EXPERIENCE SEAMLESS STREAMING WITH OUR FLAGSHIP LAUNCH

P3 5G Wireless Bonding Encoder

3G-SDI + 4K HDMI Dual-Interface   **Modular Design for Versatile Scenarios**

H.265 Codec Super low latency

The P3 is a new generation 5G wireless bonding encoder based on the patented, reliable and free technology, the one and only - KiloLink. It supports six network connections, including 4-CH 5G (or 4-CH 4G), WiFi, and Gigabit Ethernet. With a built-in 3500mAh battery and a 7000mAh external battery, it ensures all-day use. Additionally, the new modular design includes 5G/ 4G communication module (purchase seperately), WiFi/ SD storage modules, and battery modules, providing flexible options.The P3 features 3G-SDI & 4K HDMI video input interfaces, supporting video input of up to 4KP30 with H.265/ H.264 encoding. With the free KiloLink Server, it supports various media protocols such as RTSP, RTMP, SRT, HLS, and NDI HX.

Modularization, flexible customization: 5G/ 4G communication module (purchase seperately), WiFi module, recording/ storage module and battery module, all of them can be freely combined according to actual scenarios.

Reliable transmission: P3 is equipped with patented KiloLink bonding transmission technology. Leveraging encrypted algorithms, it realizes aggregate bandwidth, balanced load and dynamic bitrate adjustment for everlasting streaming. Users can deploy bonding servier privately, on-premise, or in the cloud.

Dual-battery for all day operation: P3 has built-in 3500mAh battery and 7000mAh external battery. When 5G module runs at full speed, the external battery supports for more than 4 hours. It seamlessly switch to the built-in battery to realize continuous operation, and can be connected to external power supply through DC interface.

Dual inputs, H.265 Codec, low latency: supports H.265/ H.264 encoding, and 4KP30 & 3G-SDI dual-interface inputs. It fully supports mainstream media protocols including NDI HX/ RTSP/ RTMP/ SRT/ HLS. Combined with KiloLink Server, it can easily realize live streaming on multiple mainstream platforms simultaneously with reliable, high image quality and super low latency.
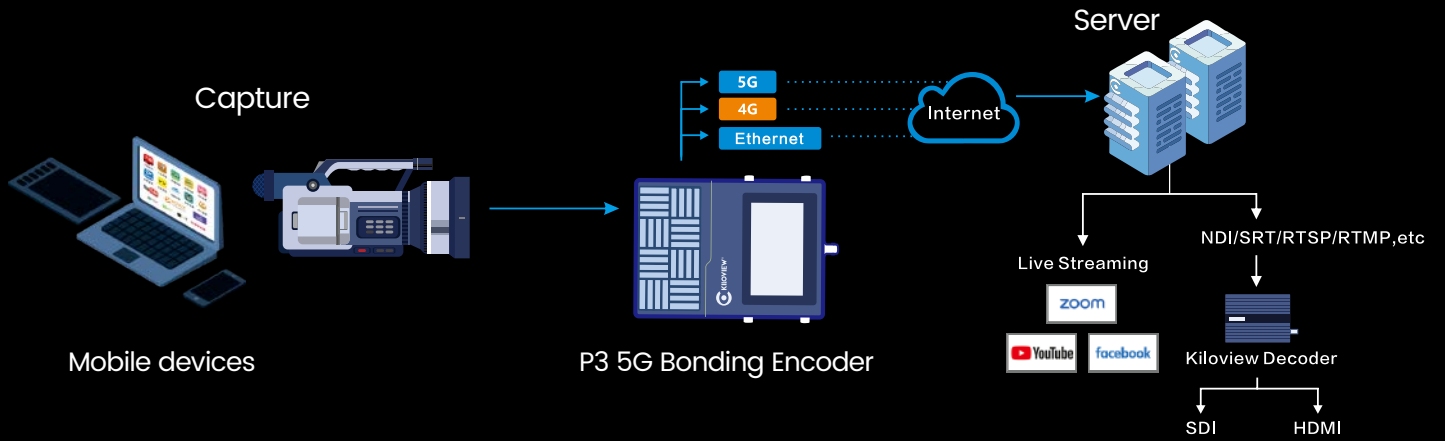
Buil-in anti-jamming antenna for stability: Leveraging professional isolation design, P3 can effectively resist signal interference even in electromagnetic environment. The built-in fan design also contributes to efficient heat dissipation, ensuring continuous operation.

