



WM6246: High Performance Coaxial HD CMOS ISP

WM6246 is a cost effective and high performance CMOS sensor ISP (Image Signal Processor) chip for security and automatic camera application. The integrated high quality ISP including 3A (AE/AWB/AF), 3DNR, 2DOL and other enhancement functions give stable and high quality images for various camera applications. WM6246 supports up to 4K@15fps HDcctv analog video output and CVBS analog video output. Down-stream audio data over video transmitted to DVR device enable remote voice capture.

WM6246 integrates video driver and comparator to achieve low BOM cost. The embedded powerful CPU enables flexible software application.

Features	
CPU	<ul style="list-style-type: none"> ● 32-bit CPU
VI	<ul style="list-style-type: none"> ● DVP 12bit ● 4Lane MIPI CSI-2 @Max 1.5Gbps/Lane ● BT1120 for external ISP input
VO	<ul style="list-style-type: none"> ● 2-ch Analog video output ● Supports HDcctv 1M/2M/3M/4M/5M RT, 6M/8M NRT analog video output ● Supports CVBS (960H) analog video output
ISP	<ul style="list-style-type: none"> ● 2DNR, 3DNR ● 2DOL WDR ● 3A (AE, AWE, AF) ● LWDR ● BLC ● DPC ● DRC ● GIC ● LSC ● Dehaze ● CCM ● Edge Enhanced process
Audio	<ul style="list-style-type: none"> ● Supports down-stream audio data over video to remote DVR device
Video and Graphic Processing	<ul style="list-style-type: none"> ● Scaling and crop ● Mask and OSD

Peripherals

Video Interfaces	VI	<ul style="list-style-type: none"> ● DVP 12bit ● 4Lane MIPI CSI-2
	VO	<ul style="list-style-type: none"> ● 2-ch analog video output
USB		<ul style="list-style-type: none"> ● USB 1.1 device
Other Interfaces		<ul style="list-style-type: none"> ● UART ● I2C ● SPI ● PWM ● ADC ● GPIO ● I2S

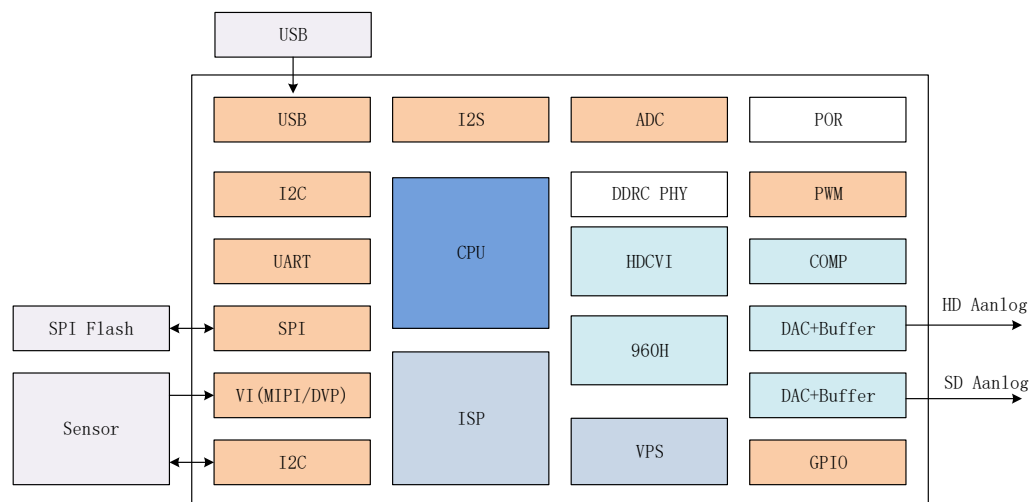
Startup

- Boot from SPI Flash

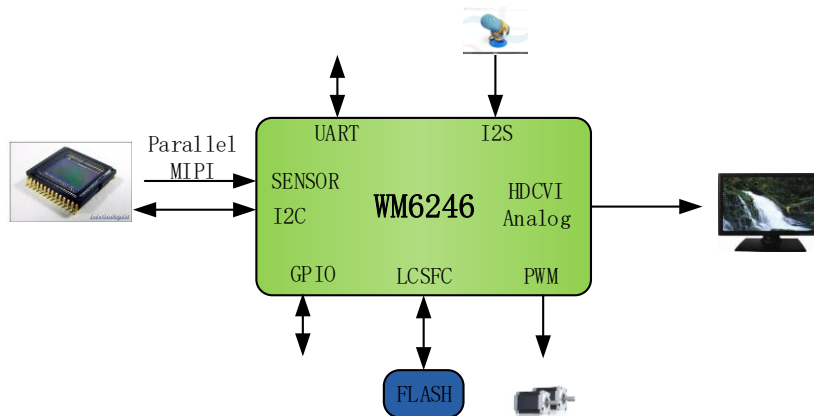
Physical Specs

Operating Voltage	<ul style="list-style-type: none"> ● 1.1V core voltage ● 3.3V I/O voltage ● 2.5, 3.3V analog voltage ● 1.8V/3.3V sensor voltage ● 1.55V SDRAM voltage
Package	<ul style="list-style-type: none"> ● 11 mm × 11 mm TFBGA220

WM6246 Block Diagram



CMOS Camera Solution with Internal ISP



CMOS Camera Solution with External ISP

