

Allwinner A100



Technical specifications and performance with the benchmarks of the Allwinner A100 processor dedicated to the tablet sector, it has 4 cores, 4 threads, a maximum frequency of 1.8GHz. The table below makes it possible to observe well the lithography, the number of transistors (if present), the offered cache memory, the maximum capacity of RAM memory that we can get, the type of compatible memory, the release date, the maximum number of PCIe lanes, the values obtained in the Passmark platform, Cinebench and Geekbench.

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Specifications:

Processor	Allwinner A100
Market (main)	Tablet

ISA	ARMv8-A (64-bit)
Microarchitecture	Cortex-A53
Core name	Cortex-A53
Family	A-Series
Part number(s), S-Spec	A100
Release date	Q1 2020
Lithography	28 nm HPC
Cores	4
Threads	4
Base frequency	408 MHz
Turbo frequency	1.8 GHz
Details	4x ARM Cortex-A53 @ 0.408 / 1.8 GHz
Cache memory	640 KB L1 Cache, 512 KB L2 Cache
Max memory capacity	4 GB
Memory types	DDR3/DDR3L/LPDDR3 @ 800 MHz, DDR4/LPDDR4 @ 800 MHz
Max # of memory channels	1
Max memory bandwidth	6.4 GB/s
TDP	6 W
GPU integrated graphics	Imagination PowerVR GE8300
GPU execution units	4
GPU shading units	128
GPU clock	1,000 MHz
GPU FP32 floating point	32 GFLOPS
Additional graphics features	OpenGL ES 3.2, Vulkan 1.1 Dual Display Engine (Main/Aux), 2D Graphic
Socket(s)	LFBGA346
Drystone MIPS	16,560 DMIPS

Crypto engine	Crypto Engine
Security	TrustZone, Secure Boot, EFUSE
Max display resolution	2332 x 1650@106Hz (E-Ink), 1920 x 1080@60fps (LVDS), 1920 x 1080@60fps (RGB), 1920 x 1080@60fps (MIPI-DSI 4-Lane)
Video decoding	H.265 1080p@60fps
Video encoding	H.264 1080p@60fps
Max camera ISP	13 MP; 8 MP; 2x2 MP
Max video capture	13 MP@10fps; 8 MP@30fps; 2x2 MP@60fps
Additional camera features	MIPI-CSI 4+2Lanes
Modem	Dual Ethernet GMAC
Connectivity	1x USB OTG, 1x USB Host, SDIO 3.0, RGB, Dual-Link LVDS, E-Ink, MIPI-DSI, MIPI-DSI 4Lane, NAND Flash, SD 2.0, eMMC 5.0, 8x TWI, 3x SPI, 8x UART, 17x PWM, 1x KEYADC, GPADC (4-ch)
Wi-Fi	Wi-Fi 5 802.11 b/g/n/ac
Bluetooth	Bluetooth 5.0
Audio	Audio Codec, 4x I2S/PCM, 8x DMIC, 2x Mic IN Headphone/Lineout
Additional features	NEON/FPU, Internal System: RTC, CCU, IDC, Timer, DMA, Thermal Sensor

AnTuTu	72,467
PassMark single thread	402
PassMark CPU Mark	617
(Android) Geekbench 4 single core	590
(Android) Geekbench 4 multi-core	1,695
(Android) Geekbench 5 single core	101
(Android) Geekbench 5 multi-core	304
(Android) Geekbench 6 single core	100
(Android) Geekbench 6 multi-core	246
(SGEMM) GFLOPS Performance	4.57 GFLOPS
(Multi-core / watt performance) Performance / watt ratio	283 pts / W
Amazon	
eBay	