Digi ConnectCore 93

New

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

- Industrial i.MX 93 single-core embedded SOM platform
- AI/ML Arm® Ethos-U65 micro neural processing unit (NPU)
- Pre-certified dual-band 802.11ax Wi-Fi 6 and Bluetooth® 5.2
- Digi TrustFlex® form factor (40 mm x 45 mm) for ultimate security

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Digi ConnectCore® 93 based on the NXP® i.MX 93 application processor, 3 an integrated system-on-module (SOM) platform with Wi-Fi 6 and Bluetooth 5.2 wireless connectivity.

The ConnectCore 93 SOM is designed for a wide range of industrial, energy and transportation applications, including human-machine interface (HMI), automation, human-machine interface (HMI), equipment monitoring, audio/voice, edge computing and machine learning (e.g. anomaly detection).

Digi ConnectCore 93 features up to four processors in efficient Arm® Cortex® 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 10+ year product lifecycles if embedded devices. The DigiTalSpec software master form factor provides simplified design integration, efficiency and reliability.

Embedded device security is a critical design aspect for the growing number of connected IoT applications. Digi ConnectCore 93 SOM solutions come with Digi TrustFlex® A fully integrated device security framework simplifying the process of securing connected devices.

Digi ConnectCore services, Digi ConnectCore Security services and Expert Support provide additional capabilities for development, deployment and maintenance.

Digi Embedded Yocto®, Digi's feature-rich Linux distribution with many extensions for embedded product design provides a fully tested, validated and maintained Yocto Linux software platform. This helps OEMs lower research and development costs, realize a lower total cost of ownership and streamline time-to-market.

With over twenty years of embedded SOM experience enabling millions of globally connected products, Digi is a trusted embedded and IoT solutions provider, simplifying the way customers design, build and deploy connected applications. Digi Wireless Design Services (WDS) also offers comprehensive hardware, industrial design, certification, production assistance, and custom design and build services to get your products to market and scale.



