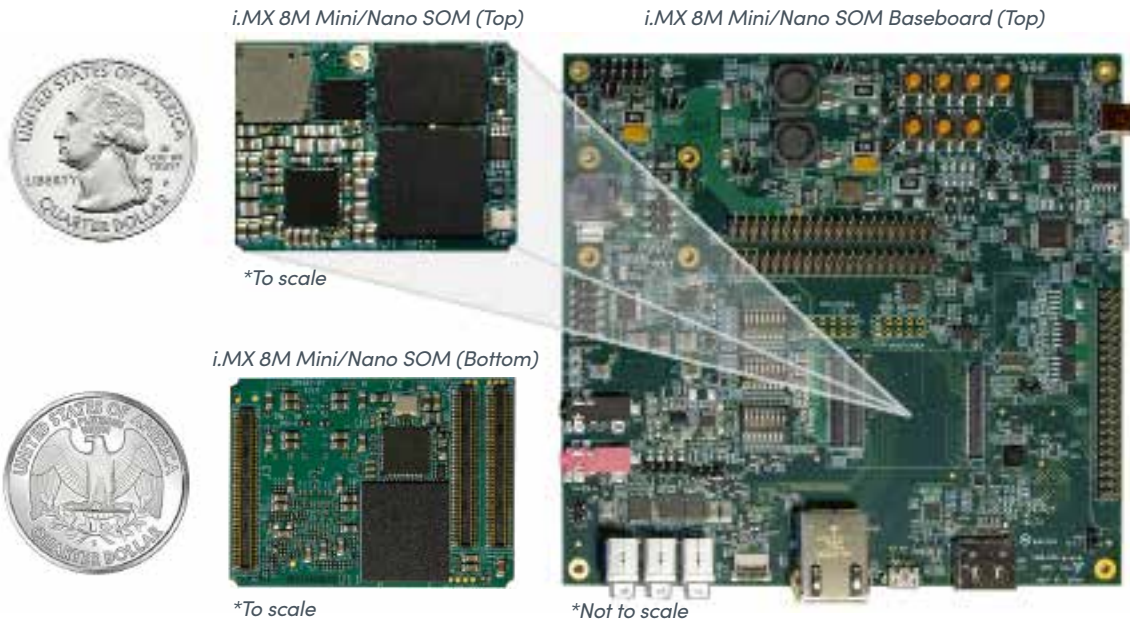


## i.MX 8M MINI/NANO SOM

Boasts speeds of up to 1.8 GHz and contains both on-board Wi-Fi (802.11 a/b/g/n/ac) and Bluetooth 4.2

Beacon EmbeddedWorks' i.MX 8M Mini/Nano SOM can help you get your product to market faster and reduce your design risk. The multicore architecture of NXP's i.MX 8M Mini applications processor provides the platform to develop a portfolio of devices on a single hardware design. The i.MX 8M Mini/Nano SOM provides security, high-performance multimedia processing including 3D graphics and high-definition video, power-efficient processing capabilities, and wireless connectivity. With a low stack height and compact footprint, the i.MX 8M Mini/Nano SOM is an excellent choice for next generation medical, military, aerospace, and industrial applications where space is at a premium.

