






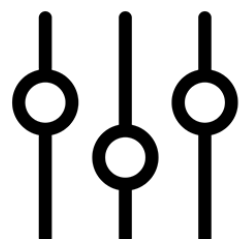
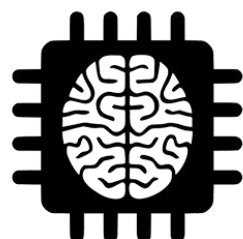




System on Module - SoM	Solder On Module	Single Board Computer - SBC
<p><b>efus</b></p> <ul style="list-style-type: none"> <li>- 47x62mm</li> <li>- Supply Voltage 5V</li> <li>- RGB, LVDS, DVI</li> <li>- WLAN/BT, 2x LAN Phy</li> <li>- 230 Pins MXM2 Goldfinger Connector</li> <li>- Pin-compatible product family</li> </ul> 	<p><b>OSM</b></p> <ul style="list-style-type: none"> <li>- Size-S: 30x30 mm, OSM 1.2 Standard</li> <li>- 332 contacts</li> <li>- Supply Voltage 5V, I/O Voltage: 1.8V</li> <li>- RGB, MIPI-DSI, LVDS</li> <li>- Very robust against shock and vibration</li> <li>- Single side mounted</li> </ul> 	<p><b>armStone</b></p> <ul style="list-style-type: none"> <li>- 100x72mm, PicoITX</li> <li>- Supply Voltage 5V, (opt. 24V Power Supply)</li> <li>- RGB, LVDS, MIPI-DSI, DVI, 1-2x LAN, WLAN/BT, PCIe slot with SIM</li> <li>- 66 pin Feature Connector 2,54mm</li> <li>- Pin-compatible product family</li> <li>- Coating possible</li> <li>- Large selection of accessories</li> </ul> 
<p><b>PicoCore</b></p> <ul style="list-style-type: none"> <li>- 35x40mm</li> <li>- Supply Voltage 3.8V – 5.5V</li> <li>- LVDS, MIPI-DSI, DVI</li> <li>- WLAN/ BT, 2x LAN Phys, Audio Codec</li> <li>- Robust 2x 100 Pin Connector</li> <li>- Pin-compatible product family</li> <li>- Wide range of functions in a small space</li> </ul> 	<p><b>SolderCore</b></p> <ul style="list-style-type: none"> <li>- 35 x35 mm</li> <li>- 220 contacts</li> <li>- Supply Voltage 5V</li> <li>- Selectable I/O Voltage (3.3V/1.8V)</li> <li>- All functions of the CPU can be used</li> <li>- Very robust against shock and vibration</li> <li>- Single side mounted</li> </ul> 	
<p><b>SMARC</b></p> <ul style="list-style-type: none"> <li>- 50x82mm SMARC 2.2 Standard</li> <li>- Supply Voltage 5V</li> <li>- 314 pin MXM3 Goldfinger Connector</li> <li>- Pin-compatible product family</li> </ul> 		
<p><b>PicoCOM</b></p> <ul style="list-style-type: none"> <li>- 40x50mm</li> <li>- Supply Voltage 3,3V</li> <li>- ARM9 to Cortex-A9</li> <li>- Robust Connector, 80 Pins, 0,8 Pitch</li> <li>- Pin-compatible product family</li> </ul> 		

## Secure Embedded Solutions



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# Product Overview 2025 | Single Board Computer | System on Module

