

# 4K Brilliance: Amlogic S922X Octa-Core

## Product Overview

General Information	
Operating System	Android Amlogic S922X
Processor	Amlogic S922X Quad Core ARM Cortex A73 + Dual Core ARM Cortex A53 1.98Ghz
GPU	ARM Mali-G52 MP4 (6EE) OpenGL ES 3.2, Vulkan 1.1 + OpenCL 2.0
Memory	DDR4 2GB/4GB
Storage	eMMC 16GB (Optional up to 128GB)
OS Version	Android 9.0
Media Capabilities	
Video Support	4K H.265 10Bit, H.264, AVS, MPEG-2, VP8, VP9, HEVC
Audio Support	MPEG1, MPEG2, MPEG4, H.264, WMV, MKV, TS, flv, AAC, MP3, MP4, MP5, MP6, MP7, MP8, MP9, MP10, MP11, MP12, MP13, MP14, MP15, MP16, MP17, MP18, MP19, MP20, MP21, MP22, MP23, MP24, MP25, MP26, MP27, MP28, MP29, MP30, MP31, MP32, MP33, MP34, MP35, MP36, MP37, MP38, MP39, MP40, MP41, MP42, MP43, MP44, MP45, MP46, MP47, MP48, MP49, MP50, MP51, MP52, MP53, MP54, MP55, MP56, MP57, MP58, MP59, MP60, MP61, MP62, MP63, MP64, MP65, MP66, MP67, MP68, MP69, MP70, MP71, MP72, MP73, MP74, MP75, MP76, MP77, MP78, MP79, MP80, MP81, MP82, MP83, MP84, MP85, MP86, MP87, MP88, MP89, MP90, MP91, MP92, MP93, MP94, MP95, MP96, MP97, MP98, MP99, MP100
Connectivity	
Display Output	1 x LVDS 40 pins 2.0, 1 x HDMI 1.4, 1 x AV 1.0
Camera	x1, MIPI
Power	25W@2 pins 4 pins 2.5, 3W@2 pins
Network	x1, 10M/100M WiFi, 2.4G single band, 2.4G/5G dual band, PCIe (4G) x1, M.2 (4G) x1
USB	USB OTG x1 (Type-C), USB 2.0 x7
Audio Output	x2, 6 pins 2.0
LED	x1, 7 pins 2.0, LED
Buttons	x4
TF Card	x1
GPIO	x1
Temperature Sensor	1
Power Supply	
Input Voltage	12V, 2.5DC

Amlogic S922X Octa-Core processor, featuring 4K H.265 10-bit video decoding, HDR10+ support, and advanced AI capabilities. The device is designed for high-performance multimedia applications, offering excellent video quality and smooth playback. It also supports various audio formats and provides a rich connectivity options for seamless integration into your system.

AI-powered features, including 12 neural network layers, enhance the device's ability to process and analyze data. The Amlogic S922X Octa-Core CPU, combined with the powerful GPU, ensures high performance and energy efficiency. The 4K HDR support allows for stunning visual experiences, while the dual-core Cortex-A73 and Cortex-A53 processors provide a balanced performance profile. The device also features a dual-core Cortex-A53 for efficient multitasking and a Neon SIMD unit for accelerated processing. With its compact size and low power consumption, the S922X is an ideal choice for embedded systems and IoT applications.

Codec: MVC, MPEG-1/2/4, vc-1 /WMV, AVS, AVS , avs2 realvideo, MJPEG, H.264, h265-10, VP9 JPEG h.265/h.264 1080p, 75 4kx2k @ 60fp (3840 \* 2160) hdmi2.2 4K V HDCP 2.2, DAC, CVBS, Mipi DSI 4 I/O TDM, PCM, I2S SPDIF PDM (dmic) 8 DVP 2x2 WiFi (2.4G 5.8G) 4.1 Gigabit Ethernet

o Amlogic ARM® Cortex™ A73 64 ARM® Cortex™ A53

GPU ARM Mali-G52 MP4

o HW UHD 4K.H.265 75fps 10 1080p H.265/H.264 60fp sencoder

o Dolby Vision HDR10, HDR10, HLG PRIME HDR

o Cortex-M4 core

o TrustZone DRM

o WIFI, BT, USB, SD,

o

Amlogic S922X Android OTT/IPTV Set Top Box (STB) CPU GPU, CODEC 4K HDR AP

CPU Big Quad-Core Cortex-A53 Dual-Core L2 CPU core NEON SIMD

GPU ARM Mali-G52 MP4 OpenGL ES 3.2 Vulkan 1.0 OpenCL 2.0 2.5D HDR10, HDR10, HLG PRIME HDR Dolby Vision, REC709/BT2020,

