | √ | √ |
| 1 Inch Sensor | | | | | | | √ |

FEATURE OVERVIEW

High Quality Imaging - Full HD

Bolin's Bolin's Blue Line PTZ cameras are equipped with Sony sensor to provide brilliant, high-quality images in 1080p60 and 4K(2160p60) resolutions with 10 to 20x optical zoom.

Video Output

All Blue Line PTZ cameras deliver IP streaming video to network with local HDMI video and USB streaming to PC software for conventional video production and cloud based video conferencing applications. Cameras with 20X zoom range and 4K60 cameras also provides 3G-SDI, lossless baseband video for live production and light broadcast use.

Video Settings

Image parameter adjustments include exposure, focus, iris, shutter speed, white balance, gamma, wide dynamic range, E-flip/mirror and more with configurable video settings.

IP Video Streaming

With AVC/HEVC(H.264/265) codec encoder built-in, the Blue-Line cameras provide RTSP, RTMP, RTMPS, SRT streaming and IP control capability via IP network.

SRT Ready

WDelivery of high-quality and secure, low-latency video across the public Internet. SRT optimizes streaming performance across unpredictable networks with secure streams and easy firewall traversal, bringing the best quality live video over unstable networks..

AI Featured Smart Focus and Exposure

Built with Bolin's latest AI-powered face analytical engine which enables precise smart focus and smart exposure to bring customer a greater level of user experience and effective image quality improvement in a complex user environment.

Audio

HDMI/SDI/USB and IP video streaming signal has high-quality audio streaming embedded with support for Mic-in and Line-in audio inputs.

PTZ Movement

Extremely quiet and smooth operation for Pan/Tilt movements combined with enhanced adaptive, variable, and super slow speed control provides accurate and effective operation experiences. Picture Profile Preset: Image parameter settings restored with presets and quick access operation.

Remote Control and Setup PTZ Camera

Bolin's Blue Line PTZ cameras support serial RS232/RS422 control, Visca over IP control over network. Remotely control pan, tilt, zoom movements with full access to camera's image parameter settings via keyboard controller or IR controller.

Ease of Installation and Use

Use Bolin mounting accessories and simply connect one network cable with POE enabled ethernet network/POE device, or RJ45 port cable connection for serial control wiring makes the installation easy.

Always Up to Date

Free and easy firmware update via IP interface to keep camera features and performance up to date and even for customized function upgrades.

UNIQUE FEATURES (B9-418)

Uncompromising 1 Inch Sensor 4K image Quality

Equipped with Sony large, back-illuminated 1.0-type Exmor R CMOS sensor which delivers an uncompromised broadcast quality color pictures in detail-packed 4K/30p. The footage can also be captured in Full HD 60p for fast-moving action applications. Excellent low light sensitivity brings low noise color video images in low light levels as low as 0.5lx, making it an ideal choice for low light environment like live hall and theater.

SRZ - Super Resolution Zoom

Zoom range optical and SRZ 18X at 4K, or 24X at FHD

TRUE Dual Output

PTZ camera provides simultaneous 3G-SDI and remote IP video streaming and control. It is a TRUE Dual Output PTZ where SDI and IP formats can be set independently.

Comprehensive

Image parameter settings (Black Level, Color Matrix and Trace Memory) and Tally lights for Broadcast-friendly use and Pro AV applications.

Image Stabilizer

Built-in image stabilizer function eliminates the effect of blurred, shaky images caused by low-frequency vibration.

Other Features

Genlock simplifies integration with other systems. Optional HDBaseT and Optical video outputs.



B2-210



B2-220



B7-220



B9-418



SDI Optical Video Output Card (Optional)



HDBaseT Video Output Card (Optional)









