

# Android TV Box Supplier, Android TV Box Manufacturer

## Multifunctional intelligent industrial control board

Amlogic S922X / S905D3 / T972



V-By-One; Direct 4K Dot Screen; Android 9.0 Or Above  
[www.sztomato.com](http://www.sztomato.com)

### Specifications

Model No.	Amlogic S922X Android TV Box Supplier
CPU	Amlogic S922X 64-bit quad core ARM® Cortex™ A73 CPU and dual core ARM® Cortex™ A53 CPU
GPU	ARM MaliTM-G52 MP4 GPU processor
ROM	2GB/4GB LPDDR4
Internal Storage	16GB/64GB eMMC
OS	Android 9.0

### Video&Audio CODEC

Video/Picture CODEC	<p>Amlogic Video Engine (AVE) with dedicated hardware decoders and encoders</p> <p>HW UHD 4K H.265 75fps 10-bit video decoder &amp; low latency 1080p H.265/H.264 60fps encoder</p> <p>Support multi-video decoder up to 4Kx2K@60fps+1x1080P@60fps</p> <p>Supports multiple "secured" video decoding sessions and simultaneous decoding and encoding</p> <p>Video/Picture Decoding</p> <p>VP9 Profile-2 up to 4Kx2K@60fps</p> <p>H.265 HEVC MP-10@L5.1 up to 4Kx2K@60fps</p> <p>AVS2-P2 Profile up to 4Kx2K@60fps</p> <p>H.264 AVC HP@L5.1 up to 4Kx2K@30fps</p> <p>H.264 MVC up to 1080P@60fps</p> <p>MPEG-4 ASP@L5 up to 1080P@60fps (ISO-14496)</p> <p>WMV/VC-1 SP/MP/AP up to 1080P@60fps</p> <p>AVS-P16(AVS+) /AVS-P2 JiZhun Profile up to 1080P@60fps</p> <p>MPEG-2 MP/HL up to 1080P@60fps (ISO-13818)</p> <p>MPEG-1 MP/HL up to 1080P@60fps (ISO-11172)</p> <p>RealVideo 8/9/10 up to 1080P@60fps</p> <p>H.265/H.264 video encoding up to 1080P@60fps with low latency</p> <p>Multiple language and multiple format sub-title video support</p> <p>MJPEG and JPEG unlimited pixel resolution decoding (ISO/IEC-10918)</p> <p>Supports JPEG thumbnail, scaling, rotation and transition effects</p> <p>Supports *.mkv, *.wmv, *.mpg, *.mpeg, *.dat, *.avi, *.mov, *.iso, *.mp4, *.rm and *.jpg file formats</p> <p>Supports Dolby VisionOptional, HDR10, HDR10+, HLG and PRIME HDR processing</p>
Video/Picture Encoding	<p>Independent JPEG and H.265/H.264 encoder with configurable performance/bit-rate</p> <p>JPEG image encoding H.265/H.264 video encoding up to 1080P@60fps with low latency</p>
Video Output	<p>Built-in HDMI 2.1 transmitter including both controller and PHY with CEC, Dynamic HDR and HDCP 2.2, 4Kx2K@60 max resolution output CVBS 480i/576i standard definition output</p> <p>Supports all standard SD/HD/FHD video output formats: 480i/p, 576i/p, 720p, 1080i/p and 4Kx2K 4-lane MIPI DSI interface, resolution up to 1920*1080 with rotation and panel calibration</p> <p>Supports MP3, AAC, WMA, RM, FLAC, Ogg and programmable with 7.1/5.1 down-mixing</p> <p>Built-in serial digital audio SPDIF/IEC958 input/output and PCM input/output 3 built-in TDM/PCM/I2S ports with TDM/PCM mode up to 84kHz x32bits x 8ch or 96kHz x 32bits x 32ch and I2S mode up to 384kHz x 32bitsx8ch</p> <p>Digital microphone PDM voice input with programmable CIC, LPF &amp; HPF, support up to 8 DMICs Built-in stereo audio DAC</p> <p>Supports concurrent dual audio stereo channel output with combination of analog+PCM or I2S+PCM</p>
Decoder Format	HD MPEG1/2/4, H.265/HEVC, HD AVC/VC-1, RM/RMVB, Xvid/DivX3/4/5/6, RealVideo8/9/10
Media Format	Avi/Rm/Rmvp/Ts/Vob/Mkv/Mov/ISO/wmv/asf/flv/dat/mpg/mpeg
Music Format	MP3/WMA/AAC/WAV/OGG/DDP/TrueHD/HD/FLAC/APE
Photo Format	HD JPEG/BMP/GIF/PNG/TIFF

