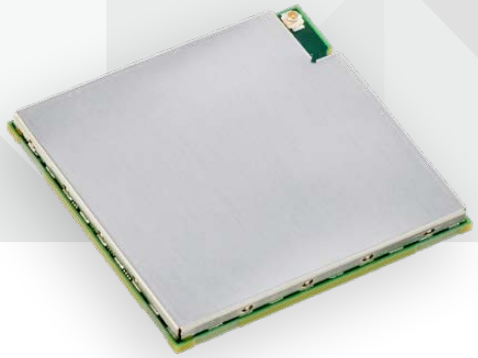
SCALABLE HIGH-PERFORMANCE SYSTEM-ON-MODULE



DIGI CONNECTCORE 6+

NXP i.MX6Plus based surface-mount module solution with scalable, quad-core performance and integrated wireless

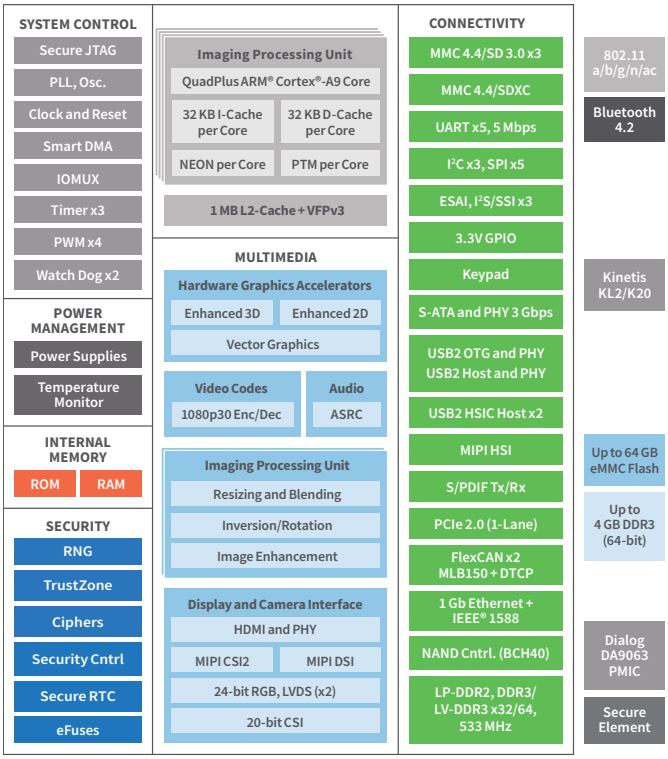
The Digi ConnectCore® 6+ is an ultra-compact and highly integrated system-on-module solution based on the NXP i.MX6Plus Cortex-A9 processor family.

With processor speeds up to 1.2 GHz and fully pin-compatible dual-/quad-core variants, the ConnectCore 6+ offers a truly future-proof platform solution with scalable performance and pre-certified wireless 802.11a/b/g/n/ac and Bluetooth 5, including Bluetooth Low Energy, connectivity.

Its low-profile, surface-mount design maximizes integration flexibility and significantly reduces design risk in a highly cost effective, reliable form factor with optimized heat dissipation capabilities even in the most demanding quad-core system configurations.

Integrated cloud integration as part of the Digi Yocto Linux and Android software platform support offers secure remote management and web services capabilities through the scalable Digi Remote Manager®.

BLOCK DIAGRAM



BENEFITS

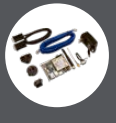
- Scalable Cortex-A9 multi-core performance
- Independent Cortex-M0+/Cortex-M4 Microcontroller Assist™ subsystem
- Cost-effective, reliable, low-profile surface-mount module form factor
- Pre-certified 802.11a/b/g/n/ac and Bluetooth 5
- Smart Power Management Architecture with PMIC
- Android and Yocto Project Linux software platform support
- Reliable design with IEC 60068 and HALT verification
- Dedicated on-module security + authentication controller
- Designed for long-term availability

KEY APPLICATIONS

ConnectCore® 6+ SBC

ConnectCore® i.MX53/ Wi-i.MX53

ConnectCard® for i.MX28


ConnectCore® 6 LCD Kit

Digi XBee® ZigBee

SPECIFICATIONS	Digi ConnectCore® 6+
FEATURES	
APPLICATION PROCESSOR	NXP i.MX6Plus encompasses a dual or quad-core Arm® Cortex®-A9 platform running up to 1.2 GHz with 1 MB of L2 cache, and optimized 64-bit DDR3 or 2-ch., 32-bit LPDDR2 support. Integrated FlexCAN, MLB busses, PCI Express®and SATA-2 provide excellent connectivity
MEMORY	8 GB flash, 2 GB DDR3
PMIC	Dialog DA9063
GRAPHICS	LVDS, MIPI display port, MIPI camera port and HDMI v1.4
SECURITY	RNG, TrustZone, Ciphers, Security Cntrl, Secure RTC, Secure JTAG, eFuses (OTP)
PERIPHERALS/INTERFACES	MMC 4.4/SD 3.0 x3MMC 4.4/SDXC, UART x5 (5 Mbps), MIPI HSI, S/PDIF Tx/Rx, I2C x3, SPI x5, ESAI, I2S/SSI x3, FlexCAN x2, MLB150 + DTCP, S-ATA and PHY (3 Gbps), USB2 OTG and PHY, USB 2.0 Host and PHY, USB 2.0 HSIC Host x2, PWM, 3.3V GPIO, Keypad, PCIe 2.0 (x1 lane), HDMI and PHY, MIPI DSI, MIPI CSI2, 20-bit CSI, 24-bit RGB, LVDS (x2), RTC, External address/data bus, Watchdog, Timers, JTAG
EXTERNAL BUS	26-bit address / up to 32-bit data (multiplexed and non-multiplexed modes)
ETHERNET	1 Gigabit Ethernet
WI-FI	802.11a/b/g/n/ac
BLUETOOTH	Bluetooth 5
ON-MODULE MICROCONTROLLER ASSIST	Microcontroller Assist (MKL14Z32VFT4)
OPERATING TEMPERATURE	-40° C to 85° C (-40° F to 185° F)
STORAGE TEMPERATURE	-50° C to 125° C (-58° F to 257° F)
RELATIVE HUMIDITY	5% to 90% (non-condensing)
RADIO APPROVALS	US, Canada, EU, Australia/New Zealand
EMISSIONS / IMMUNITY / SAFETY	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 UL/UR (or equivalent)
DESIGN VERIFICATION	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
MECHANICAL DIMENSIONS	LGA-400, 2 mm pitch, fully shielded (heat-spreading)
PRODUCT WARRANTY	3 years

PART NUMBERS	DESCRIPTION
CC-WMX-KK8D-TN	ConnectCore 6+ module, i.MX6QuadPlus, 1.0 GHz, -40 to 85°C, 8 GB flash, 2 GB DDR3, 802.11a/b/g/n/ac, Bluetooth 5, Ethernet

ACCESSORIES	DESCRIPTION
CC-WMX6P-KIT	ConnectCore 6+ professional development kit

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