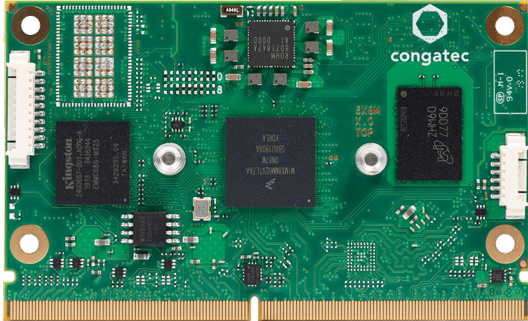


# SMARC 2.0 based on NXP i.MX 8M NANO

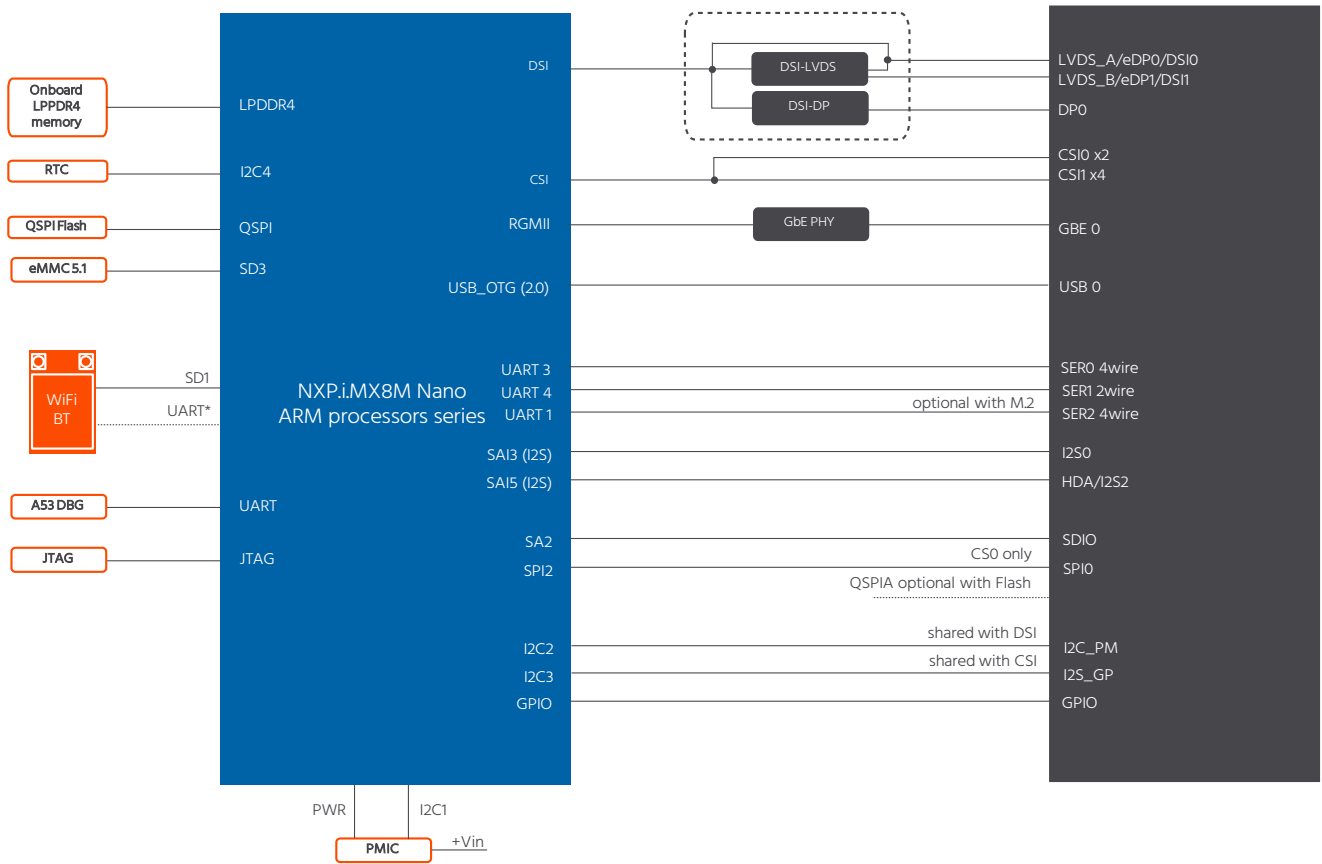
## conga-SMX8-Nano



- SMARC 2.0 Module based on NXP i.MX 8M Nano
- Provides cost-effective integration for high volume
- Up to 4x ARM® Cortex-A53 + 1x ARM® Cortex-M7
- 3D GPU with OpenGL ES 3.1
- Pin-compatible and scalable to the i.MX 8M Mini
- Extended longevity up to 15 years

<b>Form Factor</b>	SMARC Specification 2.0   82x50 mm <sup>2</sup>			
<b>CPU</b>	<b>Supported i.MX8 processors</b>			
	<b>Commercial</b>	<b>ARM Cortex-A53</b>	<b>ARM Cortex-M7</b>	<b>GPU</b>
	i.MX 8M Nano Quad	4 x 1.5GHz	1x 750MHz	GC 7000UL 3D Graphics
	i.MX 8M Nano Dual	2 x 1.5GHz	1x 750MHz	GC 7000UL 3D Graphics
	i.MX 8M Nano Solo	1 x 1.5GHz	1x 750MHz	GC 7000UL 3D Graphics
	<b>Industrial</b>			
	i.MX 8M Nano Quad	4 x 1.4GHz	1x 600MHz	GC 7000UL 3D Graphics
	i.MX 8M Nano Dual	2 x 1.4GHz	1x 600MHz	GC 7000UL 3D Graphics
	i.MX 8M Nano Solo	1 x 1.4GHz	1x 600MHz	GC 7000UL 3D Graphics
<b>DRAM</b>	Up to 2 GByte onboard LPDDR4 memory   3200 MT/s			
<b>Ethernet</b>	1x Gigabit Ethernet with IEEE 1588 support			
<b>I/O Interfaces</b>	1x USB 2.0 or 1x USB OTG client   1x SDIO 3.0   I <sup>2</sup> C Bus   SPI   up to 3x UART (1x with handshake)   GPIOs   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   Hi Res Audio   32-bit up to 384kHz   DSD512 and ASRC			