### Port

USB host	USB2.0, Max480Mbps/USB3.0, Max5.1Gbps
SIM	MICRO SIM
HDMI	HDMI 2.2/1ch Lvds/1ch EDP
LAN	RJ45 wire Ethernet connection 100/1000M Ethernet support
WiFi/ Bluetooth	AP6398S(Wi-Fi+BT) 2.4G+5.8G

4G	PCIE Port
TF	microSD(Max 128G)
HDD	Support SATA Max2TB(Not included)
<b>Power</b>	
Power Supply	12V DC/3AΦ5.5*Φ2.5mm

This product is the network Android system motherboard, which is suitable for intelligent display terminal equipment, industrial automation terminal, computer vision/algorithm, 3D experience, game/entertainment equipment, high-performance Face Recognition calculation/storage, AI intelligence with high performance requirements. It can be widely used as the high-end demand intelligent mainboard of finance, advertising, security, transportation, public transportation and other industries.

This product adopts the latest generation of 12 nm ultra-low power AI chip s922x of Amlogic. It is an advanced application processor, integrating a powerful CPU, GPU subsystem, secure 4K video codec engine and first-class HDR image processing. The CPU of S922x main system adopts large and small architecture, which integrates four core arm cortex-a73 CPU cluster and dual core cortex-a53 cluster with unified secondary cache to improve system performance. Each CPU core includes a separate neon SIMD coprocessor to improve the software media processing capacity. Ave-10 can decode 4kx2k resolution video at a speed of 75 frames/second, and has a complete trusted video path (TVP) for security applications, supporting complete formats, including: MVC, MPEG-1/2/4, vc-1/WMV, AVS, AVS +, avs2 realvideo, MJPEG stream, H.264, h265-10, VP9 and JPEG pictures without size restrictions. The independent encoder can encode JPEG or h.265/h.264 format, up to 1080p, 75 frames per second. It supports 4kx2k @ 60fp (3840 \* 2160) output of hdmi2.2 interface and 4K point screen of V by one interface. It supports HDCP 2.2, stereo audio DAC, CVBS output, 4-channel Mipi DSI interface, multi TDM, PCM, I2S and SPDIF digital audio I/O interface, 8-Channel far-field PDM digital microphone (dmic) input and DVP camera interface. The product comes with 2x2 WiFi (supporting 2.4G and 5.8G dual frequency) + 4.1 wireless network module, supporting Gigabit Ethernet interface and infrared remote control, keyboard and mouse operation.

### Highlights

- o Amlogic 64-bit quad core ARM® Cortex™ A73 CPU and dual core ARM® Cortex™ A53 CPU
- o ARM Mali-G52 MP4 GPU processor
- o HW UHD 4KH.265 75fps 10-bit video decoder & low latency 1080p H.265/H.264 60fp sencoder
- o Dolby Visionand HDR10, HDR10+, HLG and PRIME HDR video processing
- o Build in Cortex-M4 core for always on processing
- o TrustZone based security for DRM video streaming
- o WIFI, BT,USB, SD, Ethernet, Analog Audio
- o Power management auxiliary processor

Amlogic S922X is an advanced application processor designed for Android hybrid OTT/IPTV Set Top Box(STB) and high-end media box applications. It integrates a powerful CPU, GPU subsystem, a secured 4K video CODEC engine and a best-in-class HDR image processing pipeline withall major peripherals to form the ultimate high-performance multimedia AP.

