



Comparing VIM Series

	VIM1 Basic/Pro	VIM1S	VIM3L
SoC Process	28nm	12nm	12nm
CPU	Amlogic S905X x4 A53 at 1.5GHz	Amlogic S905Y4 x4 A35 at 2.0GHz	Amlogic S905D3-N0N x4 A55 at 1.9GHz
GPU	ARM Mali-450 GPU up to 750MHz	ARM Mali-G31 MP2 GPU up to 850MHz	ARM G31 MP2 GPU up to 800MHz
NPU	NO	NO	1.2 TOPS
RAM	2GB DDR3/768MHz, 32-bit	2GB LPDDR4/1176MHz, 32-bit	2GB LPDDR4/X 1608MHz, 32-bit
eMMC	8GB/16GB	16GB	16GB
SPI Flash	NO	32MB	16MB
Wi-Fi	AP6212 (b/g/n) /AP6255 (b/g/n/ac)	AP6256 (b/g/n/ac)	AP6398S (a/b/g/n/ac), 2X2 MIMO with RSDB
Bluetooth	Bluetooth 4.2	Bluetooth 5.0	Bluetooth 5.0
Ethernet	10/100Mbps	10/100Mbps	10/100/1000Mbps
Wake-on-Lan	NO	NO	YES
M.2 Socket	NO	NO	x1 1 lane PCIe 2.0 M.2 2280 NVMe SSD Supported USB 2.0, I2S, I2C, ADC, 100M Ethernet PHY interface, GPIO
HDMI Display	HDMI 2.0b	HDMI 2.1	HDMI 2.1
MIPI-DSI	-	-	x1
MIPI-CSI	-	-	x1 2 lanes MIPI-CSI (ISP not built-in)
Sensor	-	-	KXTJ3-1057Tri-axis Digital Accelerometer
Power Supply	USB-C, VIN	USB-C, VIN(90° Rotated)	USB-C, VIN
Voltage Range	5.0V	5.0V	5~20V
USB Host	x2 USB 2.0	x2 USB 2.0	x1 USB 3.0, x1 USB 2.0
USB-C	USB2.0 OTG, 5V DC Input	USB 2.0 OTG, 5.0V DC Input	USB2.0 OTG, USB PD
LEDs	2	2	3
Decoding	Multi-video Decoding up to 4x 1080p@60fps	Multi-video Decoding up to 4x 1080p@60fps	Multi-video decoder 4Kx2K@60fps + 1x1080P@60fps
Encoding	H.264 1080P@60fps	Software	H.265/H.264 1080P@60fps
Onboard MCU	8bit STM8S003 with Programmable EEPROM	8bit STM8S003 with Programmable EEPROM	8bit STM8S003 with Programmable EEPROM
RTC Timer	2 Pin JST 0.8mm Header	2 Pin JST 0.8mm Header	2 Pin JST 0.8mm Header
Cooling Fan Header	4-Pin 0.8mm Pitch Header PWM Speed Contro	4-Pin 0.8mm Pitch Header PWM Speed Contro	4-Pin 0.8mm Pitch Header PWM Speed Contro
IR Receiver	Dual Channels	Dual Channels	Dual Channels
User Buttons	Reset, Power, Function	Reset, Power, Function	Reset, Power, Function
40-Pin Header	USBx2, I2Cx2, UARTx2, I2S, SPDIF, PWM, ADC, GPIOs	CPU: USB, I2C, I2S, SPDIF, UART, PWM, ADC, GPIO MCU: SWIM, NRST	CPU: USB, I2C, I2S, SPDIF, UART, PWM, ADC MCU: SWIM, NRST, PA1
Board Dimensions	82.0 x 58.0 x 11.5 mm	82.0 x 58.0 x 13.0 mm	82.0 x 58.0 x 13.0 mm
Board Weight	28.5g	27g	28.5g
Linux Kernel	Linux Mainline, Linux 4.9	Linux 5.15, Linux 5.4	Linux Mainline, Linux 4.9, Linux 5.15
Linux Distros	Ubuntu 18.04+ / Armbian	Ubuntu 22.04, Armbian, CoreELEC, Batocera	Ubuntu 22.04/20.04, Armbian, CoreELEC, Batocera
Android	Android 9.0	Android 11	Android 9.0
Compliances	CE, RoHS	CE, FCC, TELEC, RoHS	CE, FCC, TELC, RoHS

* VIM1S and VIM3L's enhancements are highlighted in blue.