ALLWINER

Quad-Core H.265/HEVC 4K OTT Box Solution

H.265/HEVC 4K Video Playback in Hardware

Allwinner H3 is a highly cost-efficient quad-core OTT box processor that supports H.265/HEVC 4K video decoding in hardware. To deliver the best video entertainment experience, H3 can decode H.265/HEVC 4K video to 30fps, H.265/ H.264 1080p video to 60fps

Allwinner's Next-Gen SmartColor Display Technology

Allwinner H3 comes with its next-gen SmartColor display technology to deliver more vivid and eye-pleasing visual effects for still images and videos.

Higher System Integration

H3 quad-core integrates a wide range of connectivity and interfaces to make the total cost more competitive , including HDMI, CVBS, audio codec, four USB ports, EMAC+PHY, etc.
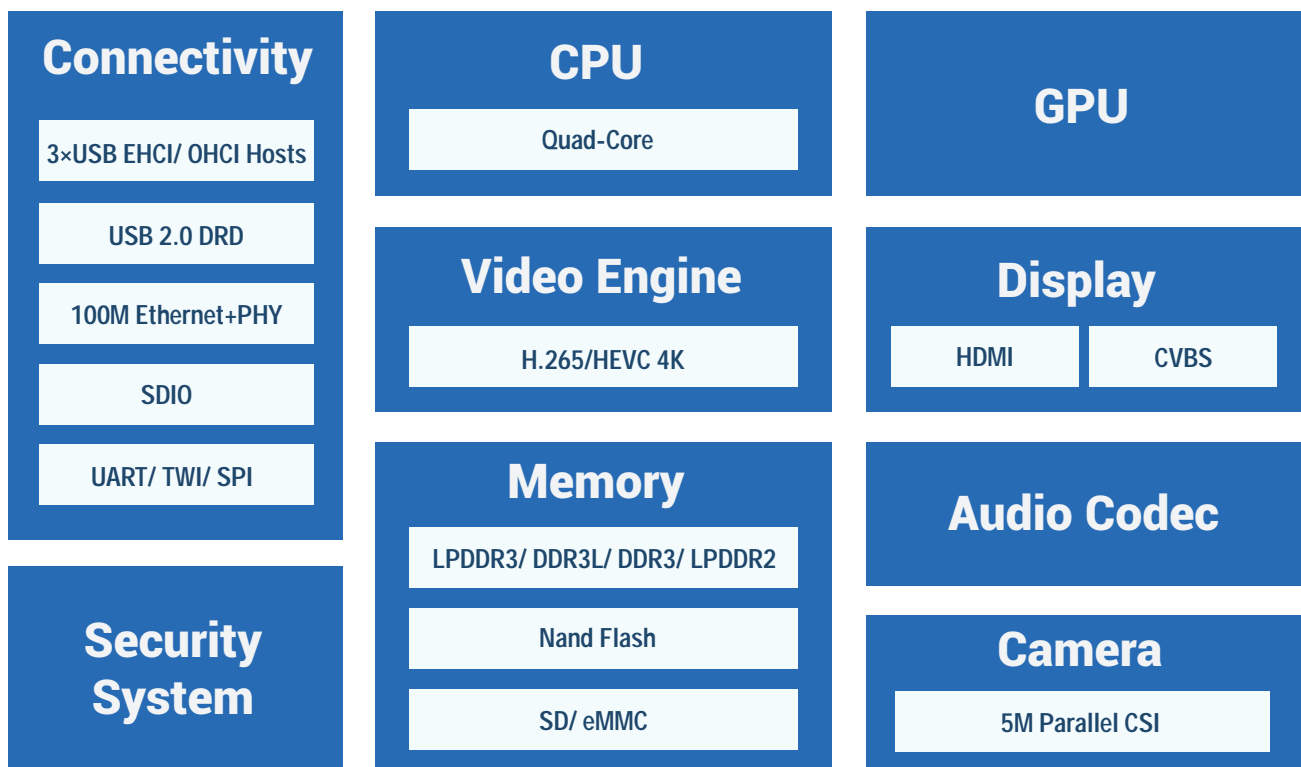
Security System

H3 implements a Trustzone-based security system. It supports various DRM solutions to protect UHD 4K contents, and supports functions such as secure boot, firmware protection with signature and verification, and secure storage to ensure the system security and reliability.

Premium Video Call Experience

H3 solution can deliver outstanding video call experience: CSI camera supports up to 1080p@30fps, and USB camera supports up to 720p@30fps.

Block Diagram

Connectivity
- 3×USB EHCI/ OHCI Hosts
- USB 2.0 DRD
- 100M Ethernet+PHY
- SDIO
- UART/ TWI/ SPI

CPU
- Quad-Core

GPU

Video Engine
- H.265/HEVC 4K

Display
- HDMI
- CVBS

Memory
- LPDDR3/ DDR3L/ DDR3/ LPDDR2
- Nand Flash
- SD/ eMMC

Audio Codec

Security System

Camera
- 5M Parallel CSI

Fea   p

CPU	· Quad-core Cortex-A7
GPU	· Mali400 MP2 GPU · Supports OpenGL ES 2.0
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/HEVC 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@30fps video encoding
Display	· Supports HDMI output with HDCP · Supports HDMI CEC · Supports HDMI 3D function · Integrated CVBS · Supports simultaneous output of HDMI and CVBS
Camera	· Supports 8-bit YUV422 CMOS sensor interface · Supports CCIR656 protocol for NTSC and PAL · Supports 5Mpixel camera sensor · Supports video capture resolution up to 1080p@30fps
Security System	· Trustzone based security architecture · Supports mainstream DRM solutions · Supports secure boot/secure storage · Supports firmware signature and verification, supports version management
Integration	· Audio codec · 3 x USB EHCI/OHCI Hosts, USB 2.0 DRD · 100M Ethernet PHY · CIR, UART, LRADC, SDIO · Integrated CVBS