






# Multi-Interface Quad-Core Platform-Level Processor

## Overview

The Allwinner V40 is a Quad-core ARM Cortex™ -A7 processor targeted at the smart rearview mirror market. With multiple interface and high cost effectiveness, it could also apply to the market of automotive, POS terminal, digital signage and smart home as a platform-level processor.

## Highlights

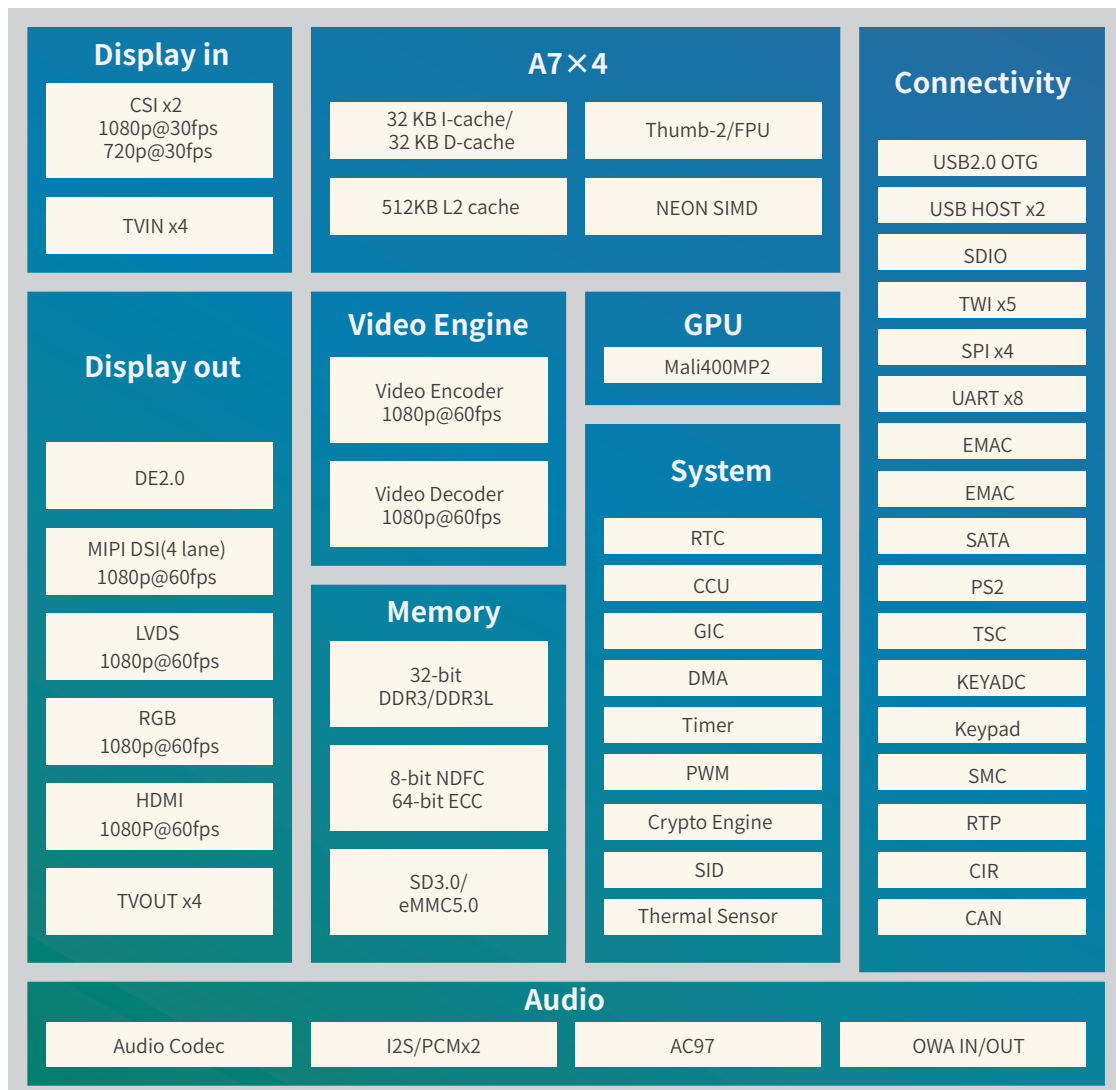
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 Based on a Quad-core ARM Cortex™ -A7 CPU architecture and Mali 400 MP2 GPU, which providing the powerful processing and display performance.
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 Supports multiple 32-bit DRAM types as well as the dynamic frequency adjustment, give consideration to both scenarios used bandwidth and power requirements.
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 Supports the multiple output interface and two independent display channels, which could satisfy many kinds of products and market applications.
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 Supports two-lane CSI image sensor and four-lane TV In&Out, which meet the 360 panoramic demand of automotive products.
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 Supports Android 4.4 System and above.

