4K Ultra HD Series (4K@60fps)

CMP-U20BC

Broadcasting-level PTZ Camera

4/3" CMOS Sensor | 4K UHD | 20x Optical Zoom | EIS | Multiple Interfaces



The CMP-U20BC camera stands as a testament to technological innovation in the A&V industry, offering versatile solutions for television studios, sports facilities, grand theaters, multi-functional halls, and large conference rooms. It delivers broadcast-grade video content characterized by cinematic visual fidelity, ensuring that every frame, whether capturing a wide panorama or Capturing the Extraordinary intricate details, provides an unparalleled viewing experience.

Features

4/3" CMOS Image Sensor

The camera equipped with a powerful 4/3" UHD CMOS sensor, can effectively reduces high-brightness and low-brightness noise and output an incredible 4K(3840x2160)60fps without any artifacts.

20x Optical Zoom

Employs a true 4K lens, with 71° HFoV and 20X optical zoom, capturing both large scenes and minute details clearly for an enriched video experience.

EIS Dynamic Stabilization

Equipped with EIS image stabilization technology, it analyzes the differences between frames in real-time and automatically compensates for blurring caused by external environmental shakes, camera movement, or rotation. Even when shootinghandheld, on a track, or with a camera arm, it provides smooth and stable image effects.

High-Precision Mechanical Pan-Tilt Head

Featuring the latest high-speed, high-torque, high-precision motors and a graded dual-layer transmission mechanism, the pan-tilt head offers enhanced sensitivity. Advanced motion backlash handling and motor raft design contribute to more accurate rotation. The head can automatically adjust its horizontal rotation speed (0.1° ~80° /s) based on the lens zoom, facilitating easy high-speed movements or fine shooting adjustments.

Three-gear Independent ND Filter

Built-in ND 1/4, 1/16, 1/64 three gears ND filter, camera can automatically adjust the ND filter gear based on the ambient illumination to get an the best exposure and image.

Multi-protocols Compatibility

Support NDI®|HX2, Dante AV-H, SRT, TCP/IP, HTTP(S), RTSP, RTMP(S) and other protocols.

Powerful AI tracking

Built-in self-developed ReID and FaceID AI algorithm, can achieve high-precision subject recognition and focusing based on information such as human skeletal structure, body shape, posture, and clothing, enabling accurate tracking and shooting of moving targets even in complex environments.

Virtual Studio

Compatible with the free-d protocol, it sends precise camera tracking information (pan/tilt/zoom/focus/aperture) to 3D production software, seamlessly blending real-life footage with 3D virtual backgrounds and characters to create a realistic virtual studio, offering a more immersive and interactive visual experience.

Front and rear Tally light

To ensure a smooth and error-free shooting process, the camera is equipped with 2 front and 1 rear Tally lights, which display the current status of the camera in red and green color, so that the Photographers and other people can quickly discern the camera's working status from different light.

Multiple Interfaces

Supports simultaneous streaming of high-definition digital signals via HDMI, 12G-SDI, 3G-SDI, USB and LAN; supports SFP+ fiber optic transmission, XLR&Line audio signal transmission, GenLock&Time Code audio and video signal synchronization, TF Card local file storage, etc., widely applicable in radio and television live broadcasts, event live broadcasts, remote conferences, and other scenarios.

Optional Interfaces

Except for the standard I/O, the camera also offers a range of customized I/O and protocols like Full NDI, Dante AV Ultra, HDBaseT, ST2110, SDVOE to cater to the diverse needs of our customers.

Product Specification

Camera

Video Resolution	**HDMI/12G-SDI:** 4KP60, 4KP59.94, 4KP50, 4KP30, 4KP29.97, 4KP25, 4KP24, 4KP23.98, 1080P60, 1080P59.94, 1080P50, 1080P30, 1080P29.97, 1080P25, 1080P24, 1080P23.98, 1080I60, 1080I50, 1080I59.94, 720P60, 720P59.94 **3G-SDI:** 1080P60, 1080P59.94, 1080P50, 1080P30, 1080P29.97, 1080P25, 1080P24, 1080P23.98, 1080I60, 1080I50, 1080I59.94, 720P60, 720P59.94
Sensor	4/3 inches, CMOS, Effective Pixels: 20 Megapixels
Scanning Mode	Progressive
Lens	20X, f 9.79mm ~ 186.5mm, F2.8 ~ F4.5
Digital Zoom	16X
Minimum Illuminance	0.5Lux @ (F1.8, AGC ON)
Shutter	1/30s ~ 1/10000s
ND Filter	Built in (OFF、1/4、 1/16、1/64)
Image Stabilization	EIS
White Balance	Auto, Manual, Indoor, Outdoor, One Push, VAR
Backlight Compensation	Support
Digital Noise Reduction	3D Digital Noise Reduction
Video S/N	≥ 55dB
HFOV	71° ~4.05°
VFOV	39.6° ~ 2.2°
Horizontal Rotation Range	±172°
Vertical Rotation Range	-30° ~ +120°
Pan Speed Range	0.1° ~ 80° /s
Tilt Speed Range	0.1° ~ 60° /s
H & V Flip	Support
Image Freeze	Support
Number of Preset	255
Preset Accuracy	0.1°

