

4K Pan Tilt Zoom camera with 1.0-type Exmor R CMOS sensor

- BC-9-4K12S-S3MN
- BC-9-4K12S-S6MN



KEY FEATURES

- 1 Inch CMOS sensor, Total Effective pixel: 20 Megapixels
- Zeiss Vario-Sonnar T lens with 12X optical zoom, with SRZ feature, 18X zoom at 4K, or 24X zoom at FHD.
- Video Resolution: Up to 4K 2160p29.97, 1080i59.94, 1080p60
- IP Video Resolution: Up to 2160p30, 1080p60
- Video Output: Simultaneous 6G-SDI, 4K HDMI, 4K IP
- HDBaseT, Optical video output via optional video card.
- 4K SDI with 6G-SDIX2 and Dual Link 3G-SDIX2 output
- Black Level, Color Matrix, Image Stabilizer
- Enhanced Pan and Tilt movement
- Power: DC 12V, POE, HDBaseT POH(IEEE802.3bt)
- License Upgradable from FHD to 4K

4K

VISCA

ONVIF

PELCO

HDBT™



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.

9 Series is Bolin's first 4K PTZ camera equipped with a full 1-inch CMOS sensor offering 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 expands zoom range to 18X zoom at 4K, or 24X 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 operation for Pan/Tilt movements combined with enhanced adaptive variable and super slow speed control provides accurate and effective operation experiences.

License Upgradable from FHD to 4K. Not ready for 4K? Have easy of mind to own a 1 inch CMOS FHD camera first, upgrade to 4K when you are ready. Your investment is protected.



FEATURES

Uncompromising 4K images

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.

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:

- * Main 4k HDMI and Dual Link 3G-SDI (x2) or 6G-SDI x2
- * Optional HDBaseT and Optical video outputs.
- * IP streaming and RTMP live streaming

Video Format

The camera video format meets the requirements for any Pro Av application and broadcast use by supporting:

- * 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 Capability

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 the convenience of wiring.
- * PoE+ and POH (Power over HDBaseT) to reduce cabling requirements.
- * Standard and ceiling mount and tripod 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.

Local Storage (Beta)

Local storage using SD card up to 128GB. Compressed video of the event can be restored and reviewed from the remote site via IP.

Optional Video Output Module

- * HDBaseT video output module: supported to carry 4K video, audio, control, and power via a single CAT6 cable up to 80-100 meters for easy installation and management.
- * Fiber Optical video output module: provides a secured and compatible solution to run high broadcast-quality video for long distance.

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



HDBaseT Video Output Card (Optional)



SDI Optical Video Output Card (Optional)



HDBaseT Receiver (Optional)



BL-BR4K-1 Back



BL-BR4K-1 Front

Product Specification

Model No.	BC-9-4K12S-S3MN	BC-9-4K12S-S6MN
	License Upgradable From FHD to 4K	
Camera	12X 4K	
Image Sensor	1.0-type back-illuminated Exmor R CMOS sensor	
Number of effective pixels	14.2 Megapixels	
Picture elements	3840 x 2160, 8.29 Megapixels	
Lens	Zeiss Vario-Sonnar T lens, Optical Zoom 12X	
Tele Convert Mode	When turn on, gain 2X-40X zoom range with 1080p resolution, up to 80X with SRZ	
Digital Zoom	Digital Zoom 12X, with SRZ feature, 18X zoom at 4K, or 24X zoom at FHD.	
Horizontal Angle of View	64.6° (Wide) - 6.1° (Tele),	
Focal Length	f=9.3 to 111.6mm, F2.8(Wide) ,F4.5(Tele)	
Min. object distance	80mm (Wide), 1000mm (Tele)	
Aperture	F2.8 Constant (W)~(T), 16 Steps	
Min. Illumination	0.5 lx (1/30 sec, 50%, High Sensitivity mode On)	
Shutter Speed	1/10000s to 1/8 (59.94/29.97)	
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	Full Auto, Gain, Shutter Priority, Iris Priority, Manual, Bright	
Features	High Sensitivity, Backlight Compensation, HLC, E-FLIP, Mirror, Day/Night	
WDR	YES(130dB), Shown as VISIBILITY ENHANCER in OSD	
ND Filter	YES	
Image Stabilizer	YES	
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	
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.)	
PTZ Trace Memory	12 (Supported via IP interface)	
PTZ Motion Sync	-	
Quietness	49db	
Home Position	Support	
Environmental	Indoor	
Interface		
Video Output	3G-SDIX2, HDMI(1.4)X2, IP, HDBaseT(Module Optional), Optical(Module Optional)	6G/3G-SDIX2, HDMI(1.4)X2, IP, HDBaseT(Module Optional), Optical(Module Optional)
4K Video Output	- - -	Main 4K HDMI 1.4a Type-A X1 6G-SDIX2 or Dual Link 3G-SDI(2SI only) x2 4K IP H.265/264
HD Video Output	Main HD HDMIX1 3G-SDI x2 Sub HD HDMIX1 (Not available, for future AI Auto Tracking video output)	
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/RS422, RJ45X1-IP Control, RJ45X1-HDBaseT, IR Remote Control	
Control Protocol	VISCA, VISCA Over IP, Pelco D, IP Onvif, IP Control Client Software, NDI(Model Specific)	
LAN	RJ45X1(1000Mb), 4K IP video streaming, System upgrade, POE(IEEE802.3bt)	
Synchronization	Internal synchronization	
External Sync. Input	BNCX1, 75Ω, HD 3-level sync	
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	
Edge Storage (Beta)	Micro SD, Class 10, FAT32 format, Up to 128GB	
Tally Light	Two sets of lamps, Red Color, Front and Back	
Dip Switch	Back Panel: 8 PIN x 1; Video Resolution Dip X1	
System Firmware Upgrade	Upgrade for camera system and FPGA	
Power Connector Type	Via USB2.0 (for FW upgrade only), via IP(for encoder and FPGA) IEC60130-10 (JEITA standard RC-5320A) TYPE4 RJ45: PoE+ (IEEE802.3bt)	
Optional Card Slots	RJ45: POH(Power Over HDBaseT), HDBaseT Card Optional YES, HDBaseT Video Card / Optical 6G-SDI Video Card.	

