

W-R04 Series

Practical Training Recording Solution



Twin-arm design, 2 PTZ optional



Replaceable and removable design



Practical training recording and broadcasting



High performance energy storage
power supply



Built-in 30W high performance
speaker(optional)



Embedded self-developed recording and
broadcasting motherboard and system



A customized video recording and teaching system for vocational education training rooms is designed primarily for relevant vocational specialties. It utilizes a mobile cart as the carrier, along with audio and video equipment to ensure flexibility in various scenarios. The HD camera captures clear images, while the microphone records high-quality sound. Teachers have the freedom to operate the camera and microphone at any time during teaching, enabling them to record both their actions and explanations simultaneously. The storage system also supports real-time synchronous uploading, making it convenient for students to watch and review class materials.



Specifcations

Host

Product configuration	
Processor	RK3588 8-core
Internal Dimension	8G
Memory	2T
System	Linux

Screen Parameters	
Size	23 inches
Material quality	Fully integrated LED touch display screen
Resolution ratio	1920*1080
Technology	Anti-fingerprint
Function	Gesture screen-off, backlight control

Video coding	
Encapsulation Protocol	H.265 H.264
Recording Resolution	4K resolution (3840*2160)
File format	MP4 FLV TS

Peripheral Interface	
HDMI	HDMI IN*2 HDMI OUT*3
USB	USB 3.0*4 USB 2.0*1
RJ45	POE*4 LAN*1 DMIC*1

Audio frequency	3.5mm IN*2 3.5mm OUT*2 6.5mm IN*2 Line IN*1 Line OUT*1
TYPE C	1
RS232	3
Debug	1

General Specification	
Size	1950 * 460mm * 460mm (height * length * width)
Net weight	86kg
Built in battery capacity	1000Wh
Battery life	6h

4K PTZ Camera

Image Parameters	
Image Resolution	Maximum support for 4K (3840×2160)
Image Sensor	8.51 million pixels 1/2.5-inch SONY CMOS
Output Frame Rate	4K up to 30 frames per second
Optical Zoom	12x optical zoom
Digital Zoom	16x digital zoom
Auto Focus	Supports fast, accurate, and stable auto focus
Signal-to-Noise Ratio	≥55dB
Lowest Illumination	0.5Lux (F1.8, AGC ON)
Noise Reduction Technology	2D and 3D noise reduction
Horizontal Rotation Range	±170°
Vertical Rotation Range	-30°~ +90°
Preset Position Number	Up to 255 (remote control calls 10)
Image Control	Supports horizontal and vertical flip
Image Freeze	Supported
Shutter Speed	1/30s ~ 1/10000s
White Balance	Auto, indoor, outdoor, one-key, manual
Backlight Compensation	Supported
AI Human Tracking	Supports real-time tracking and area tracking

Interface Parameters	
Video Output Interface	HDMI, SDI, USB3.0, wired LAN interface
Power Supply Method	Supports POE power supply
USB Features	USB3.0 supports dual-stream
Control Interface	RS422 compatible with RS485, RS232-IN, RS232-OUT

RS232 Function	Supports cascading
Control ProtocolProcessor	VISCA, PELCO-D, PELCO-P
Protocol Identification	Supports automatic identification

Encoding Parameters	
Video Encoding Format	YUY2, MJPEG, H.264, H.265, NV12
Encoding Capability	MJPEG, H.264, H.265 support 3840×2160@30fps

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Audio Compression	AAC, MP3, G.711A
Audio Sampling Rate	16000, 32000, 44100, 48000

Network Protocol Parameters	
Network Protocol	ONVIF, GB/T28181, RTSP, RTMP, VISCA OVER IP, IP VISCA, RTMPS, SRT
Streaming Function	Supports RTMP push (Wowza, FMS)
Multicast Mode	Supports RTP multicast

4K HD Camera

Image Parameters	
Image Sensor	1/2.8-inch 4K CMOS, effective pixels 8.51 million
Optical Zoom	12x
Focal Length	f=3.9~46.8mm
Aperture	F1.6 – F2.8
Lowest Illumination	0.5Lux(F1.8, AGC ON)
Digital Noise Reduction	2D and 3D digital noise reduction
White Balance	Manual/Auto/One-key white balance/Custom color temperature
Focus Mode	Auto/Manual/One-Touch Focus
Auxiliary Focus	Supports TOF Laser Ranging Module
Shutter Range	1/25-1/20000
Aperture Control	Auto/Manual
Backlight Compensation	On/Off
Image Adjustment	Brightness, Chroma, Saturation, Contrast, Sharpness, Black and White Mode
Signal-to-Noise Ratio	≥50dB

Interface Parameters

Button Function	Zoom In, Zoom Out, Brightness+, Brightness-, Freeze, Mode, Menu
Video Output Interface	HDMI*1, SDI*1, LAN*1
Audio Input Interface	Line IN
Network Interface	100M Network Port (10/100BASE-TX)
PoE Power Supply	Support

Network Protocol Parameters

Network Function	Supports Audio and Video Output
Network Protocol	RTSP, RTMP, ONVIF, GB/T28181, VISCA

Audio module

Audio Processor Parameters

Noise Suppression	Support
Feedback Suppression	Support
Echo Cancellation	Support
Automatic Gain Control	Support
Intelligent Noise Reduction	Supports AI intelligent noise reduction algorithm
Maximu Noise Suppression Level	36dB
Loca Soun Amplificatio and Remote Interaction	Supports simultaneous operation
Remote Interaction Effect	Both teachers and students can speak simultaneously without suppression, echo, or interruption
Classroom Noise Filtering Capacity	Supports filtering out noise from air conditioners, electric fans, etc.
Noise Filtering Effect	Nois filterin doe no affect sound amplification effect
Frequency Response Range	20Hz-20kHz

Built-in Speaker Parameters

Built-in Speaker Output	2 channels
Number and Power of Built-in Amplifiers	2*4Ω15W
Rated Power	15W@4Ω
Maximum Power	20W
Sensitivity	80±3dB
Frequency Range	50-12KHz

Training lapel microphone (1 piece)

Microphone parameters

Display screen	OLED
Transmission method	2.4GHz digital frequency band
Operating Range	>100 meters
Frequency Response	20Hz-20KHz
Battery Specifications	3.7V/400mAh
Power Supply Method	Built-in lithium battery power supply/ charging box contact charging/Type-C charging port (direct current 5V)
Built-in Battery Life	About 8 hours

Charging Case

Power Supply Method	Type-C charging port
Charging Case Battery Capacity	2000mAh
Charging Case Charging Time	<3 hours
Cycles of Charging Microphone	2 times

Smart Pen (1 piece)

Basic Parameters

Appearance Material	Metal gray product plastic shell
Customizable Button Count	4
Function Support	Recording, stopping, pausing, video switching, etc.
Battery Type	Polymer lithium battery
Battery Capacity	300mAh
Charging Time	1-2 hours
Endurance Time	About 30 days
Remote Control Method	Radio Frequency Technology
Transmission Frequency	2.4GHz / 868MHz
Remote Control Distance	Unobstructed 50 meters
Operating Voltage	3.6V-4.2V
Charging Voltage	5V
Charging Current	0.3A (maximum)
Product Dimensions	131mm*29mm*12.5mm
Product Weight	30.8g

USB Receiver Parameters

Operating Voltage	4.5-5.5V
Product Dimensions	22.7mm*14mm*7.6mm
Product Weight	2.1g
Transmission Frequency	2.4GHz / 868MHz