Network Spec

Video Compression	H.264 / H.265 / MJEPG
Video Stream	First Stream, Second Stream
First Stream Resolution	3840x2160, 1920x1080, 1280x720, 1024x576 etc.
Second Stream Resolution	720x576, 720x480, 320x240 etc.
Video Bit Rate	32kbps~81920kbps
Bit Rate Type	CBR, VBR
Frame Rate	50Hz: 1fps ~ 50fps, 60Hz: 1fps ~ 60fps
Audio Compression	AAC
Audio Bit Rate	96Kbps, 128Kbps
Support Protocols	NDI®|HX2, Dante AV-H, free-d, SRT, TCP/IP, HTTP(S), RTSP, RTMP(S), Onvif, DHCP, Multicast, etc.

USB Features

Operating System	Windows 7, Windows 8, Windows 10, Mac OS X, Linux, Android
Color System / Compression	YUY2 / MJPEG / H.264 /H.265
Video Format	YUY2: Max.1440P30 H.264 AVC: Max.2160P60 H.265 HEVC: Max.2160P60 MJPEG: Max. 2160P60
USB Audio	Support
USB Video Communication Protocol	UVC 1.1
UVC PTZ Control	Support

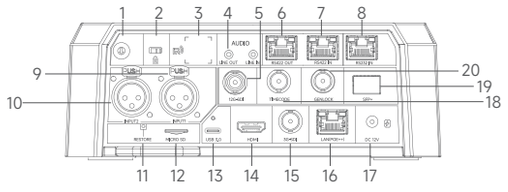
Input/Output Interface

HD Output	1 x HDMI: 2.0 1 x 12G-SDI: BNC type, 800mVp-p, 75Ω, Comply with SMPTE 2082-1 standard 1 x 3G-SDI: BNC type, 800mVp-p, 75Ω, Comply with SMPTE 424M standard
Genlock Interface	1 x BNC type，75Ω，Input only
Timecode Interface	1 x BNC type，75Ω，Input only
Network Interface	1 x RJ45: 10M/100M/1000M adaptive thernmet
Audio Interface	1 x Line In, 3.5mm Audio Interface; 1 x Line Out, 3.5mm Audio Interface; 2 x Badaptive ethernet，XLR interface; 2 x Mic input.
USB Interface	1 x USB3.0, Type-C type
Communication Interface	1 x RS232 In: RJ45, VISCA/Pelco-D/Pelco-P protocal; 1 x RS485/422 in: RJ45, VISCA/Pelco-D/Pelco-P protocal; 1 x RS422 out: RJ45, VISCA/Pelco-D/Pelco-P protocal.
SD Card	1 Micro SD
Restore Button	Support
Power Interface	JEITA type（DC IN 12V)
Optional I/O	1 x RJ45: FULL NDI; 1 x RJ45: Dante AV Ultra; 1 x RJ45: HDBaset; 1 x SFP+: ST2110；1 x SFP+: SDVOE

General Specification

Installation	Head-up, Head-down(ceiling)
TALLY Light	3 (Red and Green Dual-color)
Power Indicator	1 (Blue)
Sratus Indicator	2 (Green, Red)
IR Remote Control	Support
Input Voltage	DC 12V / POE ++
Input Current	5A（Max.)
Operating Temperature	0° C ~ 40° C
Storage Temperature	-40° C ~ 60° C
Dimension (W x D x H)	205 × 237 × 272mm
Weight	4.8kg

Interface Diagram



1 — Video Rotary Switch
2 — Security Lock
3 — Infrared Window
4 — LINE OUT/IN
5 — 12G-SDI
6 — RS422 OUT
7 — RS422 IN
8 — RS232 IN
9 — INPUT1
10 — INPUT2
11 — RESTORE
12 — MICRO SD
13 — USB3.0
14 — HDMI
15 — 3G-SDI
16 — LAN(PoE++)
17 — DC 12V
18 — TIME CODE
19 — SFP+
20 — GENLOCK