Touch screen for real-time monitoring and management: equipped with 4.3-inch LCD screen, it realizes real-time previewing, and monitoring of IP address, network status, video resolution, Tally, CPU occupancy rate, device temperature.

SCENARIOS

Capture

Mobile devices

P3 5G Bonding Encoder

5G
4G
Ethernet

Internet

Server

NDI/SRT/RTSP/RTMP,etc

Live Streaming

zoom

YouTube   facebook

Kiloview Decoder

SDI   HDMI

Marathon

Wedding

House of Worship

Outdoor

Easy Outdoor Streaming. Any Time, Anywhere
P3 mini 4G Wireless Bonding Encoder

3-CH 4G + WIFI + Ethernet Bonding   **3G-SDI + 4K HDMI Dual-Interface**

H.265 Codec Super low latency   **Compact size, PD Fast Charging**

P3 mini is the next generation 4G wireless bonding encoder built on KiloLink transmission technology. Featuring H.265/ H.264 encoding, it offers dual interfaces with 3G-SDI and HDMI inputs, supporting up to 1080P60. The P3 mini supports multi-channel wireless bonding connections, simultaneously linking to 3CH of 4G cellular networks, WiFi (2.4G/ 5G dual-band) and Ethernet.

Additionally, P3 mini seamlessly integrates with the KiloLink Server, enabling remote management and full protocol streaming services. It also supports cross-internet voice intercom functionality, meeting a wide range of application needs.

3-CH 4G+WIFI+Ethernet, reliable transmission: P3 mini is equipped with patented KiloLink bonding transmission technology. Leveraging encrypted algorithms, it realizes aggregate bandwidth, balanced load and dynamic bitrate adjustment for everlasting streaming. Users can deploy bonding server privately, on-premise, or in the cloud.

Super anti-interference: in order to ensure the stability of outdoor signal transmission, P3 mini is equipped with professional-grade anti-jamming antenna to avoid from picture freezing and intermittent sound caused by signal problems, in order to guarantee LIVE stability.

PD fast charging: equipped with 5000mAh battery and supporting PD fast charging function, it can quickly replenish power in short time, realizing continuous operation for outdoor streaming.

SDI+HDMI

Dual inputs, H.265 Codec, low latency: supports H.265/ H.264 encoding, and 4KP30 & 3G-SDI dual-interface inputs. It fully supports mainstream media protocols including NDI HX/ RTSP/ RTMP/ SRT/ HLS. Combined with KiloLink Server, it can easily realize live streaming on multiple mainstream platforms simultaneously with reliable, high image quality and super low latency.

3

Touch screen for real-time monitoring and management: equipped with 3-inch LCD screen, it realizes real-time previewing, and monitoring of IP address, network status, video resolution, Tally, CPU occupancy rate, device temperature.

Compact size with coldshoe: easy mounting on top of camera, it's perfect for your relable outdoor streaming, anytime, anywhere.

PATENTED MULTI-LINK BONDING UNLOCK YOUR AVOIP POTENTIAL

KiloLink Technology:

KiloLink is a proprietary technology pioneered by Kiloview. Its core purpose is to utilize all possible network links and establish media transmission channels between Kiloview devices.

The technology is based on reliable UDP (RUDP) transmission technology, with precise congestion control algorithms. By accurately detecting network bandwidth and predicting minimal latency, it enables stable, efficient & reliable transmission over conventional networks and multi-link bonding. The transmission efficiency of KiloLink is significantly superior to traditional TCP (Transmission Control Protocol).

Advantages of KiloLink Bonding Technology

Easy deployment efficient connectivity
Kiloview provides bonding software for free allowing users to deploy servers either locally or in the cloud

Multi-link bonding for network acceleration
Utilizing bandwidth to achieve overlay to overcome poor network bandwidth conditions

Balanced stability & bandwidth guarantee
When any link experiences fluctuations, bandwidth load balancing is performed within 100ms

Secure encryption technology
Adopt TLS 1.3 encryption transmission to maximize the data security

VPN (Virtual Private Network)
Support VPN, Enable secure internal network access

Free for use
Applicable to all Kiloview devices Inter-connectivity

KiloLink Server Deployment

① Server Environment

First of all, you need to prepare a server that meets the following hadrware & software requirements:

Hardware

Processor: Inter Core i3 and above

Storage: 64GB and above

RAM: 4Gb and above

Software

Operating System：64-bit Linux (Recommended Ubuntu 18.04+ or Debian 9+)

Network: At least one public IP address, with a recommended minimum bandwidth of 6Mbps

② Server Login

Use remote terminal software (e.g. Xshell, PuTTY) to log in. Here is an example of Xshell:

Download and install Xshell

Create a new session. Enter the server's IP address, choose the SSH protocol, and leave the port number as default (22).

