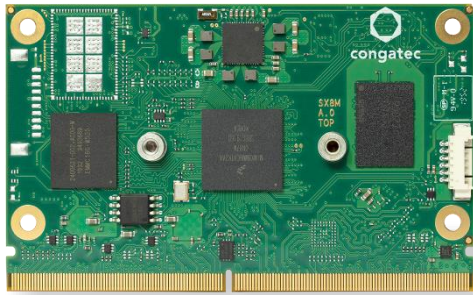


# SMARC 2.1 based on NXP i.MX 8M MINI

## conga-SMX8-Mini



- SMARC 2.1 Module based on NXP i.MX 8M Mini
- Scalable ARM Performance with up to 4x 1.8GHz Cortex-A53 and 1x Cortex-M4F
- Highly improved power efficiency and performance by 14LPC FinFET process technology
- 3D Graphics with Full HD resolution, MIPI CSI-2
- Extended longevity up to 15 years



<b>Form factor</b>	SMARC Specification 2.1   82x50 mm <sup>2</sup>		
<b>CPU</b>	<b>NXP i.MX 8M Mini ARM Processor Cores</b>		
	<b>Commercial</b>	<b>ARM Cortex-A53</b>	<b>ARM Cortex-M4F</b>
	i.MX 8M Mini Quad	4 x 1.8GHz	1x 400MHz
	i.MX 8M Mini Dual	2 x 1.8GHz	1x 400MHz
	i.MX 8M Mini Solo	1 x 1.8GHz	1x 400MHz
	<b>Industrial</b>		<b>GPU</b>
	i.MX 8M Mini Quad	4 x 1.6GHz	1x GC NanoUltra 3D Graphics
	i.MX 8M Mini Dual	2 x 1.6GHz	1x GC NanoUltra 3D Graphics
	i.MX 8M Mini Solo	1 x 1.6GHz	1x GC NanoUltra 3D Graphics
<b>DRAM</b>	Up to 4 GByte onboard LPDDR4 memory   3000 MT/s		
<b>Ethernet</b>	1x Gigabit Ethernet with IEEE 1588v2 support		
<b>I/O Interfaces</b>	Up to 5x USB 2.0 (shared with 1x USB OTG client)   1x PCIe 2.0   1x SDIO 3.0   2x I <sup>2</sup> C Bus   1x SPI   up to 3x UART (2x with handshake)   GPIOs   1x MIPI-CSI2 (2-lanes) or (4-lanes)   optional M.2 1216 WiFi/BT module		
<b>Storage</b>	eMMC 5.1 up to 128 GByte		
<b>Sound</b>	2x I <sup>2</sup> S		
<b>Graphics</b>	Integrated in NXP i.MX 8M Mini Series GC NanoUltra 3D GPU   one display   VPU with up to 1080p video decoding (H.265, H.264, VP8/9)   up to 1080p video encoding (H.264, VP8)   3D Graphics GPU with one shader core   up to 6.4GFlops   GC320 2D Graphics GPU   OpenGL ES 2.0   OpenVG 1.1		
<b>Display Interfaces</b>	1x dual channel 24bit LVDS through bridge (default) or MIPI-DSI 4-lanes or DisplayPort through bridge		
<b>Embedded Features</b>	Watchdog Timer   I <sup>2</sup> C bus   Cortex-A53 console   optional JTAG debug interface   high precision Real Time Clock		
<b>Security</b>	High Assurance Boot support   TrustZone   AES-256, RSA-4096, SHA-256, 3DES, DES, ARC4, MD-5   eFuse Key Storage   Secure Real Time Clock (RTC)   True Random Number Generator (RNG)   32 KB Secure RAM   SJTAG		
<b>Boot Loader</b>	U-Boot boot loader		
<b>Operating Systems</b>	Linux   Yocto   Android		
<b>Power Consumption</b>	See user's guide for full details		
<b>Temperature</b>	Industrial Variants:	Operating Temperature: -40 to +85°C	Storage Temperature: -40 to +85°C
	Commercial Variants:	Operating Temperature: 0 to +60°C	Storage Temperature: -40 to +85°C
<b>Humidity</b>	Operating: 10 - 90% r. H. non cond.		Storage: 5 - 95% r. H. non cond.
<b>Size</b>	82 x 50 mm (~3,23" x 1,97")		

# conga-SMX8-Mini | Block diagram

