

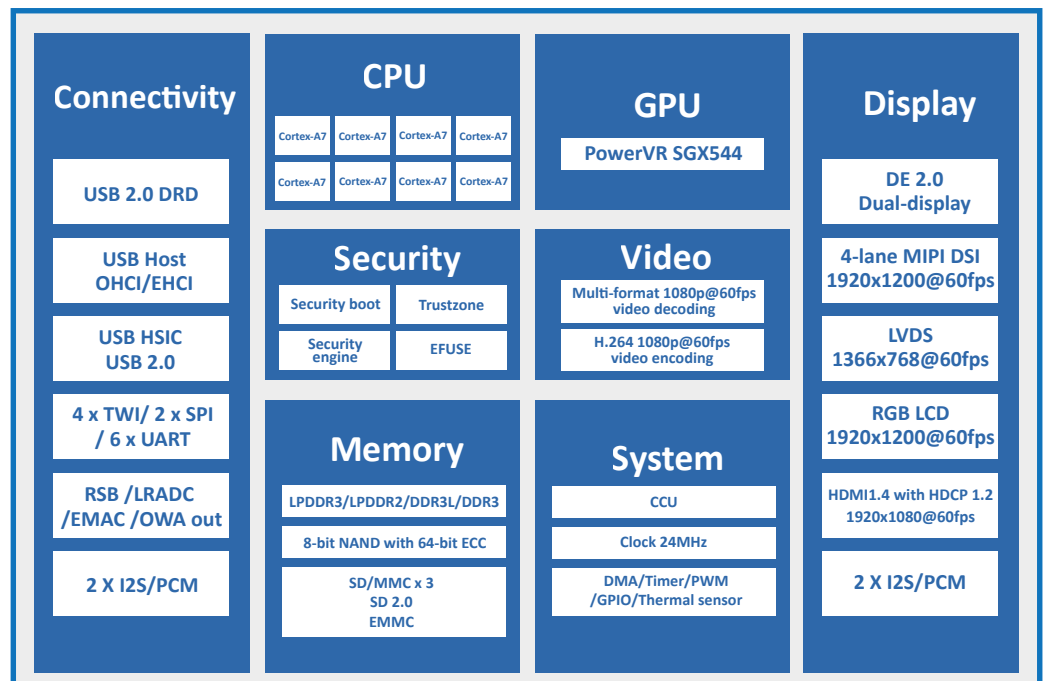
## Allwinner T8

# High-End Smart Automotive in-Dash System Solution

## Highlights

- High performance GPU for high-res, multi-window, and multi-layer applications
- Supports bandwidth-demanding background applications, like multi-tasking, voice recognition, and ADAS, etc
- High multimedia compatibility, 95+% format support
- 5mW standby power consumption (exclude standby power consumption of external devices)
- High definition, high frame rate video encoding, suitable for car DVR application
- Supports HD digital input, integrated HDR-capable ISP, supports round-the-clock driving monitoring

## Block Diagram



## T8 Specifications

<b>CPU</b>	· 8-core Cortex-A7 @ 1.6GHz , up to 1.8GHz
<b>MCU</b>	· Working frequency up to 200MHz
<b>GPU</b>	· PowerVR SGX544MP1 GPU · Supports OpenGL ES1.1/2.0 OpenCL1.1, Directx 9.3 · Supports Renderscript
<b>Display</b>	· Supports TTL up to 1920x1200@60fps · Supports LVDS up to 1366x768@60fps · Supports HDMI up to 1920x1080@60fps · Supports MIPI DSI up to 1920x1200@60fps
<b>Camera</b>	· Supports parallel camera sensor up to 5M, supports video shot up to 720P@30fps · Supports MIPI camera sensor up to 8M, supports video shot up to 1080P@60fp · Integrated ISP
<b>Video Decoder</b>	· Supports multi-format 1080P@60fps video decoding
<b>Memory</b>	· Supports 32-bit DDR3(L) 800MHz / LPDDR2 533MHz / LPDDR3 667MHz · Supports memory capacity up to 2GB

## Allwinner T8 Solution Features

### ● HD Display Output

- Input layer size up to 2048x2048, and output size up to 2048x2048
- Support RGB(24bits)up to 1920x1200@60Hz resolution
- Support LVDS up to 1366x768@60Hz resolution
- Support 4-lane MIPI DSI(V1.0)up to 1920x1200@60Hz resolution
- Support HDMI V1.4 output with HDCP1.2

### ● HD Video Codec

- Support video playback up to 1080p@60ps
- Support multi-format video playback
- HEVC/H.265 decoder(software),main profile,1080p@30fps
- Support H.264 video encoding up to 1080p@60fps,720p@120fps

### ● FHD DVR

#### CSI

- Supports 10-bits parallel camera sensor
- Supports up to 5M pixel camera sensor
- Supports video shot up to 720p@30fps

#### MIPI CSI

- Supports 4-lane MIPI CSI
- Supports speed up to 8Mpixels@30fps
- Supports video shot up to 1080p@60fps

### ● ADAS



## ● Multi-Tasking Processing

### Octa-core Cortex-A7 CPU

- 32KB I-cache and 32KB D-cache per CPU
- 2MB + 512KB L2 cache

### PowerVR SGX544MP1 GPU

- Supports OpenGL ES 1.1/2.0/, OpenCL 1.1, DirectX 9.3 standards
- Geometry ability up to 133M/s
- Effective pixel ability up to 5.33G/s

## ● Around View Parking System

- Supports 4 channels H.264 720P@30fps USB camera
- Integrated 100/1000 Mbps Ethernet Mac
- Embedded distortion correction and seamless splicing algorithm

## ● Wireless Display

- Supports four movable layers, each layer size up to 2048x2048 pixels
- Supports input and output size up to 2048x2048 pixels
- Supports multiple image input formats



### 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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