



Manage this device with Digi Remote Manager

# DIGI CONNECTCORE 93

Embedded, wireless system-on-module based on the NXP i.MX 93 processor, with AI/ML NPU, designed for longevity and scalability in industrial IoT applications

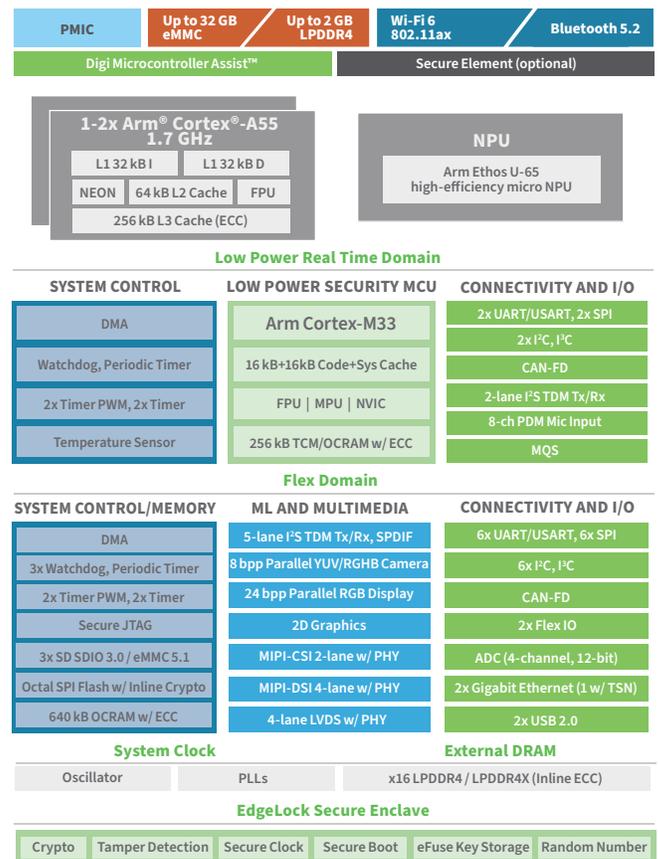
Digi ConnectCore<sup>®</sup> 93, based on the NXP<sup>®</sup> i.MX 93 application processor, is an integrated system-on-module (SOM) platform with wireless connectivity. The ConnectCore 93 SOM is designed for a wide range of medical, industrial, energy, and transportation applications, including Internet of Things (IoT), automation, human-machine interface (HMI), equipment monitoring, audio/voice, edge computing and machine learning (e.g. anomaly detection).

Digi ConnectCore 93 features up to two power-efficient Arm<sup>®</sup> Cortex<sup>®</sup>-A55 cores, with a Cortex-M33 core, AI/ML Arm Ethos U65 NPU and NXP PMIC for maximum power efficiency. This SOM is designed for industrial reliability and the 10+ year product lifecycles of embedded devices. The ConnectCore SOM solution provides ready-to-use building blocks and a vast collection of development tools. This helps OEMs lower R&D and development costs, realize a lower total cost of ownership, and streamline time-to-market by leveraging pre-certified wireless connectivity, remote management, cloud integration and a complete, embedded Linux software platform based on Yocto Project<sup>®</sup>. In addition, built in Digi TrustFence<sup>®</sup> enables OEM developers to integrate critical security and data privacy capabilities into their products.

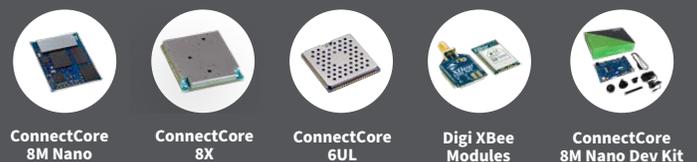
## BENEFITS

- Industrial i.MX 93 single/dual-core system-on-module
- AI/ML Arm Ethos U65 micro neural processing unit (NPU)
- Pre-certified dual-band 802.11ax Wi-Fi and Bluetooth<sup>®</sup> 5.2
- Digi SMTplus<sup>®</sup> form factor (40 mm x 45 mm) for ultimate reliability
- Superior power management with hardware and software support
- Seamless cellular modem and Digi XBee<sup>®</sup> integration
- High level of pin-compatibility with Digi ConnectCore 8 SOM family
- Cloud and edge-compute services integration
- Built-in device security, identity and privacy with Digi TrustFence<sup>®</sup>
- Remote monitoring and management with Digi Remote Manager<sup>®</sup>
- Digi Embedded Yocto Linux<sup>®</sup> support

