

SINA31s DATASHEET

V1.0



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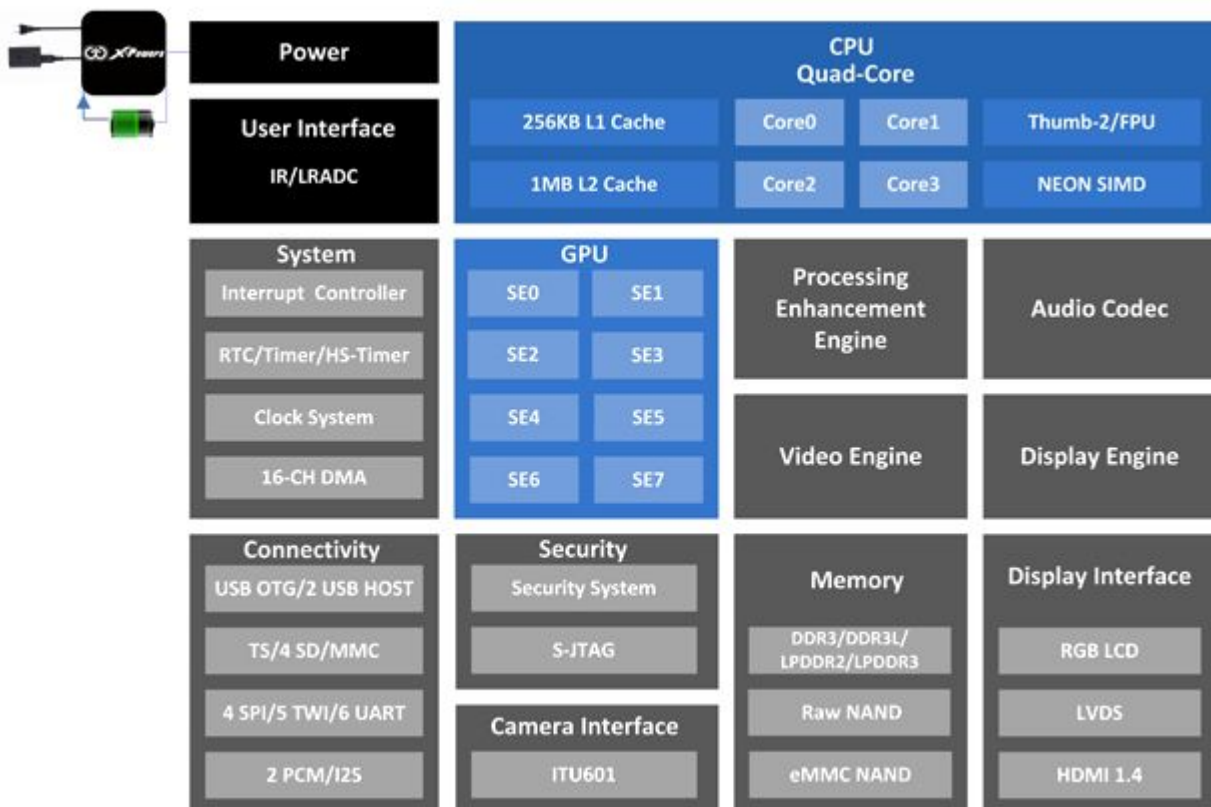
(一) About SINLINX



SINLINX Electronics Technology Co., LTD focus on the embedded technology research and development, provide embedded full range of technical services for the customer. The embedded open source hardware positioning products as the core, supporting the hardware module and abundant software routines corresponding, allows customers to easily construct their own hardware products. We benefit from the open source movement, also want more feedback organization.

My open source hardware provides advanced operating system, developed to allow customers to familiar with the CPU as soon as possible. From the build environment, to write the burning procedure, and various key module of the system description, provide the abundant development document. At the same time, also provides supporting module rich to the open-source hardware, used to extend the functionality of CPU, users can build a rapid prototype. The software also provides a rich routines such as: The operation that serial port\ GPIO\SPI\ I2C and other bus. And provides e-mail, forums and technical support services. You only need to pay attention to the application of their own, can develop their own perfect products.