B6-220



B6-420

SPECIFICATIONS

| Model No. Product Name | B2-210 FHD PTZ Camera | B2-220 | B7-220 FHD PTZ Camera | B6-220 | B6-420 4K60 PTZ Camera | B9-418 1" 4K30 PTZ Camera |
|--------------------------------|--|---|---|--|---|--|
| Product Picture |  |  |  |  |  |  |
| Camera | 10X | 20X | 20X | 20X | 20X | 18X |
| Image Sensor | Sony Progressive scan CMOS image sensor 1/2.8 type | | | | | 1.0-type back-illuminated Exmor R CMOS sensor |
| Number of effective pixels | 1920X1080, 2.13 MP | 1920X1080, 2.13 MP | | 3840x2160, 8.29MP | | 3840x2160, 8.29MP |
| Zoom | Optical Zoom 10X, Digital Zoom 16X | Optical Zoom 20X, Digital Zoom 16X | | Optical Zoom 20X, Digital Zoom 16X | | 18X(4K), 24X(FHD) |
| Focal Length | f= 4.34 mm (Wide) to 35.17 mm (Tele) | f= 5.2 mm (Wide) to 104 mm (Tele) | | f= 3.55 mm (WIDE) to 63.58 mm (TELE) | | f=9.3 to 111.6mm, F2.8(Wide) ,F4.5(Tele) |
| Aperture | F1.85 (Wide) to F2.63 (Tele) | F1.6 (Wide) to F3.0 (Tele) | | F1.8 (Wide) to F3.58 (Tele) | | F2.8 Constant (W)-(T), 16 Steps |
| Horizontal Angle of View | 68.8 °(W)-8.8° (T) | 55.8° (W)-3.2° (T) | | 78.59° (W)-4.92° (T) | | 64.6° (Wide) - 6.1° (Tele), |
| Vertical Angle of View | 39.5° (W)-5.1° (T) | - | | 48.71° (W)-2.81° (T) | | - |
| Min. object distance | 10mm (Wide) | | | | | 80mm (Wide), 1000mm (Tele) |
| Min. Illumination | 0.5lux (color) , 0.1lux (black) | | | | | 0.5 lx (1/30 sec, 50%, High Sensitivity mode On) 2.0 lx (1/30 sec, 50%, High Sensitivity mode Off) |
| Shutter Speed | 1/1 sec to 1/10000 sec (22 steps) | | | | | 1/10000s to 1/8 (59.94/29.97) 1/10000s to 1/6 (50/25) |
| Focus | Auto, Manual, One Push | | | | | Auto Focus (Trigger/Interval), Manual Focus (Variable Speed), One Push Trigger, Near Limit, |
| White Balance | Auto, Indoor, Outdoor, OPW, ATW, Manual | | | | | AUTO, ATW, Indoor, Outdoor, One Push WB, Manual WB, Outdoor Auto, Sodium Vapor Lamp (Fix/Auto/Outdoor Auto) |
| Exposure | Auto, Manual, Shutter /Iris /Brightness priority | | | | | Full Auto, Gain, Shutter Priority, Iris Priority, Manual, Bright |
| Image Adjustment | Brightness, Color (Saturation), Contrast, Sharpness, HUE | | | | | |
| Back Light Compensation | On/Off | | | | | Yes |
| E-Flip | On/Off | | | | | Yes |
| WDR | On/Off | | | | | YES (130dB), Shown as VISIBILITY ENHANCER in OSD |
| Image Stabilizer | - | | | | | Yes, optical |
| Defog | - | | | | | Yes |
| Mirror | Horizontal | | | | | Yes |
| Day/Night | On/Off | | | | | Yes |
| Contrast | Yes | | | | | Yes |
| Color Gain | Yes | | | | | Yes |
| Color Hue | Yes | | | | | Yes |
| Color Matrix | Yes | | | | | Yes |
| Black Level | - | | | | | Yes |
| Gamma | Yes, 0-4 | | | | | Yes |
| High Sensitivity | Yes | | | | | Yes |
| Scene | Default, Clear, Bright, Soft | | | | | - |
| Focus Zone | Face Priority, All Area, Upper Area, Central Area, Lower Area | | | | | - |
| AI Face Detection Focus | Yes | | | | | - |
| AI Face Auto Exposure | Yes | | | | | - |
| Noise Reduction | 2D/3D, 1-255 | | | | | On/Off (level 5 to 1 / Off, 6 steps), 2D/3D |