## DIGI CONNECTCORE<sup>®</sup> 93 BLOCK DIAGRAM



## RELATED PRODUCTS



## SPECIFICATIONS

## DIGI CONNECTCORE® 93

<b>APPLICATION PROCESSOR</b>	NXP® i.MX 93 <ul style="list-style-type: none"> <li>Up to 2x Cortex®-A55 cores at 1.7 GHz</li> <li>1x Cortex-M33 core at 250 MHz core for real-time processing</li> </ul>
<b>MEMORY</b>	Up to 32 GB flash (eMMC), up to 2 GB of LPDDR4 / LPDDR4X (16-bit)
<b>NPU</b>	AI/ML Arm Ethos U65 micro neural processor
<b>PMIC</b>	NXP PCA9451
<b>GRAPHICS / DISPLAY</b>	2D GPU: <ul style="list-style-type: none"> <li>Blended/composition</li> <li>Resize</li> <li>Color space conversion</li> </ul> 1x 1080p 60 MIPI DSI (4-lane, 1.5 Gbps/lane) with PHY 1x 720p 60 LVDS (4-lane) 18-bit parallel RGB
<b>CAMERA</b>	1x 1080p 60 MIPI-CSI (2-lane, 1.5 Gbps/lane) with PHY 8-bit parallel YUV/RGB
<b>SECURITY</b>	Digi TrustFence®: secure boot, filesystem encryption, tamper detection, secure JTAG, secure console, secure build environments, secure firmware updates; EdgeLock secure enclave: crypto, tamper detection, secure clock, secure boot, eFuse key storage, random number; Arm TrustZone (Cortex-A and Cortex-M)
<b>PERIPHERALS/ INTERFACES</b>	2x USB 2.0 OTG controllers with integrated PHY interfaces 1x Ultra Secure Digital Host Controller (uSDHC) interfaces 8x Low Power Universal Asynchronous Receiver / Transmitter (LPUART) modules 8x Low Power I2C modules, 2x I3C 8x Low Power SPI (LPSP) modules 2x FlexCAN with flexible data-rate (FD) support 4x pulse-width modulator (PWM) with 16-bit counter 1x 12-bit ADC module with accurate internal voltage reference, up to 4 channels 3x Synchronous Audio Interface (SAI) modules (up to 4 lanes) 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>	2x 10/100/1000M Ethernet with EEE, AVB and IEEE 1588 (1x TSN)
<b>WI-FI</b>	Wi-Fi 6 802.11ax dual-band 1x1 wireless
<b>BLUETOOTH</b>	Bluetooth® 5.2
<b>802.15.4</b>	802.15.4
<b>ON-MODULE MICROCONTROLLER ASSIST</b>	Digi Microcontroller Assist™ for advanced power management, security, peripheral support and system reliability <ul style="list-style-type: none"> <li>Independent Cortex-M0+ microcontroller subsystem</li> <li>Supporting ultra-low power modes</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

## DIGI CONNECTCORE® 93

### DIGI CONNECTCORE 93 DEVELOPMENT KITS

CC-WMX93-KIT	Digi ConnectCore 93 development kit with development board and dual-core, NPU, 8 GB eMMC, 1 GB LPDDR4 wireless
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### DIGI CONNECTCORE 93 SOMS

CC-WMX-93D-NN	Digi ConnectCore 93 — dual-core, NPU, 8 GB eMMC, 1 GB LPDDR4 wireless
CC-MX-93D-ZN	Digi ConnectCore 93 — dual-core, NPU, 8 GB eMMC, 1 GB LPDDR4 Ethernet

### ACCESSORIES

CC-ACC-LCDH-10	LCD application kit, including 10 in WXGA (1280x800) LCD panel with PCAP touch
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## PART NUMBERS

## SUPPORT SERVICES

DG-EXPE-12	Expert 12x5 support for end users
DG-EXPE-24	Expert 24x7 support for end users

## PART NUMBERS

## DIGI REMOTE MANAGER®

DIGI-RM-CC-STD-1YR	Digi Remote Manager for ConnectCore — Essential 1-year subscription
DIGI-RM-CC-STD-3YR	Digi Remote Manager for ConnectCore — Essential 3-year subscription
DIGI-RM-CC-STD-5YR	Digi Remote Manager for ConnectCore — Essential 5-year subscription
DIGI-RM-CC-PRM-1YR	Digi Remote Manager for ConnectCore — Premium 1-year subscription
DIGI-RM-CC-PRM-3YR	Digi Remote Manager for ConnectCore — Premium 3-year subscription
DIGI-RM-CC-PRM-5YR	Digi Remote Manager for ConnectCore — Premium 5-year subscription
DIGI-RM-CC-DATA-1GB	Digi Remote Manager for ConnectCore — Additional data (1 GB)

FOR MORE INFORMATION  
PLEASE VISIT [DIGI.COM](https://www.digi.com)



The information provided in this document is preliminary and may be subject to change without notice.

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