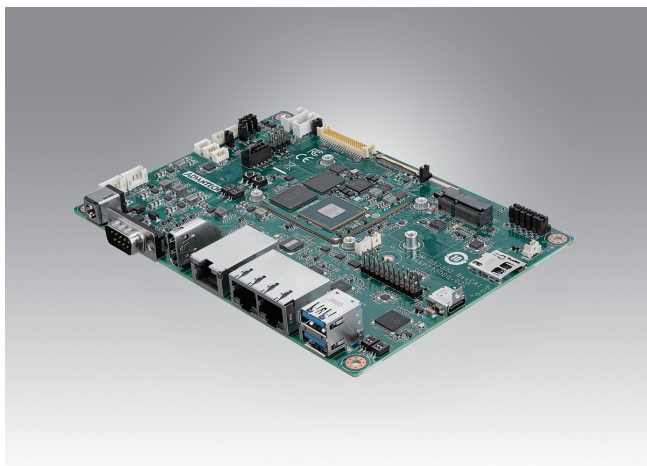


AOM-DK2521

Development Kit for OSM 1.2 AI-on-Module AOM-2521



Features

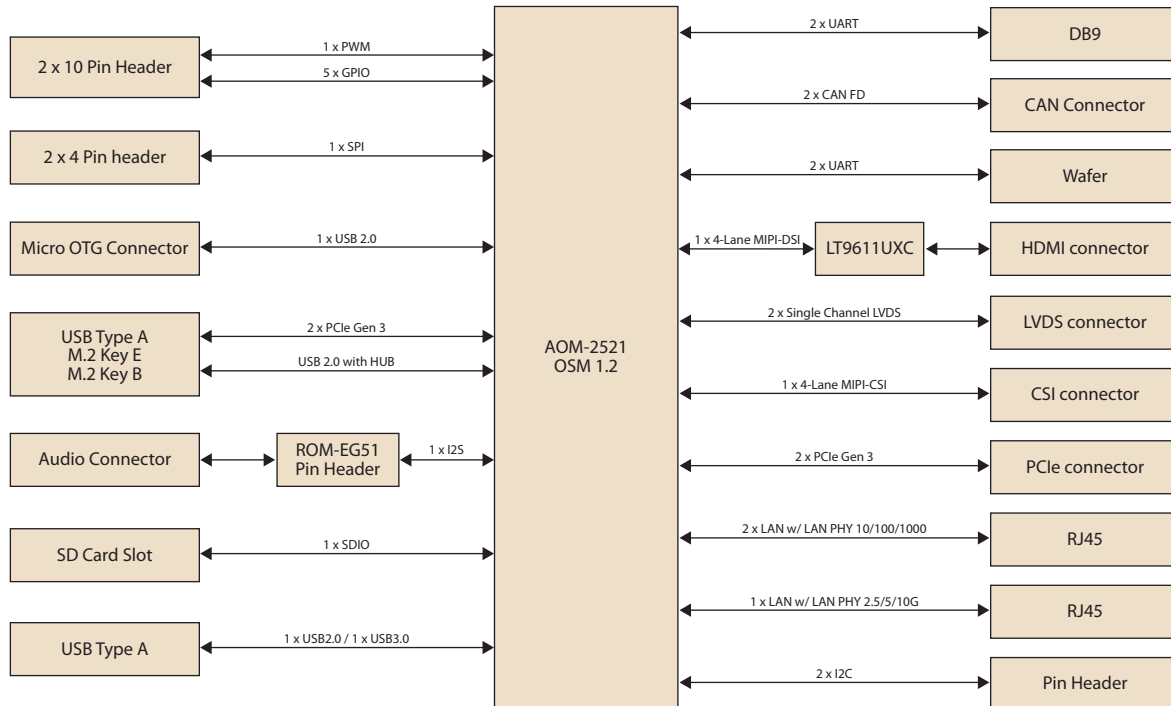
- NXP Arm® Cortex®-A55 i.MX95 Six Cores up to 2.0 GHz
- 1 x Arm Cortex-M7 core & 1 x Cortex-M33 core
- Onboard LPDDR5 8 GB, 6400MT/s memory
- Neural network accelerator built-in
- 1 x 4 lane MIPI-DSI, 2 x single channel LVDS or 1 x dual channel LVDS
- 1 x USB 3.2, 2 x USB 2.0, 5 x UART, 5 x I2C, 7 x GPIO, 3 x PWM, 2 x CAN-FD
- Compact size form factor - OSM Size L (45 x 45 mm)
- Support Yocto Linux



