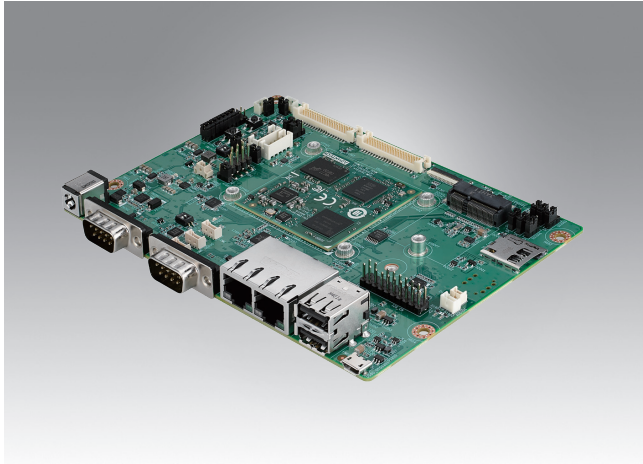


ROM-2820 Evaluation Kit

Development Kit for OSM 1.1 Computer-on-Module ROM-2820



Features

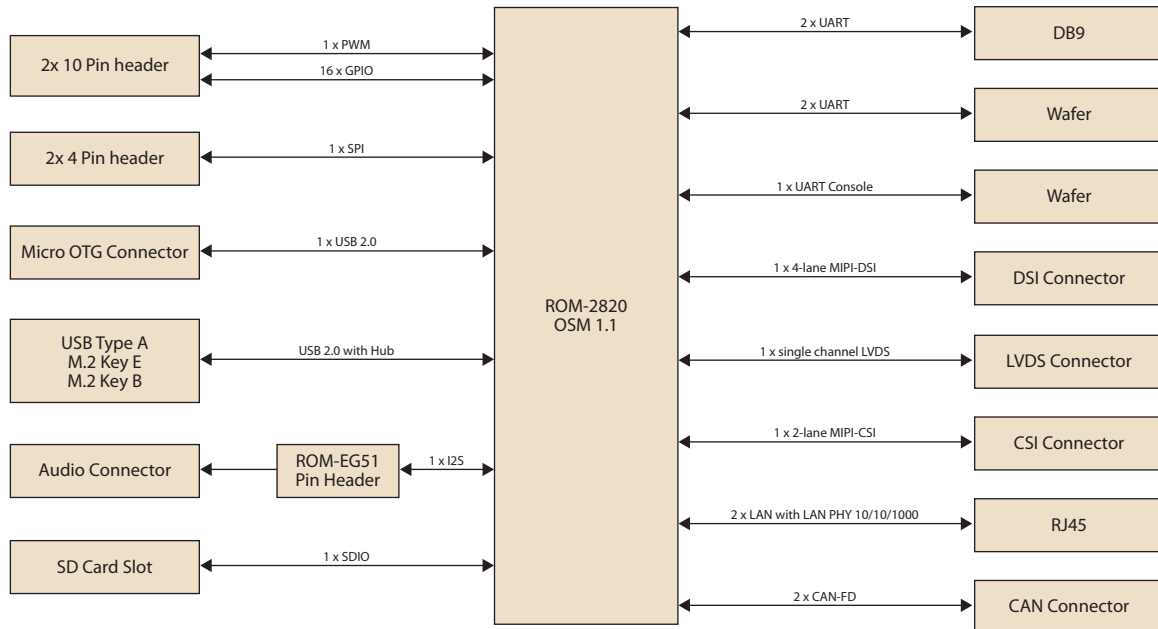
- NXP Arm® Cortex®-A55 i.MX 93 Dual up to 1.7 GHz
- 1 x Arm Cortex-M33 core
- Onboard 2GB LPDDR4X up to 3733MT/s memory
- 1 x 4 lane MIPI-DSI, 1 x single channel LVDS (Display Output, either one)
- 2 x USB 2.0, 1 x I2S, 1 x SDIO, 5 x UART, 1 x SPI, 2 x CAN-FD, 16 x GPIO
- Compact size form factor - OSM Size L (45 x 45 mm)
- Support Yocto Linux



Specifications

Form Factor		ROM-2820 OSM Evaluation Kit
Processor System	CPU	NXP i.MX 93 Cortex-A55 Dual-core (up to 1.7GHz)
	MCU	1 x Arm Cortex-M33 core
Memory	Technology	LPDDR4 up to 3733MT/s
	Capacity	On-board 2GB
	Flash	16 GB eMMC NAND Flash for O.S.
Graphics	LVDS/MIPI DSI	1 x single channel LVDS (Above 480P) 1 x 4 lane MIPI-DSI (Above 1080P) Note: Display Output, either one
	HDMI	-
	Parallel RGB	-
	VGA	-
	Graphics Engine	NXP integrated 2D Graphic Acceleration
Ethernet	Chipset	2 x NXP i.MX 93 integrated RGMII
	Speed	2 x 10/100/1000 Mbps
RTC	RTC	External RTC
Security		NXP i.MX 93 integrated Trust Zone
I/O from A-core	USB	2 x USB 2.0 Type A
	Micro USB OTG	1
	Audio	Mic in / Audio Out (wafer)
	M.2	1 x M.2 Key E 2230 Connector (USB, UART, SDIO, SPI) 1 x M.2 Key B 3052 Connector (USB)
	COM	2 x RS232/422/485 (DB9) 2 x RS232 (wafer)
	Console Port	1
	GPIO	16
	PWM	1 x Pin Header 1 x dedicated to DSI for backlight
I/O from M-core	COM	2 x RS232/422/485 (DB9) 2 x RS232 (wafer)
	SPI	1
	Console Port	1 (wafer)
	GPIO	16
	CAN	2 (wafer)
Power	Power Supply Voltage	12V
	Power Consumption	4.82W
Environment	Operating Temperature	-40 – 85 °C
	Operating Humidity	5 – 95% relative humidity, non-condensing
Mechanical	Dimensions (W x D)	146 x 102 mm (3.5")
Operation System		Yocto Linux
Certifications		CE/FCC Class B

Block Diagram



Ordering Information

Part No.	Description
ROM-DK2820-F1A1E	ROM-2820 Evaluation Kit

Packing List

Part No.	Description
9696ED93000	ROM-ED93 OSM Carrier Board
9696MEG510E	ROM-EG51 A101 ASS'Y CODEC Board
ROM-2820WD-REA1E	ROM-2820 OSM V1.1 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
EWM-W194M201E	802.11ac + BT 5.0 2T2R NXP88W8997 SDIO/UART
1750008717-01	Dipole Ant. D.B 2.4/5G WIFI 3dBi SMA/M-R BLK
1750007965-01	Antenna cable, SMA (M) to MHF4, 300mm
96LCM-G070WV40L-A0	7" LCD, 400nits, 800x480