(二) A31s Specification



Part Name	Features
CPU	ARM Cortex™-A7 Quad-Core 256KB L1 Cache 1MB L2 Cache
GPU	PowerVR™ SGX544MP2 Complies with OpenGL ES 2.0, OpenCL 1.x, DX 9_3
Video	UHD H.264 2160p video decoding Multi-format FHD video decoding, including Mpeg1/2, Mpeg4 SP/ASP GMC, H.263, H.264, etc. H.264 High Profile 1080p@30fps or 720p@60fps encoding 3840x1080@30fps 3D decoding, BD/SBS/TAB/FP supported 3840x1080@30fps 3D encoding Complies with RTSP, HTTP, HLS, RTMP, MMS streaming media protocols
Display	Integrated LVDS/RGB/CPU LCD interface 1280x800 resolution Integrated HDMI1.4 1920x1080@60fps
Camera	Supports 0.3M/1.3M/2M/5M CMOS sensor Supports 8/10/12-bit YUV/Bayer sensor
HawkView ISP	Static and dynamic defect pixel correction, and lens shading correction Anisotropic non-linear Bayer interpolation with false color suppression Programmable color correction, dynamic range compression and contrast enhancement Advanced spatial de-noise filter AE/AF/AWB Anti-flick detection
Memory	32-bit DDR3/DDR3L/LPDDR3/LPDDR2 controller 8-bit NAND Flash controller with 64-bit ECC
PMIC	PMIC AXP221s 21-CH power output and 2.2A Flash charging Comply with USB 3.0 power supply standard
Audio	Two sets of I2S/PCM interfaces for Baseband and Bluetooth Two integrated differential analog MIC for headset and phone Integrated digital MIC interface Dedicated headphone/speaker/receiver outputs Two-channel audio ADC with 96dBA SNR Two-channel audio DAC with 100dBA SNR

01/ 领先的图形性



顶级图形显卡 SGX544MP2

全志A31s采用IMG PowerVR SGX544MP2图形处理器

游戏性能双倍于iPad 2

图形渲染能力较以往提升400%

游戏体验更出色

200%

高于iPad2游戏性能

400%

图形渲染能力提升

像素填充率 3000M/s

A31sGPU拥有高达3000M/s的强劲像素填充率，能完美展现3D游戏画面质感，带给你身临其境的游戏体验



三角形生成率 100M/s

A31s拥有迄今最高的100M/s渲染性能，准确高效地对游戏画面进行3D 建模渲染

GPU纹理压缩格式

全志与苹果一样广泛采用SGX系列GPU，因此A31s也就拥有了全球众多专为App Store开发的顶级游戏数据包纹理的直接支持功能。

SGX显卡渲染规范采用也带来了游戏数据包的无损移植，画质相比其他安卓芯片的后期缩水移植更优秀，体验更好。



02/ 先进的处理器技术

4核CPU处理器

Cortex-A7四核处理器

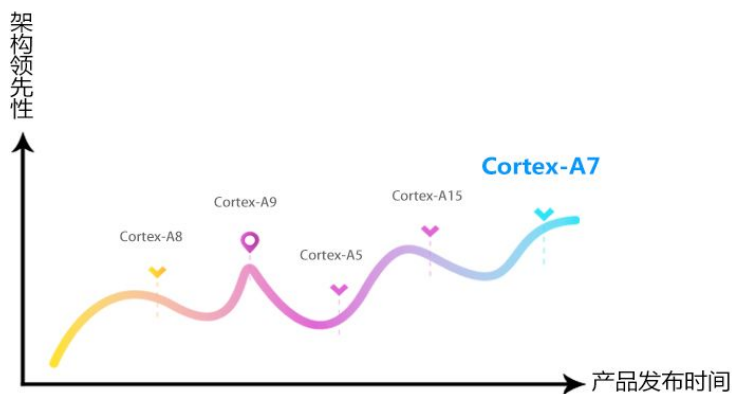
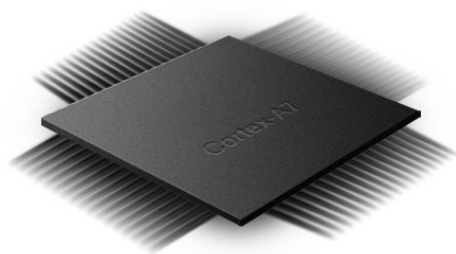
为平板电脑带来无可匹敌的性能跃进