Product	armStoneMX8MP	armStoneMX8ULP <i>NEW</i>	armStoneMX95 <i>NEW***</i>	efusMX8X	efusMX8MP	efusMX91 <i>NEW</i>	efusMX93 <i>NEW</i>	PicoCOMA7	PicoCOMA9X	PicoCOM91 <i>NEW</i>
OS	Yocto Debian Win 10 IoT Enterprise FreeRTOS	Yocto FreeRTOS	Yocto Debian FreeRTOS	Yocto FreeRTOS	Yocto Debian FreeRTOS Zephyr	Yocto	Yocto Debian Win 11 IoT Enterprise FreeRTOS Zephyr	Buildroot Yocto	Buildroot Yocto FreeRTOS	Yocto
CPU	NXP i.MX 8M Plus  4x Cortex-A53 1x Cortex-M7 HIFI-4, NPU	NXP i.MX 8ULP  2x Cortex-A35 1x Cortex-M33 HIFI-4/Fusion DSP	NXP i.MX 95  6x Cortex-A55 1x Cortex-M7 1x Cortex-M33 NPU	NXP i.MX 8X  4x Cortex-A35 1x Cortex-M4F	NXP i.MX 8M Plus  4x Cortex-A53 1x Cortex-M7 HIFI-4 DSP NPU	NXP i.MX 91  1x Cortex-A55	NXP i.MX 93  2x Cortex-A55 1x Cortex-M33 NPU	NXP i.MX 6ULL  1x Cortex-A7	NXP i.MX 6SoloX  1x Cortex-A9 1x Cortex-M4	NXP i.MX 91  1x Cortex-A55
Special	2D/3D GPU (2 shader) VPU	2D/3D GPU (1 shader)	2D/3D GPU VPU	2D/3D GPU (4 shader), two independent displays, integrated Security Engine	2D/3D GPU (2 shader) VPU	---	PXP	---	2D/3D GPU	---
Flash (up to)	64GB eMMC EEPROM	64GB eMMC EEPROM	64GB eMMC EEPROM	512MB SLC NAND 1MB QSPI NOR 64GB eMMC EEPROM	512MB QSPI NAND 64GB eMMC EEPROM	64GB eMMC EEPROM	64GB eMMC EEPROM	512MB SLC NAND	512MB SLC NAND	64GB eMMC EEPROM
RAM (up to)	8GB LPDDR4 x32	2GB LPDDR4X x32	16GB LPDDR5 x32	2GB LPDDR4 x32	8GB LPDDR4 x32	2GB LPDDR4 x16	2GB LPDDR4 x16	1GB DDR3L x16	512MB DDR3L x16	2GB LPDDR4 x16
LAN	2x Gbit LAN	1x 100 Mbit LAN	2x Gbit LAN	2x Gbit Phy	2x Gbit Phy	2 Gbit Phy or RGMII	2 Gbit Phy or RGMII	2** 100 Mbit Phy	2** 100 Mbit Phy	2** 100Mbit Phy
WLAN BT	802.11ac/a/b/g/n 5.3 LE	WIFI 6 5.2	WIFI 6 5.2	802.11ac/a/b/g/n 5.3 LE	802.11ac/a/b/g/n 5.3 LE	802.11ac/a/b/g/n 5.3 LE	802.11ac/a/b/g/n 5.3 LE	---	---	---
Security	EdgeLock SE05x	EDGELOCK® SECURE ENCLAVE	EdgeLock SE05x	EdgeLock SE05x	EdgeLock SE05x	EDGELOCK® SECURE ENCLAVE	EDGELOCK® SECURE ENCLAVE	---	---	EDGELOCK® SECURE ENCLAVE
RS232 RS485	4 1	4 1	4 1	4 ---	4 ---	4 ---	4 ---	3 ---	3 ---	3 ---
USB Host	4x 2.0	4x 2.0	4x 3.0	1	1x 3.0	8	1x 2.0	1	1	1
USB Device	1x OTG 3.0 Type-C	1x OTG 2.0 Type-C	1x OTG 3.0 Type-C	1x OTG 3.0	1x OTG 3.0	1x OTG	1x OTG	1	1	1
SDIO	1x µSD Slot	1x µSD Slot	1x µSD Slot	2**	2**	2**	2**	1	1	1
mPCIe	1x + SIM	---	1x + SIM	1	1	---	---	---	---	---
Audio	IN/ OUT/ MIC/ Headphone	IN/ OUT/ MIC/ Headphone	IN/ OUT/ MIC/ Headphone	I2S	I2S	I2S	I2S	Line In/Out	Line In/Out	Line In/Out
CAN	2**	1	2**	2x CAN-FD	2x CAN-FD	2x CAN-FD	2x CAN-FD	2**	2**	
I²C	4**	4**	4**	4	4	4	4	2**	1	2x CAN-FD
SPI	2**	2**	2**	2	2	2	2	1	1	6
ADC	4	4	4	---	4	4	4	---	---	8
LVDS	8 lanes	8 lanes	8 lanes	2x 4 lanes	8 lanes	---	4 lanes	external	---	---
RGB	---	---	---	---	18bit	18bit	18bit	18bit**	18bit	18bit
DVI/HDMI	DVI	---	DVI	---	DVI	---	---	---	---	---
MIPI-DSI	4 lanes	4 lanes	4 lanes	4 lanes	4 lanes	---	---	---	---	---
MIPI-CSI	4 lanes	2 lanes	2x 4 lanes	4 lanes	4 lanes	---	2 lanes	---	---	---

--- unavailable [ ] optional \* on request \*\* with restrictions \*\*\* coming soon **low power product**

**NOTE: The above mentioned number of interfaces is available within the standard. More/other interfaces possible by changing the IO MUX. Please contact us.**



