High Quality PTZ Camera
Lights Up For Any Budget
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
**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.
## SPECIFICATIONS

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<tbody>
<tr>
<td></td>
<td></td>
<td>FHD PTZ Camera</td>
<td>FHD PTZ Camera</td>
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<td>4K60 PTZ Camera</td>
<td>1” 4K30 PTZ Camera</td>
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### Camera
- **Image Sensor:** Sony Progressive scan CMOS image sensor 1/2.8 type
- **Number of effective pixels:**
  - B2-210: 1920X1080, 2.13 MP
  - B2-220: 1920X1080, 2.13 MP
  - B7-220: 3840x2160, 8.29MP
- **Zoom:**
  - Optical Zoom: 10X, Digital Zoom 1X
  - Optical Zoom 20X, Digital Zoom 16X
- **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)
- **Aperture:**
  - F1.85 (Wide) to F2.03 (Tele)
  - F1.6 (Wide) to F3.0 (Tele)
  - F1.8 (Wide) to F3.58 (Tele)
- **Vertical Angle of View:**
  - 39.5° (W)~5.1° (T)
  - 55.8° (W)~3.2° (T)
- **Horizontal Angle of View:**
  - 68.8° (W)~8.8° (T)
  - 78.59° (W)~4.92° (T)
- **Min. object distance:**
  - 10mm (Wide)
- **Min. Illumination:**
  - 0.5lux (color), 0.1lux (black)
- **Shutter Speed:**
  - 1/1 sec to 1/10000 sec (22 steps)
- **Focus:**
  - Auto, Manual, One Push
- **White Balance:**
  - Auto, Indoor, Outdoor, CWF, ATW, Manual
- **Exposure:**
  - Auto, Manual, Shutter Iris / Brightness priority
- **Image Adjustment:**
  - Brightness, Color (Saturation), Contrast, Sharpness, HUE
- **Back Light Compensation:**
  - Yes
- **E-Flip:**
  - On/Off
- **WDR:**
  - Yes
- **Image Stabilizer:**
  - Yes
- **Defog:**
  - Yes
- **Mirror:**
  - Horizontal
- **Day/Night:**
  - On/Off
- **Contrast:**
  - Yes
- **Color Gain:**
  - Yes
- **Color Hue:**
  - Yes
- **Color Matrix:**
  - Yes
- **Black Level:**
  - Yes
- **Gamma:**
  - Yes, 0.4
- **Hight Sensitivity:**
  - 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
- **SNR Ratio:**
  - ≥50db
- **OSD:**
  - Editable
- **SDI Menu Display:**
  - YES
- **HDMI Signal System:**
  - 1920x1080p/60/59.94/50/30/29.97/25; 1280x720p/60/59.94/50/30/25;

<table>
<thead>
<tr>
<th>Video Format - HDMI</th>
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<tbody>
<tr>
<td>4KP-2160p:60/59.94/50/30/29.97/25; 1080p:60/59.94/50/30/29.97/25; 720p:50/25</td>
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<tr>
<th>Color Format</th>
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<tr>
<td>10bit(HDMI), YCbCr</td>
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<th>Color Space</th>
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<td>YUV, RGB</td>
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### USB Signal System
- **USB Port:**
  - USB2.0, Type C
  - USB3.0, Type C
- **USB Video Format:**
  - 1920x1080p/60/50/30/25fps, 1280x720p/60/50/30/25fps
- **USB Video Codec:**
  - MJPEG, AVC/HEVC-H.264/265 by SoC
- **Network Interface:**
  - RJ45 port-Standard 1Gbps Ethernet
- **IP Video - 1st Stream:**
  - Frame Rate: P60/50/30/25 |
  - 3840x2160, 1920x1080, 1280x720 |
- **IP Video - 2nd Stream:**
  - Frame Rate: P60/50/30/25 |
  - 704x576, 640x480, 640x360, 576x480, 352x288, 320x240, 320x180 |
- **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, RTSP, RTMP, RTMPS, SRT
- **Application Protocols:**
  - 2 Streams (Up to 20 viewers at the same time)
- **Audio Compression:**
  - AAC-LC, G.711, G.726 Broadband Audio Encoding

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**SPECIFICATIONS**

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<tr>
<td>Camera</td>
<td>10X</td>
<td>20X</td>
<td>20X</td>
<td>18X</td>
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</table>

**Network/IP Streaming**

- **Compatible Integration**: ONVIF 2.4 (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
- **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 (Up to 4K30, 1080p60)
- **IP Video Stream**: Up to 4K60
- **SDI Video Output**: -
- **HDBaseT Module**: -

**Fiber Optic SDI Module**

- **Power Input**: DC12V (IEC60130-10 (JEITA standard)
- **Operating Temperature**: -10 to 50°C, 32 to 130°F
- **Dimension**: 143x143x16mm (LxWxH)
- **Weight**: 1.5kg (Net wt. 800g)
- **Body Color**: Black/White

**Audio Output**

- **Audio Noise (RMS)**: ≤-90dB
- **Audio THD+N**: ≤-90dB

**Mechanical**

- **Pan/Tilt Movement**: Vertical:+90 degrees to -30 degrees; Pan/Tilt Speed proportional to zoom range
- **Zoom range adaptive Pan/Tilt speed**
- **Preset Memory**: YES, 4 (Supported via IP interface)
- **Motionless Preset**: On/Off
- **PTZ Trace Memory**: Yes, 4 (Supported via IP Interface)
- **Adaptive PT**: Normal, Invert
- **Quietness**: NC3 or less
- **Home Position**: Support
- **Environmental**: Indoor

**General**

- **Body**: 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
- **Power Consumption**: Min:10W (static state with no movement); Max:13W (fully loaded operation)
- **Weight**: 4.5kg (Net wt. 800g)
- **Body Color**: Black/White

**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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