| S/N Ratio | ≥50db | | | | | ≥50db |
| OSD | Editable | | | | | Yes |
| HDMI Signal System | | | | | | |
| Video Format - HDMI | 1920x1080p:60/59.94/50/30/29.97/25; 1280x720p:60/59.94/50/30/25 | | | 4KP-2160p:60/59.94/50/30/29.97/25; 1080p:60/59.94/50/30/29.97/25; 1080i:60/59.94/50; 720p:60/59.94/50/30/25 | | 3840x2160p/29.97/23.98/24; 1920x1080p/60/59.94/50/30/29.97/25/2 4/23.98; 1920x1080i/60/59.94/50; 1280x720p/60/59.94/50 |
| Color Format | 10bit(HDMI), YCbCr | | | | | 10bit(HDMI), YCbCr |
| Color Space | YUV, RGB | | | | | YUV, RGB |
| OSD Menu Display | YES | | | | | Yes |
| SDI Signal System | | | | | | |
| SDI Video Format | - | 1080p:60/59.94/50/30/29.97/25; 720p:60/59.94/50/30/25 | | - | 1920x1080p/60/59.94/50/30/29.97/25/2 4/23.98; 1920x1080i/60/59.94/50; 1280x720p/60/59.94/50 | |
| Color Precision | - | 10bit(SDI), YCbCr, 4:2:2 | | - | 10bit(SDI), YCbCr, 4:2:2 | |
| Color Space | - | YUV | | - | YUV | |
| Standard | - | 3G-SDI, SMPTE424/SMPTE292, TE 425-A (3Gb/s) standard / 75 Ω (BNC x 1), With SMPTE352 SDI Metadata Supported | | - | 3G-SDI, SMPTE424/SMPTE292, TE 425-A (3Gb/s) standard / 75 Ω (BNC x 1), With SMPTE352 SDI Metadata Supported | |
| True Dual Output | - | IP and SDI signal can be output with different format | | - | IP and SDI signal can be output with different format | |
| OSD Menu Display | - | YES | | - | Yes | |
| USB Signal System | | | | | | |
| USB Port | USB2.0, Type C | | | USB3.0, Type C | | - |
| Encoder | H.264/MJPEG/YUV2 | | | H.264/MJPEG/YUV2 | | - |
| USB Video Format | 1920x1080p60/50/30/25fps, 1280x720p60/50/30/25fps | | | H.264/MJPEG:(3840x2160, 1920x1080, 1280x720, 800x600, 704x576, 640x480, 320x240) 50/60/25/30fps YUV2: 3840x2160 15fps (1920X1080, 1280X720, 800x600, 704x576, 640x480, 320X240) 50/60/25/30fps | | - |
| Compatible Integration | UVC, UAC | | | | | - |
| Video Conference Compatibility | Most video conference platform in the market | | | | | - |
| Network-IP Streaming | | | | | | |
| Video Codec | MJPEG, AVC/HEVC-H.264/265 by SoC | | | | | MJPEG, AVC/HEVC-H.264/265 by SoC |
| Network Interface | RJ45 port-Standard 1Gbps Ethernet | | | | | RJ45 port-Standard 1Gbps Ethernet |
| IP Video - 1st Stream | 1920x1080, 1280x720; Frame Rate: P60/50/30/25 | | | 3840x2160, 1920x1080, 1280x720; Frame Rate: P60/50/30/25 | | 3840x2160p30/25, 1920x1080p/60/50/30/25, 1280x720p60/50/30/25; |
| IP Video - 2nd Stream | 704x576, 640x480, 640x360, 576x480, 352x228, 320x240, 320x180; Frame Rate P60/50/30/25 | | | | | |
| True Dual Output | Video resolution and framerate: IP and HDMI can be output with different format (SDI and HDMI will be the same, SDI is the same or lower than HDMI, USB is the same as IP) | | | | | |
| IP Protocols | TCP/IP, ICMP, ARP, RTP, SIP, UDP, HTTP, HTTPS, DNS, DHCP, FTP, NTP | | | | | |
| Application Protocols | RTP, RTSP, RTMP, RTMPS, SRT | | | | | |
| Multi-stream | 2 Streams (Up to 20 viewers at the same time) | | | | | |
| Audio Compression | AAC-LC, G.711, G.726 Broadband Audio Encoding | | | | | |

