



## Comparisons between Edge-V and VIM Series SBC

| Model             | VIM1 Pro (V14)                         | VIM2 Pro (V14)                   | VIM3L   | VIM3 Pro  | Edge-V Pro  |
|-------------------|--|----------------------------------|---|---|---|
| SoC Process       | 28nm                                   | 28nm                             | 12nm  | 12nm  | 28nm  |
| CPU               | Amlogic S905X<br>x4 A53 at 1.5GHz      | Amlogic S912<br>x8 A53 at 1.5GHz | Amlogic S905D3-N0N<br>x4 A55 at 1.9GHz                | Amlogic A311D<br>x4 A73 at 2.2GHz<br>+ x2 A53 at 1.8GHz | Rockchip RK3399<br>x2 A72 at 1.8GHz<br>+ x4 A53 at 1.4GHz |
| GPU               | Mali-450 MP5 at 750MHz                 | Mali-T820MP3 at 750MHz           | Mali G31 MP2 at 800MHz                                | Mali G52 MP4 at 800MHz                                  | Mali T860 MP4   |
| NPU               | -                                      | -                                | 1.2 TOPS  | 5 TOPS  | -   |
| RAM               | 2GB DDR3<br>912MHz, 32bit              | 3GB DDR4<br>1008MHz, 32bit       | 2GB LPDDR4/X<br>1608MHz, 32bit                        | 4GB LPDDR4/X<br>1608MHz, 32bit                          | 4GB LPDDR4<br>800MHz, 64bit                               |
| eMMC              | 16GB                                   | 32GB                             | 16GB  | 32GB  | 32GB  |
| SPI Flash         | -                                      | 16MB                             | 16MB  | 16MB  | 16MB  |
| Wi-Fi             | 1T1R 802.11 ac                         | 2T2R 802.11 ac with RSDB         | 2T2R 802.11 ac with RSDB                              | 2T2R 802.11 ac with RSDB                                | 2T2R 802.11 ac with RSDB                                  |
| Bluetooth         | V4.2                                   | V5.0                             | V5.0  | V5.0  | V5.0  |
| Ethernet          | 100Mbps                                | 1000Mbps                         | 1000Mbps  | 1000Mbps  | 1000Mbps  |
| Wake-on-Lan [1]   | -                                      | ✓                                | ✓   | ✓   | ✓   |
| M.2 Socket        | -                                      | -                                | 1-lane PCIe [2]                                       | 1-lane PCIe [2]   | 4-lane PCIe   |
| USB-C DP Display  | -                                      | -                                | -   | -   | ✓   |
| HDMI Display      | HDMI 2.0a                              | HDMI 2.0a                        | HDMI 2.1a   | HDMI 2.1a   | HDMI 2.0a   |
| HDMI eARC         | -                                      | -                                | ✓   | -   | -   |
| eDP Display       | -                                      | -                                | -   | -   | ✓   |
| MIPI-DSI Display  | -                                      | -                                | 1   | 1   | 2 [3]   |
| MIPI-CSI Camera   | -                                      | -                                | 2-lane x1<br>without integrated ISP                   | 4-lane x1<br>with 8MP ISP                               | 4-lane x2<br>with dual 14MP ISP                           |
| Gesture Control   | -                                      | -                                | -   | -   | ✓   |
| Motion Tracking   | -                                      | -                                | Tri-axis Accelerometer                                | Tri-axis Accelerometer                                  | Tri-axis Gyroscope<br>Tri-axis Accelerometer              |
| Battery           | -                                      | -                                | -   | -   | ✓ [4]   |
| Power Supply      | USB-C, VIN                             | USB-C, Pogo Pad                  | USB-C, VIN  | USB-C, VIN  | USB-C x2  |
| Voltage Range     | 5V                                     | 5V                               | 5~20V   | 5~20V   | 5~20V   |
| USB Host          | x2 USB 2.0                             | x2 USB 2.0                       | x1 USB 3.0 + x1 USB 2.0                               | x1 USB 3.0 + x1 USB 2.0                                 | x1 USB 3.0 + x1 USB 2.0                                   |
| USB-C             | USB 2.0 OTG                            | USB 2.0 OTG                      | USB PD<br>USB 2.0 OTG                                 | USB PD<br>USB 2.0 OTG                                   | USB PD<br>USB 3.0 OTG [5]                                 |
| LEDs              | 2                                      | 2                                | 3   | 3   | 3   |
| AV Out            | -                                      | -                                | Test Points   | Test Points   | -   |
| Decoding          | H.264/H.265 4K 60fps                   | H.264/H.265 4K 60fps             | Multi-video decoder up to 4Kx2K@60fps + 1x1080P@60fps |   | H.264/H.265 4K 60fps                                      |
| Encoding          | H.264 1080P@30fps                      | H.265/H.264 1080P@60fps          | H.265/H.264 1080P@60fps                               |   | H.264 1080P@30fps   |
| New VIMs Heatsink | ✓                                      | ✓                                | ✓   | ✓   | ✓   |
| 3705 Cooling Fan  | ✓                                      | ✓                                | ✓   | ✓   | ✓   |
| Tone Board        | ✓                                      | ✓                                | ✓   | ✓   | ✓   |
| IR Remote         | ✓                                      | ✓                                | ✓   | ✓   | ✓   |
| DIY-Case          | ✓                                      | ✓                                | ✓   | ✓   | -   |
| TS050 Touchscreen | -                                      | -                                | ✓   | ✓   | ✓   |
| 24W USB-C PSU     | ✓                                      | -                                | ✓   | ✓   | ✓   |
| M2X Module        | -                                      | -                                | ✓   | ✓   | ✓ [6]   |
| IMX214 Camera     | -                                      | -                                | -   | -   | ✓   |
| Juice Module      | -                                      | -                                | -   | -   | ✓   |
| vTV Board         | -                                      | ✓                                | -   | -   | -   |
| Onboard MCU       | 8bit STM8S003 with Programmable EEPROM |                                  |   |   |   |
| RTC Timer         | 2 Pin JST 0.8mm Header                 |                                  |   |   |   |
| IR Receiver       | Dual Channels                          |                                  |   |   |   |
| User Buttons      | Reset, Power, Function                 |                                  |   |   |   |
| Board Dimensions  | 82.0 x 58.0 x 11.5 mm                  |                                  |   |   |   |

[1] WOL: Power-on or wake up SBC remotely over LAN through an app or webpage.

[2] Switch between "1-lane PCIe and USB 2.0" or just "USB 3.0".

[3] The MIPI-TX/RX interface can be configured to function as a secondary MIPI-DSI, by default it is MIPI-CSI.

[4] Battery module requires a built-in charging circuit; the Juice Board has this circuit built-in.

[5] The USB-C port on the top side has USB 3.0 & PD, the other USB-C port under the board only supports USB PD.

[6] Edge-V can only use the SSD feature of M2X Module.

[7] The RTC timer can power on the SBC at a preset time, this applies to applications such as digital signage.