

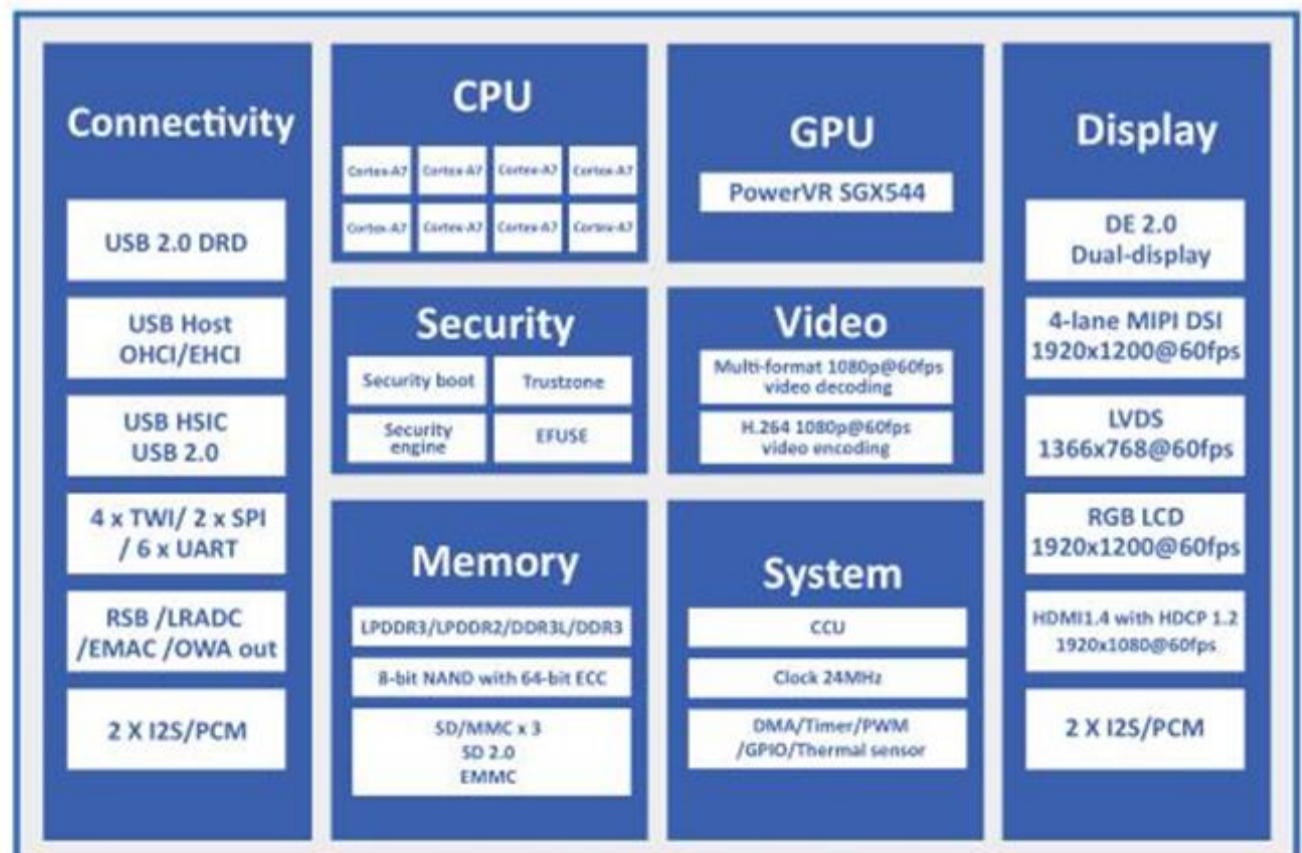
Allwinner T8

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

CPU	· 8-core Cortex-A7 @ 1.6GHz, up to 1.8GHz
MCU	· Working frequency up to 200MHz
GPU	· PowerVR SGX544MP1 GPU · Supports OpenGL ES1.1/2.0 OpenCL1.1, Directx 9.3 · Supports Renderscript
Display	· 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
Camera	· 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
Video Decoder	· Supports multi-format 1080P@60fps video decoding
Memory	· 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