# CMP-U20HDR
# CMP-U20HDRG

## HDR10 4K UHD PTZ Camera

adertech

50MP — 50 Megapixel sensor
120FPS — 1080P/120fps
20x Optical Zoom
PDAF (Phase Detection Autofocus)
HDR10
4K HDR




As a revolution of Pro AV camera, CMP-U20HDR camera integrates 10-bit color depth and BT2020 wide color gamut technology, delivering images with exceptionally rich details and stunning effects. Featuring a 50MP sensor and a 20X optical lens, it captures intricate details, from the nuanced expressions of educators in online classes to the intricate paths of light particles on stage. Enhanced with AI-driven intelligent tracking, it effortlessly tracks fast-moving subjects, excelling in complex shooting scenarios like live broadcasting, virtual meetings, educational settings, and remote command operations, ensuring every frame is captured with precision.

## *Features*

### ▼ 50MP Ultra-High-Resolution Sensor

Equipped with a 1/1.55-inch 50MP CMOS sensor for unmatched clarity and cinematic video output. Support various video output resolutions, maximum 4K60fps and lower resolution like 1080P, 720P and etc.

### ▼ 120fps High Frame Rate

Supports 1080P at 120fps for smooth, high-quality video capture, perfect for fast-moving scenes like live sports broadcasts, significantly enhances video fluidity and real-time performance.

### ▼ PDAF(Phase Detection Autofocus)

Built-in PDAF (Phase Detection Autofocus) technology, can accurately calculate the focus position using optical phase differences, enabling very fast and precise Auto focus.

### ▼ HDR10: A Comprehensive Revolution in Lighting and Color

Supporting the BT.2020 color standard, which doubles the color gamut range compared to BT.709, this technology offers a more realistic representation of light and dark contrasts. It can depict colors that are closer to human perception, with light and dark contrasts that more accurately reflect the real world, defining the colors of the future.

### ▼ 20X Optical Zoom+ 60° HFoV Lens

Featuring a premium ultra-high resolution lens with 60 ° HFoV and up to 20x optical zoom. this system delivers crystal-clear imaging across all distances - from intimate close-ups to expansive distant shots.

### ▼ Multiple interfaces

Support simultaneous streaming of high-definition digital signals via HDMI, 12G-SDI (CMP-U20HDRG), 3G-SDI, USB and LAN; Support multiple ways of control, RS422, RS485, IP and USB, widely used in various scenarios such as virtual studios, live streaming, broadcasting, virtual education and etc.

### ▼ Tally light

Equipped with 1 front and 1 rear Tally lights, enables operators to effortlessly access the camera's live status, with visual indicators helping users quickly grasp the camera's working status.

### ▼ AI-Powered Presenter Tracking

Featuring proprietary ReID and FaceID AI algorithms, the camera precisely identifies and focuses on subjects based on skeletal structure, body shape, posture, and clothing. Even in complex environments, it accurately tracks and captures moving targets, keeping them in clear focus and at the center of the frame.

### ▼ Built-in Filter Mount for One-Touch Switching

The camera body features a pre-installed filter mount, compatible with Neutral Density (ND) and Circular Polarizing (CPL) filters for immediate use. With a single touch, effortlessly address issues like strong light overexposure and reflective interference, easily achieving dynamic light and shadow control along with color depth optimization. Even photography beginners can capture cinematic-quality footage.

## Product Specification

### ▼ Camera

| | |
|---|---|
| Signal System | HDMI/12G-SDI: 4KP60、4KP50、4KP30、4KP25、4KP59.94、4KP29.97、1080P120、1080P60、1080P50、1080P59.94、1080P30、1080P29.97、720P60、720P59.94, 12G-SDI (CMP-U20HDRG)<br>3G-SDI: 1080P60，1080P50，1080P30，1080P29.97，1080P59.94，1080P25，1080I60，1080I50，1080I59.94，720P60，720P59.94 |
| Sensor | 1/1.55", CMOS，Total pixel：50MP |
| Scanning model | Progressive |
| Lens | 20X，f=6.55~126mm，F1.8~4.5 |
| Digital Zoom | 16X |
| Minimum Illumination | 0.5Lux @ (F1.8, AGC ON) |
| Shutter | 1/30s ~ 1/10000s |
| White Balance | Automatic, indoor, outdoor, one-key operation, manual, specified color temperature |
| Backlight Compensation | Support |
| Digital Noise Reduction | 3D Digital Noise Reduction |
| SNR | ≥ 55dB |
| Horizontal FoV | 60.5° ~3.49° |
| Vertical FoV | 36.6° ~ 1.99° |
| Tilt Aange | ±170° |
| Pan Aange | -30° ~ +90° |
| Pan Speed Range | 1.7° ~100° /S |
| Tilt Speed Range | 1.7° ~69.9° /S |
| Horizontal Flip & Vertical Flip | Support |
| Image Freeze | Support |
| PoE+ | Support |
| Preset Positions Number | 255 |
| Preset Position Accuracy | 0.1° |