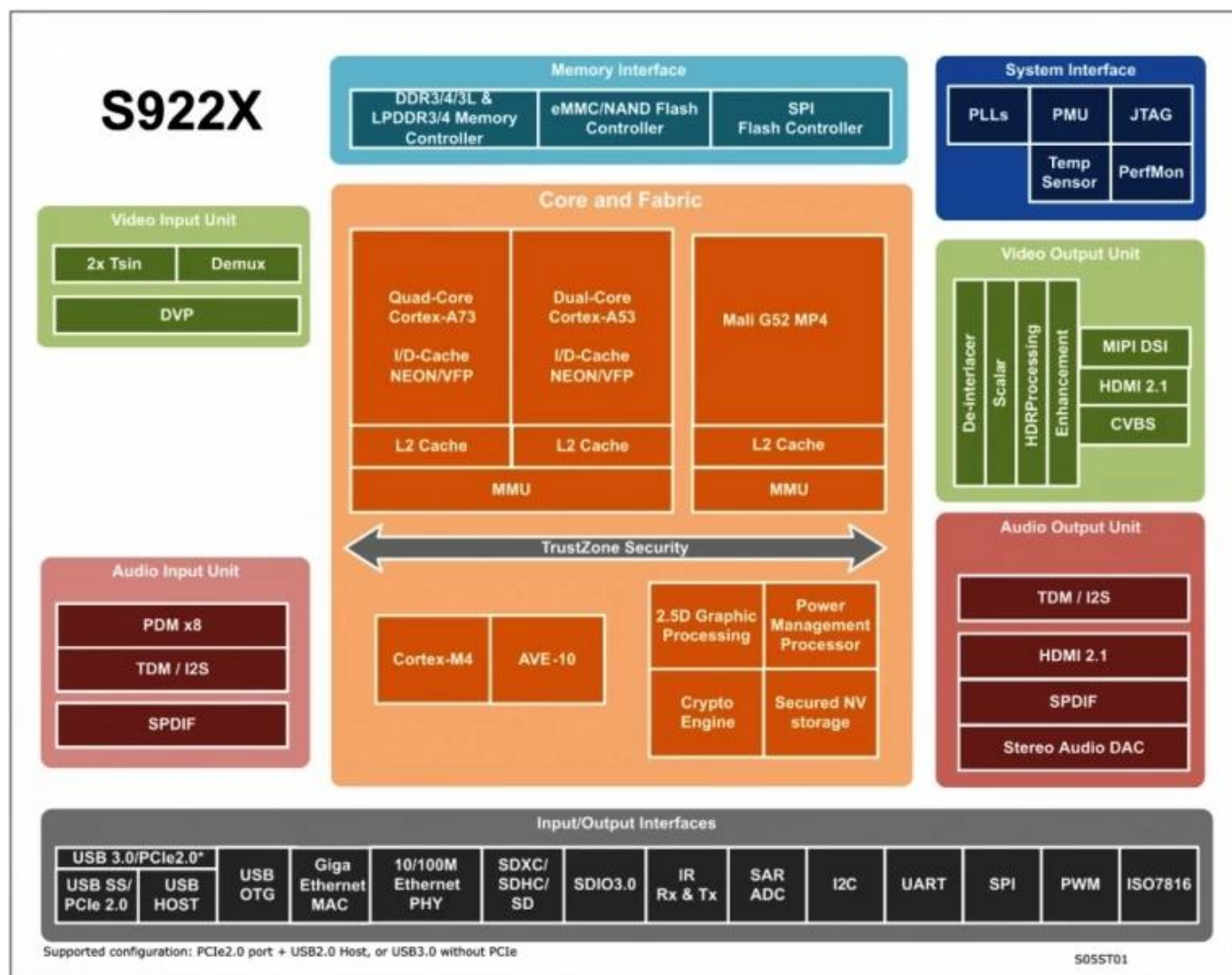
Amlogic Video Engine (AVE-10) Cortex-A53 CODEC

4Kx2K 75fps Trusted Video Path (TVP)  
 MVC, MPEG- 1/2/4, VC-1/WMV, AVS, AVS, AVS2 RealVideo, MJPEG, H.264, H265-10, VP9, JPEG  
 JPEG H.265/H.264 1080p 60fps

