

Smart Dual-Channel FHD Camera Solution

Allwinner V3 is a high performance FHD camera application solution that features:



Robust Video Engine, H.264 1080p@60fps or 2-CH 1080p@30fps encoding

Allwinner V3 comes with a high-performance and low bit-rate video engine that is capable of single-channel H.264 1080p@60fps encoding, or dual-channel 1080p@30fps encoding, or front & rear 1080p@30fps encoding. It is also the world's first camera solution that supports recompilation of FHD MJPEG into H.264 format. An advanced ISP is integrated to provide higher image quality.



ARM Cortex-A7 CPU, Advanced ADAS Algorithm

Allwinner V3 packs an ARM Cortex-A7 core that runs up to 1.2GHz to deliver higher computing capability, enabling support for advanced ADAS (Advance Driver Assistant System) algorithm to provide more secure driving experience, including FCWS (Forward Collision Warning System), LDWS (Lane Departure Warning System), etc.



WiFi or 3G/4G Supported, Android/iOS APKs

WiFi or 3G/4G function can be available in V3 to enable interaction with mobile phones after installing corresponding Android/iOS applications.



Linux OS or Allwinner's Camdroid OS

Allwinner V3 runs on the Linux operating system or Allwinner's Camdroid OS, an Android-lite operation system that capable of running on Nor Flash.



Lower Power Consumption

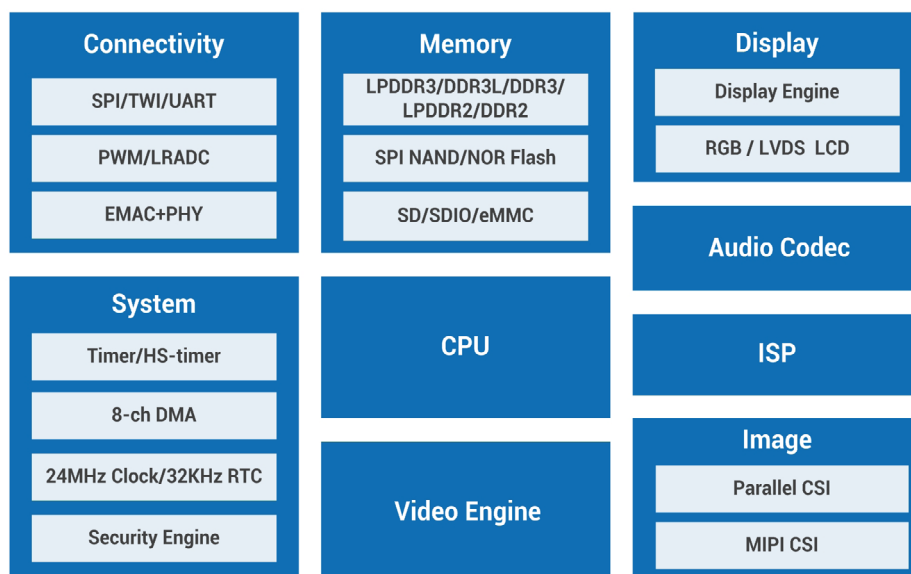
Allwinner V3 runs is highly power efficient due to its leading fabrication process and optimized processor architecture design.



High System Integration

Allwinner V3 integrates a wide range of connectivity and interfaces, including MIPI & parallel CSI controllers, RGB/LVDS LCD controller, audio codec, EMAC + PHY, etc.