SPECIFICATIONS

| Model No. | B2-210 | B2-220/B7-220/B6-220 | | B6-420 | B9-418 |
|--|--|---|---|--|---|
| Camera | 10X | 20X | | 20X | 18X |
| Network-IP Streaming | | | | | |
| Compatible Integration | ONVIF2.4 (Profile S, Profile G, Profile T), VISCA Over IP | | | | |
| OSD | Customized OSD | | | | |
| Browser Support | Cross Browser Compatibility - HTML5 support for Microsoft Edge, Google Chrome, Firefox, and Safari | | | | |
| Latency - Codec | <150ms at 1080p60 | | <380ms at 4K60 | | <150ms at 1080p60; |
| Bandwidth | 2-4Mbps at 1080p60 | | 4-8Mbps at 4K60 | | 3-6Mbps at 4K30 |
| Results may vary depending on network configuration and management settings. | | | | | |
| Interface | | | | | |
| HDMI Video Output | HDMI 1.4X1 Type A | | HDMI 2.0X1 Type A | | HDMI 1.4X1 Type A |
| IP Video Stream | Up to 1080p60 | | Up to 4K60 | | Up to 4K30, 1080p60 |
| SDI Video Output | - | 3G-SDI, SMPTE424/SMPTE292, TE 425-A (3Gb/s) standard / 75 Ω (BNC x 1), With SMPTE352 SDI Metadata Supported | | - | 3G-SDI, SMPTE424/SMPTE292, TE 425-A (3Gb/s) standard / 75 Ω (BNC x 1), With SMPTE352 SDI Metadata Supported |
| HDBaseT Module | | | | | Detachable slot, 1XRJ45-HDBaseT(4K), With HDBaseT video output transmission distance up to 80-100 meters (Insert card is not included) |
| Fiber Optic SDI Module | | | | | Detachable slot, Connector: Duplex LC, Laser Unit: Single-mode 1.310nm DFB-LD transmitter and PIN receiver Compliant with MSA SFP+ Specification SFF-8402. (Insert card is not included) |
| Camera Control Interface | RJ45X1-RS422, RJ45X1-IP Control, IR Remote Control | | | | |
| Control Protocol | VISCA, VISCA Over IP, Pelco P/D | | | | |
| LAN Port | RJ45X1 (1000BASE-T Ethernet port) | | | | |
| USB Port | USB2.0, Type C | | USB3.0, Type C | | - |
| USB Protocol | UVC, UAC | | | | |
| Synchronization | Internal synchronization | | | | Internal synchronization and External Genlock/BNC |
| Tally Light | Tally lamp in front, Red and Green Color | | | | Tally lamp in front and back, Red and Green Color |
| Dip Switch | Camera bottom panel: 8 PIN x 2 | | | | |
| Firmware Upgrade | HEVC IP stream system upgrade via IP | | | | Camera back panel: x 1 |
| IR ID | Upgrade via IP for camera system MCU and Encoder | | | | HEVC IP stream system upgrade via IP |
| Power Connector Type | DC12V (IEC60130-10 (JETA standard RC-5320A) TYPE4) | | | | DC12V (IEC60130-10 (JETA standard RC-5320A) TYPE4) |
| Audio Input | MIC/LINE input, 3.5mm audio jack | INPUT: RJ45, PoE+ (IEEE802.3at) | | INPUT: RJ45, PoE++ (IEEE802.3bt) | |
| Audio Output | - | ACC (Bit Rate(bps)48K*96K; Sampling Rate(bps)16/24*32) | | Line in input, 3.5mm audio jack* | |