Amlogic S922X /  
 HDMI2.1 3D, Dynamic HDR, CEC, HDCP 2.2, DAC, CVBS, 4 MIPI DSI, TDM, PCM, I2S, SPDIF, PDM (DMIC) 8 DVP

Amlogic S922X demuxcan

10/100/1000M Ethernet MAC, RGMII, 10/100M Ethernet PHY, USB XHCI OTG 2.0, USB3.0, PCIe



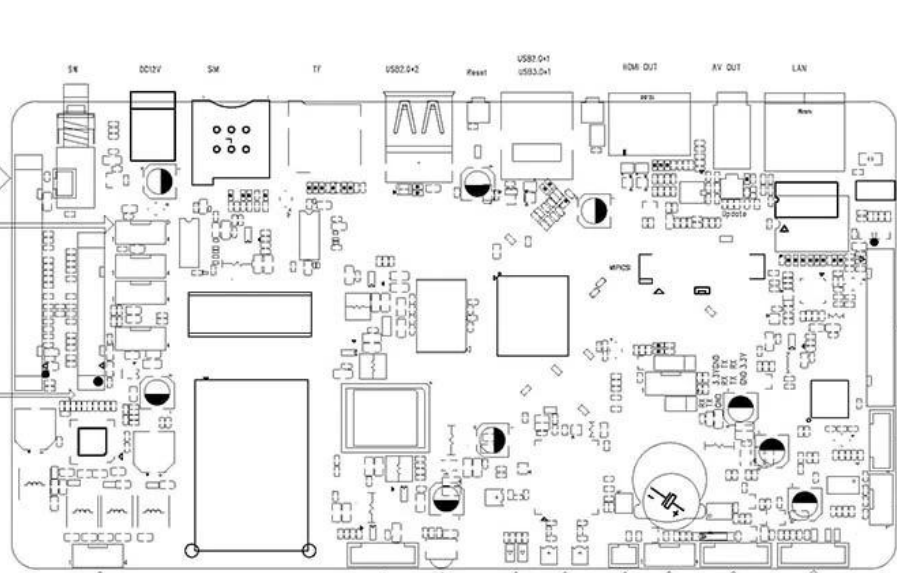


180mm

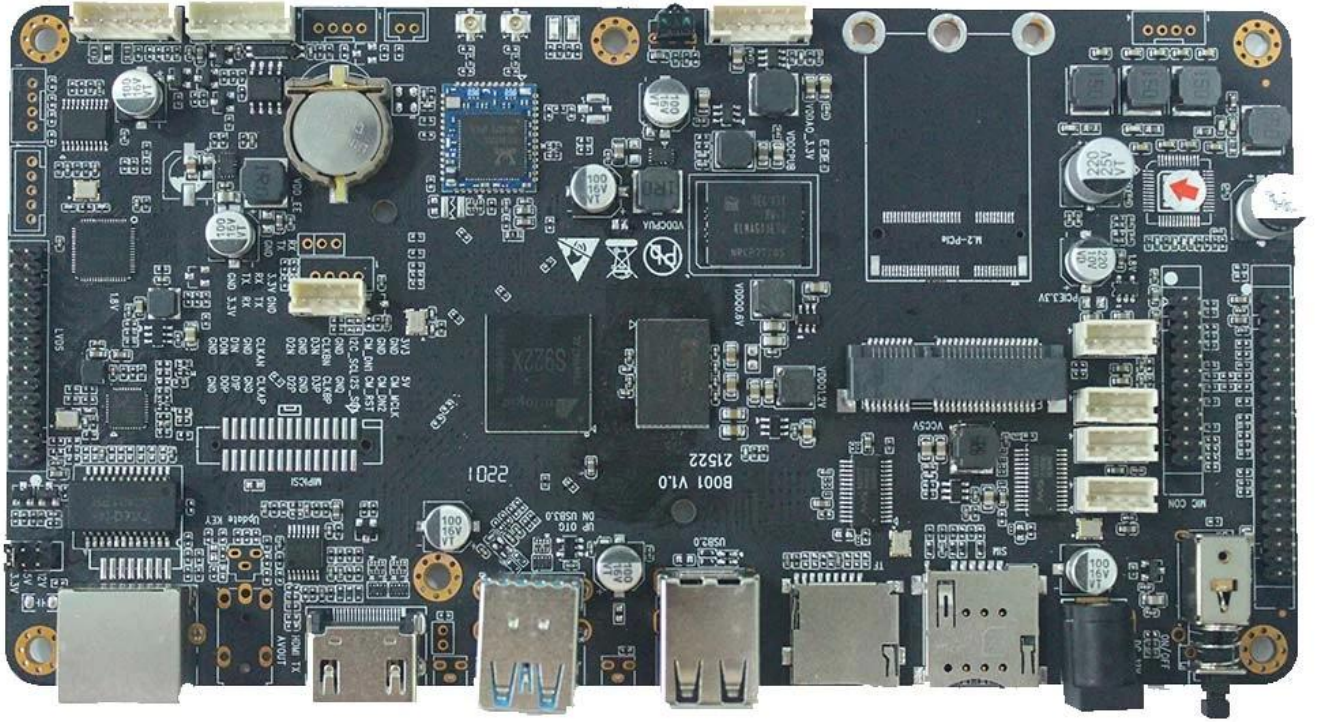
95mm

180mm\*95mm\*20mm

21258 10 142802



LVDS





- MIPI CSI 1
- AV 1
- 1 I2C
- I2SC/IS2B
- 25W 1 3W
- (2)
- WiFi 4G
- (3)
- U

AV

- (1) Quad Core ARM Cortex-A73 Dual Core ARM Cortex-A53
- (2) ARMv8-A Neon Crypto
- (3) L2
- (4) Build-in Cortex-M4 core
- (5) TrustZone
- (6) QoS

- (1) GPU ARM Mali-G52 MP4 (4ppc)
- (2) 8, 2xdual, 6x8 (EE)
- (3)
- (4) OpenGL ES3.2, Vulkan 1.0 OpenCL 2.0

CODEC

- (1) Amlogic Video Engine (AVE)
- (2) 4Kx2K@60fps 1x1080P@60fps
- (3) "AV1"
- (4) VP9-2 4Kx2K@60fps
- H.265 HEVCMP-10@L5.1 4Kx2K@60fps
- AVS2-P2 4Kx2K@60fps
- H.264 AVCHP@L5.1 4Kx2K@30fps
- H.264 MVC 1080P@60fps
- MPEG-4 ASP@L5 1080P@60fps (ISO-14496)
- WMV/VC-1 SP/MP/AP 1080P@60fps
- AVS-P16(AVS) /AVS-P2 JiZhun 1080P@60fps
- MPEG-2 MP/HL 1080P@60fps(ISO-13818)
- MPEG-1MP/HLupto1080P@60fps(ISO-11172)
- RealVideo 8/9/10 1080P@60fps
- MJPEG JPEG (ISO/IEC-10918)
- \*.mkv,\*.wmv,\*.mpg, \*.mpeg, \*.dat, \*.avi,\*.mov, \*.iso,\*.mp4, \*.rm \*.jpg
- (5) H.265/H.264 1080P@60fps

AV

