



1080P HD multimedia processor

Overview

The F1C200s is a highly integrated, low-power mobile application processor that can be used in a wide range of multimedia audio and video equipment.

The F1C200s is based on the ARM9 architecture and integrates DDR. It supports HD video decoding, including H.264, H.263, MPEG1/2/4, etc. It also integrates audio codec and I2S/PCM interface to enhance the user experience.

The F2C100s has excellent system integration capabilities, simple development, supports for low-power applications, and rich interfaces such as USB OTG, UART, SPI, TWI, TP, SD/MMC, CSI, etc., which can support operations such as Melis, Linux OS. It is a product with simple development and high cost performance.

Highlights



H.264 video decoding

Support H.264 1920x1080@30fps Decoding Support MPEG1/2/4 1920x1080@30fps decoding



MJPEG video encoding

Support MJPEG 1280x720@30fps encode Support JPEG encode 8192x8192



High integration

Integrated 64MB DDR, integrated audio codec Integrated rich interface, audio and video images, such as TV IN/OUT



Low cost, low power consumption, easy to develop

The chip is highly integrated, the BOM development cost is low, the external materials are streamlined, and the development is simple.

Features

CPU	• ARM9 CPU architecture • 16KByte D-Cache • 32KByte I-Cache	
Memory	• SIP 64MB DDR1 • SD2.0, eMMC 4.41	
Video	 H.264 1920x1080@30fps decoding MPEG1/2/4 1920x1080@30fps decoding MJPEG 1280x720@30fps encoding JPEG encode size up to 8192x8192 	
Camera	• 8-bit CMOS-sensor interface • CCIR656 protocol for NTSC and PAL	
Audio	 Integrated analog audio codec with two DAC channels and one ADC channel, maximum 192kHz DAC sample rate and 48kHz ADC sample rate One I2S/PCM interface 	
Display	 LCD RGB interface up to 1280x720@60fps TV CVBS output, support NTSC/PAL, with auto plug detecting 	
Connectivity	• USB OTG, SDIO,IR, 3 x TWI, 2 x SPI, 3 x UART	
OS	• Melis, Linux OS	
Package	• QFN88, 10mm x 10mm	
Process	• 40nm	

Block Diagram

Connectivity	Video Engine (H.264, H.263, MPEG1, MPEG4, JPEG/MJP		Display Engine	
SDIO				
USB OTG	I2S/PCM		Audio Codec	
3 x TWI	3 x TWI			
2 x SPI	CPU			
RSB				
3 x UART	32KB I-Cache		16KB D-Cache	
KEYADC	Memory	System	Image and Display	
RTP	SIP DDR1	Interrupt Controller	CSI	
JTAG		Timer	CVBS Input	
IR	SD/eMMC	CCU	CVBS Output	
OWA out	SPI Nor/NAND Flash	DMA	RGB LCD	

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.

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