The main system CPU is based on Big. Little architecture which integrates a quad-core ARM Cortex-

A73 CPU cluster and a dual-core Cortex-A53 cluster with united L2 cache to improve system performance. Each CPU core includes the separate NEON SIMD co-processor to improve software media processing capability.

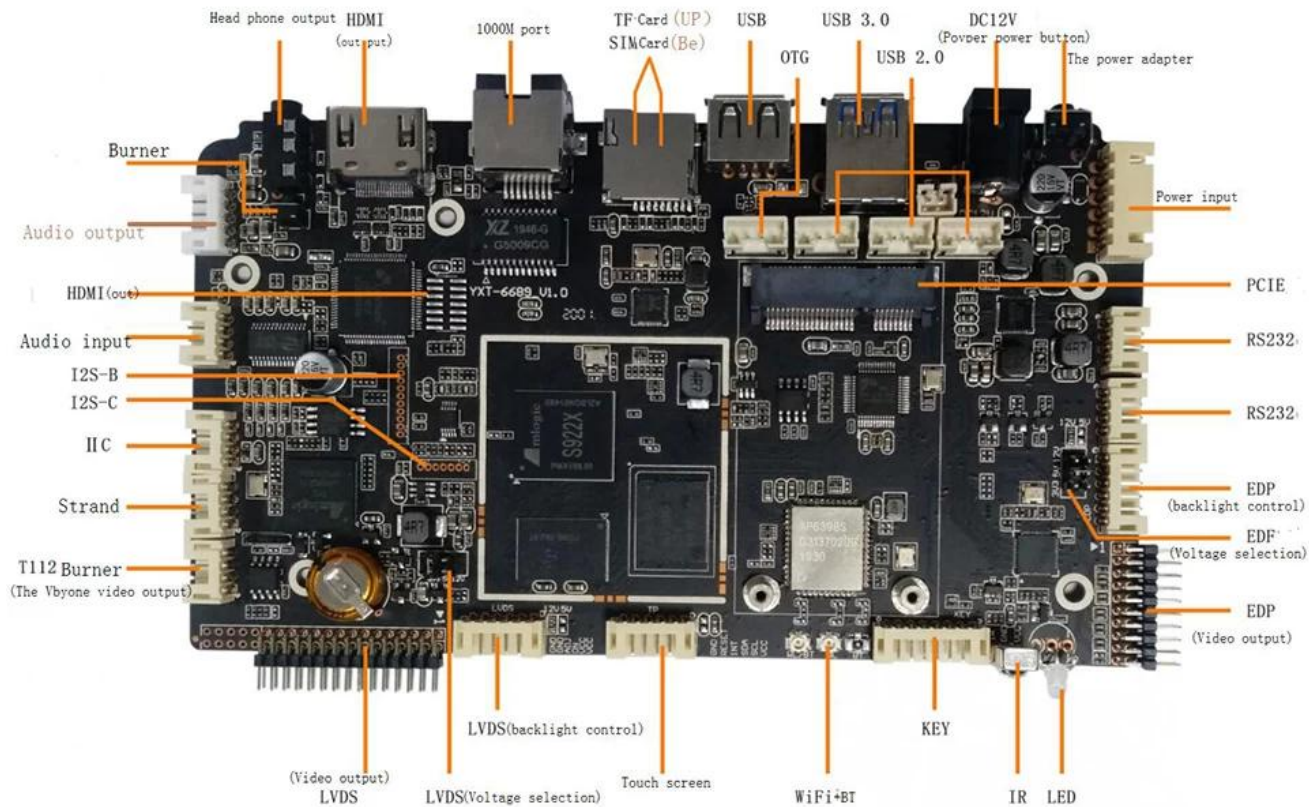
The graphic subsystem consists of two graphic engines and a flexible video/graphic output pipeline. The ARM Mali-G52 MP4 GPU handles all OpenGL ES 3.2 Vulkan 1.0 and OpenCL 2.0 graphic programs, while the 2.5D graphics processor handles additional scaling, alpha, rotation and color space conversion operations. Together, the CPU and GPU handle all operating system, networking, user-interface and gaming related tasks. The video output pipeline includes Dolby Vision optional HDR10, HDR10+, HLG and PRIME HDR processing, REC709/BT2020 processing, motion adaptive edge enhancing de-interlacing, flexible programmable scalar, and many picture enhancement filters before passing the enhanced image to the video output ports.