- (1) HDMI 2.1 PHY CEC, Dynamic HDR HDCP 2.2,



4Kx2K@60

(2) CVBS 480i/576i

(3) SD/HD/FHD : 480i/p, 576i/p, 720p, 1080i/p 4Kx2K

(4) MIPI DSI 4 1920 \* 1080

(7) Quad Core ARM Cortex-A73 Dual Core ARM Cortex-A53

(8) ARMv8-A Neon Crypto

(9) L2

(10) Cortex-M4

(11) TrustZone

(12) QoS

3

(5) GPU ARM Mali-G52 MP4 (4ppc)

(6) 8, 2xdual, 6x8 (EE)

(7)

(8) OpenGL ES3.2, Vulkan 1.0 OpenCL 2.0

CODEC

(6) Amlogic Video Engine (AVE)

(7) 4Kx2K@60fps1x1080P@60fps

(8) "H.265" H.265

(9)

VP9-2 4Kx2K@60fps

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

AVS2-P2 4Kx2K@60fps

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

H.264 MVC 1080P@60fps

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

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

AVS-P16(AVS) /AVS-P2 JiZhun 1080P@60fps

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

MPEG-1MP/HLupto1080P@60fps(ISO-11172)

RealVideo 8/9/10 1080P@60fps

MJPEG JPEG (ISO/IEC-10918)

JPEG

\*.mkv,\*.wmv,\*.mpg, \*.mpeg, \*.dat, \*.avi,\*.mov, \*.iso,\*.mp4, \*.rm \*.jpg

(10)

JPEG H.265/H.264

JPEG

H.265/H.264 1080P@60fps

(5) HDMI 2.1 PHY CEC, Dynamic HDR HDCP 2.2,

4Kx2K@60

(6) CVBS 480i/576i

(7) SD/HD/FHD : 480i/p, 576i/p, 720p, 1080i/p 4Kx2K

(8) MIPI DSI 4 1920\*1080

Amlogic S922X Octa-Core Ultra HD 4K

[Android TV Box.](#)