

Smart TV Box with Amlogic A311D Octa Core CPU Chip

Specifications

Model No.	Amlogic A311D Smart 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

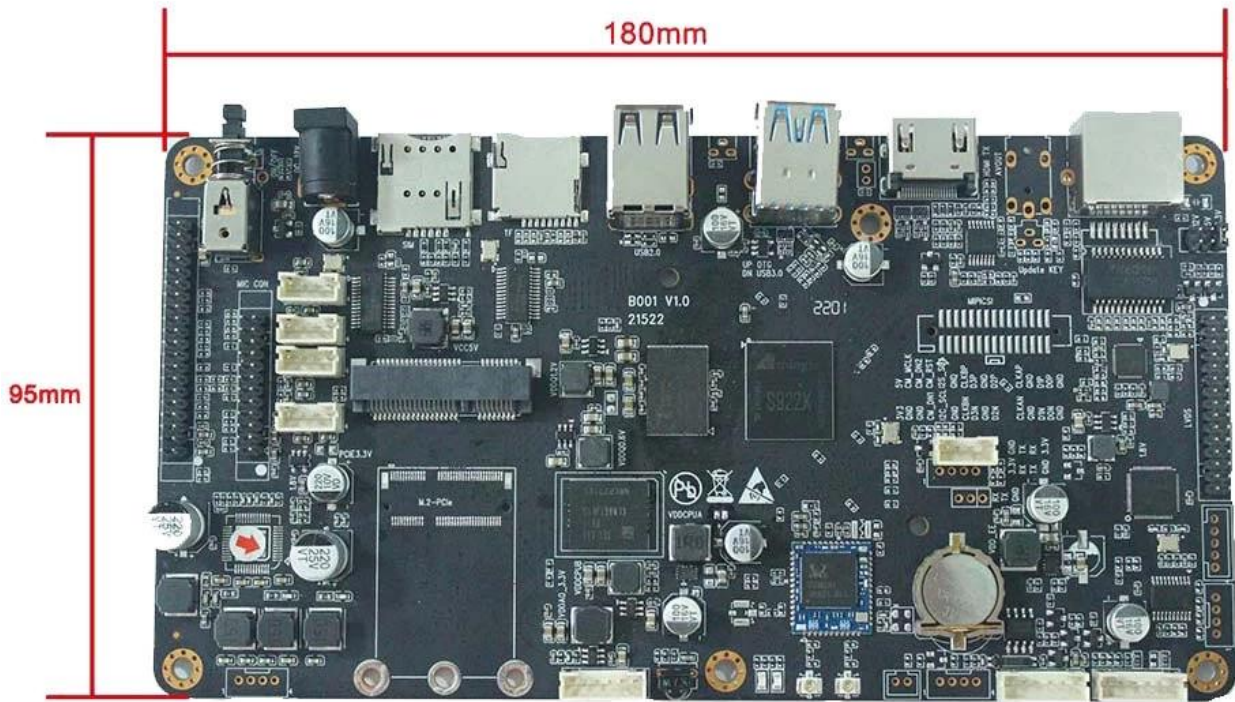
Power Supply	12V, 2.5DC Connector
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S922X

