



VCell® P1

4G Bonding Video Encoder

Built-in dual 4G, Wifi,
professional SDI
H.264/AVC encoder
Powered by lithium battery,
Battery life is 3 hours



Product overview

P1 is a professional HD/3G-SDI H.264 video encoder, designed for outdoor broadcaster, applied in video image transmission. Small size and ultra-low consumption design! It supports up to 1080p60 input.
Input SDI signal through preceding image processor for image enhancement, then encoding by SOC processor for creating H.264 video encode featured with high performance and low bit rate.
P1 supports unbind audio from SDI signal, also input audio from Analog Line-in for AAC (MPEG4-Audio) stereo audio encoding or G.711 audio encoding.
Built-in Kiloview Sunshine streaming media server engine is a server with the ability of supporting 20-50 concurrent users access simultaneously.
P1 built in battery can support working 3 hours. And users can prolong working time with the help of mobile power bank. Easy operation and convenient!
P1 is equipped with bracket and hot shoe screw, fixed well on the camera. Button design between bracket and camera makes device disassemble very easily.

Features

High integration, portable, low consumption, high performance

P1, small size of 115mm*75mm*35mm, integrates FPGA, video co-processor and video encoding chip. It is built-in two 4G-LTE modems, IEEE 802.11 b/g/n/ac dual-band (2.4G/5.8G) Wi-Fi model and built-in lithium battery.
P1 can support up to 1080p60 Full HD video encoding, meanwhile enabling up to 960x540@60Hz sub-stream encoding.
Very low power consumption. Under typical case by opening dual 4G modules, overall power consumption is <=6.5W. Matched up with 6800mAh lithium battery can work for 3 hours.

Low bit rate assuring nice image and quality audio

P1 adopts VLB (Very Low Bit Rate) H.264 video encoding technology, bonding with preceding video processor to do video dynamic noise reduction, image enhancement, etc.. Generally, 1Mbps@720p, 1.5Mbps@1080p can achieve good video encoding quality, which meet needs of low bit rate and quality image under internet applications.

Support Wi-Fi and 4G-LTE

P1 has built-in two 4G-LTE modules, working with SIM card. It supports bonding work of multiple 4G-LTE modules to enhance bandwidth and improve transmission reliability. P1 also supports built-in IEEE 802.11 b/g/n/ac dual-band (2.4G/5.8G) Wi-Fi model.

Powerful streaming media protocols supported and full service function

P1 needs to work with Kiloview CellCentre 4G bonding streaming media platform (software). CellCentre platform is a cloud server platform provided by Kiloview, connected via Phone APP to enable or stop 4G bonding service. CellCentre fully supports RTMP/HLS/TS and RTP/RTSP/ protocols. CellCentre push bonded video streaming live to many global live video platforms, or providing video transit and distribution, 20-50 concurrent users to access simultaneously.

{Note: Only with P1 hardware couldn't realize bonding transmission, but could finish normal encoding/transmission and pushing functions}

Easy operation and professional quality

P1 allows you to use Web interface to manage device, as well as Phone/PAD App.

Other features

- ✓ Supported global live video platform (tested): YouTube, UStream, Twitch and so on.;
- ✓ Supported streaming media server platform/CDN system (tested): Wowza, FMS, RED5, SRS, etc.;
- ✓ Local storage and recording based on Micro SD/TF card;
- ✓ Support image rotation, cutting, gray scale and other special image processing;
- ✓ Support character /image overlay;
- ✓ Support quick function customization (Please contact salesman or factory technical support);
- ✓ Two-way voice intercom function (based on factory provided solutions or for customization).

© Main parameters

| | | |
|-----------|---------------------|--|
| Interface | Video input | 1*BNC SDI |
| | Analog video input | Based on USB extend Microphone input or Line-in input |
| | Analog video output | Based on USB extend Headphone input or Line-out output |
| | SIM card slot | 2*Micro SIM card slot |
| | USB | 2*USB 2.0 Type-A |
| | Micro SD | 1*Micro SD/TF Card storage interface |

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|------------------|--------------|--------------|
| Operation button | Red button | Power key |
| | Black button | Function key |

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| Network support | 4G-LTE built-in | 4G-LTE module |
| | Wi-Fi | Built-in Wifi module, IEEE 802.11 b/g/n/ac Dual-band (2.4G/5.8G), external antenna |

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| Signal and formats | Interface standard | SD/HD/3G SDI |
| | Supported video formats | 1080p23.98/24/25/29.97/30 |
| | | 1080p50/59.94/60 |
| 1080i50/59.94/60 | | |
| 720p23.98/24/25/29.97/30 | | |
| 720p50/59.94/60 | | |
| Audio | stereo SDI AES/EBU audio | |

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| Encoding | Video encoding | H.264/AVCHigh profile (up to level 5.1), compatible with Main profile and Baseline |
| | Multi-stream supported | Support multi-stream encoding, including Main /Sub stream and Motion JPEG image encoding |
| | | Main stream: up to 1080p60, the highest bitrate is 30Mbps |
| | | Sub stream: up to 960*540, the highest bitrate is 4Mbps |
| | Motion JPEG: up to 1920*1080 encoding | |
| | Audio encoding | AAC/MPEG4-Audio, G.711 (u-Law/a-Law) {Other algorithm can be extended} |
| | Encoding latency | ≤67ms |
| Video encoding bitrates | 256Kbps~30Mbps adjustable | |
| Audio encoding bitrates | 32Kbps ~ 512Kbps : AAC encoding 64Kbps : G.711 encoding | |

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|---|------------------------|--|
| Transmission protocols and Management protocols | Transmission protocols | RTP / RTSP (compatible RTP over RTSP, RTSP HTTP Tunnel and RTSP Multicast) RTMP pushing, RTMP service, TS over UDP, HLS |
| | Management protocol | HTTP |

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| Management ways | Management interface | Web and Android APP |
| | Remote management | Support |
| | Online firmware updating | Support |

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| Working environment | Power | DC 12V 1A |
| | Operating temperature | -4 to 131° F / -20 to 55° C |
| | Relative humidity | 20 ~90%RH(un condensation) |
| | Power consumption | 6.5W Max |

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|----------------------|---------------|----------------------------|
| Size and accessories | Size | 115 x 75 x 35 mm |
| | Weight | 420g |
| | Wi-Fi antenna | Built-in PCB antenna |
| | 4G antenna | 3db rod-like antenna |
| | Power adapter | External DC 12V 1A adapter |

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|---------|------------------|--|
| Battery | Standard | built-in lithium battery, external I5V mobile power supply |
| | Volume | 3.7V 6800mAh (29.6Wh) |
| | Life time | > 3 hours |
| | Fixing | 1/4" hot shoe screw |
| | Charging methods | 12V 1A power adapter charging |

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