



Preliminary

Features

- 6x Arm Cortex-A55, 1x Cortex-M33 and 1x Cortex-M7
- Neutron NPU 2.0 TOPS
- Onboard 8GB LPDDR5, 16GB eMMC
- 1x Dual-channel LVDS, 1x single-channel LVDS or 1x 4 lane MIPI-DSI
- 1x 10 GbE, 2x Gigabit LAN, 1x USB 3.0, 1x USB 2.0, 2x PCIe 3.0, 3x CAN FD, 24x GPIO, 2x SDIO
- OSM Size L (45x45mm) Compact Size
- Supports wide-range operating temperature from -40°C to 85°C
- Validated with Yocto5

Specifications

Form Factor	OSM v1.2 Size-L compatible
Dimensions	45mm x 45mm
CPU Socket	N/A
CPU Type	6x Arm Cortex-A55 (up to 2.0 GHz, industrial grade; supports 64-bit Arm® v8.2 architecture, 2.0 TOP/s Neural Network performance) 1x Arm Cortex-M7 core 1x Arm Cortex-M33 core
PCH	N/A
Memory	System memory: 8 GB LPDDR5 6400 MT/s onboard (options: 4 GB or 16 GB) Flash memory: 16 GB eMMC NAND Flash for OS (optional configurations up to 256 GB)
BIOS	N/A
Watchdog Timer	1~6553s, power on/off delay 4s
H/W Monitor	N/A
Storage Device Interface	uSDHC(eMMC/SD)
Graphics	Arm Mali-G310 V2 GPU 3D GPU OpenGL® ES 3.2 Vulkan® 1.3 OpenCL 3.0
Display	1x 4-lane MIPI-DSI supporting 4kp30 or 3840 x 1440p60 1x 8-lane or 2 x 4-lane LVDS up to 1080p or 1920x1200 or Dual 720P
Image Capture Interface	1x 4-lane MIPI CSI-2 camera interface 1x 4-lane MIPI CSI-2 camera interface, shared with MIPI-DSI interface
Video Codec	Decoder: H.265, H.264, 4Kp30 Encoder: H.265, H.264, 4Kp30
I/O Chipset	NXP Cortex™ A55 i.MX95 Six Cores 2.0 GHz Industrial Grade Support of 64-bit Arm® v8.2 architecture Cortex®-M7 CPU operating up to 800 MHz Cortex®-M33 CPU operating up to 333 MHz
Internal I/O	2x Gigabit Ethernet (RGMII interface) 1x 10 Gigabit Ethernet (SGMII interface) with TSN support 1x USB 2.0 Host/Client 1x USB 2.0/3.0 Host/Client 2x MMC/SD/SDIO 2x 4-wire UART (w/ RTS/CTS) 3x 2-wire UART (Rx, Tx) 2x I²S 5x I²C up to 400 Kbit/s (2x for GP) 1x SPI (with two chip selects) 1x QSPI/SPI (with two chip selects) 2x CAN-FD / CAN 2.0B 1x CAN-FD / CAN 2.0B on vendor defined pins 2x PCIe 3.0 x 1-Lane 24x GPIO, configurable as input or output

External I/O	N/A
Expansion IO	N/A
TPM	Discrete TPM 2.0
Others	Temperature compensated RTC 4x PWM 2x ADC INputs (12-bit) 4x ADC INputs (12-bit) on vendor defined pins
Power Consumption	Power Supply +5V +/-5% Power Consumption 4-6 W typ. (depending on CPU)
Operating Temperature	-40°C to +85°C (-40°F~185°F), Industrial grade, with heat-sink
Storage Temperature	-40°C to 85°C (-40°F~185°F)
Relative Humidity	0 % to 90 % RH at 60° C (non-condensing)
OS Support	Yocto 5 Other OS (by request)
Certification	CE/FCC Class B