# Product Overview 2025 | System on Module

Product	SMARC MX95 <i>NEW***</i>	SMARC MX8MP	PicoCoreMX6UL100	PicoCoreMX8ULP	PicoCoreMX8MM	PicoCoreMX8MN	PicoCoreMX8MP	PicoCoreMX93 <i>NEW</i>	PicoCoreMX91 <i>NEW</i>
OS	Yocto Debian FreeRTOS Zephyr	Yocto Debian FreeRTOS Zephyr	Buildroot Yocto	Yocto FreeRTOS	Buildroot Yocto FreeRTOS Zephyr	Buildroot Yocto FreeRTOS	Yocto Debian Win 10 IoT Enterprise FreeRTOS Zephyr	Yocto Debian Win 11 IoT Enterprise FreeRTOS Zephyr	Yocto
CPU	NXP i.MX 95  6x Cortex-A55 1x Cortex-M7 1x Cortex-M33 NPU	NXP i.MX 8M Plus  4x Cortex-A53 1x Cortex-M7 HIFI-4 DSP NPU	NXP i.MX 6ULL  1x Cortex-A7	NXP i.MX 8ULP  2x Cortex-A35 1x Cortex-M33 HIFI-4/Fusion DSP	NXP i.MX 8M Mini  4x Cortex-A53 1x Cortex-M4	NXP i.MX 8M Nano  4x Cortex-A53 1x Cortex-M7	NXP i.MX 8M Plus  4x Cortex-A53 1x Cortex-M7 HIFI-4 DSP NPU	NXP i.MX 93  2x Cortex-A55 1x Cortex-M33 NPU	NXP i.MX 91  1x Cortex-A55
Special	2D/3D GPU VPU	2D/3D GPU (2 shader) VPU	---	2D/3D GPU (1 shader)	2D/3D GPU (1 shader) VPU	2D/3D GPU (2 shader) VPU	2D/3D GPU (2 shader) VPU	PXP	---
Flash (up to)	64GB eMMC EEPROM	64GB eMMC EEPROM	512MB SLC NAND 32GB eMMC EEPROM	64GB eMMC EEPROM	512MB SLC NAND 64GB eMMC EEPROM	512MB SLC NAND 64GB eMMC EEPROM	64GB eMMC EEPROM	64GB eMMC EEPROM	64GB eMMC EEPROM
RAM (up to)	16GB LPDDR5 x32	8GB LPDDR4 x32	512MB DDR3L	2GB LPDDR4 (x32)	4GB LPDDR4 x32	2GB LPDDR4 x16	8GB LPDDR4 x32	2GB LPDDR4 x16	2GB LPDDR4 x16
LAN	2x Gbit Phy	2x Gbit Phy	2x 100Mbit Phy or RMII	1x 100Mbit Phy or RMII	2 Gbit Phy or RGMII	2 Gbit Phy or RGMII	2 Gbit Phy or RGMII	2 Gbit Phy or RGMII	2 Gbit Phy or RGMII
WLAN BT	WIFI 6 5.2	802.11ac/a/b/g/n 5.3 LE	802.11ac/a/b/g/n 5.3 LE	802.11ac/a/b/g/n 5.3 LE	802.11ac/a/b/g/n 5.3 LE	802.11ac/a/b/g/n 5.3 LE	802.11ac/a/b/g/n 5.3 LE	WIFI 6 5.2	WIFI 6 5.2
Security	EdgeLock SE05x	EdgeLock SE05x	EdgeLock SE05x	EDGELOCK® SECURE ENCLAVE	EdgeLock SE05x	EdgeLock SE05x	EdgeLock SE05x	EDGELOCK® SECURE ENCLAVE	EDGELOCK® SECURE ENCLAVE
RS232 RS485	4 ---	4 ---	4 ---	4 ---	4 ---	4 ---	4 ---	4 ---	4 ---
USB Host	4 (3.0)	4 (2.0)	1x	1x	1x	---	1x 3.0	1x	1x
USB Device	1 OTG 3.0	1 OTG 3.0	1x OTG	1x OTG	1x OTG	1x OTG	1x OTG 3.0	1x OTG	1x OTG
SDIO	1	1	1	2**	2	2	2**	2	1
mPCIe	2	1	---	---	1	1	1	---	---
Audio	2x I2S	2x I2S	Line In/Out/MIC/HP or I2S	Line In/Out/MIC/HP or I2S	Line In/Out/MIC/HP or I2S	Line In/Out/MIC/HP or I2S	Line In/Out/MIC/HP or I2S	Line In/Out/MIC/HP or I2S	Line In/Out/MIC/HP or I2S
CAN	2x CAN-FD	2x CAN-FD	2x FlexCAN	FlexCAN	CAN-FD	CAN-FD	2x CAN-FD	2x CAN-FD	2x CAN-FD
I <sup>2</sup> C	5	5	4	4	4	4	4	4	4
SPI	2	2	2	2	2	2	2	2	2
LVDS	8 lanes	8 lanes	4 lanes	---	8 lanes	8 lanes	8 lanes	4 lanes	---
RGB	---	---	18 bit**	24 bit**	---	---	---	18bit**	18bit**
DVI/HDMI	DVI	DVI	---	---	---	---	DVI	---	---
MIPI-DSI	4 lanes	4 lanes	---	4 lanes	4 lanes	4 lanes	4 lanes	4 lanes	---
MIPI-CSI	1x 4 lanes, 1x 2 lanes	1x 4 lanes, 1x 2 lanes	---	2 lanes	4 lanes	4 lanes	2x 4 lanes	2 lanes	---