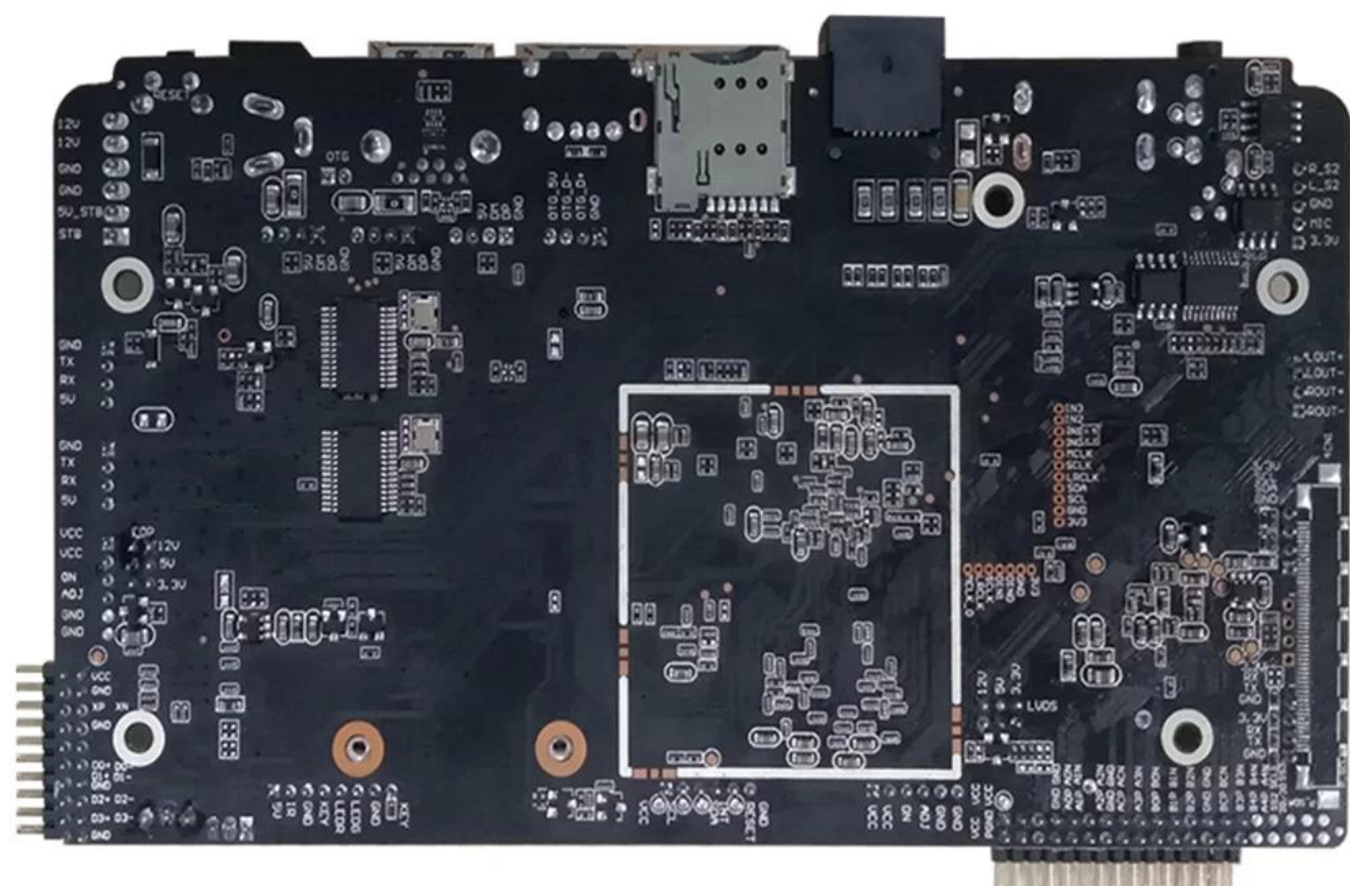
Amlogic Video Engine (AVE-10) offloads the Cortex-A53 CPUs from all video CODEC processing. It includes dedicated hardware video decoder and encoder. AVE-10 is capable of decoding 4Kx2K resolution video at 75fps with complete Trusted Video Path (TVP) for secure applications and supports full formats including MVC, MPEG-1/2/4, VC-1/WMV, AVS, AVS+, AVS2 RealVideo, MJPEG streams, H.264, H.265-10, VP9 and also JPEG pictures with no size limitation. The independent encoder is able to encode in JPEG or H.265/H.264 up to 1080p at 60fps.