300%

运算速度提升

35%

功耗降低



Cortex-A7 低功耗架构

游戏图形性能强大，更要超长的游戏续航

全志A31s芯片采用了ARM最新研发的Cortex-A7高性能低功耗设计

40%

性能领先A8/A9架构

70%

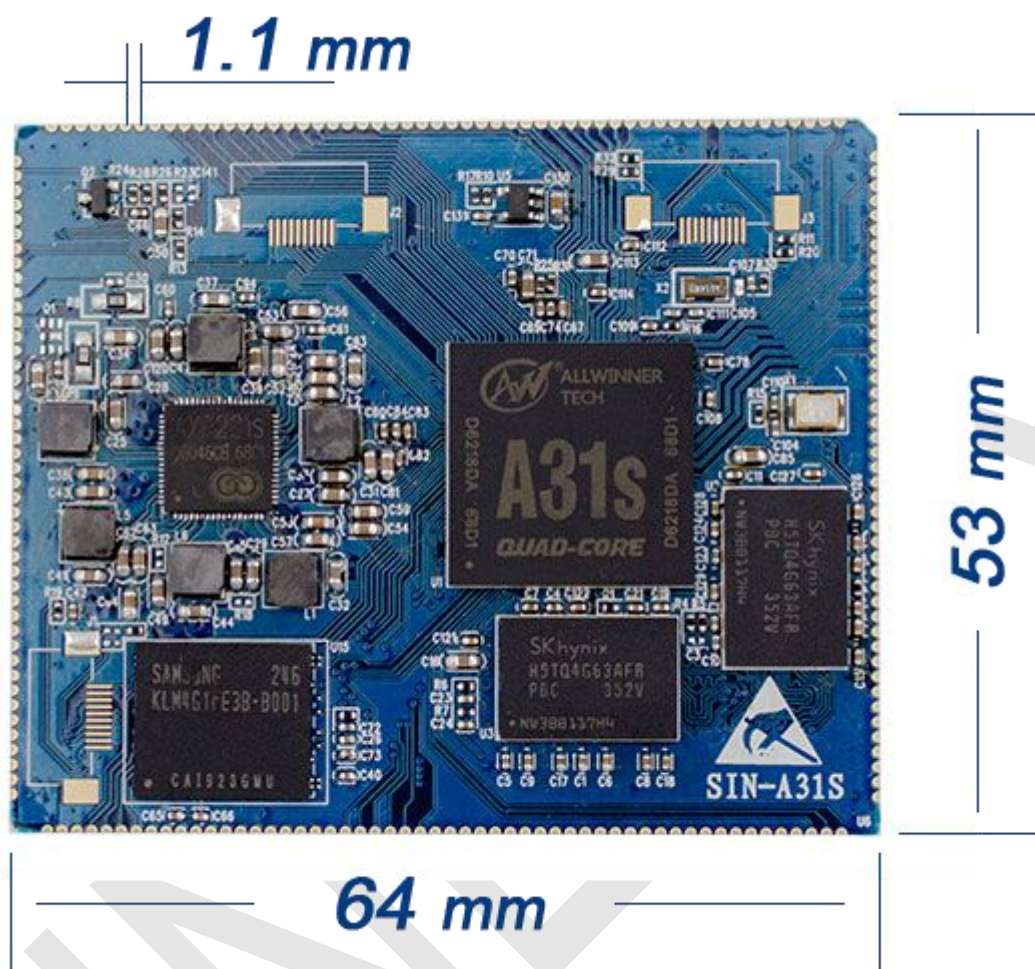
能耗降低

集成设计 All in One

全志A31s芯片拥有目前国内集成度最高的设计，A31s芯片不仅集成了常规处理器和图形GPU，更直接将音频解码芯片、显示芯片、HDMI投影芯片等集成至主控当中，技术实力更强大，运行更稳定，多屏应用更顺畅。