--- unavailable [ ] optional \* on request \*\* with restrictions \*\*\* coming soon **low power product**

**NOTE: The above mentioned number of interfaces is available within the standard. More/other interfaces possible by changing the IO MUX. Please contact us.**



# Product Overview 2025 | Solder On Modules

Product	FS 8ULP OSM-SF	FS 8MN OSM-SF	FS 8MM OSM-SF	FS 8MP OSM-SF <i>NEW</i>	FS 91 OSM-SF <i>NEW</i>	FS 93 OSM-SF <i>NEW</i>	SolderCore8ULP
OS	Yocto FreeRTOS	Buildroot Yocto FreeRTOS	Buildroot Yocto FreeRTOS Zephyr	Yocto Debian FreeRTOS Zephyr	Yocto	Yocto Debian FreeRTOS Zephyr	Yocto FreeRTOS
CPU	NXP i.MX 8ULP 2x Cortex-A35 1x Cortex-M33 HIFI-4/Fusion DSP	NXP i.MX 8M Nano 4x Cortex-A53 1x Cortex-M7	NXP i.MX 8M Mini 4x Cortex-A53 1x Cortex-M4	NXP i.MX 8M Plus 4x Cortex-A53 1x Cortex-M7 HIFI-4 DSP NPU	NXP i.MX 91 1x Cortex-A55	NXP i.MX 93 2x Cortex-A55 1x Cortex-M33 NPU	NXP i.MX 8ULP 2x Cortex-A35 1x Cortex-M33 HIFI-4/Fusion DSP
Special	2D/3D GPU (1 shader)	2D/3D GPU (2 shader)	2D/3D GPU (1 shader) VPU	2D/3D GPU (2 shader) VPU	---	PXP	2D/3D GPU (1 shader)
Flash (up to)	64GB eMMC EEPROM	64GB eMMC EEPROM	64GB eMMC EEPROM	64GB eMMC EEPROM	64GB eMMC EEPROM	64GB eMMC EEPROM	64GB eMMC
RAM (up to)	2GB LPDDR4X x32	2GB LPDDR4 x16	8GB LPDDR4 x32	8GB LPDDR4 x32	2GB LPDDR4 x16	2GB LPDDR4 x16	2GB LPDDR4X x16
LAN	1x RMII	1x RGMII	1x RGMII	2x RGMII	2x RGMII	2x RGMII	1x RMII
WLAN BT	---	---	---	---	---	---	---
Security	EDGELOCK® SECURE ENCLAVE				EDGELOCK® SECURE ENCLAVE	EDGELOCK® SECURE ENCLAVE	EDGELOCK® SECURE ENCLAVE
RS232 RS485	1x Console + 4 ---	1x Console + 3 ---	1x Console + 3 ---	1x Console + 3 ---	1x Console + 4 ---	1x Console + 4 ---	8 ---
USB Host	1x OTG 2.0	1x OTG 2.0	1x OTG 2.0	1x OTG 3.0	1x OTG 2.0	1x OTG 2.0	1x OTG
USB Device	1x OTG 2.0	1x OTG 2.0	1x OTG 2.0	1x OTG 2.0	1x OTG 2.0	1x OTG 2.0	1x OTG
SDIO	1	2	2	2	1	1	2
PCIe	---	1	1	1	---	---	---
Audio	2x I2S	1x I2S	1x I2S	2x I2S	1x I2S	1x I2S	6x I2S
CAN	1	---	---	2x CAN-FD	2x CAN-FD	2x CAN-FD	1
I <sup>2</sup> C	3	3	3	3	3	3	6
SPI	2	2	2	2	2	2	4
ADC PWM	---	---	---	---	2 2 + BL-PWM	2 2 + BL-PWM	4 5
LVDS	---	---	---	4 lanes	---	4 lanes	---
RGB	18bit	---	---	---	---	---	24 bit
DVI/HDMI	---	---	---	DVI	---	---	E-Paper
MIPI-DSI	4 lanes	4 lanes	4 lanes	4 lanes	---	4 lanes	4 lanes
MIPI-CSI	2 lanes	4 lanes	4 lanes	4 lanes	---	2 lanes	2 lanes

--- unavailable [] optional \* on request \*\* with restrictions **low power product**

**NOTE: The above-mentioned number of interfaces is available within the standard. More/other interfaces are possible by changing the IO MUX. Please contact us.**