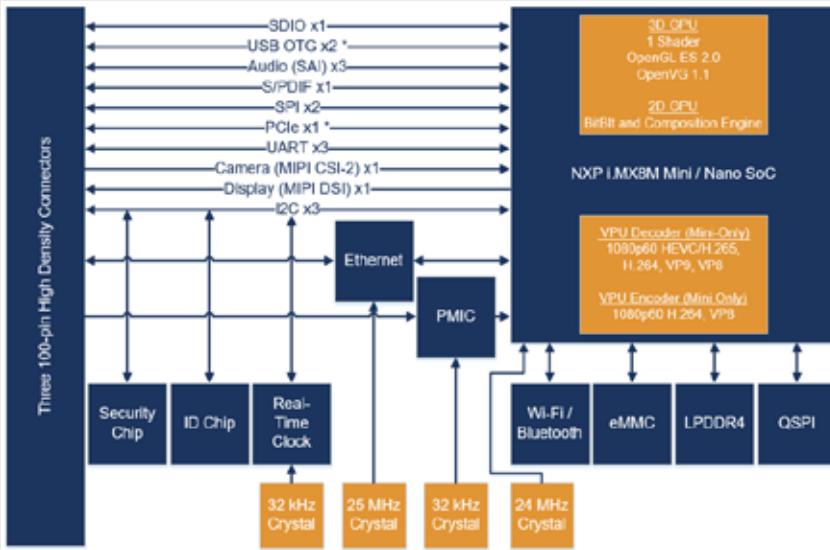


The design, development, manufacturing, and ongoing support of embedded technology is a complex and time-consuming process without the right expertise. At Beacon EmbeddedWorks, we elevate your product development with custom SOM solutions and high-performance application development kits. Beacon EmbeddedWorks is a leader in designing and developing SOMs with wireless technologies, low power capabilities and small form factors. We have the experience and knowledge to help you select the right SOM, integrate the SOM into your product design, or develop a customized SOM to meet the needs of your application.

Beacon EmbeddedWorks can also help at any stage in the product lifecycle, so our expertise and assistance doesn't end when you've completed your hardware design. Beacon EmbeddedWorks provides continuation support including obsolescence management and application engineering for any product utilizing one of our SOMs. We also continually update our board support package (BSP) options with versions of Linux, Android, and real-time operating systems.

## i.MX 8M Mini SOM Block Diagram

(Block diagram is not drawn to scale, for reference purposes only.)



\* OTG limited to one channel on Nano. PCIe not present on i.MX 8M Nano.

## i.MX 8M Mini SOM Ordering Information

MODEL NUMBER	DDR4 (GB)	eMMC (GB)	802.11 ETHERNET	ETHERNET PHY	TEMP. (°C)
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Coming Soon

NOTES:

## PRODUCT FEATURES

### Processor Options

- Mini: NXP i.MX 8M Mini processor with up to four ARM® Cortex™-A53 cores running up to 1.8 GHz, plus an ARM® Cortex™-M4 core running up to 400 MHz
- Nano: NXP i.MX8M Nano processor with up to four ARM® Cortex™-A53 cores running up to 1.5 GHz, plus an ARM® Cortex™-M7 core running up to 750 MHz

### Embedded Memory

- Mini: Up to 8GB of 32-bit wide LPDDR4 memory
- Nano: Up to 4GB of 16-bit wide LPDDR4 memory
- eMMC, configurable
- Quad SPI NOR Flash, configurable

### Network Connectivity

- 802.11a/b/g/n/ac
- Bluetooth 4.2
- BLE support
- Ethernet 10/100/1000 MAC + PHY
- Security
- Integrated secure element for end-to-end security

### USB

- Mini: Two USB 2.0 high-speed On-the-Go
- Nano: One USB 2.0 high-speed On-the-Go

### Display

- MIPI DSI (Up to 4 lanes)

### Camera

- MIPI CSI-2 (Up to 4 lanes)

### Audio

- Up to Three synchronous audio interfaces (SAI) with support for 9 TX and 13 RX lanes (default)
- S/PDIF input and output
- Up to 8 Channel Pulse Density Modulation (PDM) input

### PCIe

- 1x PCIe Gen 2.0, 1- lane (Mini only)

### Serial I/O

- Up to three UART interfaces
- Up to three I2C interfaces
- Up to two SPI interfaces operating as either master or slave

### GPIO

- Up to 87 multiplexed GPIOs supporting various peripherals such as PWMs, SDIO, UART, SPI, and I2C

### RTC

- On-board ultra-low power real-time clock (RTC)

### Debug

- JTAG support

### Mechanical

- Dimensions: 28mm x 38mm
- Weight: 7.7 g

### Compliance

- RoHS Compliant
- Reach Compliant
- Wi-Fi and Bluetooth are pre-certified for FCC and ISCED