

Amlogic A311D Android TV Box

Specifications

Model No.	Amlogic A311D Android TV Box
CPU	Amlogic A311D Quad Core ARM Cortex A73 and Dual Core ARM Cortex A53 1.98Ghz
GPU	ARM Mali-G52 MP4 (6EE) OpenGL ES 3.2, Vulkan 1.1 and OpenCL 2.0
RAM	DDR4 2GB/4GB
ROM	16GB eMMC (Expandable up to 128GB)
OS	Android 9.0

Video&Audio CODEC

Decoding resolution	Support 4K H265 10Bit, H.264, AVS, MPEG-2 and many other formats
Multimedia Support	Support MPEG1, MPEG2, MPEG4, H.264, WMV, MKV, TS, flv and other video formats; Support MP3 and other audio formats; support JPG, JPEG, BMP, PNG, GIF and other photo formats

Port

Video output	1 channel LVDS 40-pin 2.0mm double-pin, can support 8bit, 10bit screen; 1 channel HDMI output; 1 channel AV output
Video input	x1, MIPI CSI
Audio output	4-pin 2.5mm socket 25W@2 amplifier and 3W@2 speaker
Network interface	x1, 10M/100M Ethernet WIFI+BT, 2.4G single band or 2.4G/5G dual band for options PCIE slot (4G) x1 or M.2 slot (4G) x1 for options
USB2.0 interface	USB OTG x1 (available for HOST) USB HOST x7
Backlight interface	x2, 6-pin 2.0mm socket
Infrared interface	x1, 7-pin 2.0mm socket, supports both red and green LED indicators
Function expansion port	Serial ports x4
TF card slot	x1
SIM card slot	x1
RTC	Supports time synchronization

Power

Power Supply	12V, 2.5DC Connector
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S922X