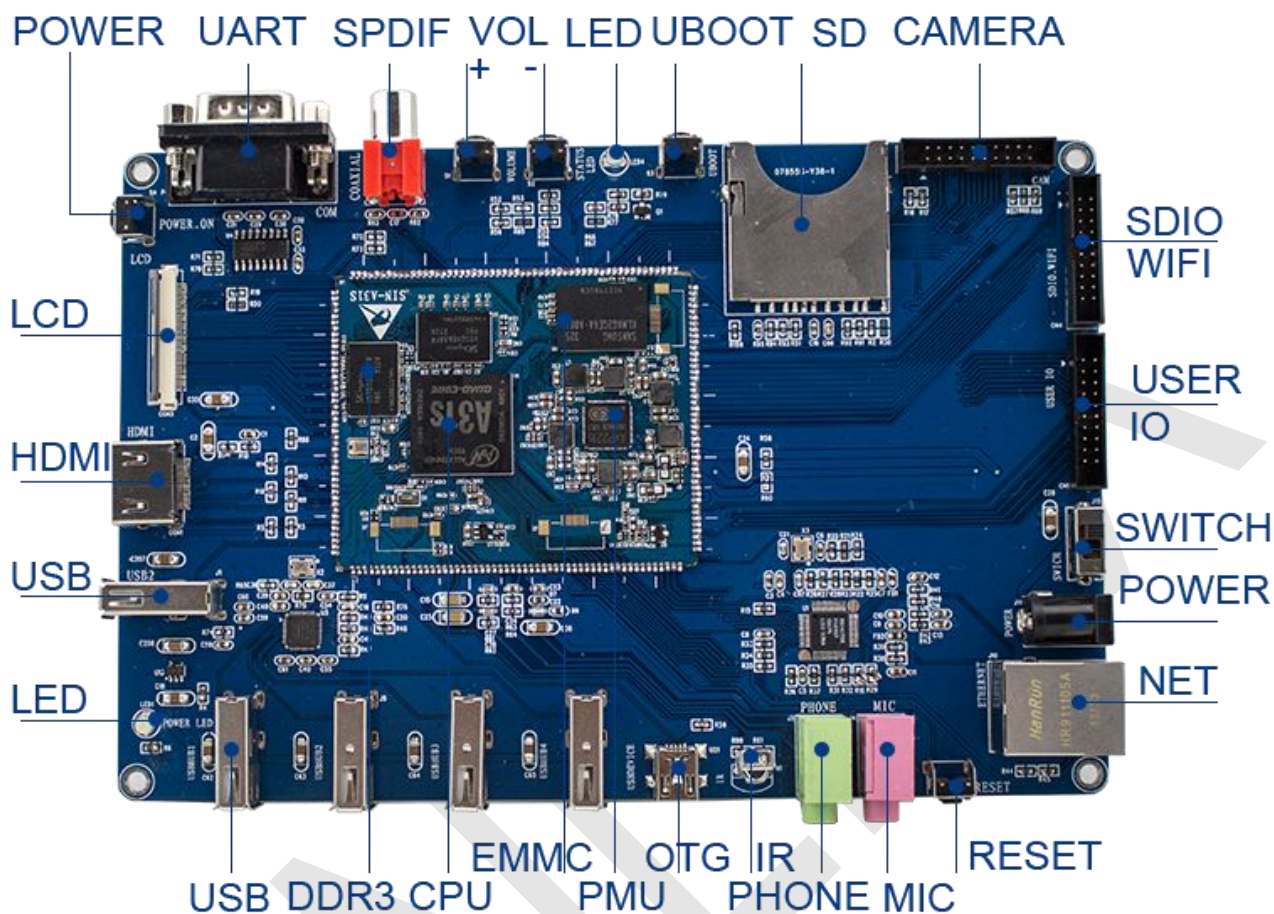


(三) CPU BOARD



NAME	Features
CPU	Allwinner A31s Quad Cortex-A7 1.0Ghz
RAM	1GB DDR3
EMMC	4GB/16GB EMMC
GPU	PowerVR™ SGX544MP2
PMU	PMIC AXP221s
PIN	(54+44) * 2 = 196 pins
OS	Android4.2.2 & Linux3.3

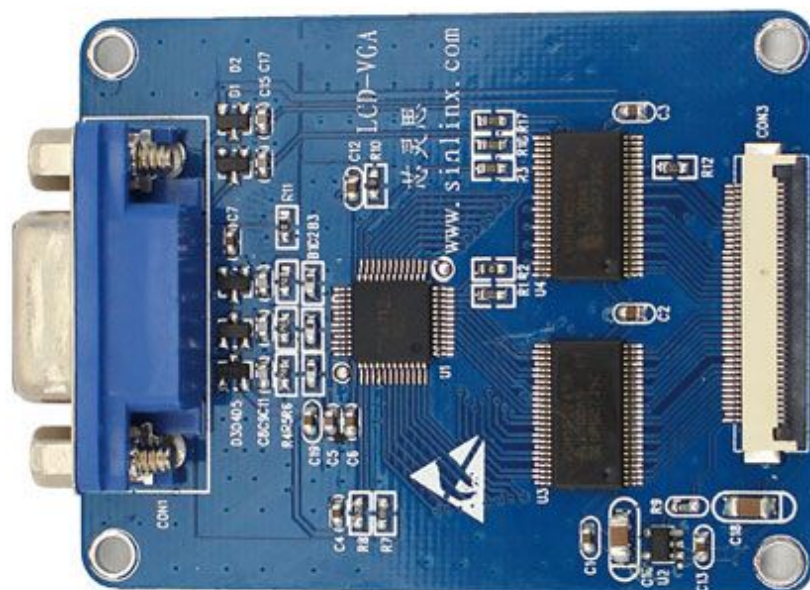