| Audio Output | Embedded with HDMI/SDI/IP streaming, 24bit Stereo, sample rate: 44k1 to 192k, PCM24 | | | | |
| Audio S/N Ratio | ≥85dB | | | | |
| Audio THD+N | ≤0.05% | | | | |
| Audio Noise (RMS) | ≤-90dB | | | | |
| Mechanical | | | | | |
| Pan Movement | Horizontal:±170 degrees continuous pan (Zoom Adaptive Speed Range: 0.05°~100°/S) | | | | |
| Tilt Movement | Vertical:+90 degrees to -30 degrees (Zoom Adaptive Speed Range: 0.05°~50°/S) | | | | |
| Speed Proportional | Pan/Tilt Speed proportional to zoom range | | | | |
| Preset Position | 255 positions, Speed 150°/s, Accuracy: 0.05° 6 presets on remote controller | | | | |
| Preset Speed | 0~5 Level Adjustable | | | | |
| Preset Memory | YES, (Picture Profile Preset-Preset Memory for image parameters, like: Backlight Compensation, White Balance, R-Gain/B-Gain, Auto Exposure, Bright, Iris, Shutter, Gain, Aperture, Effect, Noise Reduction, Mirror, Gamma, Ex-COMP, Color Hue, Contrast etc.) | | | | |
| Motionless Preset | On/Off | | | | |
| PTZ Trace Memory | Yes, 4 (Supported via IP interface) | | | | |
| Cruise | Yes, 4 | | | | |
| Adaptive PT | Zoom range adaptive Pan/Tilt speed | | | | |
| Pan/Tilt Direction | Normal, Invert | | | | |
| Quietness | NC35 or less | | | | |
| Home Position | Support | | | | |
| Environmental | Indoor | | | | |
| General | | | | | |
| Body | Partial Magnesium Alloy | | Aluminum Alloy | | Partial Magnesium Alloy |
| Mount | Ceiling mount, Wall mount, Tripod | | | | |
| Size of Tripod Screw Hole | 1/4"-20UNC with safety joint | | | | |
| Operating Temperature | -10 to +50 (°C), 32 to 130 (°F) | | | | |
| Operating Humidity | ≤80% Suitable for Use | | | | |
| Power Input | DC±12V, PoE+(Compatible with IEEE802.3at) | | | | |
| Power Consumption | Min:10W(Static state with no movement); Max:13W(Fully loaded operation) | Min:15W; Max:19W | Min:13W(Static state with no movement); Max:18W(Fully loaded operation) | Min: 25W(Static state with no movement); Max: 45Watts (Fully loaded operation) | |
| Dimension | 143x143x161mm (LxWxH) | | 280*159*173mm (LxWxH) | | 165x196x247mm |
| Weight | 1.5kg (Net w eight) | | 2kg | | 3.3kg (Net w eight) |
| Body Color | Black/White | | Dark Grey | | Black/White |
| Accessory | | | | | |
| Power Supply | 12VDC 4A X1, Universal various power core. | | | | |
| Remote Controller | Full Function IR Controller X1 | | | | |
| Serial Control Adaptor | RS232/RS422 adapter cable x1 For serial RS232/422 control | | | | |
| Insert Video Card (Optional) | | | | | HDBaseT Module |
| Insert Video Card (Optional) | | | | | Fiber Optic SDI Module |

