I-Pi OSM-IMX93

I-Pi OSM Development Kit based on NXP® i.MX 93 dual-core Arm® Cortex-A55 & M33



Features

- OSM Base 3.5 carrier
- OSM-IMX93 module powered by NXP® i.MX 93 with dual-core Arm® Cortex-A55 & Cortex-M33
- In-SoC Arm Ethos-U65 microNPU
- 2GB LPDDR4L soldered, 32GB eMMC
- LVDS, HDMI graphic outputs
- Dual GbE (1 TSN capable), dual CAN bus, USB 2.0, USB 2.0 OTG
- Rugged operating temperature (optional): -40°C to +85°C

Specifications

Core System	SoC	NXP® i.MX93 with dual core Arm Cortex-A55 & M33
	NPU	Arm® EthosTM U-65 microNPU
	Architecture	2x ARM Cortex-A55 + 1x Cortex M33
	Memory	2GB LPDDR4
	L2 Cache	32GB eMMC
	Security	Arm® TrustZone® EdgeLock® secure enclave
Video	GPU Core	PXP 2D accelerator
	HDMI	1x HDMI interface, via a DSI-to-HDMI bridge on the carrier
	LVDS	1x LVDS interface, 4 lanes
	Camera	1x 22-pin CSI connector, with 2 lanes available
Audio	Codec	TI TLV320AIC3106
Ethernet	LAN	2x GbE (1x TSN capable)

Note: "Build option""indicates an alternative BOM configuration to support additional or alternative functions that are not available on the standard product. Be aware that these "build option" part numbers will need to be newly created and this will result in production lead times.

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Specifications

Connectors/Headers	Display	1x HDMI 1x LVDS
	Audio	1x 3.5mm audio jack
	Network	2x RJ45
	USB	2x USB 2.0 host, 1x USB 2.0 OTG
	SD Card Slot	1x microSD
	UART	3x UART on the header
	SPI	2x SPI on the header
	I^2C	2x I^2C on the header
	GPIO	14x GPIO on header
	PWM/ADC	4x PWM / 2x ADC on header
	CAN	2x CAN header
Power	Input	15 to 30 VDC (Adapter: 19VDC)
	Connector	DC Jack
Mechanical	Form Factor	3.5” standard
	Dimension	146 x 102mm
	Operating Temperature	Standard: 0°C to 60°C Rugged: -40°C to 85°C (optional)
	Humidity	5-90% RH operating, non-condensing 5-95% RH storage (and operating with conformal coating)
	Shock and Vibration	IEC 60068-2-64 and IEC-60068-2-27, MIL-STD-202 F, Method 213B, Table 213-I, Condition A and Method 214A, Table 214-I, Condition D
Operating Systems	Standard Support	Yocto Linux BSP
	Extended Support (BSP)	Foundries.IO

Ordering Information

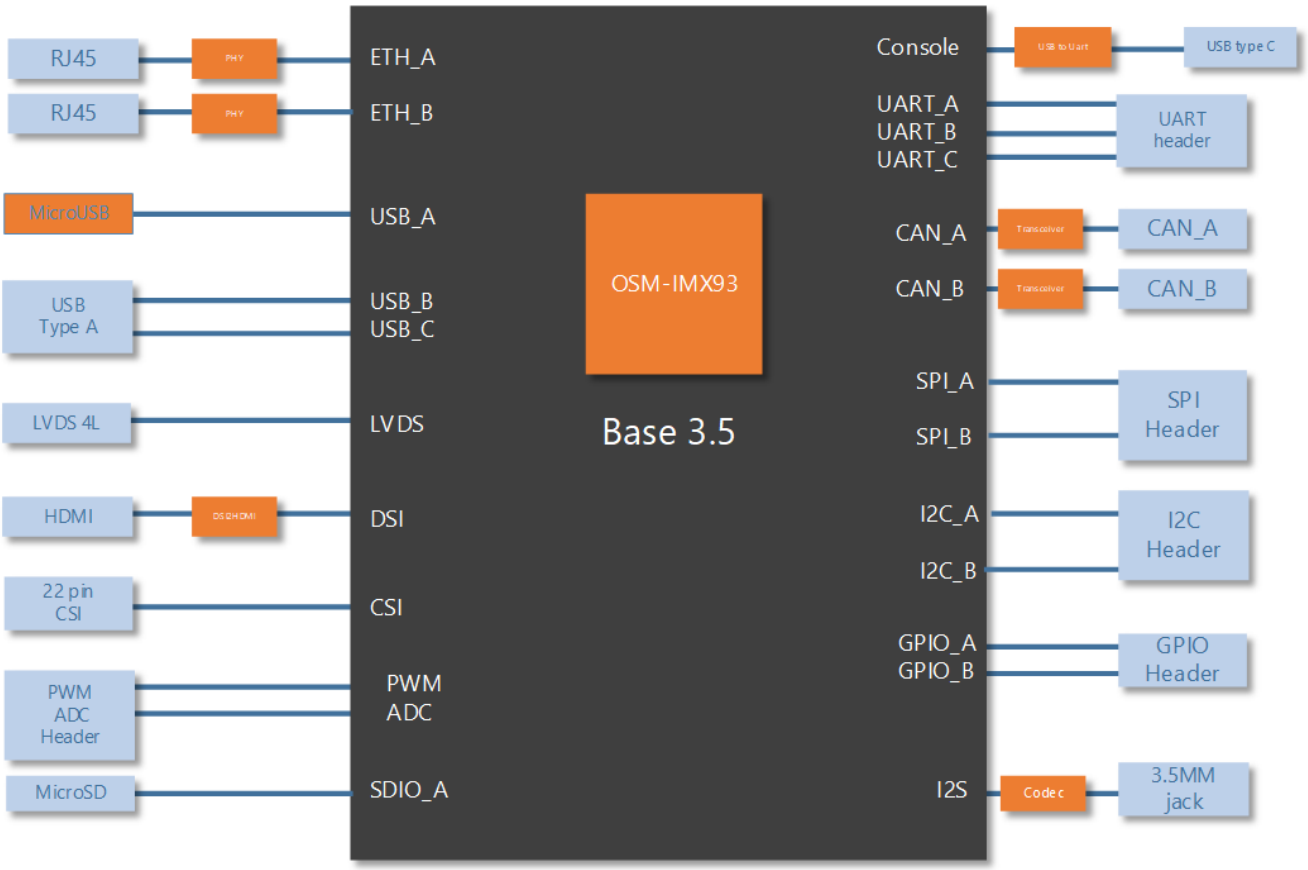
Part Name	Description/Configuration
OSM-iMX93-2G-32G-CT	OSM module L size with Dual Core NXP i.MX93, 2 GB LPDDR4, 32 GB eMMC, 0°C to 70°C
OSM-iMX93-2G-32G-ER	OSM module L size with Dual Core NXP i.MX93, 2 GB LPDDR4, 32 GB eMMC, -40°C to 85°C
I-Pi OSM-iMX93-2G-32G	I-Pi OSM Prototype Kit with OSM-iMX93-2G-32G-CT, EU/US 110/220V to 19V Adapter, USB debug cable)

Note: Non-listed configurations available upon request.

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