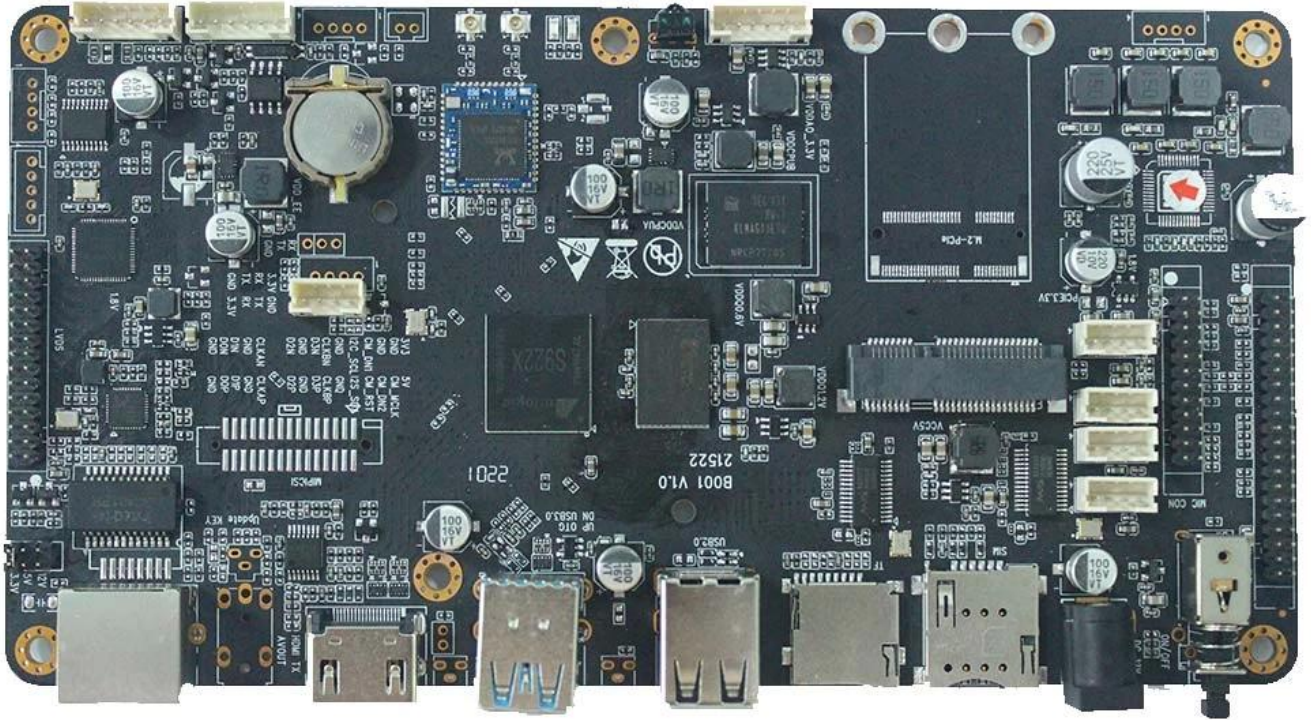


Supported configuration: PCIe2.0 port + USB2.0 Host, or USB3.0 without PCIe

S055T01



180mm*95mm*20mm



Amlogic S922X Android Development Board multimedia network player-LCD driver integrated board adopts Amlogic S922X 12nm high-end chip, which supports UHD 4K@60fps hardware video decoding. It also supports supports H.265 10-bit, H.264 and AVS+ and many other formats. Support HDR10 and HLG high dynamic range processing, with multi-channel UART and USB interfaces. Support Bluetooth, WIFI, 4G and Ethernet functions. Support AV serial use, SD card expansion. Perfectly supports all kinds of touch screens, suitable for high-performance intelligent display terminal equipment, industrial automation terminal, computer vision/algorithm, 3D experience, game/amusement equipment, high-performance face recognition computing/storage, AI intelligence, etc. It can be widely used as a high-end intelligent motherboard for various industries such as finance, advertising, security, transportation, and public transportation.

(1) With various interfaces

- 1 channel LVDS video output (40pins)
- 1 channel HDMI video output
- 5 channels USB2.0
- 4 channels RS232 (can be modified to USB2.0 by patch)
- 1 channel MIPI CSI
- 1 channel AV output
- 1 channel I2C
- I2SC/IS2B
- 1 channel 25W super power amplifier and 3W speaker interface

- (2) Hybrid networking to break through network constraints
 - Support wired, WiFi and 4G access, can realize multi-network hybrid networking
- (3) Easy to operate & fast maintenance
 - Support breakpoint playback
 - Super multi-period timing switch function
 - Support U disk loading or direct playback
 - Support automatic repair, remote upgrade, intelligent domain name resolution

Chip Performance

CPU Sub-system

- (1) Quad Core ARM Cortex-A73 and Dual Core ARM Cortex-A53 CPU
- (2) ARMv8-A architecture with Neon and Crypto extensions
- (3) Unified system L2 cache
- (4) Build-in Cortex-M4 core for always on processing
- (5) Advanced TrustZone security system
- (6) Application based traffic optimization using internal QoS-based switching fabrics

3D Graphics Processing Unit

- (1) ARM Mali-G52 MP4 (4ppc) GPU
- (2) 8-wide warps, 2x dual texture pipe, 6x8-wide execution engines (EE)
- (3) Concurrent multi-core processing
- (4) OpenGL ES3.2, Vulkan 1.0 and OpenCL 2.0 support

Video/Picture CODEC

- (1) Amlogic Video Engine (AVE) with dedicated hardware decoders and encoders
- (2) Support multi-video decoder up to 4Kx2K@60fps+1x1080P@60fps
- (3) Supports multiple "secured" video decoding sessions and simultaneous decoding and encoding
- (4) Video/Picture Decoding

VP9 Profile-2 up to 4Kx2K@60fps

H.265 HEVCMP-10@L5.1 up to 4Kx2K@60fps

AVS2-P2 Profile up to 4Kx2K@60fps

H.264 AVCHP@L5.1 up to 4Kx2K@30fps

H.264 MVC up to 1080P@60fps

MPEG-4 ASP@L5 up to 1080P@60fps (ISO-14496)

WMV/VC-1 SP/MP/AP up to 1080P@60fps

AVS-P16(AVS+) /AVS-P2 JiZhun Profile up to 1080P@60fps

MPEG-2 MP/HL up to 1080P@60fps (ISO-13818)

