Comparisons between Edge-V, VIM3 and RPi 4

Model	Edge-V Pro	VIM3 Pro	Raspberry Pi 4 (4GB)
SoC Process	28nm	12nm	28nm
CPU	Rockchip RK3399 x2 A72 at 1.8GHz + x4 A53 at 1.4GHz	Amlogic A311D x4 A73 at 2.2GHz + x2 A53 at 1.8GHz	Broadcom BCM2711 x4 A72 at 1.5GHz
GPU	Mali T860 MP4	Mali G52 MP4 at 800MHz	VideoCore VI at 500MHz
NPU	-	5 TOPS	-
RAM	4GB LPDDR4 800MHz, 64bit	4GB LPDDR4/X 1608MHz, 32bit	4GB LPDDR4 TBC, 32bit
eMMC	Onboard, 32GB	Onboard, 32GB	-
SPI Flash	16MB	16MB	512KB (EEPROM)
Wi-Fi	2T2R 802.11 ac with RSDB	2T2R 802.11 ac with RSDB	1T1R 802.11 ac
Bluetooth	V5.0	V5.0	V5.0
M.2 Socket	4-lane PCIe	1-lane PCIe [1]	-
Wake-on-Lan	✓	✓	-
Timer on [2]	✓	✓	-
USB-C DP Display	✓	-	-
HDMI Display	x1 Type-A	x1 Type-A	x2 Type-D
eDP Display	✓	-	-
MIPI-DSI Display	2 [3]	1	2-lane
MIPI-CSI Camera	4-lane x2 with dual 14MP ISP	4-lane x1 with 8MP ISP	2-lane
Gesture Control	✓	-	-
Motion Tracking	Tri-axis Gyroscope Tri-axis Accelerometer	Tri-axis Accelerometer	-
Battery	✓ [4]	-	-
User Buttons	Reset, Power, Function	Reset, Power, Function	-
Power Supply	USB-C x2	USB-C, VIN	USB-C
IR Receiver	Dual Channels	Dual Channels	-
AV Out	-	-	✓
USB Host	x1 USB 3.0 + x1 USB 2.0	x1 USB 3.0 + x1 USB 2.0	x2 USB 3.0 + x2 USB 2.0
USB OTG Port	USB-C	USB-C	USB-C
Board Dimensions	82.0 x 58.0 x 13.0 mm	82.0 x 58.0 x 13.0 mm	88.0 x 58.5 x 19 mm [5]
Decoding	H.265 4K 60fps	Multi-video decoder up to 4Kx2K@60fps + 1x1080P@60fps	H.265 up to 4Kp60
Encoding	H.264 at 1080P@30fps	H.265 & H.264 at 1080P@60fps	H.264 at 1080P@30fps

[1] Switch between 1-lane PCIe or USB 3.0.
[2] The RTC timer can power on the SBC at a preset time which can be used applied to occasions like digital signage.
[3] Need to setup one of the MIPI-TX/RX interface(MIPI-CSI as default configuration) as MIPI-DSI interface.
[4] The Battery module requires a built-in charging circuit.
[5] All board dimensions given are inclusive of I/O ports.