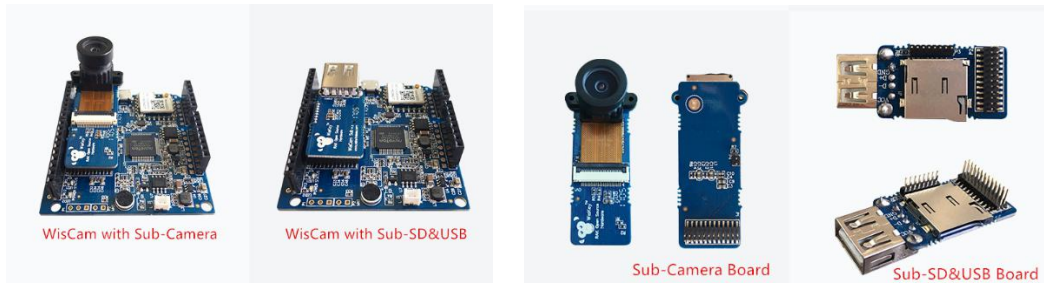


What is WisCam?

RAK WisCam is the Modular Based Evaluation Kit to help the developer to design Wi-Fi video product with Linux OS. WisCam can transmit video through Wi-Fi to APPs. This document mainly describes the hardware structure of WisCam and how to use WisCam's basic function. For example, play video in the mobile app or Windows program.



Why I should buy the WisCam?

- Add video or image to Real-time preview in APPs
- Build P2P Cloud server and transmit video and control data anywhere when you access into internet
- All software source code are available on Github and Hardware open all design
- Fully compatible with Arduino UNO development board in hardware
- The source code of mobile app is available on github
- Fast to build the prototype for your application demos
- Design the products not only linux but also Arduino devices.

What's function of the WisCam?

- CPU is built on the ARM926EJ- 32-bit RISC CPU core. The frequency can be up to 200MHz@1.8V.
- WisCam supports WI-FI IEEE 802.11 b/g/n protocol, 1T1R antenna and SDIO interface. High-speed wireless connection can be up to 150 Mbps.
- WisCam provides UART interface to communicate with Host MCU or Arduino board. This allows you to focus on your application development.
- Provides a 10-bit ADC, a MIC-phone, a UART, a speaker and a dozen of GPIOs
- Record up to 640x480@30FPS RGB MJPEG video.
- Provide multiple accessories to make your application more amusing and easier to use

Who will pay the interesting for WisCam?

- The R&D or product team at the company who make video product
- Engineer developer interesting Linux OS
- Open source developer for Arduino
- Maker who make your video or image idea coming ture
- Robot or toys team to making product amusing
- Student to learn linux programming from Junior to senior

The function demos that product integrate the WisCam

- Update the Tutorial video in RAK youtube channel
- Update the how to compile the source code video in RAK youtube channel
- Update the how to use Peripherals(PWM,I2C,GPIO,ADC etc.) video in RAK youtube channel
- Update Controlling toys with Arduinio video in RAK youtube channel

How it works?

1:WisCam build in P2P Cloud server, the developer can use WisCam to build similar product like IP-Camera .

2:WisCam build in RTSP server, the engineers can develop smartphone APPs or Windows Software.

3:Developer can program inside the WisCam base on linux to realize his own application code

4:WisCam compatible to Arduino Shield,you can use UART to communication with Arduino core to leverage the plenty demos base on Arduino

5:WisCam can communicate with Windows PC via USB UVC protocol

6:WisCam can record video or snap image automatically.

7:WsiCam add your product not only Real-time video but also remote control or get status

8:WsiCam will add vision algorithm to make your product more and more amusing

9:WsiCam make you learning wifi driver ,image sensor driver ,UVC driver ,P2P cloud driver and linux OS.

Compare to other solution, what's the advantage?

- WisCam's competitor: Openmv, is a typical hardware solution for image embedded module
 - Company website: <http://openmv.io/>
- The difference
 - WisCam base on Linux OS, which has high performance to encode video or image. We spent lots of the development time to reduce the code size to match Linux architecture
 - WisCam open all source code to engineer to build your application
 - WisCam can be up to 640x480@30FPS video
 - WisCam have the high performance video and audio processing to
 - Compare to linkplay made, RAK WisCam is mostly like a open source module not just a wifi speaker modules.
 - The developer can use WisCam UART to connect the HOST-MCU ,such as Arduino.
 - WisCam provide the SDK with plenty open IO like UART,ADC,GPIO,I2C etc.

How Many way Wiscam can play video now?

- USB UVC mode
- WIFI Camera playing in Android , IOS ,Windows APP.

How Many Functions inside the WisCam?

- MJPEG Encode
- Audio Encode
- Audio Decode
- USB HOST/ USB Device
- P2P Cloud server
- ADC/SPI/I2C/GPIO
- HTTP Protocol
- RTSP Server
- USB UVC
- SDIO WIFI
- SD card

What can customers do with WisCam today?

WisCam can access to a lot of field about video ,audio and wifi application.

- IP CAMERA with P2P Cloud Server
- USB Camera with UVC Protocol
- Motion detection for security applications
- With QR Code Detection/Decoding you can make smart robots or toys
- Detect Frame or Image differencing to execute different action
- Face Detection to count Human traffic
- Motion tracking to control your device to move
- 2D barcodes Detection/Decoding

The key word of WisCam

- **Open source IPC**
- **Linux learn board**
- **MJPEG Encoding video board**
- **Arduino Camera module**