



# VIM4 Specifications

SoC	<p>Amlogic A311D2            2.2GHz Quad core ARM Cortex-A73 and 2.0GHz Quad core Cortex-A53 CPU            ARM Mali-G52 MP8(8EE) GPU up to 800MHz            8K 24fps decoder &amp; low latency 4K H.264/H.265 50fps encoder            Support multi-video decoder up to 4Kx2K@60fps+1x1080P@60fps            HDR10, HDR10+, HLG and PRIME HDR video processing            TrustZone based security for DRM video streaming</p>
Coprocessor [1]	STM32G031K6
SPI Flash	32MB
RAM	8GB LPDDR4X 2016MHz, 64bit
EMMC 5.1	32GB
Wi-Fi	AP6275S Wi-Fi 6 Module 802.11a/b/g/n/ac/ax, 2T2R MIMO with RSDB [2]
Bluetooth	Bluetooth 5.1
LAN	10/100/1000M
WOL [3]	Wake on Lan
TF Card	Molex Slot, Spec Version 2.x/3.x/4.x(SDSC/SDHC/SDXC)
USB HOST	x2 (1500mA & 1300mA Load)
USB Type-C	USB2.0 OTG & USB PD
VIN Connector	System Power Input
Wide Input Voltage	Range from 9V to 20V
HDMI Output	Type-A Female HDMI2.1, up to 4K2K HDR Video, Dynamic HDR, CEC and HDCP 1.4/2.3
HDMI Input	Micro HDMI, up to 4Kp60
DMIC	Stereo Digital Microphones
V-by-One	8 lanes Interface, Resolution up to 4096*2160 30 Pin 0.5mm Pitch FPC Connector
Touch Display	MIPI-DSI and eDP Combo Interface 4 lanes MIPI-DSI Interface, Resolution up to 1920*1200 or 4 lanes eDP Interface, Resolution up to 2560*1600 I2C and GPIO Signals for Touch Panel 40 Pin 0.5mm Pitch FPC Connector
Camera	Interface: 4 lanes MIPI-CSI x2 Supports Dual Cameras Up to 16 MP ISP 30 Pin & 20 Pin 0.5mm Pitch FPC Connectors
Sensor	KXTJ3-1057 Tri-axis Digital Accelerometer
M.2 Socket	PCIe 2.0 (1 lane) M.2 2280 NVMe SSD Supported USB 2.0, I2S, I2C, GPIO, MCU-I/O
RTC Battery Header	0.8mm Pitch Header
Cooling Fan Header	4-Pins 0.8mm Pitch Header, with PWM Speed Control
LEDs	White LED x1, Red LED x1

40-Pins Header(2.54mm)	CPU: USB, I2C, I2S, SPDIF, UART, PWM, ADC, GPIO MCU: SWCLK, SWDIO
Buttons	x3 (Power / Func / Reset)
XPWR Pads	For External Power Button
Mounting Holes	Size M2 x 4
Board Dimensions	82.0 x 58.0 x 11.5 mm
Board Weight	31g
Bootloader	U-Boot
Linux Kernel	Linux 5.4
Linux Distros	Ubuntu 22.04
Android	Android 11
Khadass Only	Khadass TST [4]
	Khadass KBI
	OOWOW [5]
	Fenix [6]
Compliances	CE, FCC, TELEC(Japan), RoHS

[1] MCU: Power management, and boot media(SPI Flash or eMMC) setup.

[2] RSDB: Real Simultaneous Dual Band, which lets VIM4 and other devices transmit and receive data over two bands at the same time.

[3] WOL: Power on or wake up VIM4 remotely over Lan through APP or webpage.

[4] The Khadas TST feature enables developers to enter upgrade mode easily: simply press the function key 3 times within 2 seconds, and it works even if the boot loader is damaged.

[5] OOWOW: A standalone embedded service for seamless online OS delivery, device maintenance, and much more!

[6] Fenix Script: One-click script for building of Linux Distributions.

[7] The current version of VIM4 does not include an NPU, future refresh version might include an NPU.