



Manage this device with Digi Remote Manager



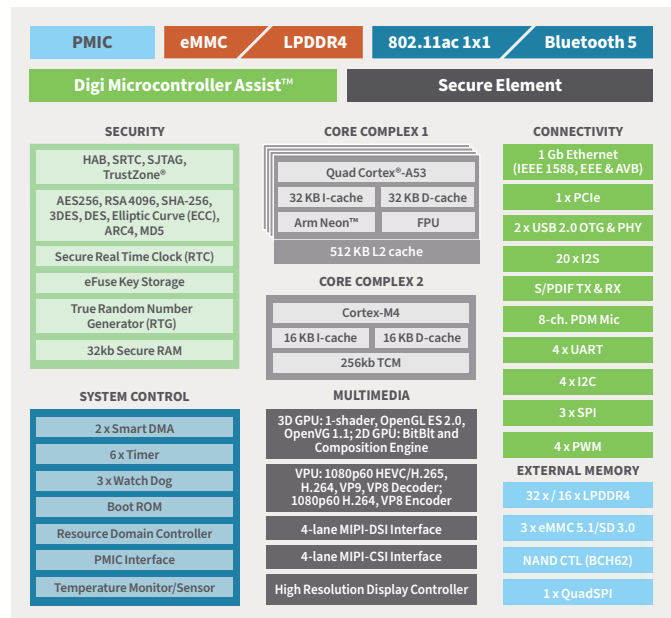
# DIGI CONNECTCORE 8M MINI

Embedded system-on-module based on the NXP i.MX 8M Mini processor with built-in security; designed for longevity and scalability in industrial IoT applications

**Digi ConnectCore® 8M Mini**, based on the NXP® i.MX 8M Mini application processor, is a secure integrated system-on-module (SOM) platform. The Mini is designed for a wide range of industrial, medical, agricultural and transportation applications, including Internet of Things (IoT), human-machine interface (HMI), equipment monitoring, audio/voice, graphics/video, edge computing and machine learning.

Digi ConnectCore 8M Mini features four power-efficient Arm® Cortex®-A53 cores, one Cortex-M4 core, and the Digi Microcontroller Assist Cortex-M0, which allow it to minimize power consumption while maintaining a high standard of performance. With a 10+ year product lifecycle, OEMs can reduce their development costs and achieve a lower total cost of ownership by leveraging pre-certified wireless connectivity, remote management, cloud integration, and complete Linux Yocto Project and Android software platform support.

## BLOCK DIAGRAM

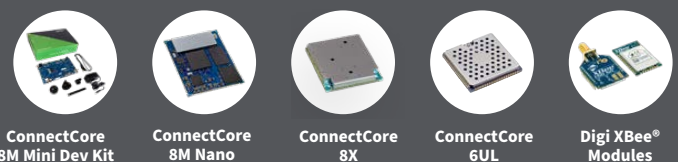


## BENEFITS

- Industrial i.MX 8M Mini quad-core system-on-module
- Digi SMTplus® form factor (40 mm x 45 mm) for ultimate reliability and design freedom
- Power management with both hardware and software support for low-power designs
- Display and camera capabilities with graphics and video hardware acceleration
- Video capabilities with built-in VPU
- Pre-certified dual-band 802.11a/b/g/n/ac 1x1 and Bluetooth® 5 connectivity
- Seamless cellular modem and **Digi XBee®** wireless integration
- Cloud and edge-compute services integration
- Built-in device security, identity and privacy with **Digi TrustFence®** and a hardware Secure Element
- Remote monitoring and management with **Digi Remote Manager®**
- Yocto Project Linux and Android support



