Allwinner Technology CO., Ltd.
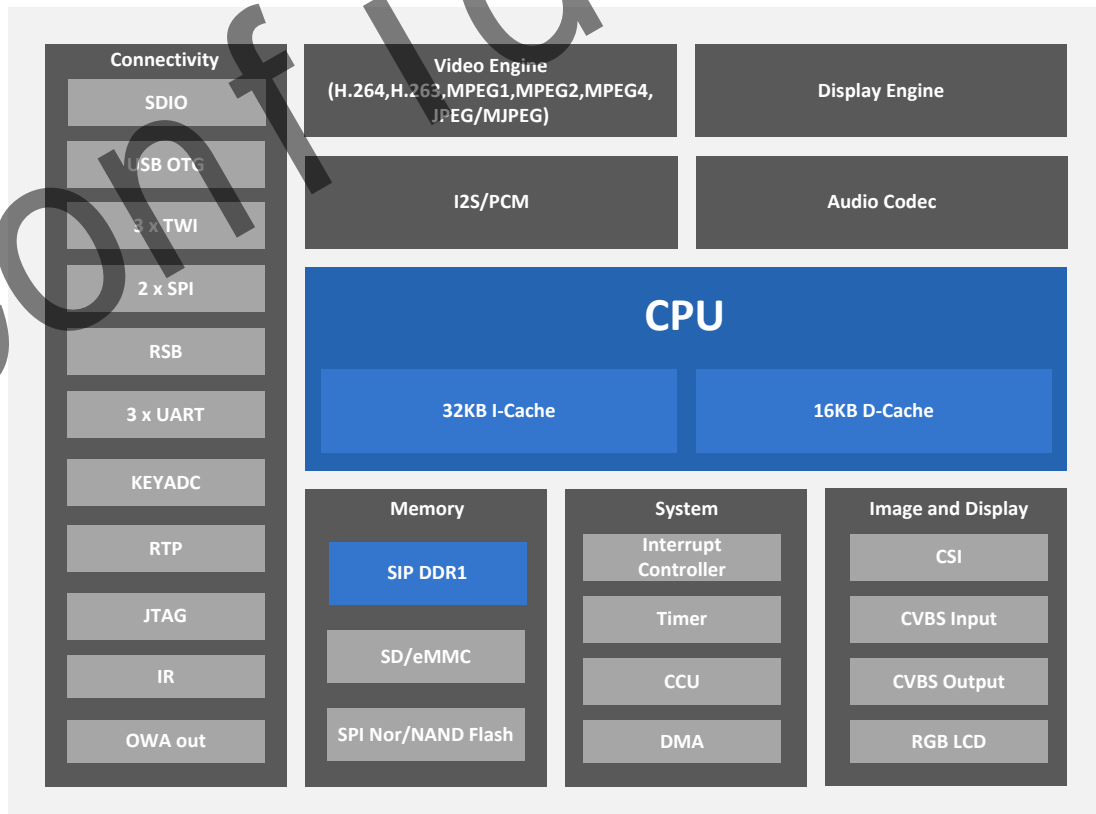
F1C600

Audio And Video Boombox Processor

Overview

The F1C600 processor represents Allwinner's latest achievement in mobile applications processors. The processor targets the needs of wifi audio and video boombox markets.

F1C600 processor is based on the ARM9 CPU architecture with a high degree of functional integration. F1C600 supports Full HD video playback, including H.264,H.263,MPEG1/2/4 decoder. Integrated audio codec and I2S/PCM interface provide end users with a good audio experience. TV-IN interface enables video input by connected to video devices such as camera, and TV-OUT interface enables video output by connected to TV devices.

To reduce the BOM costs, F1C600 built-in DDR1 memory , and packed with general-purpose peripherals such as USB OTG, UART, SPI, TWI, TP, SD/MMC,CSI etc. F1C600 perfectly supports various applications of mainstream operating systems such as Andriod, Linux,etc. F1C600 outperforms competitors in terms of its powerful performance, low power consumption, and flexible scalability.

Block Diagram

Connectivity	Video Engine (H.264,H.263,MPEG1,MPEG2,MPEG4, JPEG/MJPEG)	Display Engine
SDIO		
USB OTG	I2S/PCM	Audio Codec
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

Features

CPU

- ARM926EJ-S
- 16KB D-Cache/ 32KB I-Cache

VPU

HD Video Decoding

- Up to 1280*720@30fps
- Support H.264, H.263, MPEG1/2/4

HD Video Encoding

- Up to 1280*720@30fps
- Support MJPEG

DPU

- LCD Interfaces: CPU, RGB
- CVBS Output

Image

- CSI
- CVBS Input

Audio

- Audio Codec
- I2S/PCM
- OWA out

Memory

- SIP DDR1
- SD2.0, eMMC4.41

Peripherals

- USB2.0 OTG
- SDIO2.0
- SPI, TWI, UART

R-TP Controller

- 4-wire resistive TP interface
- 2 points
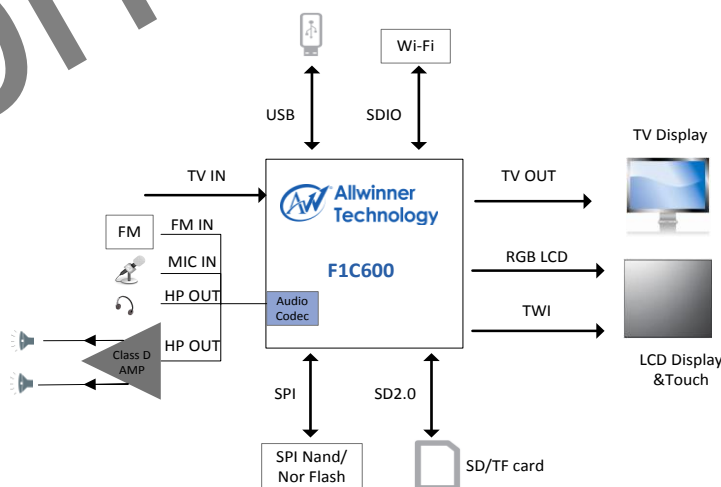
Boot Devices

- SPI NAND Flash
- SPI Nor Flash
- SD Card
- USB

Ultra-low System Power Consumption

- 30~40% lower than competitors

Package

- QFN88,10x 10mm

Application

Benefits

- Optimum multimedia and processing abilities
- Lower power consumption of HD videos
- Much faster, easier and cost efficient product launch due to the high integration
- Further development kits, including OS BSP(LINUX /MELIS)

Contact

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※ **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.

This brief is for reference only and has no commitment. All content contained herein is subject to changes without notice. For more information, please contact service@allwinnertech.com.