ORDER INFORMATION

- B2-210 (FHD, 10X Zoom, Black)
- B2-210W (FHD, 10X Zoom, White)
- B6-220 (FHD, 20X Zoom, Gray)
- B7-220 (FHD, 20X Zoom, Black)
- B9-418 (4K30/FHD, 18X Zoom, Black)
- B2-220 (FHD, 20X Zoom, Black)
- B2-220W (FHD, 20X Zoom, White)
- B6-420 (4K60, 20X Zoom, Gray)
- B7-220W (FHD, 20X Zoom, White)
- B9-418W (4K30/FHD, 18X Zoom, White)

ACCESSORIES



VCC-RC-2
IR Remote Controller



VCC-P12-2
12VDC 2A Power Adapter



VCC-CC45RS
RJ45 To RS232/RS422/485 Adapter



VCC-WM
Wall Mount Bracket-Optional

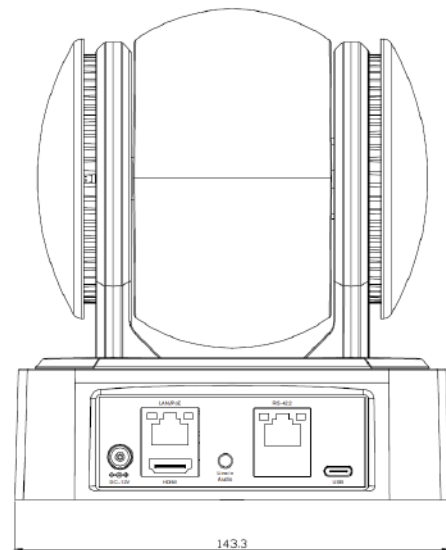
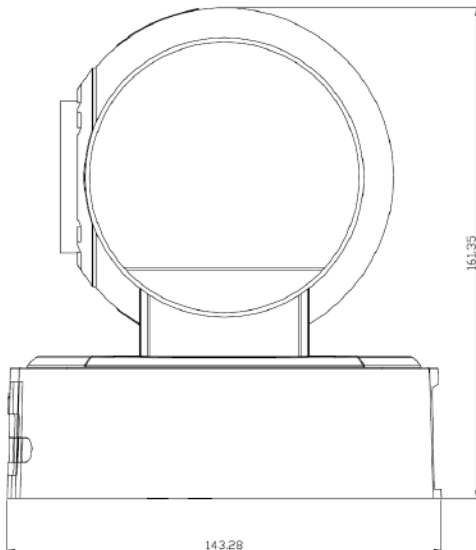
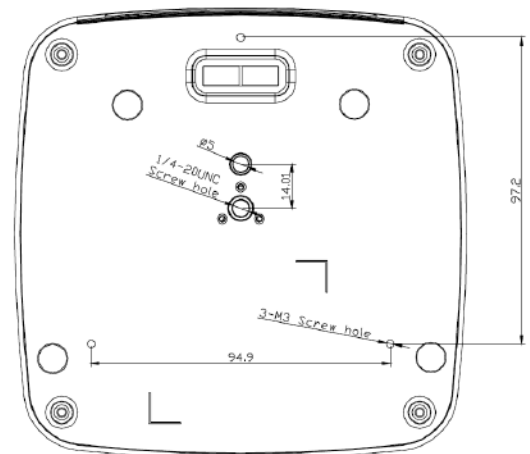
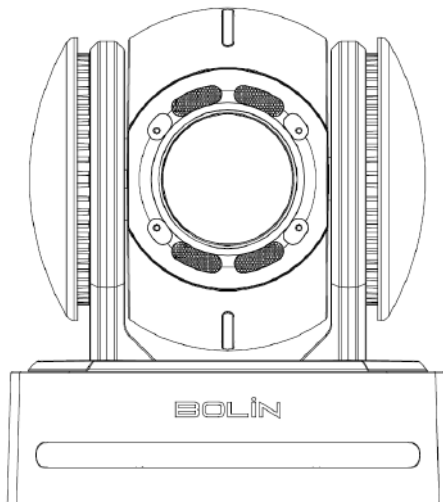


