

High-integration Coaxial HD ISP Chip

Zhejiang Chipup Electronics Co., LTD

XS5018B is an image signal processing chip designed for CMOS image sensors, specifically tailored for security cameras. This chip, mainly applied to coaxial HD cameras, features highly integrated peripheral components to simplify product design. The chip is equipped with a high-performance ISP and 3DNR, offering processing capabilities up to 1080P@30 fps. It supports standard-definition analog output via CVBS (960H) and high-definition analog output through HDcctv 720P, 960P, and 1080P. With an embedded CPU, XS5018A enables flexible software applications.

◎ **Inventor of coaxial HD, with proprietary intellectual rights**

◎ **Integrated DAC, video buffer, and comparator**

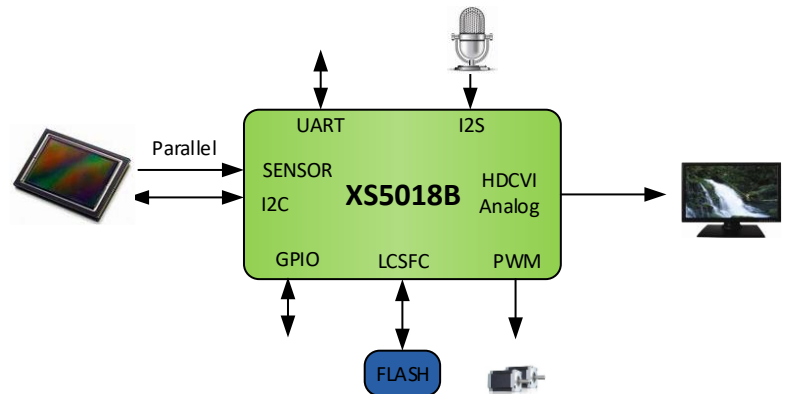
◎ **Compatible with HDcctv and CVBS**

◎ **Supports 960H, 720p, 960p, and 1080p**

◎ **ISP supports up to 1080p@30 fps**

◎ **High-performance 2D and 3D noise reduction**

◎ **Supports seamless frame rate reduction**



● **Video Input Interface**

- Supports 10bit RGB Byer input and clock up to 100 MHz

● **Audio Interface**

- Supports an I2S input interface and an I2S output interface

- Supports master/slave mode
- Provides working clock for external audio ADC module
- Supports HDCVI coaxial audio output

● **External Interface**

- Supports POR power-on reset
- UART × 1, can be multiplexed as GPIO
- I2C × 1
- SPI × 1, can be multiplexed as GPIO
- PWM × 4, can be multiplexed as GPIO
- ADC × 2
- Integrated with JTAG, can be multiplexed as GPIO
- Integrated with a comparator
- Integrated with video DAC and Buffer

● **Image Signal Processing**

- Supports 2D noise reduction
- Supports 3D noise reduction
- Supports shading correction and dynamic bad pixel correction

- Supports AE and AWE
- Supports correcting uneven green
- Supports color correction and false color correction
- Supports edge enhancement
- Supports seamless frame reduction

● **Video Processing**

- Supports video cropping and scaling up/down
- Supports privacy masking and OSD overlay

● **Physical Specifications**

- Core voltage: 1.1 V
- Common IO voltage: 3.3 V
- Sensor IO voltage: 1.8/3.3 V

● **QFN6X6, 60-pin, pitch of 0.35 mm**

- It supports various coaxial HD and SD formats, including

960H@25/30 fps

720P@25/30/50/60 fps

960P@25/30 fps

1080P@25/30 fps

- **Integrates a video DAC, video buffer, and comparator, further simplifying PCB design and reducing hardware BOM costs**