

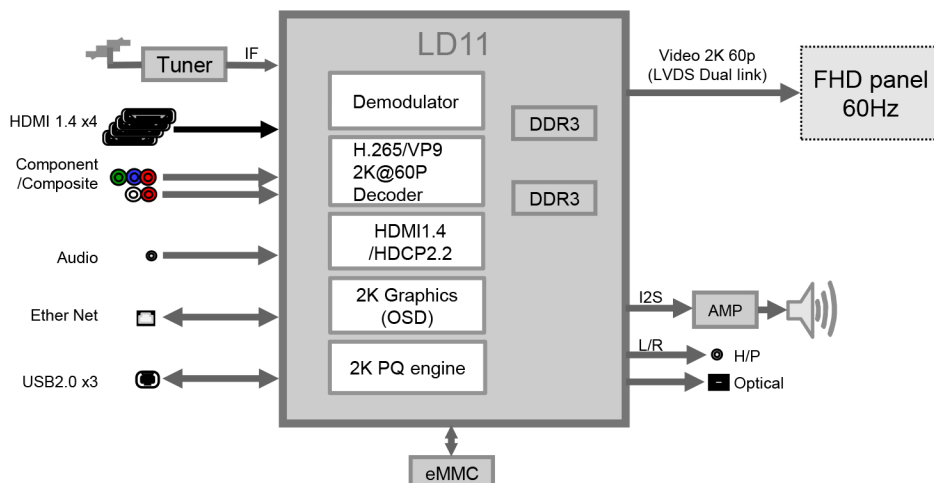
# SoC for High Performance Smart TV System LD11U (SC1405AP1-40A)



## ■ Features

- ✓ Suitable for high performance 2K/60p smart-TV solution
- ✓ Realized quickly responsive UI with high performance CPU (ARM® Cortex®-A53) and GPU

## ■ Application (2K-TV 60p)



## ■ SoC

- Package: FBGA (23x23mm)  
Balls: 487pins, 0.8mm pitch
- Power: 1.2/ 1.5/ 1.8/ 3.3V

## ■ CPU

- ARM® Cortex®-A53 x2
- Instruction / Data caches: 32 / 32-KB

## ■ DDR memory

- DDR3-1600 (ch0:16bit, ch1:16bit)

## ■ General purpose peripherals

- Timers x16 (16-bit x12, 8-bit x4)
- UART x4 (\*maximum)
- SPI x2 (\*maximum)
- I<sup>2</sup>C x1
- NAND flash x1 (SLC)
- eMMC x1 (Version5.0)

## ■ Media I/F

- USB: 2.0 x3-ports
- Ethernet: x1-port (10/ 100Mbps)

## ■ Stream I/F

- Serial TS: In x3, In/ Out x2
- Parallel TS: In x2, Out x1

## ■ Video I/O

- Analog input: CVBS x1, RGB/YPbPr x3
- HDMI x4-ports (ver.1.4) \*HDCP2.2
- MHL x1-port (ver.2.1) (shared pins with HDMI)
- LVDS (Dual link for 2K 60Hz)

## ■ Audio I/O

- Analog input: LR x3
- Analog output: LR x2
- Digital input: I<sup>2</sup>S x1, SPDIF x1
- Digital output: I<sup>2</sup>S x1, SPDIF x1

## ■ Graphics processor

- Original GPU (1Gpixel/s)
- OpenGL ES1.1/ 2.0 compliant

## ■ Standby microcontroller

- 32-bit microcontroller

## ■ Integrated DTV Demodulator:

- ATSC / QAM (Cable)

## ■ Integrated high performance Multi-format Video Decoder supports (\*1):

- MPEG-1
- MPEG-2 MP@HL
- MPEG-4 AVC (H.264 HP@L4.1)
- HEVC (H.265 MP@L4.1 8/10bit)
- VC-1
- DivX (HD, plusHD)
- VP8
- VP9(8/10bit)
- JPEG (include Motion-JPEG)

## ■ Integrated Audio Processor supports (\*1):

- MPEG-1 Layer 2/3
- MPEG-2 Layer 2/3
- MPEG-2 AAC (SBR)
- Dolby Digital (Plus)
- Dolby True HD
- DTS
- DTS-HD
- WMA 8/9
- WMA pro
- Vorbis
- FLAC
- Apple Lossless

## ■ Integrated Video Processor:

- Super-resolution
- Picture quality Adjustment for 2K pictures

\*1: To use some of these formats, you may have to acquire a license or perform a software development. In addition, some combinations of audio/video formats may have a limitation to use.

For details, please contact our service representative.

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