## RELATED PRODUCTS



## SPECIFICATIONS

## Digi ConnectCore® 8M Mini

<b>APPLICATION PROCESSOR</b>	NXP® i.MX8 Mini <ul style="list-style-type: none"> <li>• Four Cortex®-A53 cores @ 1.6 GHz</li> <li>• Cortex-M4 400 MHz core processor for low-power processing</li> </ul>	
<b>MEMORY</b>	Up to 8 GB eMMC, up to 2 GB of LPDDR4 (32-bit)	
<b>PMIC</b>	NXP PCA9450	
<b>GRAPHICS / VIDEO</b>	Graphic Processing Unit: <ul style="list-style-type: none"> <li>• GCNanoUltra for 3D acceleration</li> <li>• GC320 for 2D acceleration</li> <li>• LCDIF display controller, supporting up to 1080 p 60 fps display through MIPI DSI</li> <li>• 4-lane MIPI DSI interface</li> <li>• 4-lane MIPI CSI interface</li> </ul>	Video Processing Unit: <ul style="list-style-type: none"> <li>• 1080 p 60 HEVC H.265 (decode)</li> <li>• VP9, H.264, VP8 (encode/decode)</li> </ul>
<b>SECURITY</b>	Digi TrustFence®, TRNG, TrustZone, Secure RTC, Secure JTAG, Secure Element	
<b>PERIPHERALS / INTERFACES</b>	1x PCI Express 2.0 (PCIe) 2x USB 2.0 OTG controllers with integrated PHY interfaces 3x Ultra Secure Digital Host Controller (uSDHC) interfaces 5x Universal Asynchronous Receiver / Transmitter (UART) modules 4x I2C modules 3x SPI modules 1x Quad SPI 10x PWM channels 1x 16-bit ADC module with accurate internal voltage reference, up to 20 channels 5x Synchronous Audio Interface (SAI) modules supporting I2S, AC97, TDM, codec/DSP and DSD interfaces 1x S/PDIF input and output, including a raw capture input mode 8-channel Pulse Density Modulation (PDM) input Up to 112 GPIOs	
<b>ETHERNET</b>	10/100/1000M Ethernet + AVB	
<b>WI-FI</b>	802.11a/b/g/n/ac dual-band wireless	
<b>BLUETOOTH</b>	Bluetooth® 5	
<b>ON-MODULE MICROCONTROLLER ASSIST</b>	Digi Microcontroller Assist™ <ul style="list-style-type: none"> <li>• Independent Cortex-M0+ microcontroller subsystem</li> <li>• Supporting ultra-low power modes @ &lt;3µA</li> </ul>	
<b>OPERATING TEMPERATURE</b>	Industrial: -40° C to 85° C (-40° F to 185° F), depending on use case and enclosure/system design	
<b>STORAGE TEMPERATURE</b>	-50° C to 125° C (-58° F to 257° F)	
<b>RELATIVE HUMIDITY</b>	5% to 90% (non-condensing)	
<b>RADIO APPROVALS</b>	US, Canada, EU, Japan, Australia/New Zealand	
<b>EMISSIONS / IMMUNITY / SAFETY</b>	FCC Part 15 Class B, EN 55022 Class B, EN 61000-3-2, EN 61000-3-3, ICES- 003 Class B, VCCI Class II, AS 3548, FCC Part 15 Subpart C Section 15.247, IC (Industry Canada), RSS-210 Issue 5 Section 6.2.2(o), EN 300 328, EN 301 489-17, EN 55024, EN 301 489-3, Safety (IEC 62368-1)	
<b>DESIGN VERIFICATION</b>	Temperature: IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-78 Vibration/Shock: IEC 60068-2-6, IEC 60068-2-64, IEC 60068-2-27, HALT	
<b>MECHANICAL DIMENSIONS</b>	118 castellated vias, LGA-474, 1.27 mm pitch, 40 mm x 45 mm x 3.5 mm (1.6 in x 1.8 in x 0.1 in)	
<b>PRODUCT WARRANTY</b>	3-year	

PART NUMBERS	DESCRIPTION
<b>DIGI CONNECTCORE® 8M MINI DEVELOPMENT KITS</b>	
CC-WMX8MM-KIT	Digi ConnectCore 8M Mini development kit with development board - quad core, 8 GB eMMC, 2 GB LPDDR4 wireless
<b>DIGI CONNECTCORE 8M MINI SOMS</b>	
CC-WMX-ET8D-NN	Digi ConnectCore 8M Mini - quad core, 8 GB eMMC, 2 GB LPDDR4 wireless
CC-WMX-ET7D-NN	Digi ConnectCore 8M Mini - quad core, 8 GB eMMC, 1 GB LPDDR4 wireless
CC-MX-ET8D-ZN	Digi ConnectCore 8M Mini - quad core, 8 GB eMMC, 2 GB LPDDR4 Ethernet
CC-MX-ET7D-ZN	Digi ConnectCore 8M Mini - quad core, 8 GB eMMC, 1 GB LPDDR4 Ethernet

ACCESSORIES	DESCRIPTION
CC-ACC-LCDH-10	LCD application kit, including 10 in WXGA (high resolution) LCD panel

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