Specifications

Form Factor	AOM-2521 OSM Evaluation Kit	
Processor System	CPU	NXP i.MX95 Cortex-A55 Six core (up to 2.0GHz)
	MCU	1 x Arm Cortex-M7 core & 1 x Cortex-M33 core
Memory	Technology	LPDDR5 6400MT/s
	Capacity	On-board 8GB
	Flash	16 GB eMMC NAND Flash for O.S.
Graphics	LVDS/MIPI DSI	1 x 4 lane MIPI-DSI (Optional) 1 x Dual channel LVDS
	HDMI	1
	Parallel RGB	-
	VGA	-
	Graphics Engine	2D/3D Graphic Acceleration supporting 1G Pixel/s, OpenVG 1.1, Open GL ES3.1, Vulkan, and Open CL 1.2 FP.
Ethernet	Chipset	1 x NXP i.MX95 integrated USXGMII, 2 x NXP i.MX95 integrated RGMII
	Speed	1 x 10 GbE, 2 x 10/100/1000 Mbps
RTC	RTC	External RTC
Security	NXP i.MX 95 integrated Trust Zone	
I/O	USB	1 x USB 2.0, 1 X USB 3.0 Type A
	Micro USB OTG	1
	Audio	Mic in / Audio Out
	M.2	1 x M.2 Key E 2230 Connector (USB, UART, SDIO) 1 x M.2 Key B 3052 Connector (USB)
	COM	2 x RS232/422/485 (DB9) 3 x RS232 (wafer)
	Console Port	1
	GPIO	5
	PWM	1 x Pin Header 1 x dedicated to DSI for backlight 1 x dedicated to LVDS for backlight
	CAN FD	2
	SPI	1
	Camera	2 x 4 lane MIPI CSI (1 share with MIPI DSI by option)
	I2C	2
	PCIe	2
	Power	Power Supply Voltage
Power Consumption		10.46W
Environment	Operating Temperature	-40 ~ 85 °C
	Operating Humidity	5 ~ 95% relative humidity, non-condensing
Mechanical	Dimensions (W x D)	146 x 102 mm (4")
Operation System	Yocto Linux	
Certifications	CE/FCC Class B	

Block Diagram



Ordering Information

Part No.	Description
AOM-DK2521-01A1	AOM-2521 Evaluation Kit

Packing List

Part No.	Description
9696D230000	AOM-DB2300 OSM Carrier Board
9696MEG510E	ROM-EG51 A101 ASS'Y CODEC Board
AOM-2521B6-9590NA1	AOM-2521 OSM V1.2 module
96PSA-A36W12W7-5	ADAPTER 100-240V 36W 12V 3A
1700026878-01	M cable PH JACK D3.5/1x2P-1.25 15cm
1700031429-01	M Cable PH JACK D3.5/1x3P-1.25 15cm
1700021565-01	Debug cable 1x4P-1.25/D-SUB 9P(F) 60cm
1700019474	M Cable D-SUB 9P(F)/D-SUB 9P(F) RS232/RS485 100c
SQF-MSDM1-16G-21E	SQF MICRO SD C10 MLC 16G (-40~85°C)
1700023619-01	M cable USB-A 4P(M)/micro USB-B 5P(M) 100cm
1700021882-01	BKL cable 1x4P-1.25/1x5P-2.0 50cm
1700021883-01	LVDS cable 1x20P-1.0/2x20P-1.25 50cm

Optional Accessories

Part No.	Description
1700001524	Power Cord 3P UL 10A 125 V 180 cm
170203183C	Power Code 3P Europe (WS-010+WS-083)183cm
1700008921	Power Cord 3P PSE 183cm
170203180A	Power Cord 3P UK 2.5A/3A 250V 1.83M
AIW-167BN-GI1	NXP IW611 M.2 2230 with standard package
1751000460-01	Omn-directional radiation pattern, compatible for Wi-Fi 5/6/6E/7
1750007965-01	Antenna cable, SMA (M) to MHF4, 300mm
96LCM-G070WV40L-A0	7" LCD, 400nits, 800x480
EWM-C401	4G LTE M.2 3042 Key B, no simslot, no GNSS
1751000652-01	External Ant. LTE SMA/M RG178 BLK L163.1mm
1751000625-01	RF Cable SMA/F MHF4L/113 BLK L150mm