<b>Graphics</b>	Integrated in NXP i.MX 8M Nano Series GC 7000UL 3D GPU   Single Display 3D Graphics GPU with 2 shader cores   up to 9.6 GFlops   OpenGL ES 3.1   OpenCL 1.2   Vulkan			
<b>Display Interfaces</b>	1x dual channel 24bit LVDS through bridge (default)   optional eDP 1.4 or MIPI-DSI 4-lanes (shared with LVDS)			
<b>Embedded Features</b>	Watchdog Timer   JTAG debug interface   High Precision Real Time Clock (optional)			
<b>Security</b>	High Assurance Boot support   SJTAG   ARM® TrustZone®   DRM support for RSA, AES, 3DES   Secure Real Time Clock (RTC)   eFuse Key Storage   True Random Number Generator (RNG)   32kB Secure RAM			
<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:	Operating Temperature Range: -40 to +85°C	Storage: -40 to +85°C	
	Commercial:	Operating Temperature Range: 0 to +60°C	Storage: -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-Nano | Block diagram



# conga-SMX8-Nano | Order Information

Article	PN	Description
conga-SMX8-Nano/QC-2G eMMC16	051280	SMARC 2.0 module with NXP i.MX 8M Nano quad core 14LPC FinFET processor with 4x 1.5GHz ARM Cortex-A53 and 1x 750MHz ARM Cortex-M7, 2GB onboard LPDDR4 memory and 16GB onboard eMMC. Commercial temperature range.
conga-SEVAL	007010	Evaluation carrier board for SMARC 2.0 modules.