(四) SDK BOARD



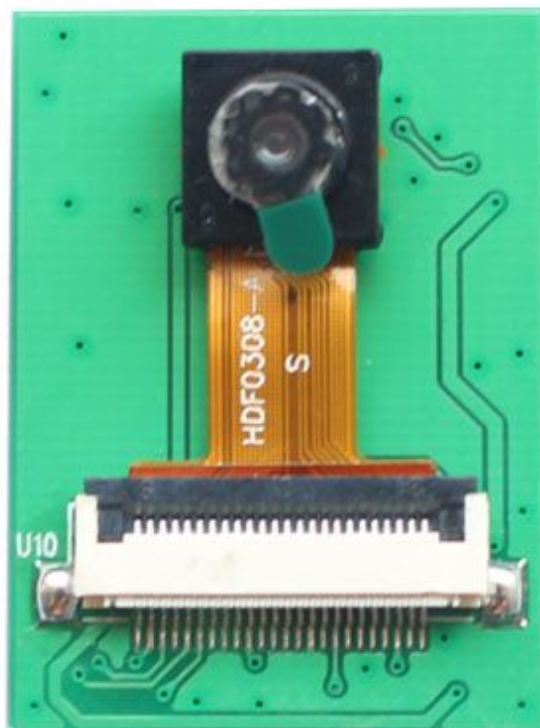
(五) Modules



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(六) Operating System

Name	Version
	Android4.2
	Linux3.4

(七) How To Buy

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