4K Intelligent Educational Box Camera

C22-40

4K UHD	**Smart Blackboard Writing**	**AI Intelligent Director**	**PoC**	**PoE**

Designed for scenarios like blended learning, interactive teaching, and educational recording, the camera comes in two models: the teacher's camera and the student's camera. Installed on the front and rear walls of the classroom, respectively. Features a 4K UHD CMOS image sensor, delivering ultra-clear images. Equipped with built-in image recognition, intelligent tracking, intelligent director, and smart blackboard writing, it delivers an immersive educational experience.

Product Specification

▼ Camera Spec

Sensor	1/2.8 inches, CMOS, Effective Pixels: 8.46 Megapixels
Scanning Mode	Progressive
Type of Lens Mount	M12
Lens（Teacher）	Focal length: f=7.2mm, Horizontal FOV: 42°
Lens（Student）	Focal length: f=2.88mm, Horizontal FOV: 95°
Digital Zoom	8×
Minimum Illumination	0.5Lux @ (F1.8, AGC ON)
Shutter	1/30s ~ 1/10000s
White Balance	Auto, Indoor, Outdoor, One Push, Manual, VAR
Backlight Compensation	Support
Digital Noise Reduction	2D&3D Digital Noise Reduction
EPTZ	Support
Auto Focus	Support（Teacher machine）
PoC	Support
PoE	Support
Select Lens I/II	Corresponding to the teacher/ student tracking mode, respectively

▼ Network Spec

Video Compression	H.265 / H.264 / MJPEG
Video Stream	First Stream, Second Stream Third Stream,Fourth Stream
First Stream Resolution	1920x1080, 1280x720, 1024x576, etc.
Second Stream Resolution	3840×2160, 1920x1080, 1280x720, etc.
Third Stream Resolution	1920x1080, 1280x720, 1024x576, etc.
Fourth Stream Resolution	1024×576, 960×540, 720×576(50Hz), 720×480(60Hz), 720×480, etc.
Video Bit Rate	32kbps~16384kbps
Bit Rate Control	VBR, CBR
Frame Rate	50Hz: 1fps~50fps, 60Hz:1fps~60fps
Audio Compression	AAC、G711A
Audio Bit Rate	96Kbps, 128Kbps, 256Kbps
Protocols	TCP/IP, HTTP, RTSP, RTMP, Onvif, DHCP, GB/T 28181, Multicast, etc.

▼ I/O

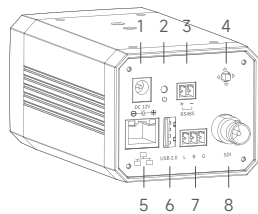|	
HD Output	1 x 3G-SDI: BNC , 800mVp-p, 75Ω, as per SMPTE 424M standard, PoC supported
Network Interface	1 x RJ45: 10M/100M/1000M adaptive Ethernet，PoE support
USB Interface	1 x USB2.0, Type-A
Audio Interface	1 x LINE IN: 3-core phoenix interface
Control Interface	1 x RS485: 2-core phoenix interface，Max. distance 1200m, VISCA/Pelco-D/Pelco-P protocols
Power Interface	DC005 type（DC12V）

▼ Generic Spec

Input Voltage	DC 12V / PoC / POE (802.3af)
Input Current	1A（Max.）
Operating Temperature	-10° C ~ 40° C
Storage Temperature	-40° C ~ 60° C
Power Consumption	12W（Max.）
Dimension	72mm (**W**) x 60mm (**D**) x 130mm (**H**)
Net Weight	0.37kg

Features

▼ 4K UHD

Utilizes a 1/2.8-inch UHD CMOS image sensor, providing output of 4KP30/25. The camera is compatible with resolutions like 1080p and 720p, ensuring clear images.

▼ Dual-Camera Design

Teacher's camera： Equipped with a 42° wide-angle lens that supports autofocus, ensuring clear and focused capturing of the teacher.
Student's Unit： Features a 95° low-distortion wide-angle lens, providing a broader FoV for students in the classroom.

▼ Support 3G-SDI Interface

Supports 3G-SDI interface for effective transmission with a maximum distance of 150 meters (1080P25). Simultaneously outputs SDI, network, and USB signals.

▼ Interlace Mode Support

Capable of simultaneously output panoramic and close-up signals through a single camera and a single SDI interface.

▼ Intelligent Director

Embedded with image recognition, intelligent tracking, and directing algorithms. Automatically identifies interactive behaviors between teachers and students. Automatically switches between panoramic views and close-up shots of the teacher, close-up shots of the blackboard, panoramic and close-up views of the students. No need for manual control, ensuring precise presentation.

▼ Smart Blackboard Writing

The camera incorporates smart blackboard writing algorithms that generate unobstructed images or display content above the teacher's figure when writing on the blackboard, making it easier for students to take notes.

▼ PoC and PoE

Supports Power over Cable (PoC) and Power over Ethernet (PoE). Integrates power, video, audio, and control into a single cable for simplified installation and operation.

Interface Diagram

1 —— DC 12V		5 —— NET	
2 —— Indicator Light		6 —— USB2.0	
3 —— RS485		7 —— LRG	
4 —— Control Switch		8 —— SDI	