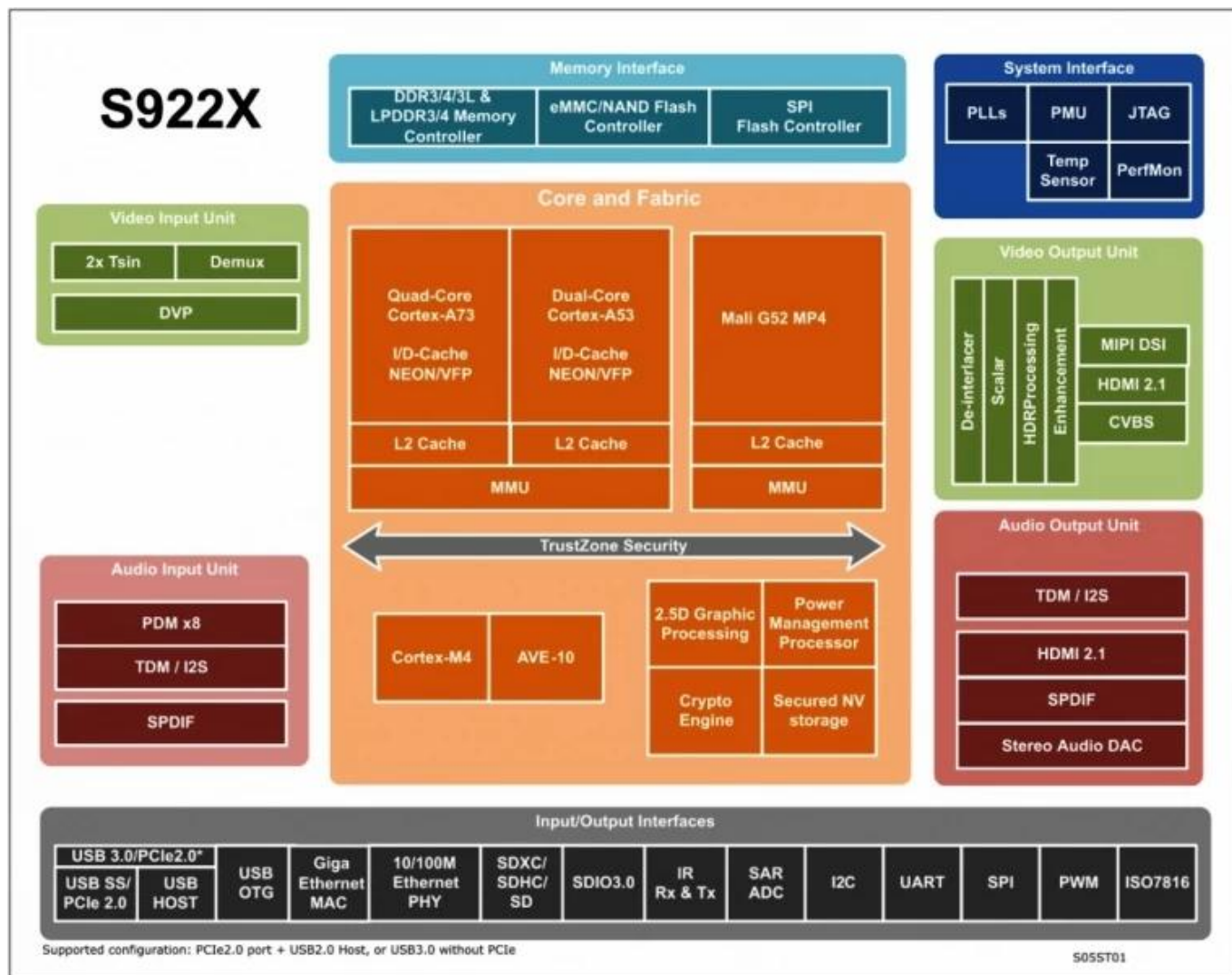
Amlogic S922X integrates all standard audio/video input/output interfaces including a HDMI 2.1 transmitter with 3D, Dynamic HDR, CEC and HDCP 2.2 support, stereo audio DAC, a CVBS output, 4-lane MIPI DSI interface, multiple TDM, PCM, I2S and SPDIF digital audio input/output interfaces, 8 channel far-field PDM digital microphone (DMIC) inputs and a DVP camera interface.