VCC-CM
Ceiling Mount Bracket-Optional

DIMENSIONS

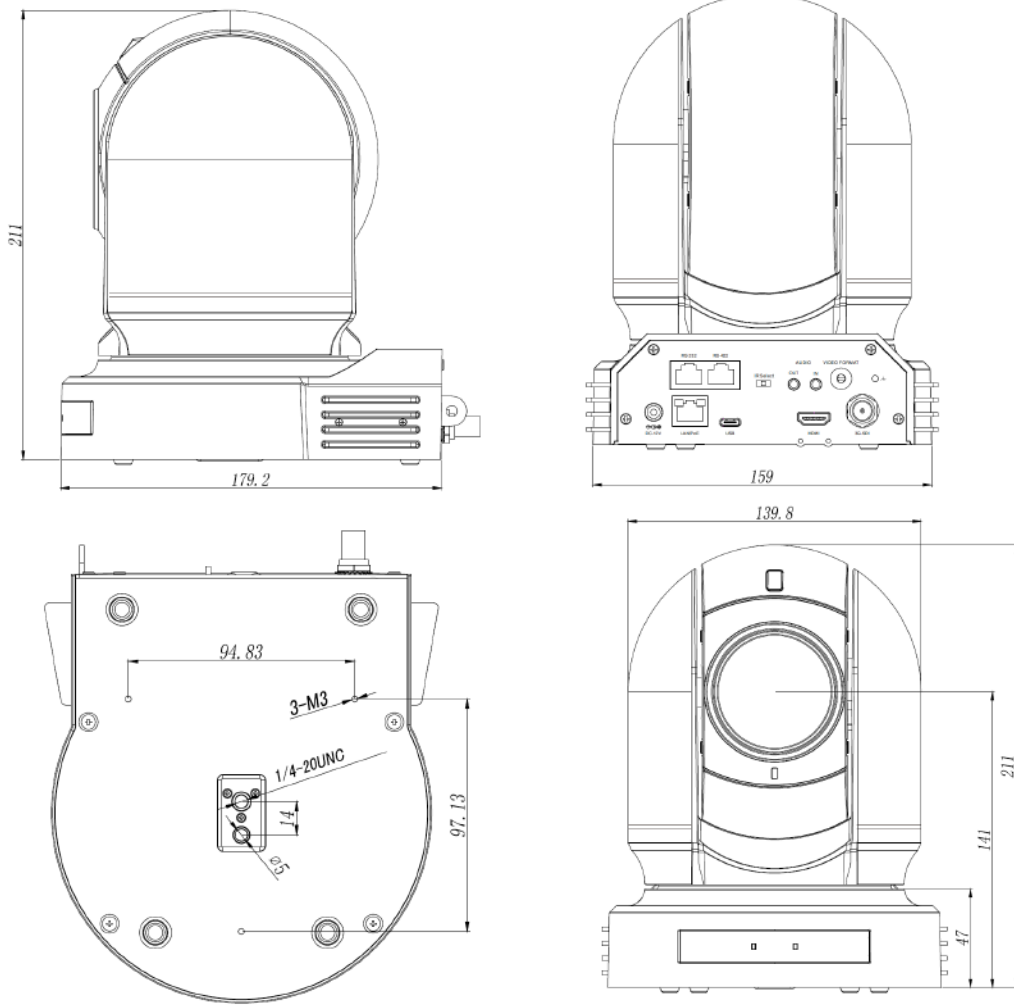
Unit: mm

B2-210/B2-220

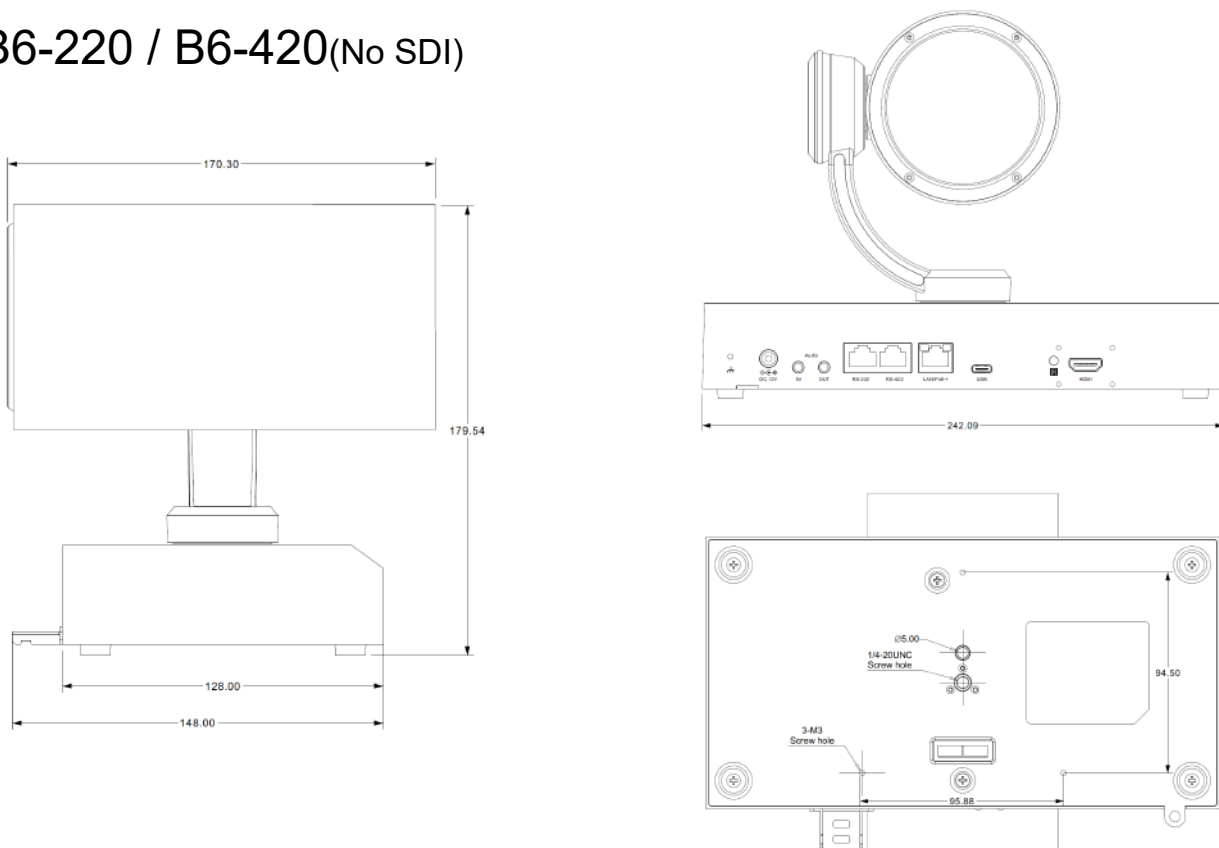


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B7-220