MPEG-1MP/HL up to 1080P@60fps (ISO-11172)

RealVideo 8/9/10 up to 1080P@60fps

Multiple language and multiple format sub-title video support

MJPEG and JPEG unlimited pixel resolution decoding (ISO/IEC-10918)

Supports JPEG thumbnail, scaling, rotation and transition effects

Supports *.mkv, *.wmv, *.mpg, *.mpeg, *.dat, *.avi, *.mov, *.iso, *.mp4, *.rm and *.jpg file formats

(5) Video/Picture Encoding

Independent JPEG and H.265/H.264 encoder with configurable performance/bit-rate

JPEG image encoding

H.265/H.264 video encoding up to 1080P@60fps with low latency

Video Output

- (1) Built-in HDMI 2.1 transmitter including both controller and PHY with CEC, Dynamic HDR and HDCP 2.2, 4Kx2K@60 max resolution output
- (2) CVBS 480i/576i standard definition output
- (3) Supports all standard SD/HD/FHD video output formats: 480i/p, 576i/p, 720p, 1080i/p and 4Kx2K
- (4) 4-lane MIPI DSI interface, resolution up to 1920*1080 with rotation and panel calibration

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The **Amlogic A311D Android TV Box** offers the latest in home entertainment technology, combining high-powered performance with advanced AI capabilities. At the heart of this device is the **Amlogic A311D Quad Core processor**, known for its high efficiency and power. This processor is engineered to handle intensive tasks such as **8K Ultra HD video playback**, making it perfect for users who demand the best visual experience. Whether you're streaming movies, watching live TV, or gaming, the A311D provides exceptional clarity, vivid colors, and smooth playback.

One of the standout features of this Android TV box is its support for **AI acceleration**. This technology enables the device to improve video quality, optimize resource allocation, and even enhance voice control features. AI upscaling allows you to watch content in lower resolutions, and the AI engine boosts it to near-4K or 8K quality, enhancing the viewing experience on large, high-

definition screens.

Running on the **Android 11 OS**, this TV box gives you access to a wide range of apps and services via the **Google Play Store**. You can stream your favorite shows from services like Netflix, YouTube, and Amazon Prime Video, or enjoy a vast array of games and productivity apps, making the A311D Android TV Box a versatile entertainment hub. Android 11 also enhances system performance with better app management, improved privacy features, and smoother multitasking.

With **4GB of RAM** and up to **64GB of internal storage**, this device ensures that you can switch between multiple apps with ease, store large media files, and install a variety of apps without worrying about lag or performance issues. Additionally, the **expandable storage** feature allows you to increase storage capacity using an external SD card, providing ample space for all your needs.

Wi-Fi 6 support is another highlight of the Amlogic A311D Android TV Box, allowing you to enjoy faster, more reliable internet connectivity. This means quicker downloads, smoother streaming, and a more stable connection, even in environments with multiple connected devices. For users who enjoy online gaming or 8K streaming, Wi-Fi 6 ensures a buffer-free, high-speed experience.

In terms of connectivity, the A311D Android TV Box comes with **multiple USB ports, HDMI output**, and **Bluetooth** compatibility. This makes it easy to connect external devices such as game controllers, keyboards, external hard drives, or Bluetooth speakers, allowing for a fully immersive experience. The HDMI output ensures that you can connect the TV box to any modern TV or monitor, delivering high-definition visuals and crystal-clear audio.

The **AI-enhanced voice recognition** features make navigating the device a breeze. Using simple voice commands, you can search for content, open apps, or control the settings without the need for a remote. This hands-free feature, combined with the overall performance, ensures that you have a futuristic, streamlined experience with the Amlogic A311D TV Box.

In summary, the **Amlogic A311D [Android TV Box](#)** offers a premium entertainment experience with its powerful processor, AI capabilities, 8K streaming, and Android 11 OS. Whether you're looking for top-notch video quality, responsive gaming, or an all-in-one media center, this TV box delivers on every front, making it an essential addition to your home theater setup.