Enter the username and password. If you are a standard user, you need to use sudo su to become administrator or log in as root.

③ Deployment Process

Step 1: Install docker container

Enter the following command in the terminal window to install

```
curl -fsSL https://get.docker.com | bash
```

Step 2: Load the image file

If you already have the KiloLink Server image file
(e.g. KiloLink-Server_1.00.0011.tar),
use the following command to load it:

```
docker load -i kilolink-server_1.00.0011.tar
```

Step 3: Create KiloLink Server container

First, check if there are any existing containers and delete them

```
docker ps | grep kilolinkserver
docker rm -f [CONTAINER_ID]
```

Then, create a new container

```
docker run -dit --restart=always --name kilolinkserver -e KLNKPORT=50000 -v /data:/
data --privileged --user root --network host kilolink-server:1.00.0011 /bin/bash
```

Step 4: Load the streaming server Image

Load the streaming server image
(assuming firmware version 1.00.0015)

```
Docker load -i kilolink-streamer-server_1.00.0015.tar
```

Step 5: Start streaming server container

Check if there are any existing streaming server containers and delete them. Create a new container

```
docker ps | grep "kilolink-streamer-server"
docker rm -f [CONTAINER_ID]
```

Start the new streaming server container

```
docker run -itd --name kilolink-streamer-server -v /var/run/avahi-daemon:/
var/run/avahi-daemon -v /var/run/dbus:/var/run/dbus -v /data:/data
--restart=always --network host --privileged=true kilolink-stream-
er-server:1.00.0015 /bin/python3 /var/www/kilolink-streamer-server/bootstrap.py
```

④ Login Verification

Enter the server's IP address and port number (defaul 83), for example http://server IP address:83 in the browser.
Acccess the login page with default username: admin , password Kiloview001.

⑤ System Guidance

After log in, you can perform device management, user management, directory management... according to the chapters in the document. Please follow the above steps and ensure security practices. Always refer to sales support for assistance during operation.

P3 mini FAQ

Q1: The main application scenarios of KiloLink's wireless bonding products?

Kiloview's wireless bonding products offer a range of video transmission solutions, including the P3/ P3 mini mobile encoders, KiloLink media relay transmission service, and Kilolink Server management platform. These products are primarily used for real-time video broadcasting and are suitable for various scenarios such as news reporting, sports events, live events, online education, and more.

Q2: Why choose KiloLink Server for streaming?

In complex network environments, the use of KiloLink Server product is necessary for:

(1) Multi-network bonding technology: KiloLink Server product supports multi-network bonding technology, allowing simultaneous utilization of multiple network interfaces (such as 4G, 5G, WiFi, Ethernet) for transmission, thereby improving the stability and bandwidth utilization of video transmission. In unstable network environments situations with limited bandwidth, multi-network bonding technology ensures the continuity and smoothness of video signals.

(2) Adaptive bitrate adjustment: KiloLink Server product features adaptive bitrate adjustment functionality, capable of dynamically adjusting video bitrate in real-time based on changes in network bandwidth. This ensures the stability of video transmission and maintains video quality while minimizing latency.

(3) Multi-protocol conversion and media stream splitting: KiloLink Server offers the functionality of a small to medium-sized streaming media server, supporting tens to hundreds of concurrent connections to effectively distribute broadband pressure. It also supports various protocols such as NDI/ SRT/ RTMP/ TS-UDP/ HLS/ RTSP for conversion and output.

(4) Real-time monitoring and remote adjustment: KiloLink Server products are equipped with real-time monitoring and remote adjustment capabilities. Users can monitor devices in real-time and make remote adjustments through the management platform. This enables timely identification of problems during network transmission, ensuring smooth live streaming.