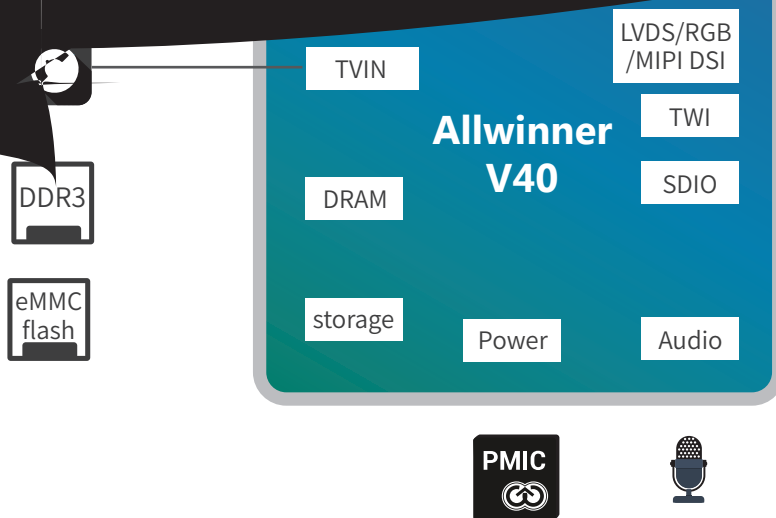
## Features

CPU	<ul style="list-style-type: none"> <li>• Quad-core ARM Cortex™-A7 Processor</li> </ul>
GPU	<ul style="list-style-type: none"> <li>• Mali400 MP2</li> </ul>
Memory	<ul style="list-style-type: none"> <li>• Supports 32-bit DDR3/DDR3L/LPDDR2/LPDDR3 up to 576MHz</li> <li>• Supports system boot from NAND Flash, eMMC, SD/TF card and SPI Nor Flash</li> </ul>
Audio	<ul style="list-style-type: none"> <li>• Up to two kits of I2S/PCM interfaces, eight channels of Time Division Multiplexing(TDM) with sampling precision up to 32bit/192KHz</li> </ul>

Display	<ul style="list-style-type: none"> <li>• Supports 4 lanes MIPI DSI up to 1080p@60fps</li> <li>• Supports LVDS interface up to 1920 x 1080@60fps</li> <li>• Supports RGB interface up to 1920 x 1080@60fps</li> <li>• Supports TV In&amp;Out</li> <li>• Supports HDMI 1.4 transmitter</li> </ul>
Camera	<ul style="list-style-type: none"> <li>• Supports dual CMOS sensor parallel interfaces up to 1080p@30fps</li> <li>• Supports BT656, BT1120 and 24-bit YUV444/RGB</li> <li>• Supports two-lane input simultaneously</li> </ul>
Video	<ul style="list-style-type: none"> <li>• Supports decoding speed up to 1080p@60fps</li> <li>• Supports H.264 HP encoding up to 1080p@60fps, JPEG baseline: picture size up to 4096 x 4096</li> </ul>
External Peripherals	<ul style="list-style-type: none"> <li>• USB x 3, SATA x 1</li> <li>• UART x 8, SPI x 4, Smart Card x 1, TS x 2, TWI x 5</li> <li>• MAC x 2, PS2 x 2, KEYPAD x 1(8 row 8 column), IR-RX x 2, KEYADC x 2, RTP</li> </ul>
Package	<ul style="list-style-type: none"> <li>• FBGA 468 balls,0.65mm ball pitch, 16x16 mm</li> </ul>

## 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](mailto:service@allwinnertech.com), or scan the QR code to follow us on Wechat.

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