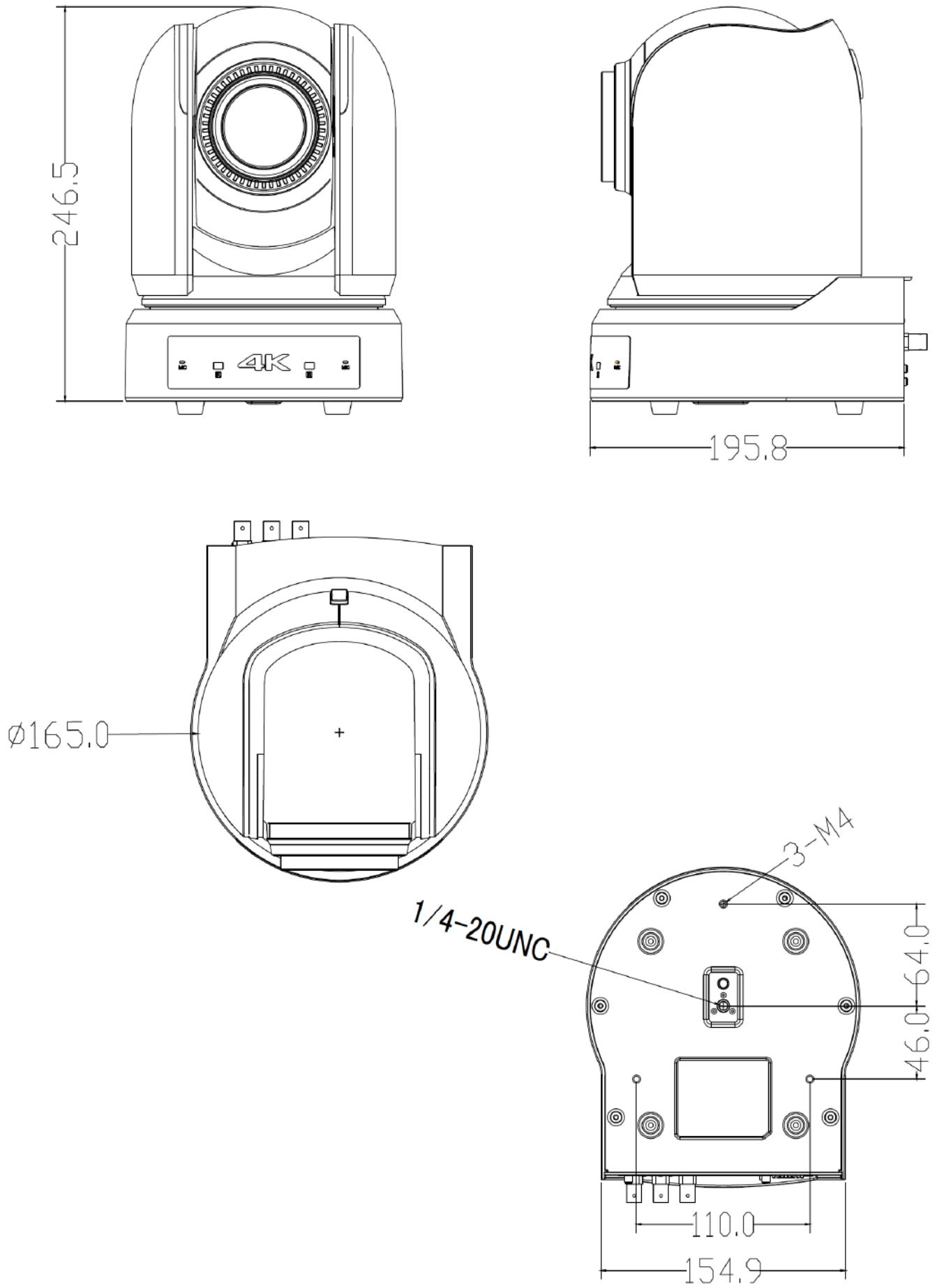


B6-220 / B6-420(No SDI)



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B9-418



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