Amlogic S922X also integrates a set of functional blocks for digital TV broadcasting streams. The built-in two demux can process the TV streams from the serial and parallel transport stream input interface, which can connect to external tuner/demodulator.

The processor has rich advanced network and peripheral interfaces, including a 10/100/1000M Ethernet MAC with RGMII, 10/100M Ethernet PHY, one USB XHCI OTG 2.0 port, one USB 3.0 and PCIe







**Innovative Android TV Box Solutions** As a leading Android TV Box supplier and manufacturer, we are committed to delivering innovative solutions that enhance your entertainment experience. Our Android TV Boxes are designed to offer exceptional performance, reliability, and versatility, making them ideal for streaming, gaming, and multimedia consumption.

**Cutting-Edge Features** Our Android TV Boxes come packed with cutting-edge features such as powerful processors, advanced graphics capabilities, 4K Ultra HD support, HDR compatibility, and Dolby Audio for an immersive audiovisual experience. Whether you're streaming your favorite content or playing the latest games, our devices deliver outstanding performance.

**Customizable Interfaces** We understand that every user has unique preferences, which is why our Android TV Boxes feature customizable interfaces. Tailor your home screen, app layout, display settings, and more to suit your personal style and requirements. Enjoy a personalized and user-friendly experience with our intuitive interfaces.

**Extensive App Compatibility** With access to the Google Play Store, our Android TV Boxes offer a vast library of apps, games, and streaming services. Enjoy popular streaming platforms like Netflix, Amazon Prime Video, Hulu, YouTube, and more, all in stunning 4K resolution. Explore endless entertainment possibilities at your fingertips.

**Seamless Connectivity** Stay connected and enjoy seamless streaming with our Android TV Boxes. Equipped with Wi-Fi and Ethernet connectivity options, you can stream content, browse the web, and download apps without interruptions. Connect effortlessly to your home network for a smooth

and reliable experience.

**Reliable Performance** Our Android TV Boxes are built to deliver reliable performance over extended periods. Whether you're binge-watching your favorite shows or engaging in intense gaming sessions, our devices maintain consistent performance, ensuring a hassle-free entertainment experience.

**Conclusion** As a trusted [Android TV Box supplier](#) and manufacturer, we are dedicated to providing superior entertainment solutions that exceed customer expectations. Explore our range of feature-rich Android TV Boxes and elevate your home entertainment to new heights. Experience innovation, performance, and versatility with our cutting-edge devices.