Product Specification

SDI signal System

Video Format	1920 x 1080/59.94p/60p (HDMI, SDI) 1920 x 1080/59.94i/60i (HDMI, SDI) 1920 x 1080/50p (HDMI, SDI) 1920 x 1080/50i (HDMI, SDI) 1920 x 1080/29.97p/30p (HDMI, SDI) 1920 x 1080/25p (HDMI, SDI) 1920 x 1080/23.98p/24p (HDMI, SDI) 1280 x 720/59.94p/60p (HDMI, SDI) 1280 x 720/50p (HDMI, SDI)	3840 x 2160/29.97p (HDMI, 6G-SDI x 2 / Dual Link 3G-SDI (2SI)) 3840 x 2160/25p (HDMI, 6G-SDI x 2 / Dual Link 3G-SDI (2SI)) 3840 x 2160/23.98p (HDMI, 6G-SDI x 2 / Dual Link 3G-SDI (2SI)) 3840 x 2160/24p (HDMI, 6G-SDI x 2 / Dual Link 3G-SDI (2SI)) 1920 x 1080/59.94p/60p (HDMI, SDI) 1920 x 1080/59.94i/60i (HDMI, SDI) 1920 x 1080/50p (HDMI, SDI) 1920 x 1080/50i (HDMI, SDI) 1920 x 1080/29.97p/30p (HDMI, SDI) 1920 x 1080/25p (HDMI, SDI) 1920 x 1080/23.98p/24p (HDMI, SDI) 1280 x 720/59.94p/60p (HDMI, SDI) 1280 x 720/50p (HDMI, SDI)
Standard	SMPTE 292(1.5Gb/s), SMPTE 424, SMPTE 425-A(3Gb/s), SMPTE 2081 With SMPTE352 SDI Metadata Supported	

Network

Video Compression	MJPEG,H.264/H.265	
IP Video Format	True Dual Output : IP format can be set independently of SDI video format 1920x1080p60/50/30/25/24, 1280x720p60/50 3840x2160p30/25/24, 1920x1080p60/50/30/25/24, 1280x720p60/50	
Protocols	TCP/IP, ICMP, ARP, RTP, SIP, UDP, HTTP, DNS, DHCP, FTP, NTP, RTMP, RTSP	
Multi-stream	3 data stream function will satisfy various bandwidth, frame rates and storage requirements in real time	
Audio Compression	AAC-LC Broadband Audio Encoding(Duplex Communicate Supported, Audio/Video synchronization)	
OSD	Customized OSD	
Compatible Integration	ONVIF2.4 (Profile S), VISCA Over IP	
Video Module Card	Optional (Sold Separately)	

HDBaseT Module	Detachable slot, 1XRJ45-HDBaseT(4K), With HDBaseT video output transmission distance up to 80-100 meters
Fiber Optic SDI Module	Detachable slot, Connector: Duplex LC Laser Unit: Single-mode 1,310nm DFB-LD transmitter and PIN receiver Complaint with MSA SFP+ Specification SFF-8402.

General

Body Color	Black, White
Mount	Ceiling mount, Wall mount, Tripot
Size of Screw Hole for Tripod	1/4-20UNC x2
Operating Temperature	-10 to +40 (°C), 32 to 104 (°F)
Operating Humidity	≤80% Suitable for Use
Power Input	12VDC, POE(IEEE 802.3bt), POH(Power Over HDBaseT, IEEE 802.3bt)
Power Consumption	Min: 25W(Static state with no movement); Max: 45W (Fully loaded operation)
Dimension	165x196x247mm
Weight	3.3kg (Net weight)
Body Color	Black, White

HDBaseT Receiver

Model No.	BL-BR4K-1
Input	1XRJ45-HDBaseT
Output	1XHDMI Type A - HDMI 1.4b, 1XRJ45- IP Pass-Thru (100Mbps,extend connection only, not IP encoder)
Power Input	DC54V, 2.77A
Power Output	POH(Power Over HDBaseT), Power over one CAT6 network cable
Power Consumption	Up to 97W
Control Interface	2XRJ45-RS232/ RJ45-RS422/RS485, IR Control Sensor
IR IN Control Interface	3.5mm 3.5-5v TTL
Audio Output	3.5mm Jack
Dimension	164x118x33mm
Weight	0.52KG
*	This HDBaseT receiver is not an IP video encoder. The LAN Port is IP Pass-Thru for the camera with IP control or IP streaming functionality.

ORDER INFORMATION

- BC-9-4K12S-S3MN/B (Black)
- BC-9-4K12S-S3MN/W (White)
- BL-BR4K-1 (HDBaseT Receiver, Not included with the camera)
- BL-PP97 (Bolin 97W High Power POE Injector)
- VCC-9-WM (Wall Mount)
- BC-9-4K12S-S6MN/B (Black)
- BC-9-4K12S-S6MN/W (White)
- BC-9-4K12S-LS-4K (License for 4K upgrade)
- BC-9-VC-B (HDBaseT Card)
- BC-9-VC-OS6 (6G-SDI Optical Card)
- BC-9-VC-SFPM (Laser Module)
- VCC-9-CM (Ceiling Mount)