



High-End Octa-Core Hybrid PC Solution

Overview

A hybrid PC, also called a “2-in-1” or a “detachable”, has a removable screen that turns into a tablet when separated, capable of delivering both the productivity of laptop and the mobility of a tablet in a single device. To meet the increasing need for laptop-tablet versatility, Allwinner Technology releases an octa-core high performance R58 processor especially for hybrid PCs, enabling you to do whatever you want, from productive tasks to gaming and HD video streaming.

To deliver the performance and productivity of a laptop, Allwinner R58 packs eight Cortex-A7 CPU cores with clock speed up to 2.0GHz and an ultra-fast PowerVR SGX544MP GPU architecture to enable remarkable computing capability.

Allwinner R58 delivers exceedingly high system integration for better device mobility, including LPDDR3/LPDDR2 interface, LVDS, MIPI DSI, HDMI, and HawkView ISP, etc. It also comes with such features as multi-format high-definition 1080p@60fps video processing, 2048x1536 resolution display, and 8M camera support for excellent entertainment experience. Allwinner’s patented SmartColor display technology is also supported to enhance color, contrast and resolution to make the photos and videos more brilliant, providing users with spectacular visual experience. Allwinner R58 implements a TrustZone-based security system to address the increasing need for more reliable system in such applications as mobile payment, copyright protection, etc.

Extremely low power consumption is another noteworthy feature of Allwinner R58. Thanks to its performance-power balanced system architecture, ultra-high system integration, and cutting-edge 28nm process, Allwinner R58 consumes less power even than quad-cores, capable of delivering long-lasting on-the-go working and entertainment experience to end users.

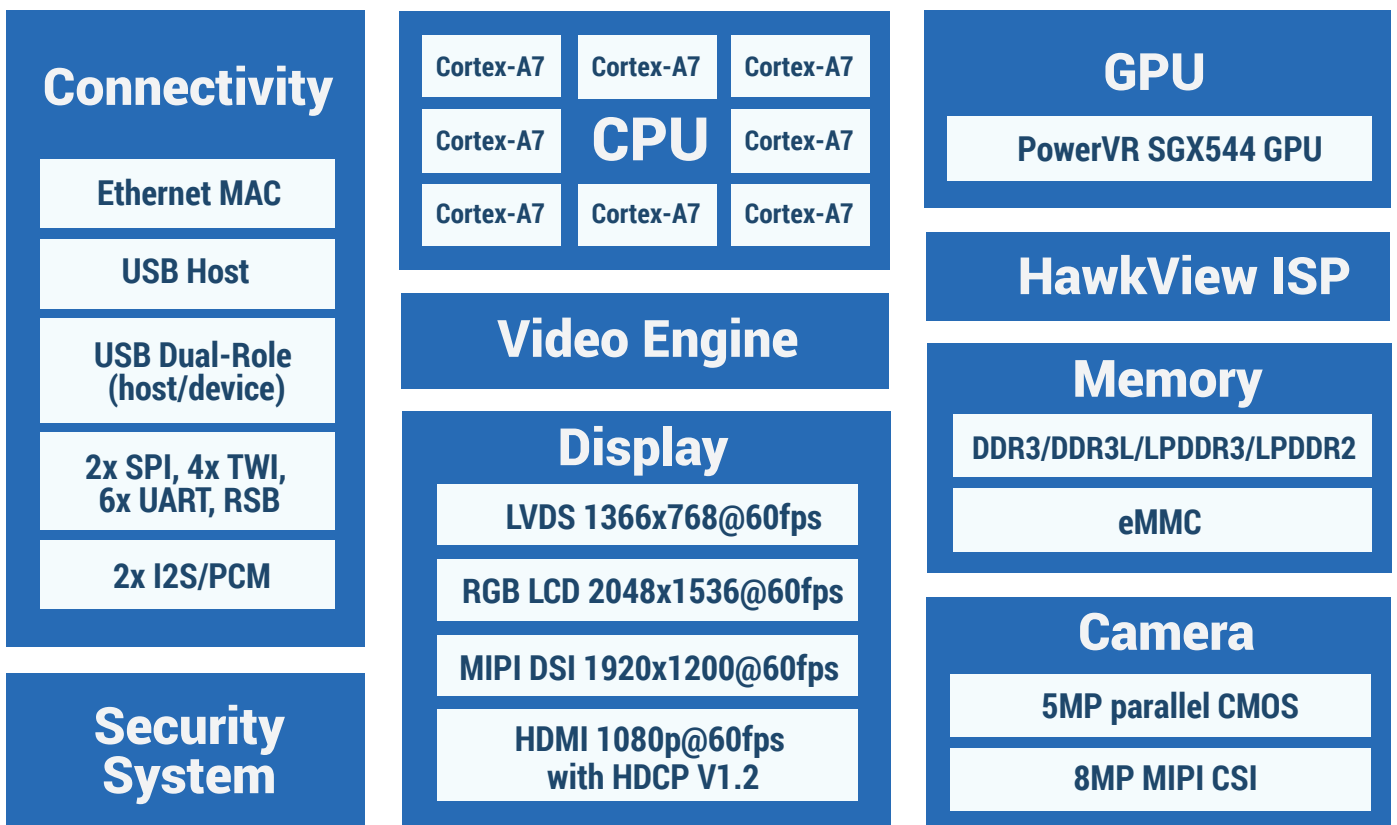
Allwinner R58 runs on deeply customized Android operating system to improve your productivity and entertainment experience.

Features

CPU	<ul style="list-style-type: none"> · Octa-Core Cortex-A7 CPU · Low-power CoolFlex power management architecture
GPU	<ul style="list-style-type: none"> · PowerVR SGX544 GPU · Supports OpenGL ES 2.0/1.1, OpenCL 1.1, DX 9_3
Video	<ul style="list-style-type: none"> · Supports 1080p@60fps video playback · Supports multi-format video playback, including H.264, 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 capture
Display	<ul style="list-style-type: none"> · Supports LVDS 1366x768@60fps or RGB LCD 2048x1536@60fps · Supports 4-lane MIPI DSI 1920x1200@60fps · Supports HDMI 1080p@60fps, HDCP V1.2 supported · Supports dual-display LCD 720p@60fps and HDMI 720p@60fps

Camera	<ul style="list-style-type: none"> · Integrated 5MP parallel CMOS sensor · Integrated 8MP MIPI CSI controller · Integrated 8MP ISP
Memory	<ul style="list-style-type: none"> · Supports 32-bit DDR3/DDR3L/LPDDR3/LPDDR2 · Supports SLC/MLC/TLC/EF NAND with 64-bit ECC · Supports eMMC V4.5
Connectivity	<ul style="list-style-type: none"> · USB Host, USB Dual-Role (host/device) · Ethernet MAC · 2x SPI, 4x TWI, 6x UART, RSB · 3x SD/MMC · HSIC · 2x I2S/PCM · CIR, LRADC
Package	<ul style="list-style-type: none"> · FCBGA 345 · 14mm x 14mm size

Block Diagram



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.

CONTACT US

For more product info, please contact service@allwinnertech.com, or scan the QR code to follow us on Wechat.

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