Compare SOMs

	Digi ConnectCore MP1 Intelligent, wireless and secure system-on-module based on the STM32MP1 MPU family, available in the industrial temperature rated SOM form factor.	Digi ConnectCore 93 Embedded, wireless system-on-module based on the NXP i.MX 93 processor, designed for longevity and scalability in industrial IoT applications	Digi ConnectCore 8M Nano Embedded system-on-module based on the NXP i.MX 8M Mini processor with built-in Video Processing Unit (VPU), designed for longevity and scalability in industrial IoT applications.	Digi ConnectCore 8M Nano Embedded system-on-module based on the NXP i.MX 8M Nano processor, designed for longevity and scalability in industrial IoT applications	Digi Con Intelligent connect embedded on-mod scalable core pac industrial applicat
	VIEW PRODUCT	VIEW PRODUCT	VIEW PRODUCT	VIEW PRODUCT	VIEW
Processor Cores	1 (MP151) or 2 (MP157)	2	4	4	Up to 4
Ethernet	10/100/1000M Ethernet GMAC: IEEE 1588v2, MII/RMII/GMII/RGMII (MP157); 2x 10/100/1000M Ethernet GMAC: IEEE 1588v2, MII/RMII/RGMII (MP151).	2x Gigabit (1x TSN)	1x Gigabit	1x Gigabit	2x Gigat
Processor Architecture	32-bit	64-bit	64-bit	64-Bit	64-Bit
Graphics	2D GPU (Vivante®, OpenGL® ES 2.0) running at up to 533 MHz, parallel LCD-TFT controller, MIPI® DSI 2 data lanes (MP157)	2D GPU, 1080p 60 MPI DSI (4 lanes, 1.5 Gbps/lane) with PPI, 1x 720p 60 LVDS (4-lane), 18-bit parallel RGB	Graphics Processing Unit: GCNanoUltra for 3D acceleration, GC320 for 2D acceleration, 1/2/4 display controller, supporting up to 1080 p 60 fps display through MIPI DSI, DSI PHY (4x lanes) with PPI (display interface), MIPI CSI (4x lanes) camera interface, Video Processing Unit: 1080 p 60 HEVC H.265 (decode), VP9, H.264, VP8 (encode/decode)	GC7000XS, with OpenCL and Vulkan 1.0 support, 2 shader, 123 million triangles / sec, 3.8 gigapixel / sec, 12.8 GFLOPs 32-bit / 25.6 GFLOPs 16-bit, supports OpenCL 1.2, 3.0, 3.1, OpenCL shader binary generation, MIPI-DSI display 4-lane @ 1.5 Gbps/lane, MIPI-CSI (4 lane) with PHY (display interface), MIPI CSI (4 lane) with PHY (camera interface)	Multi-st HD-vide processi H.265 (1080p 1080p6 (1080p 1080p3 Hantro G graphic hardwa graphic 2D/3D/ to four s
I/O	1x SPI 133 in sx I2C, 4x UART + 4x USART, 1x SPI (SPI133), 1x I2S (SPI133), 2x SPI133 in 2x SPI (SPI157, 2 with full-duplex I2S), HDMI-CEC (SPI157), 2x SPDIFRX in 4x (SPI157) SDMMC up to 8-bit (SD / eMMC™ / SDIO), 2x CAN-FD (SPI157), 1x USB 2.0 host + 1x USB 2.0 full-speed OTG, up to 128 GPIO (SPI157) or 176 GPIO (SPI157) I/O ports with interrupt capability	2x USB 2.0 OTG controllers with integrated PHY interfaces, 3x Ultra Secure Digital Host Controller (uSDHC), 8x Low Power Universal Asynchronous Receiver / Transmitter (LPUART), 4x Low Power I2C, 2x Low Power SPI (LPSPI) modules, 2x FlexCAN modules, 1x PWM with 16-bit counter, up to 112 GPIOs	1x USB 2.0 OTG controllers with integrated PHY interfaces, Ultra Secure Digital Host Controller (uSDHC) interfaces, Gigabit Ethernet controller, four Universal Asynchronous Receiver / Transmitter (UART) modules, four I2C modules, four PCI Express 2.0 (PCIe)	1x USB 2.0 OTG controllers with integrated PHY interfaces, 3x Ultra Secure Digital Host Controller (uSDHC) interfaces, 1x Gigabit Ethernet controller, four Universal Asynchronous Receiver / Transmitter (UART) modules, 4x I2C modules, 4x SPI modules	1x SD 2.: controll with int Digital PHY interfac Secure Digital Host Controller Interfac 1x Gigabit Ethernet controller, four Universal Asynchronous Receiver / Transmitter (UART) modules, 4x SPI modules, 3x SPI modules	
Audio	2x SPI133 in 4x (SPI157) SAI/I2S, SPDIF, SPDIF Tx, S/PDIF Rx (4 inputs)	3x SAI/I2S (up to 4 channels), 1x S/PDIF	5x SAI/I2S, 1x S/PDIF Rx/Tx	5x SAI/I2S, 1x S/PDIF Rx/Tx	4x SAI/I2 1x S/PDI	
Wireless	Optional Wi-Fi 5 dual-band 802.11a/b/g/n/ac (1x1), Bluetooth® 5.2, BLE (+LR) up to 4 Mbps) with full hardware support, Bluetooth® 5.1	Wi-Fi 6 802.11a/b/g/n/ac/ax (1x1), Bluetooth® 5.2, 802.15.4 (optional)	Wi-Fi 5 802.11a/b/g/n/ac (1x1), Bluetooth® 5	Wi-Fi 5 802.11a/b/g/n/ac (1x1), Bluetooth® 5	Wi-Fi 5 802.11a (2x2), Bl	
Operating Temperature	Industrial: -40° C to 85° C / -40° F to 185° F), depending on use case and enclosure/system design	Industrial: -40° C to 85° C / -40° F to 185° F), depending on use case and enclosure/system design	Industrial: -40° C to 85° C / -40° F to 185° F), depending on use case and enclosure/system design	Industrial: -40° C to 85° C / -40° F to 185° F), depending on use case and enclosure/system design	Industri -40° C t (Depen case and enclosu design	
Processor Family	STM32MP151C, dual Cortex® A7 at 650 MHz (MP157) / STM32MP153C, dual Cortex® A7 at 800 MHz (MP157) / STM32MP135C, single Cortex A7 at 650 MHz (MP151) Secure boot, crypto engine	NXP i.MX 93 applications processor	NXP i.MX 8M Mini 4x Cortex-A53 cores at 1.6 GHz 1x Cortex-M4 core at 400 MHz	NXP i.MX 8M Nano 4x Cortex-A53 cores at 1.4 GHz 1x Cortex-M7 core at 600 MHz	NXP i.MX 2 4x Cor at 1.6 G 1x Cor 264 MHz Tensil DSP	
RAM	Up to 1 GB DDR3L	Up to 2 GB of LPDDR4 (1866 MT/s)	Up to 2 GB LPDDR4	Up to 2 GB of LPDDR4	Up to 2	
Flash	Up to 1 GB SLC NAND	Up to 32 GB eMMC	Up to 64 GB eMMC	Up to 4 GB eMMC	Up to 1	
Software Support	Digi Embedded Yocto Linux	Digi Embedded Yocto Linux®, Digi Embedded Android™	Digi Embedded Yocto Linux®, Digi Embedded Android™	Digi Embedded Yocto Linux®	Digi Emb Linux®, Android	
Other		AI/ML Arm Ethos-U65 micro neural processor; Digi Microcontroller Assist™ Independent Cortex M4+ microcontroller subsystem supporting ultra-low power modes	Digi Microcontroller Assist™, Independent Cortex M4+ microcontroller subsystem, supporting ultra-low power modes @ <1µA	Digi Microcontroller Assist™, Independent Cortex M4+ microcontroller subsystem, supporting ultra-low power modes @ <1µA		
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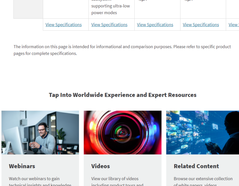

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