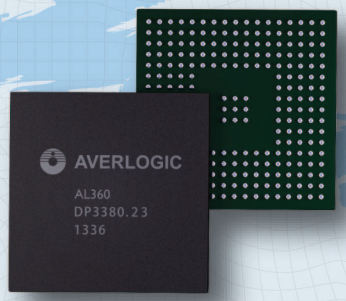
AVERLOGIC
Video Solutions Provider

Color & Sound

AL360



Full HD Video Conversion SOC

Robust, Sophisticated, Intuitive

A Dream Chip for HD Developers

Developing Full HD video products can be fraught with debugging headaches, interface incompatibilities, performance problems, workarounds ... and Burnout! These are the burdens that dog today's developers and wreak havoc with product development schedules.

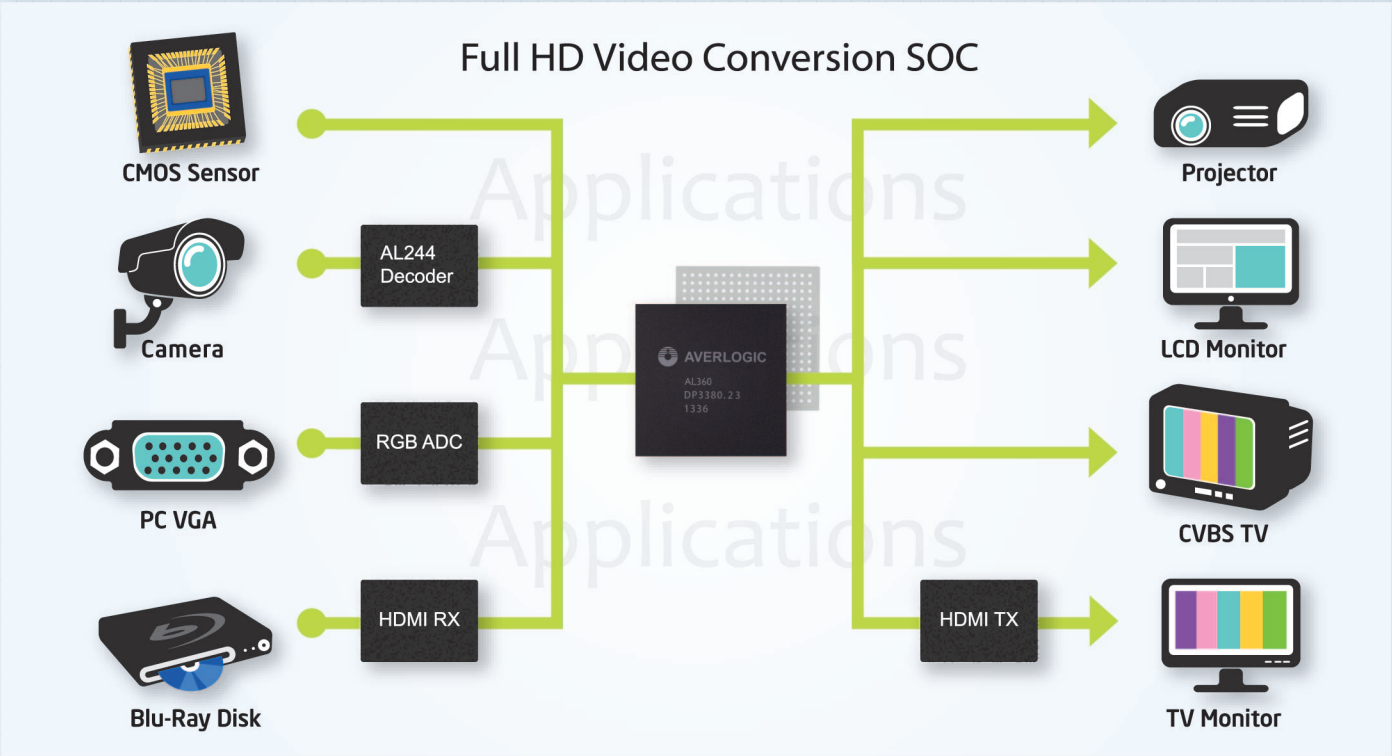
AverLogic's AL360 is a full HD Video Conversion SOC keen on providing seamless implementation for HD Video Product developers. It's a highly integrated SOC (MCU80251), free from external interface snags (e.g. OS interface). It has everything you need, providing a stable, robust, well-defined environment. Sophisticated technology, intuitive API, and full features take you on the fast-track to product development for getting to market on time and beating the competition.

