ADLINK
LEADING EDGE AI COMPUTING

I-Pi SMARC iMX95

I-Pi SMARC Development Kit Based on NXP iMX95
NXP i.MX 95 with hexa-core Arm Cortex-A55
& ARM Cortex M33 and M7



Features

- i.MX95 series 6-core Arm Cortex-A55
- 1x Arm Cortex-M7 core + 1x Arm Cortex-M33 core
- In-SoC eIQ® Neutron NPU, up to 2.0 TOPS
- LVDS, DSI, HDMI graphics output (BOM option)
- Rugged operating temperature option: -40°C to 85°C
- Dual CAN bus FD
- 2x GbE (TSN) ports
- I2S audio codec interface
- 15-year product availability
- SMARC Revision 2.2 compliant

Specifications

Core System	SoC	NXP i.MX 95 series with 2/4/6-core Arm Cortex-A55, 1× Cortex-M7 (Flex domain), 1× Cortex-M33 (low-power real-time domain), TrustZone support, Armv8 cryptography extensions, and an NPU up to 2 TOPS
	Memory	4GB LPDDR5
	Storage	32GB eMMC
	L2 Cache	Per core: 32KB I-Cache, 32KB D-Cache, 64KB L2 Cache Unified: 512KB L3 Cache
	Security	Cryptography Services • Multiple key storage and user support • Key Type: AES-128/192/256, ECC 256/384 • Key Import/Creation/Derivation/Update/Deletion • SCA-hardened Asymmetric Public Key Cryptography: - RSA up to 4096; Elliptic Curve up to P-512 w/NIST curves; Brainpool P-512, P-384 • SCA-hardened Symmetric Cryptography: - AES-128/192/256 Modes: GCM, ECB, CBC, CTR, CCM, XCBC-MAC, KTS (256)

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

Video	GPU Core	Arm® Mali™ G310
	GPU Feature Support	Arm Mali-G310 GPU • 3D GPU supporting 50 GFLOPs, OpenGL ES 3.2, Vulkan 1.2, OpenCL 3.0
	VPU Feature Support	4Kp30 H.265 and H.264 encode and decode 1x JPEG Encoder, 1x JPEG Decoder
	HDMI	HDMI 2.0a (BOM option)
	MIPI DSI	1x MIPI DSI 4 lanes
	LVDS	Dual-channel LVDS port 18/24 bit
	Camera	MIPI CSI RX interface • Compatible with MIPI Alliance Interface specification v1.0 • Up to 4 data lanes, 1.0Gbps maximum data rate per lane • Supports MIPI-HS, MIPI-LP mode
Audio	Codec	TI TLV320
Ethernet	LAN	2x GbE (TSN capable)
Connectors/Headers	Display	1x HDMI 2x LVDS
	Audio	1x 3.5mm Audio jack
	Network	2x RJ45
	USB	2x USB 3.0, 2x USB2.0, 1x micro USB
	Buttons	1x Reset 1x Power
	SD Card Slot	1x microSD
	SIM Card Slot	1x SIM
	M.2 Card Slots	1x M.2 B-key PCIe 1x M.2 E-key PCIe
	40-pin RPI Expansion Header	GPIO / I²C / PWM / SPI / UART
	40-pin Expansion Header	I²C / CAN / SPI / UART
Power	Input	19V+/-5% DC (Adapter: 19VDC)
	Connector	DC jack
Operating Systems	Standard Support	Yocto Linux BSP, Android (by project), Ubuntu (by project)
Mechanical and Environmental	Form Factor	SGET SMARC Specification v2.2
	Dimensions	SMARC short size module (82mm x 50mm)
	Operating Temperature	Standard: 0°C to 60°C Rugged: -40°C to 85°C*
	Humidity	Operating: 5-90% RH, non-condensing Storage: 5-95% RH
	Shock and Vibration	IEC 60068-2-64 and IEC-60068-2-27 MIL-STD-202 F Method 213B, Table 213-I, Condition A Method 214A, Table 214-I, Condition D

