**Overview**

**Ideal for** Broadcast TV, Videoconferencing, House of worship, Live sports and events, Educational environment, Corporate training, Large auditoriums. Distance learning, Courtrooms, sports stadiums and Telemedicine applications.

**BC Series** is Bolin first 4K PTZ camera designed for broadcast application use quipped with SONY 4K image block brilliant broadcast-quality Super-High-Resolution color image in 4K30 with excellent low-light sensitivity and full HD footage can also be captured at up to 1080p60, which is optimal for capturing fast, spontaneous action.

**SRZ** - Super-Resolution-Zoom expends zoom range to 30X zoom at 4K, or 40X zoom at FHD without sacrificing detail.

**TRUE Dual Output** PTZ camera provides simultaneous 6G/3G-SDI and remote 4k 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.

**Extremely quiet and smooth** Pan/Tilt movements combined with enhanced adaptive variable and super slow speed control provides accurate and effective operation experiences.
Uncompromising 4K images
Equipped with Sony 4K image block with Bolin FPGA video processing which delivers an uncompromised broadcast quality 10bit color pictures in detail-packed 4K/30p. Also the footage can 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 0.4lx, making it an ideal choice for low light environment like live hall and theater.

Image Stabilizer
Bolin camera’s built-in image stabilizer function eliminates the effect of blurred, shaky images caused by low-frequency vibration.

Versatile Video Outputs
Flexibility in professional broadcast and AV environments with multiple choices of video outputs:
* 4K HDMI and 6G-SDI(3G-SDI) and HDBaseT
* 4K IP streaming and RTMP live streaming, HTML5 Cross Browser compatibility

SRT Ready
Delivery 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.

Video Format
The camera video format satisfies application for Pro AV and broadcast use
* HDMI/SDI format up to 4K 2160p29.97, 1080i59.94, 1080p60
* IP video format up to 2160p30, 1080p60.
* Supports cinematic 23.98/24p pictures

Control
The camera provides multiple methods of controlling, which gives you capabilities of local control and remote control without distance limitations.
* RS232, RS422/485, IP, HDBaseT, IR remote controller.
* Protocol supported: VISCA, VISCA-Over-IP, PELCO D, IP Onvif, HDBaseT one cable control + video.

Flexible Installation
Installation is simplified in a wide range of environments via:
* RJ45 RS232/422 control port provides convience of wiring.
* PoE and POH (Power over HDBaseT) to reduce cabling requirements.
* Standard and ceiling mount and tripot with E-Flip function.

Always Up to Date
Always up to date, Download the latest Firmware upgrade via USB and IP interface which constantly improves the camera features and performance, even for customized function upgrades.

Other Features
* Picture Profile Preset- Image parameter setting restore with presets and quick access operation.
* Genlock simplifies integration with other systems.
* Audio output Embedded with SDI and HDMI

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# Product Specification

## Model No.

<table>
<thead>
<tr>
<th>Camera</th>
<th>BC-7-4K20S-S6MNB</th>
</tr>
</thead>
<tbody>
<tr>
<td>20X 4K</td>
<td></td>
</tr>
</tbody>
</table>

## Image Sensor
- **Image Sensor**: 1/2.5" CMOS
- **Number of effective pixels**: 8.5 Megapixels
- **Picture elements**: 3840 x 2160

## Lens
- **Lens**: Optical Zoom 20X, Up to 30X in 4K and 40X in Full HD with SRZ(Super Resolution Zoom) feature
- **Digital Zoom**: Digital Zoom 12X
- **Horizontal Angle of View**: 70.2(°W)-4.1(°T)
- **Focal Length**: 4.4mm(Wide)-8.4mm(Tele)
- **Min. object distance**: 80mm (Wide), 1000mm (Tele)

## Aperture
- **F2.0(W)~F3.8(T)
- **Min. Illumination**: 0.4lx (1/30s, 50%, High Sensitivity mode On), 1.6lx (1/30s, 50%, High Sensitivity mode Off), 0.06lx(1/4s(1/3s),50%, High Sensitivity mode On), 0.21lx(1/4s(1/3s),50%, High Sensitivity mode Off)
- **Shutter Speed**: 1/1~1/10000s (22 steps)