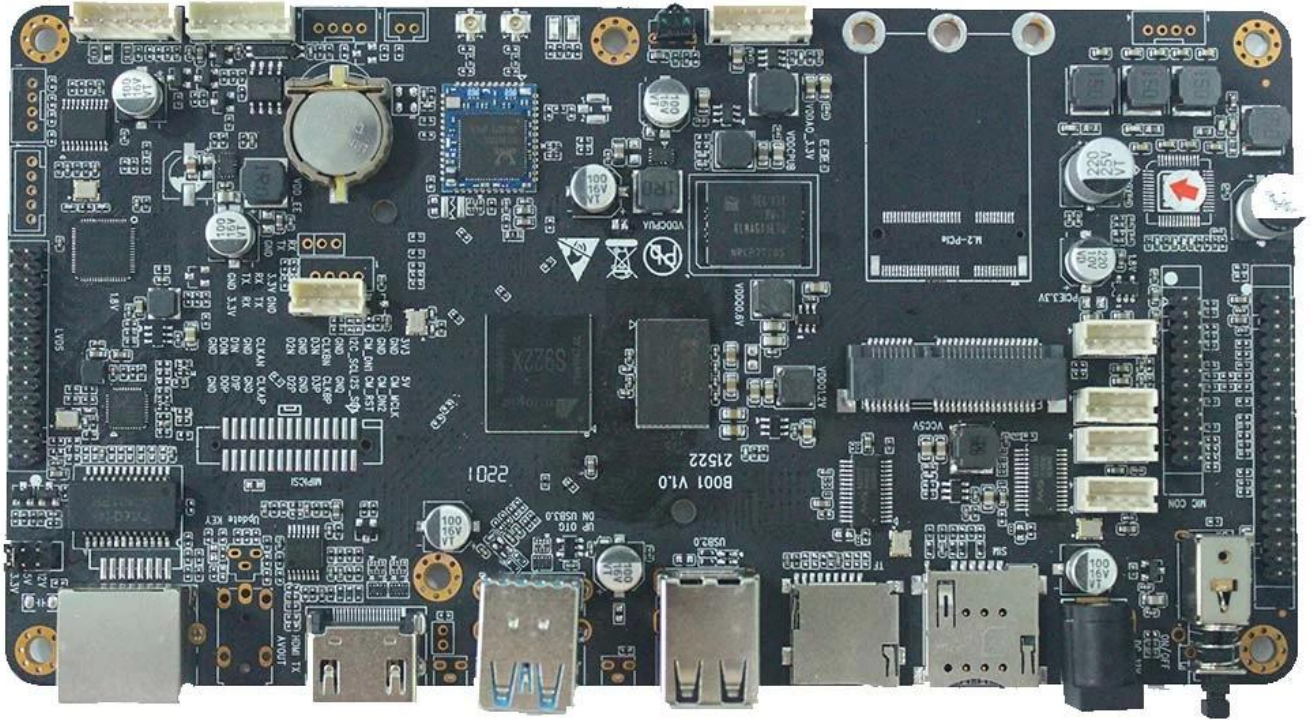


Supported configuration: PCIe2.0 port + USB2.0 Host, or USB3.0 without PCIe

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 upto 4Kx2K@60fps

AVS2-P2 Profile up to 4Kx2K@60fps

H.264 AVCHP@L5.1 upto 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 upto 1080P@60fps(ISO-11172)

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

Multiple language and multiple format sub-title videosupport

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 **Smart TV Box with Amlogic A311D Octa Core CPU Chip** is designed to offer a powerful and smooth home entertainment experience. At the heart of this device is the **Amlogic A311D Octa Core CPU**, a cutting-edge processor that ensures high-speed performance and efficient handling of resource-demanding applications. Whether you're streaming 8K content, playing high-definition games, or using multiple apps simultaneously, this TV box delivers a flawless and responsive experience.

One of the key highlights of this device is its ability to support **8K Ultra HD streaming**, providing stunning visual quality with exceptional clarity, color depth, and detail. Paired with **AI-powered upscaling technology**, the Smart TV Box can enhance lower-resolution content to near-8K quality, giving you an enhanced viewing experience regardless of the source. This AI technology also extends

to voice controls, allowing you to navigate the interface, search for content, and control settings using simple voice commands.

Running on the **Android 9 OS**, this Smart TV Box opens up a world of possibilities with access to thousands of apps via the **Google Play Store**. Whether you're streaming from popular platforms like Netflix, YouTube, or Amazon Prime, playing games, or using productivity apps, Android 9 provides a seamless and user-friendly experience. The OS is optimized for better system management, improved security, and faster app loading times, ensuring a smooth and responsive interface.

The device comes equipped with **4GB of RAM**, allowing it to handle multitasking with ease. You can switch between streaming, gaming, and browsing apps without experiencing any lag. Additionally, the **64GB of internal storage** ensures ample space for downloading and storing apps, media files, and games. For those who need even more storage, the device supports **expandable memory** through an SD card slot, making it easy to manage large libraries of content.

Connectivity is another strong point of this Smart TV Box. It features **Wi-Fi 6**, the latest in wireless technology, offering faster and more stable connections than previous generations. This is especially useful for streaming high-definition or 8K content, as it ensures a buffer-free and lag-free experience, even in environments where multiple devices are connected to the same network. The box also supports **Bluetooth**, allowing for easy connection to external devices such as wireless keyboards, gaming controllers, or Bluetooth speakers.

The **HDMI output** ensures that you can easily connect the Smart TV Box to any modern TV or display, providing high-definition visuals and crystal-clear audio. Multiple **USB ports** allow you to connect external drives, input devices, or additional storage, further expanding the functionality of the TV box.

In terms of design, the Smart TV Box is compact yet powerful, fitting seamlessly into any home entertainment setup. Its user-friendly interface, powered by Android 9, makes it simple to navigate and customize your experience, whether you're an avid streamer or a casual user.

In conclusion, the [**Smart TV Box with Amlogic A311D Octa Core CPU Chip**](#) offers a comprehensive and high-performance solution for those looking to upgrade their home entertainment system. With 8K streaming, AI-enhanced features, Wi-Fi 6 support, and Android 9, this device delivers everything you need for smooth, high-quality entertainment. Whether you're streaming, gaming, or multitasking, this Smart TV Box is built to provide a premium and immersive experience for all your media needs.