ALLWINNER

A64
64-bit

The High Competiti[ve] Tablet Processor Solu[tion]

Allwinner A64 is a quad-core 64-bit tablet [...] at entry-level 64-bit tablet market.

64-Bit

64-bit, 4-Core Cortex-A53 CPU

delivering significantly higher system performance with less power consumption.

H.265 4K

H.265 4K Video Hardware Decoding

Allwinner A64 features a robust video engine that supports H.265 4K video hardware decoding, and H.264 1080p@60fps or 720p@120fps video encoding.

Next-Gen Display Engine 2.0, 4K HDMI Output, SmartColor Display

With the next-gen Display Engine 2.0, Allwinner A64 is capable of 4K HMDI output. It also comes with the SmartColor display technology to provide end users with pleasant visual entertainment experience.

High System Integration

Targeting at entry-level 64-bit tablet, Allwinner A64 features high system integration to make its BOM cost more competitive, including on-chip audio codec, eMMC 5.0 support, LPDDR2/LPDDR3 support,etc.

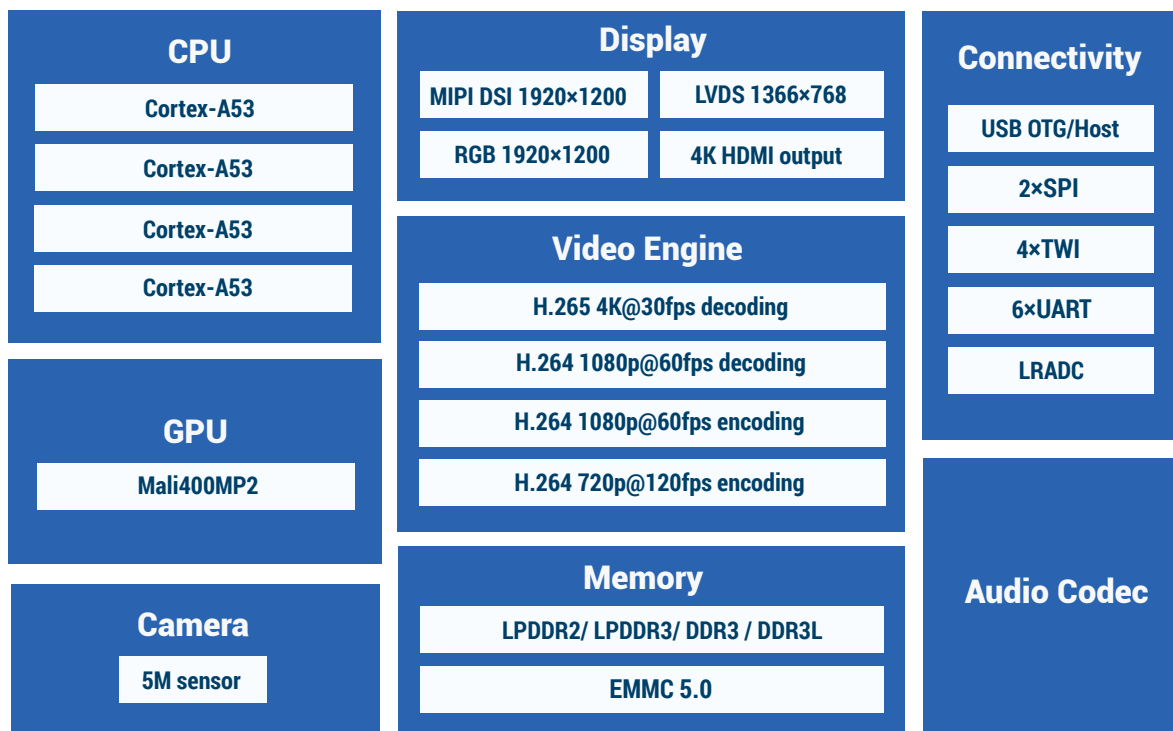## Android 5.0 Lollipop OS, Linux Kernel v3.10

Allwinner A64 runs on Android 5.0 Lollipop operating system, and it'll be based on Linux Kernel v3.10 to maximize the advantages of the 64-bit architecture.

Features

CPU	
GPU	· Mali400MP2 GPU · Supports OpenGL ES 2.0 , Open VG1.1
Memory	· Supports LPDDR2/ LPDDR3/ DDR3 / DDR3L SDRAM · Supports 8-bit SLC/MLC/TLC/EF NAND with 64-bit ECC · Supports SD/eMMC/tSD/fSD/efSD

Video	· Supports H.265 4K@30fps video decoding · Supports multi-format 1080p@60fps video decoding, including H.264 BP/MP/HP, VP8, MPEG1/2, MPEG4 SP/ASP GMC,H.263 including Sorenson Spark, WMV9/VC-1, JPEG/MJPEG, etc · Supports H.264 1080p@60fps or 720p@120fps video encoding
Camera	

Display	· Supports MIPI DSI up to 1920x1200
	  Supports LVDS up to 1366x768, support RGB up to 1920x1200
	  Supports 4K HDMI output with HDCP
	· Supports HDMI CEC
	· Supports HDMI 3D function

Integration	· USB OTG/HOST/HSIC · 2x SPI, 4x TWI, 6x UART, LRADC, SDIO
Package	BGA, 396 balls, 0.65mm pitch, 15mm x 15mm

Block Diagram

CPU
- Cortex-A53
- Cortex-A53
- Cortex-A53
- Cortex-A53

GPU
- Mali400MP2

Camera
- 5M sensor

Display
| MIPI DSI 1920×1200 | LVDS 1366×768 |
| RGB 1920×1200 | 4K HDMI output |

Video Engine
- H.265 4K@30fps decoding
- H.264 1080p@60fps decoding
- H.264 1080p@60fps encoding
- H.264 720p@120fps encoding

Memory
- LPDDR2/ LPDDR3/ DDR3 / DDR3L
- EMMC 5.0

Connectivity
- USB OTG/Host
- 2×SPI
- 4×TWI
- 6×UART
- LRADC

Audio Codec