Q3: Difference between P3 and P3 mini

The main differences lie in their sizes, features, and performance. P3 supports a 5G module, and the communication modules can be flexibly combined. P3 has a larger size, allowing for hot-swappable batteries, and offers more powerful features and performance. On the other hand, P3 mini supports 4G networks, does not have replaceable batteries, and is more compact and lightweight, making it more suitable for portable applications.

Q4: P3 mini's dimensions and weight are as follows:

Dimensions (mm): 138.0*85.0*35.0
Weight: 580 grams, approximately 25% of the weight of P3.

Q5: Does P3 mini support external storage for video recording?

Yes, it supports USB expandable hard drive local recording and also supports NAS network storage, making it easy to use.

Q6: Which network standards and frequency bands does P3 mini support?

P3 mini 4G module support:

Network Standards	frequency bands
LTE-FDD	B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/B28
LTE-TDD	B38/B39/B40/B41
WCDMA	B1/B2/B4/B5/B6/B8/B19
GSM	850/900/1800/1900

Q7: Comparison of Parameters between P3 and P3 mini

Tech Specs Comparison:

Model	P3	P3 mini
Resolution	(HDMI Interface): 3840×2160p 30fps 1920×1080p 23.98/24/25/29.97/30/50/59.94/60fps 1920×1080i 50/59.94/60fps 1280×720p 29.97/30/50/59.94/60fps 720×576i 50fps (PAL SD) 720×480i 59.94fps (NTSC SD) (SDI Interface): 1920×1080p 23.98/24/25/29.97/30/50/59.94/60fps 1920×1080i 50/59.94/60fps 1280×720p 25/29.97/30/50/59.94/60fps 720×576i 50fps (PAL SD) 720×480i 59.94fps (NTSC SD)	(HDMI Interface) 1920*1080p 60/59.94/50/30/29.97/25/24/23.98fps 1920*1080i 60/59.94/50fps 1280*720p 60/59.94/50/30/29.97/25/24/23.98fps 720×576i 50fps (PAL SD) 720×480i 59.94fps (NTSC SD) (SDI Interface): 1920*1080p 60/59.94/50/30/29.97/25/24/23.98fps 1920*1080i 60/59.94/50fps 1280*720p 60/59.94/50/30/29.97/25/24/23.98fps 720×576i 50fps (PAL SD) 720×480i 59.94fps (NTSC SD)
Codec Format	H.264 (AVC): Baseline/Main/High profile, Level 5.1 H.265 (HEVC): Main profile, Level 5.0	
Protocols	NDI HX/RTMP/SRT/RTSP/HLS/TS over UDP (with Kilolink Server)	
Bonding Performance	Modular design, allowing flexible selection of modules (5G/ 4G communication module, WiFi communication module, recording storage module, and battery module)	Integrated 3-CH of 4G cellular networks + WiFi (2.4/ 5G dual-band) + USB expandable wired connection
Record	SD card for local recording, USB expandable hard drive recording	USB expandable hard drive recording
Overlay	Supports custom text and image overlay function, which can be overlaid on the screen at any position (this function requires software upgrade support in the future)	
Voice Intercom	Support Kiloview Intercom Server (KIS)	
Tech Specs		
Video Input	1*HDMI 4K@30fps input	1*HDMI 1080P@60fps input
	1* 3G-SDI 1080P@60fp input	1* 3G-SDI 1080P@60fps input
Audio Input	4-CH HDMI signal embedding audio input	
	4-CH SDI signal embedding audio input	
	1*3.5mm Line in/out interface	

Model	P3	P3 mini
Display	4.3-inch LCD touchscreen display (800x480)	3.0-inch LCD touchscreen display (360x640)
Ethernet Interface	1×10M/100M/1000M RJ45	
Management	Web/ KiloLink Server remote management	
Working Temperature	-5℃~45℃	
Battery	Dual battery module design, with a total battery capacity of 6000mAh@7.2V 43.2W	Built-in 5000mAh@7.2V 36W battery
Power Supply	DC 12V/3A	DC 12/3A PD fast charge
Battery	Dual battery module design, with a total battery capacity of 6000mAh@7.2V 43.2W	Built-in 5000mAh@7.2V 36W battery
Size	211.20*143.00*68.00mm	138.0*85.0*35.0mm
Weight	1900g	580g

kiloLink Server FAQ

Q1: What is KiloLink Server？

KiloLink Server is a software based on KiloLink technology, designed for centralized online management, status monitoring, remote configuration, firmware management, and upgrades of Kiloview products (hardware devices and software systems). It does not require any client software installation and can be operated through a web interface, making it simple, convenient, and easy to use. Additionally, KiloLink Server can perform protocol conversion for mainstream media protocols such as NDI HX/ SRT/ RTMP/ TS/ RTSP/ HLS and provide real-time streaming media forwarding services for small and medium-scale applications.