## Focus
- **Focus**: Auto Focus(Trigger/Interval), Manual Focus(Variable Speed), One Push Trigger, Near Limit,
- **White Balance**: AUTO, ATW, Indoor, Outdoor, One Push WB, Manual WB, Outdoor Auto, Sodium Vapor Lamp (Fix/Auto/Outdoor Auto)

## Exposure
- **Exposure**: Full Auto, Gain, Shutter Priority, Iris Priority, Manual, Bright
- **Features**: High Sensitivity, Backlight Compensation, HLC, E-FLIP, Mirror, Day/Night

## WDR
- **YES(130dB)

## Image Stabilizer
- **YES

## ND Filter
- **- -

## Color Gain
- **YES (15 step)

## Color Hue
- **YES (15 step)

## Gamma
- **Standard/Straight/Pattern
- **Gamma Level**: Yes (15 step)
- **Black Level**: Yes (97 step)
- **Black Gamma**: Yes (15 step)

## Color Matrix
- **Off/Standard/High Saturation/FL light

## Noise Reduction
- **On/Off (level 5 to 1 / Off, 6 steps), 2D/3D
- **S/N Ratio**: ≥50db

## Mechanical
- **Pan Movement**: Horizontal:±175 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)
- **Preset Position**: 128 (Speed adjustable: Up to 150°/S, 6 presets on remote controller.)
- **Preset Speed**: 0~5 Level Adjustable, Motionless preset
- **Pre Set 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.)
- **PTZ Trace Memory**: 12 (Supported via IP interface)
- **PTZ Motion Sync**: -
- **Quietness**: 49db
- **Home Position**: Support
- **Environmental**: Indoor

## Interface
- **Video Output**: 6G-SDIX1(3G-SDI supported), HDMI(1.4X), IP, HDBaseT
- **4K Video Output**: Main 4K HDMI 1.4a Type-A X1
- **6G-SDIX1
- **4K IP H.265/264
- **HD Video Output**: HD HDMI X1
- **3G-SDIX1
- **Color Precision**: 10bit(SDI), 8bit(HDMI), YCbCr, 4:2:2
- **Color Space**: YUV
- **IP Video Stream**: Up to 4K/30 and 1080p60
- **Camera Control Interface**: RJ45X2-RS232/RS-422/RS485, RJ45X1-IP Control, RJ45X1-HDBaseT, IR Remote Control
- **Control Protocol**: VISCA, VISCA Over IP, Pelco D, IP Onvif, IP Control Client Software, ND(Protocol Specific)
- **LAN**: RJ45X1(1000Mb), 4K IP video streaming, System upgrade, POE(IEEE802.3bt)
- **Synchronization**: Internal synchronization
- **External Sync. Input**: Genlock, BNCX1, 75Ω, BBS (Black Burst Sync), tri-level sync supported
- **Audio I/O**: Audio input x1, Audio output x1, 3.5mm audio jack
- **Audio Output**: Embedded with main HDMI, 24bit Stereo, Embedded with SDI, 24bit Stereo
- **HDBaseT**: Yes, Runs FHD/4K video, control(RS232/422/485/IR Remote), power, audio, IP(Video streaming+control) on one CAT6 cable up to 80-100 meters.
- **Edge Storage (Beta)**: Micro SD, Class 10, FAT32 format, Up to 128GB
- **Tally Light**: Two color lamp in front
- **Dip Switch**: Bottom Dip Switch: 8 PIN x 1; Rear Pannel Video Resolution Dip X1

All models and specifications are subject to change without notice.
## Product Specification

### System Firmware Upgrade
Upgrade for camera system and FPGA
Via USB2.0 (for FW upgrade only); via IP (for encoder and FPGA)

### Power Connector Type
External Power adaptor: IEC60130-10 (JEITA standard RC-5320A) TYPE4
RJ45: POE((IEEE802.3bt))
RJ45: POH((Power Over HDBaseT))