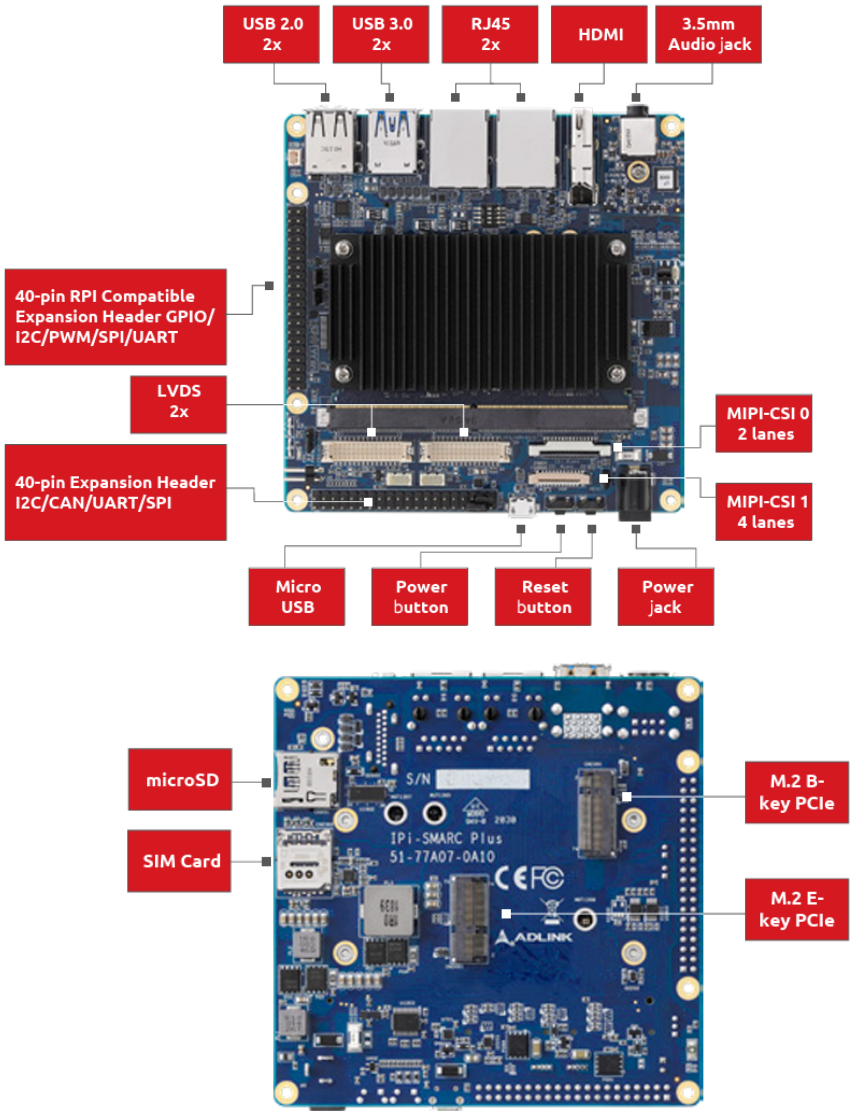
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Ordering Information

Part Name	Description/Configuration
LEC-iMX95-H-4G-32G-CT	SMARC 2.1 Short Size Module with Hexa Core NXP i.MX95, 4 GB LPDDR5, 32 GB eMMC, 0°C to 60°C
LEC-iMX95-H-4G-32G-ER	SMARC 2.1 Short Size Module with Hexa Core NXP i.MX95, 4 GB LPDDR5, 32 GB eMMC, -40°C to 85°C
I-Pi LEC-iMX95-H-4G-32G	I-Pi SMARC Plus Prototype Kit for AIOT with LEC-iMX95-H-4G-32G, low profile heatsink and TLV320 Audio (US & EU power cable, 110/220V to 19V Adapter, USB debug cable)

Note: Non-listed configurations are available upon request.



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