



Shenzhen HaiRayVision Technology Co., Ltd.

——Endoscope Video Processing & Decoding Mainboard Series

——High-Tech Enterprise | Medical-Grade ISP Image Processing Expert for UVC Endoscopes——

※**Product Model:** HRY-6930-MB (内置 OV420)

-----**Patent Number:** CN210016549U

※ **Product Introduction:**

Supported Sensor Models	Frame Rate@Resolution
OV6930	400*400@30fps
Input/Output Interface	Input/Output wire bonding method



※**Product Overview:**

HRY-6930-MB is a high-performance, micro-power UVC endoscope image processing and decoding mainboard. It serves as the core ISP image processing component for endoscopes. Featuring USB2.0 interface and compact dimension of 48.0 mm × 13.0 mm ±0.2 mm, it supports 2–5 meters long-distance CVBS signal input from sensor drivers. Equipped with advanced 7th-generation ISP image algorithm processing technology, it achieves low signal latency and meets EMC test and isolation requirements.

It supports UVC protocol and OTG function. SDKs and APIs are available for integration with ARM intelligent mainboards, endoscope hosts, mobile phones, tablets and operating systems including Android, Linux, Windows, Ubuntu and iOS, together with comprehensive technical support.

Linked control via GPIO and APP enables one-touch white balance, snapshot and video recording, as well as manual adjustment of parameters such as white balance, exposure, sharpness and brightness. Customization services are offered according to customer functional requirements (e.g., dimming control) and dimensional specifications, including fine image tuning for medical-grade and industrial-grade applications. This product incorporates proprietary patented core technologies. By adopting Hai Ruiyang decoding boards, your endoscope products can avoid export restrictions and intellectual property infringement risks. It is widely applied in multi-department medical endoscopes and industrial endoscopes.

※**Plug and Play:**

Driver-free on Windows, Android, Linux, iOS, and other systems



※**Product Features:**

- Adopts advanced 7th-generation ISP, supporting 160,000 pixels at 30 FPS.
- Supports GPIO protocol control including one-touch white balance, snapshot, video recording and dimming.
- High-speed 480 Mbps USB2.0 data interface with OTG and UVC protocol support.
- Low latency, excellent anti-glare processing and fine medical ISP effect to avoid reflection in applications.
- Industrial-grade components, high-level ESD protection and reliable EMC performance.
- The mainboard drives CVBS signal for endoscopes over a distance of 2 m to 5 m.
- Supports driving of LED fill light and fiber optic fill light.
- Supports adjustment of various video parameters.
- Eco-friendly product; all manufacturing processes comply with the international RoHS standard.
- Optional matching UVC isolation board available.

※**Service Advantages:**

www.hairayvision.com

No. 401, Building B, Jiaquan Building, Lane 7, Lanqing Road, Longhua High-tech Industrial Park, Shenzhen City, Guangdong, China



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Solid full-chain technical service capabilities, covering the complete stages from image processing and hardware to application layer; SDK and API interface protocols provided;

Fine medical-grade and industrial-grade image tuning and optimization services, plus functional and PCBA customization services;

Rapid response: Technical support and sales centers in East China (Suzhou) and South China (Shenzhen);

20 years of image processing experience, over 10 years as a core supplier of endoscope image processing and decoding boards, and extensive experience serving more than 100 endoscope companies.

※Application Areas:

This product series is a core component for endoscope ISP image processing. It is especially suitable for bronchoscopes, ENT endoscopes, choledochoscopes, gastroscopes, urological endoscopes, pyelosopes, arthroscopes, spinal endoscopes, neuroendoscopes, electronic rigid endoscopes, electronic flexible endoscopes, hysteroscopes, industrial rigid endoscopes, industrial flexible endoscopes, and many other types of endoscopes.

※Effect Display

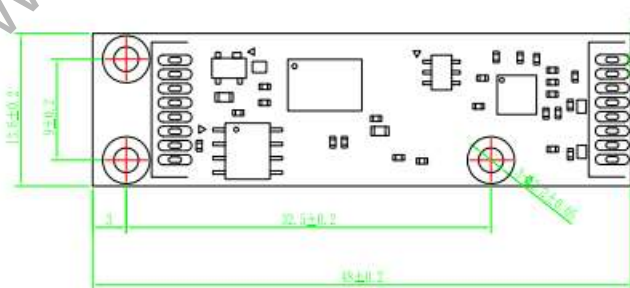


※Adjustable Video Parameters:



※Specifications & Dimensions: 48.0mm*13.6mm±0.2mm

※Interface Definition:



6930 Signal PAD D=0.5MM HOLE

SIGNAL	Description
LED-	LED-(NO SIGNAL CONNECTION)
LED+	LED+(NO SIGNAL CONNECTION)
AVDD	SENSOR POWER 3.3V
VTO	SENSOR DATA INPUT
SDA	SENSOR I2C DATA
SCL	SENSOR I2C SCL
XCLK	CLOCK OUTPUT TO SENSOR
AGND	SENSOR GROUND

USB Signal PAD D=0.5MM HOLE

SIGNAL	Description
LED-	LED-(NO SIGNAL CONNECTION)
LED+	LED+(NO SIGNAL CONNECTION)
5V	USB POWER 5V
D-	USB SIGNAL D-
D+	USB SIGNAL D+
GND	GROUND
DGND	GROUND
BW	General purpose input and output

※Contact Us:



Contact person's WeChat account
Contact person: Mr. Cedar Lee
Telephone: 18576213747
Email: cedarlee@hairayvision.com

※Application Display



www.hairayvision.com

No. 401, Building B, Jiaquan Building, Lane 7, Lanqing Road, Longhua High-tech Industrial Park, Shenzhen City, Guangdong, China