### ▼ USB

| | |
|---|---|
| Support Operating System | Windows8, Windows10, Windows11, MacOSX, Linux2.4.6 and later versions, Android versions that include UVC-related driver programs. |
| Color Space/Compression | YUY2/H.264/MJPEG |
| Video Format | YUY2: Upto 1080P30<br>H.264: Upto 4KP60<br>MJPEG: Upto 4KP60 |
| USB Audio | Support |
| USB Video Communication Protocol | UVC 1.1 |
| UVC PTZ Control | Support |

### ▼ Network

| | |
|---|---|
| Video Compression | H.264 / H.265 / MJPEG |
| Video Stream | First Stream, Second Stream |
| First Stream Resolution | 3840*2160、1920*1080、1280*720、1024*576、720*480、720*408、640*480、640*360 |
| Second Stream Resolution | 720*480、720*408、640*480、640*360、480*320、320*240 |
| Bit Rate | First stream：32kbps~51200kbps<br>second stream：32kbps~20480kbps |
| Bit Rate Control | Variable Bit Rate, Fixed Bit Rate |
| Frequency | 1fps~60fps，120fps(1080P and below only) |
| Audio Compression | AAC |
| Audio Bit Rate | 96Kbps, 128Kbps |
| Support Protocols | NDI6 (Optional)、HX3、TCP/IP、HTTP、RTSP、RTMP、ONVIF、DHCP、SRT、Multicast and etc. |

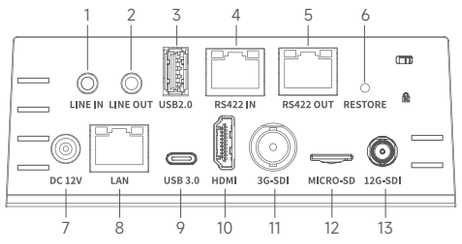
### ▼ I/O

| | |
|---|---|
| HD Output | 1 x HDMI: 2.0;<br>1 x 3G-SDI: BNC type, 800mVp-p, 75Ω, Comply with SMPTE 424M standard;<br>1 x 12G-SDI: BNC type, 800mVp-p, 75Ω, Comply with ST2082 standard (CMP-U20HDRG) |
| Network | 1 x LAN：10M/100M/1000Mbps adaptive ethernet |
| USB | 1 x USB2.0，Type-A，Host Interface(Reserved)<br>1 x USB3.0, Type-C (for audio and video signal transmission) |
| Audio | 1 x Line in：3.5mm Audio Interface；<br>1 x Line out：3.5mm Audio Interface； |
| Communication interface | 1 x RS422 IN/RS485：RJ45，Max: 1200m, VISCA/Pelco-D/Pelco-P protocol<br>1 x RS422 OUT：RJ45，Max：1200m，VISCA/Pelco-D/Pelco-P protocol |
| SD Card | 1 Micro SD |
| RESTORE button | Support |
| Power Interface | JEITA type（DC IN 12V） |

### ▼ Generic

| | |
|---|---|
| Input Voltage | DC 12V/PoE+（802.3at） |
| Input Current | 2A |
| Working Temperature | 0° C ~ 40° C |
| Storage Temperature | -40° C ~ 60° C |
| Dimension (W x D x H) | 170 × 196 × 228mm |
| Net weight | 2.3KG |

## Interface Diagram




1 — LINE IN
2 — LINE OUT
3 — USB 2.0
4 — RS422 IN
5 — RS422 OUT
6 — RESTORE
7 — DC 12V
8 — LAN
9 — USB 3.0
10 — HDMI
11 — 3G-SDI
12 — MICRO SD
13 — 12G-SDI (CMP-U20HDRG)