

# Amlogic A311D2 Android Smart Integrated Board

## Specifications

Model No.	Amlogic A311D2 Android Smart Integrated Board
CPU	Amlogic A311D2 Quad Core Cortex-A73 + Quad Core Cortex-A53
GPU	ARM Mali-G52 MP8
RAM	4GB (max to 8GB/32GB for options)
ROM	32GB (64GB/128GB/256GB options)
OS	Android 11.0
Wi-Fi / BT	Built-in Wi-Fi (standard single band 2.4G supported; Dual band 2.4G/5G for options); BT4.2 or BT5.0 ( M.2 port for option)

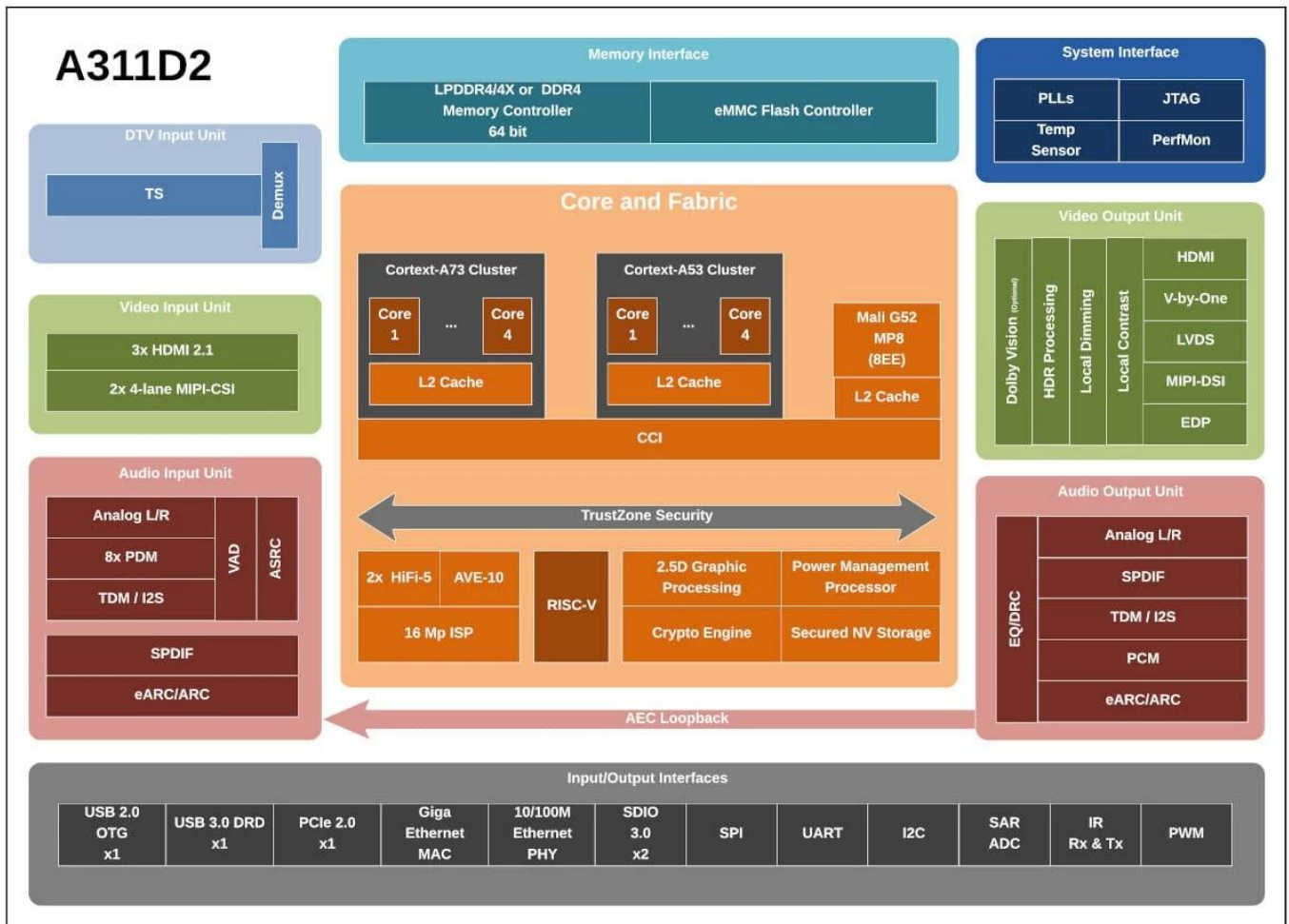
## I/O Port

HDMI input	3*HDMI input
HDMI output	1*HDMI output
LVDS output	1 single/dual, can directly drive 50/60Hz LCD
V-By-One output	2*8-lane V-by-One, up to 4Kp60; support 4K*2K@60Hz output
Screen backlight interface	5V/12V power, Local Dimming or PWM dimming
USB port	1*USB 3.0 A port USB 2.0 A port ( for burning firmware) or ( mini USB OTG for option)
Serial ports	2*serial ports (2*RS232 or 2*TTL ports; If need TF card slot, then only 1* serial port available.)
Camera CSI	2*CSI input
MIC PDM	Some of the function pins are multiplexed with Camera CSI, need to confirm before use
Spk BOARD	Support I2S output
Ethernet	1*RJ45 port, 100M/1000M
SPDIF	SPDIF or COAX output for option
Line in	AUDIO_Line in
Line out	AUDIO_Line out
RTC	Support timer switch on/off
IR	IR receiver (on-board IR receiver for option)
Power LED	On-board or matching function board for option
Upgrade	Support local upgrade by TF & USB or OTA upgrade