Block Diagram

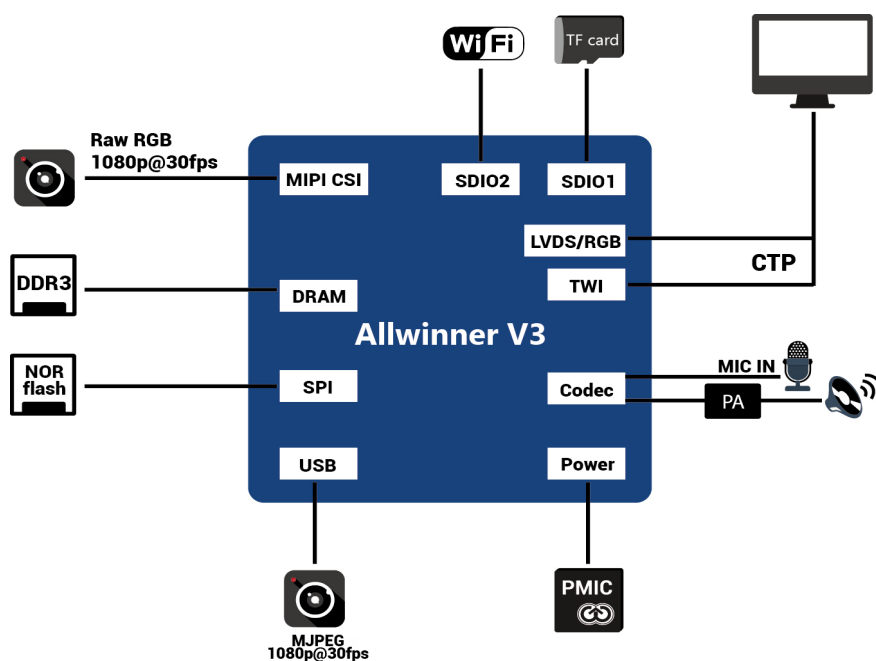


Features and Specifications

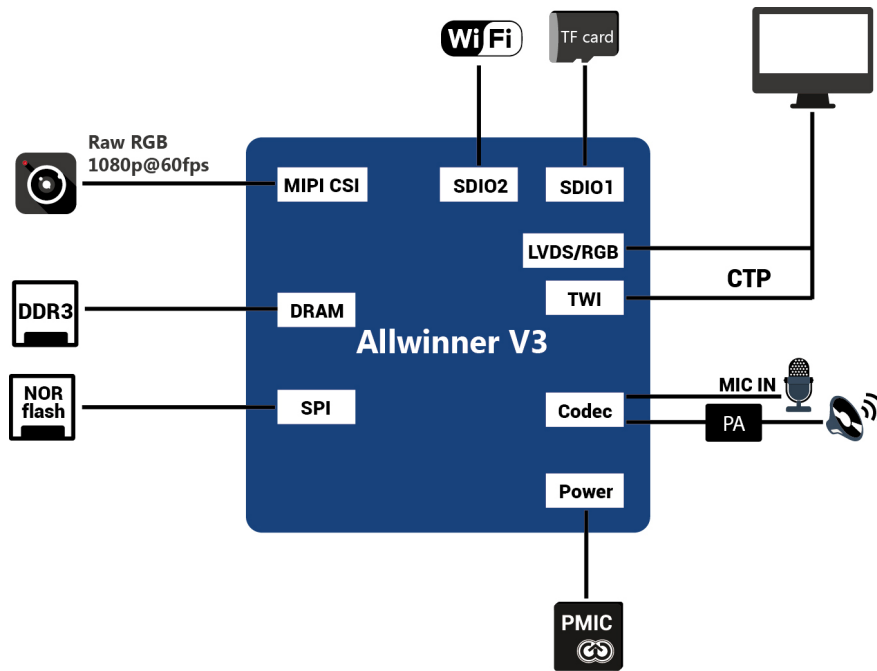
Video	<ul style="list-style-type: none"> • Supports 1080p@60fps or 2-channel 1080p@30fps H.264 video encoding, supports 8M JPEG encoding • Supports H.264 1080p@60fps decoding, MJPEG 1080@30fps decoding
HawkView™ ISP	<ul style="list-style-type: none"> • Integrated ISP up to 8M pixels • Supports two channel outputs for display and encoding respectively • Supports various input and output formats • Supports AE/AF/AWB • Supports saturation adjustment/ noise reduction/ defect pixel correction/distortion correction
Video Input/Output	<ul style="list-style-type: none"> • Supports 8/10/12-bit parallel CSI and 4-lane MIPI CSI2 • Supports BT1120 input • Supports up to 8M CMOS sensor • Supports RGB/i80/LVDS LCD up to 1024x768 resolution • Supports Allwinner's next-gen SmartColor display technology for better visual effects for images & videos
CPU	<ul style="list-style-type: none"> • ARM® Cortex™-A7 @1.2GHz
Memory	<ul style="list-style-type: none"> • Supports 16-bit DDR3/LPDDR3/DDR3L SDRAM controller, up to 1333Mbps • Supports 16-bit DDR2 up to 800Mbps, 16-bit LPDDR2 up to 1066Mbps • Supports memory size up to 2GB
Audio Codec	<ul style="list-style-type: none"> • Integrated 92dB audio codec • Supports two ADC channels and two DAC channels • Supports 3 MIC-in, a stereo Line-in, a headphone output and a stereo line-out output
Security Engine	<ul style="list-style-type: none"> • Supports AES/DES
Connectivity	<ul style="list-style-type: none"> • 3 x SD card controllers • LRADC/SPI/TWI/UART/PWM • USB, EMAC+PHY
OS	<ul style="list-style-type: none"> • Supports Camdroid OS, an Android-lite operating system • Supports Linux OS
Package	<ul style="list-style-type: none"> • TFBGA 259 pins, 12mm x 12mm, 0.65 pitch