### Optional Card Slots
- *

### Signal System

<table>
<thead>
<tr>
<th>Video Format</th>
<th>3840 x 2160/29.97p (HDMI, SDI)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3840 x 2160/25p (HDMI, SDI)</td>
</tr>
<tr>
<td></td>
<td>3840 x 2160/23.98p (HDMI, SDI)</td>
</tr>
<tr>
<td></td>
<td>3840 x 2160/24p (HDMI, SDI)</td>
</tr>
<tr>
<td></td>
<td>1920 x 1080/59.94p/60p (HDMI, SDI)</td>
</tr>
<tr>
<td></td>
<td>1920 x 1080/59.94i/60i (HDMI, SDI)</td>
</tr>
<tr>
<td></td>
<td>1920 x 1080/50p (HDMI, SDI)</td>
</tr>
<tr>
<td></td>
<td>1920 x 1080/50i (HDMI, SDI)</td>
</tr>
<tr>
<td></td>
<td>1920 x 1080/29.97p/30p (HDMI, SDI)</td>
</tr>
<tr>
<td></td>
<td>1920 x 1080/25p (HDMI, SDI)</td>
</tr>
<tr>
<td></td>
<td>1920 x 1080/23.98p/24p (HDMI, SDI)</td>
</tr>
<tr>
<td></td>
<td>1280 x 720/59.94p/60p (HDMI, SDI)</td>
</tr>
<tr>
<td></td>
<td>1280 x 720/59.94i/60p (HDMI, SDI)</td>
</tr>
</tbody>
</table>

### Standard
- SMPTE 292(1.5Gb/s), SMPTE 424, SMPTE 425-A(3Gb/s), SMPTE 2081 With SMPTE352 SDI Metadata Supported

### Network

<table>
<thead>
<tr>
<th>Video Compression</th>
<th>MJPEG,H.264/H.265</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP Video Format</td>
<td>True Dual Output : IP format can be set independently of SDI video format</td>
</tr>
<tr>
<td></td>
<td>3840x2160p30/25/24, 1920x1080p60/50/30/25/24, 1280x720p60/50</td>
</tr>
</tbody>
</table>

| Protocols         | TCP/IP, ICMP, ARP, RTP, SIP, UDP, HTTP, DNS, DHCP, FTP, NTP, RTMP, RTSP, SRT |
| Multi-stream      | 3 data stream function will satisfy various bandwidth, frame rates and storage requirements in real time |

### Audio Compression

| MTS | AAC-LC Broadband Audio Encoding(Duplex Communicate Supported, Audio/Video synchronizaion) |

### OSD
Customized OSD, Support custom LOGO insert

### Compatible Integration
ONVIF2.4, VISCA Over IP

### Browser Support
Cross Browser Compatibility - HTML5 support for Microsoft Edge, Google Chrome, Firefox, and Safari

### Body Color
- Black, White

<table>
<thead>
<tr>
<th>Mount</th>
<th>Ceiling mount, Wall mount, Tripot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size of Screw Hole for Tripod</td>
<td>1/4-20UNC x2</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-10 to +40°C, 32 to 104°F</td>
</tr>
<tr>
<td>Operating Humidity</td>
<td>≤80% Suitable for Use</td>
</tr>
<tr>
<td>Power Input</td>
<td>12VDC, POE++(IEEE 802.3bt Type 4, class 8 required), POH(Power Over HDBaseT, IEEE 802.3bt)</td>
</tr>
</tbody>
</table>

### Power Consumption
Min: 22W(Static state with no movement); Max: 38W (Fully loaded operation)

| Dimension | 142x159x217mm |

### Weight
2.7kg

### HDBaseT Receiver

<table>
<thead>
<tr>
<th>Model No.</th>
<th>BL-BR4K-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input</td>
<td>1XRJ45-HDBaseT</td>
</tr>
<tr>
<td>Output</td>
<td>1XHDMI Type A - HDMI 1.4b, 1XRJ45- IP Pass-Thru (100Mbps,extend connection only, not IP encoder)</td>
</tr>
<tr>
<td>Power Input</td>
<td>DC54V, 2.77A</td>
</tr>
<tr>
<td>Power Output</td>
<td>POH(Power Over HDBaseT), Power over one CAT6 network cable</td>
</tr>
</tbody>
</table>

| Power Consumption | Up to 97W |
| Control Interface | 2XRJ45-RS232/ RJ45-RS422/RS485, IR Control Sensor |
| Audio Output      | 3.5mm 3.5-5v TTL |
| Dimension         | 164x118x33mm |
| Weight            | 0.52KG |

* Optional, Sold Separately

### ORDER INFORMATION

- **BC-7-4K20S-S6MNB/B (Black)**
- **BC-7-4K20S-S6MNB/W (White)**
- **BL-BR4K-1 (HDBaseT Receiver, sold separately)**
- **VCC-WM (Wall Mount)**
- **VCC-CM (Ceiling Mount)**

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