Power Supply	5V/12V Power
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## Amlogic A311D2 Android Smart Integrated Board

### Applicable Scope

Amlogic A311D2 Android Smart Integrated Board motherboard integrates multimedia network playback, LCD driver and Android intelligence, mainly for supporting LVDS and V-by-one screens of various sizes and resolutions. It is suitable for smart shelf, door advertising, commercial display, etc. It can also be applied to intelligent display terminal products, video terminal products, industrial automation terminal products, commercial display, self-service products, intelligent education, new retail and many other display fields. Such as: multimedia advertising machine, intelligent self-service terminal, intelligent retail terminal, etc.

### Product Overview

[Amlogic A311D2](#) Android Smart Integrated Board motherboard is powered by Amlogic A311D2 chip with Android 11.0 OS; with superb audio and video processing capabilities. Octa-core processor designed for smart display applications, quad-core Cortex-A73 & quad-core Cortex-A53, up to 2.2GHz; Mali-G52 MP8 (8EE) GPU; supports up to 4Kp60 with 3\*HDMI 2.1 inputs, one 16MP ISP and 4K video encoding. Support 4K\*2K@60fps, H.265 hard decode and many other formats, rich peripheral interfaces.

### Product Features

\*On-board V-By-One / LVDS output interface, no converter chip required;

- \*Support Ethernet & WiFi (M.2 port option) both and RTC;
- \*Rich expansion interfaces: 1\*OTG USB port, 1\*USB 3.0 A port, 2\*RS232 serial ports, 1\*TTL serial port, 1\*ADC interface; which is adaptable to various peripheral access requirements in the market;
- \*Support HDMI + LVDS or HDMI + V-by-one screen dual screen outputs;
- \*High definition: Supports up to 4K\*2K@60fps decoding and various LCD displays and cutting screens which with LVDS or V-By-One interfaces;
- \*2\*4-lane MIPI-DSI interfaces with resolution up to 1920\*1200;
- \*Support customization for Android system, providing reference code for the system call interfaces API. Perfectly support customer in upper layer application APP development;
- \*Support AV1, MP-10, VP9, AVS2, MPEG2, MPEG4, H.265, wmv, mkv, mov, iso and other mainstream video formats;
- \*Support 4K screenshot and recording;
- \*High memory bandwidth to support 4K user interface;

## Unlock Versatility with the Amlogic A311D2 Android Smart Integrated Board

The Amlogic A311D2 Android Smart Integrated Board is a cutting-edge solution designed for developers and manufacturers seeking to create high-performance smart devices. Here's why our integrated board stands out:

1. **Powerful Performance:** The Amlogic A311D2 chipset, featuring a quad-core Cortex-A73 CPU and a dual-core Cortex-A53 CPU, delivers exceptional processing power and efficiency, enabling smooth multitasking and fast response times.
2. **Advanced Graphics:** With the ARM Mali-G52 MP4 GPU, our integrated board offers stunning graphics performance, supporting 4K Ultra HD video playback and advanced gaming experiences.
3. **Comprehensive Connectivity:** Equipped with Gigabit Ethernet, dual-band Wi-Fi, Bluetooth 5.0, and USB ports, our integrated board ensures seamless connectivity and compatibility with a wide range of peripherals and accessories.
4. **Rich Multimedia Capabilities:** The Amlogic A311D2 chipset supports a variety of multimedia formats and codecs, allowing for immersive multimedia experiences, including video streaming, audio playback, and image processing.
5. **Android Operating System:** Our integrated board comes pre-installed with the Android operating system, providing developers with a familiar and versatile platform for application development and customization.
6. **Flexible Development Environment:** With support for popular development frameworks and tools, including Android Studio and the Android SDK, developers have the flexibility to create customized solutions tailored to their specific requirements.
7. **Enhanced Security Features:** Built-in security features, such as secure boot and hardware

encryption, help protect sensitive data and ensure the integrity of the system.

8. **Compact and Durable Design:** The compact form factor and durable construction of our integrated board make it suitable for a wide range of applications, including smart TVs, set-top boxes, digital signage, IoT devices, and more.
9. **Scalable and Cost-Effective:** Whether you're prototyping a new product or scaling up production, our integrated board offers a cost-effective solution that meets the demands of your project without compromising on performance or quality.
10. **Dedicated Technical Support:** Our team of experienced engineers is committed to providing comprehensive technical support and assistance throughout the development process, ensuring a smooth and successful implementation of your project.

In summary, the [Amlogic A311D2 Android Smart Integrated Board](#) combines powerful performance, advanced features, and versatile connectivity to empower developers and manufacturers to create innovative smart devices that meet the demands of today's connected world.