Q2: Why KiloLink Server for management

KiloLink Server leverages patented bonding technology to provide reliable transmission capabilities, supporting unlimited device management and control. It is suitable for remote, distributed, and multi-device scenarios, offering users efficient, convenient intelligent management, and centralized monitoring services. Additionally, it features multi-link bonding transmission for stability and reliability, as well as protocol conversion and media stream splitting functions.

Q3: What are the different versions

At first, KiloLink Server had three versions: KiloLink Server Free (basic version supporting only 32 devices), KiloLink Server Bonding edition (supporting only P1/ P2 bonding service management), and KiloLink Server Premium edition (full functionality requires authorization). Currently, KiloLink Server Free and KiloLink Server Bonding versions are no longer maintained.

The new KiloLink Server Pro version is based on the KiloLink Server Premium edition and adds bonding service and centralized management for P3/ P3 mini. It is provided to users free of charge.

We plan to add centralized management functionality for other Kiloview devices such as E3/ N50/ N60/ N5/ N6 in future versions of KiloLink Server Pro.

Q4: What devices are supported?

Products	Models		
Encoder	E1/E1-s/E2	P1/P2	M2
	E1 NDI	P3/P3 mini	S2
	E1-s NDI	N1/N2	U40
	E2-NDI	N3/N3-s/N4	
	G1/G1-s/G2	N30/N40	
Decoder/Gateway	D350/D260	MG300	MS2/MS4
	DC230/DC220	MG300 v2	D300
Rackmount Cards	RD-230	RE-1/RE-2	RD-350
	RD-300	REN-2	RD-260
	RE-1 v2 (new)	RE-100	RN-40
	REN-1	REN-100	RMG-300
	REN-1 v2(new)	RN-3 (new)	RMG-300 v2

（Future versions will support E3, N5, N6, N50, and N60……）

Q5: How does KiloLink Server support P3/ P3 mini bonding service?

If you are a user of P3/ P3 mini, you need to deploy the new version of KiloLink Server Pro to support centralized management, bonding transmission, and media forwarding services. It not only supports the latest P3/ P3 mini but also is compatible with all previous versions of devices, including P1/ P2, etc.

Q6: What is the plan for future optimization?

In the future, KiloLink Server Pro will support automatic deployment and optimize deployment tutorials. Users will only need basic computer skills to perform one-click installation through tools. For professional users, we will also support manual deployment with customized installation. If users are familiar with the LINUX system, they can easily install and deploy manually through our deployment documentation.

Q7: How long will the free policy last?

KiloLink Server offers permanant free usage rights, allowing users to freely experience all the features of the KiloLink Server system. If users need authorization or have any questions during the experience, they can call the hotline at +86 185-7319-2787 to get help and support.

Q8: Recommendations for deplyment

X86 64bit CPU with 2 cores or higher, and a frequency of no less than 2.0GHz.
Hard disk with at least 16GB available space.
4GB RAM or higher.
For device management and control, use a minimum of 256Kbps bandwidth per device (or software system) as a metric.
Multiply this by the total number of managed devices for bandwidth configuration reference.

Others FAQ

Q1: After the release of P3/ P3 mini, will there be further upgrades for P1/ P2?

KiloLink is Kiloview's patented technology that connect and link all Kiloview products & solutions, we previously have a KiloLink Server Free that can manage all the previous models of Kiloview devices, while also we have the KiloLink Server for Bonding, which is the bonding server that can be used to support our P1 and P2 products' bonding.

Now for KiloLink Server Pro, it's acutally an upgraded version of the existing KiloLink Servers, which means it can be used to not only manage all Kiloview devices, inlucding our latest E3, N50, N60, N5, N6; as well as the bonding server for both P1/ P2, or the P3 & P3 mini.

Refer to Tech Support team for further questions.https://www.kiloview.com/en/support/download/