Features

- Data and Control interfaces - Low voltage detection for battery control, UART, interrupt and GPIO for MCU user's interface control.
- Embedded MCU80251, Embedded Low Power DDR-SDRAM, Embedded power management and power saving control

Features

- Scaling, Interlacing, de-interlacing, format conversion, video freeze, zoom, flip, mirror, rotation, 256-Color OSD, and more.
- Inputs - RGB888, BT.1120-16bit, YCbCr, BT.656
- Outputs - RGB888, BT.1120-16bit, YCbCr, BT.656, Analog RGB DAC,CVBS/S-video
- Comprehensive Developer's Kit, fully functional EVB board



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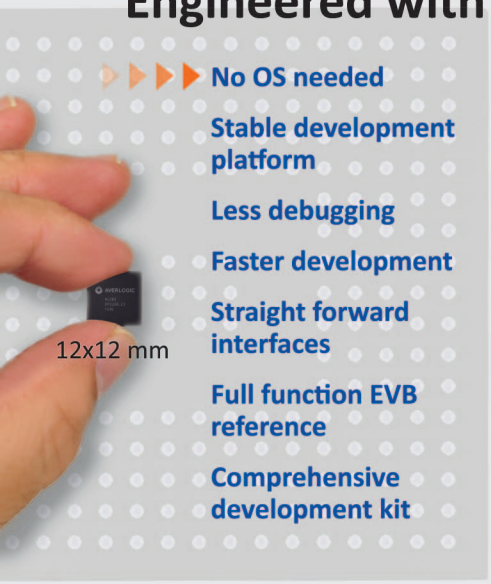
AL360 HD Video Conversion SOC

Engineered with Developers in mind



- No OS needed
- Stable development platform
- Less debugging
- Faster development
- Straight forward interfaces
- Full function EVB reference
- Comprehensive development kit

Video Input- Digital

- 8-bit YCbCr
- 24-bit RGB888
- 16-bit BT.1120 and 16-bit YCbCr
- 8-bit BT.656
- Supports up to 148.5MHz pixel rate

Video Output- Digital

- 24-bit RGB888 with TCON output
- 16-bit BT.1120 and 16-bit YCbCr
- 8-bit BT.656
- Supports up to 148.5MHz pixel rate

Video Processing and Scaler

- Supports video scaling engine (640x480 to 1920x1080)
- Supports de-interlacing video engine
- Frame rate conversion
- Supports video freeze, zoom, flip, mirror, rotation and more
- Supports video contrast/ brightness/ hue/ sharpness adjustment

Video Output- Analog

- Embedded Analog RGB DAC
- Embedded TV Encoder CVBS/S-video

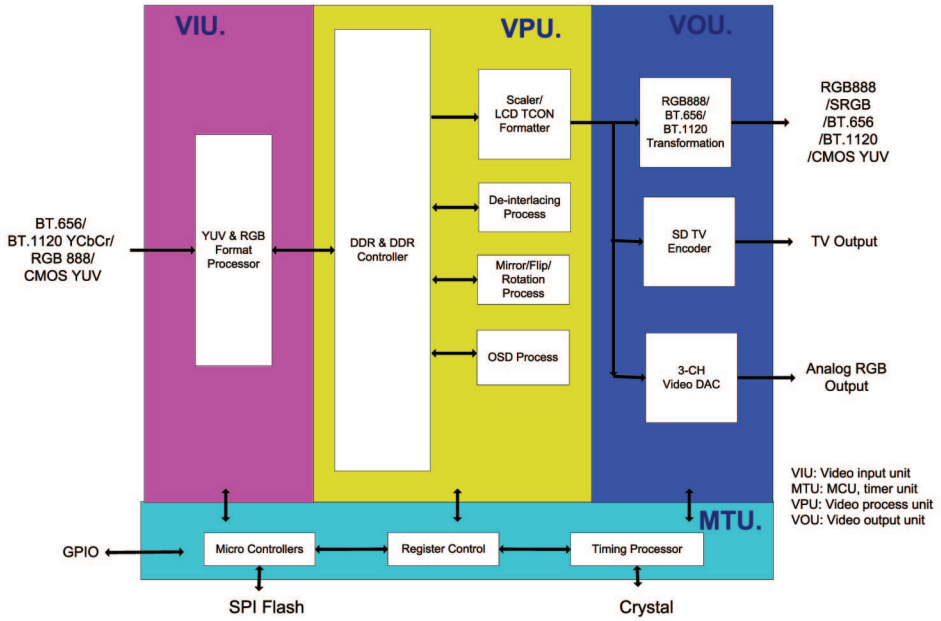
OSD

- Embedded 2-layer 256 color OSD engine

Miscellaneous

- 3.3V I/O, 1.2V/1.8V core logic
- Embedded MCU80251
- Supports SPI-Flash and ISP (In-System Programming) function
- No external memory required
- Small-size package LFBGA-249 12x12 mm

Block Diagram



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Ordering Information

Part Number	Description
AL360A	HD Video Conversion SOC
AL360A-EVB-A0	AL360A EVB