Application Diagrams

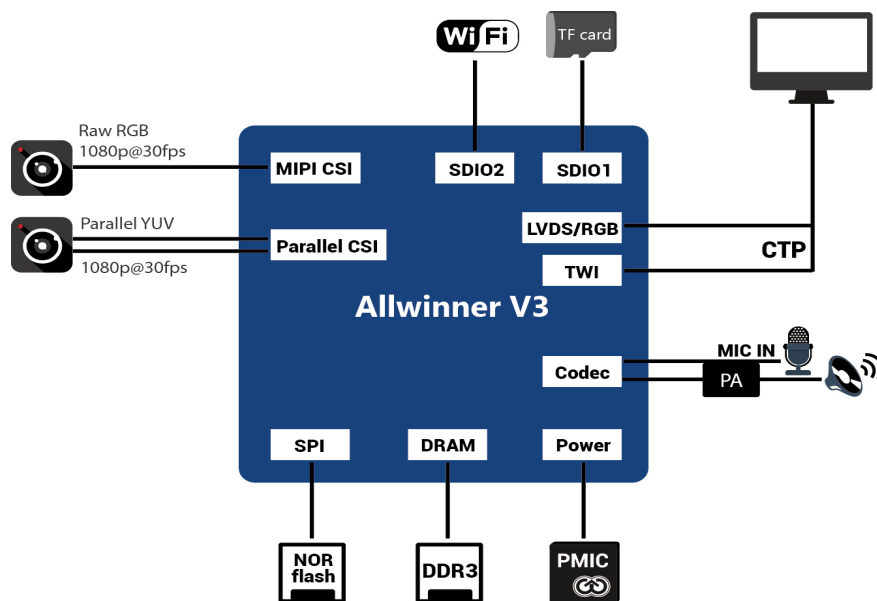
i) Front & Rear 1080p application



ii) 1080p@60fps application



iii) Dual-channel 1080p application



ABOUT ALLWINNER

Allwinner Technology is a leading fabless design company dedicated to smart application processor SoCs and smart analog ICs. Its product line includes multi-core application processors for smart devices and smart power management ICs used by brands worldwide.

With its focus on cutting edge UHD video processing, high performance multi-core CPU/GPU integration, and ultra-low power consumption, Allwinner Technology is a mainstream solution provider for the global tablet, internet TV, smart home device, automotive in-dash device, smart power management, and mobile connected device markets. Allwinner Technology is headquartered in Zhuhai, China.

CONTACT US

For more product info, please contact service@allwinnertech.com, or scan the QR code to follow us on Wechat.

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