

Manage this device with  
Digi Remote Manager

# DIGI CONNECTCORE 6N

NXP i.MX6 based surface-mount module solution with scalable, single-/multi-core performance and integrated wireless

Digi ConnectCore® 6N is an ultra-compact and highly integrated System-On-Module (SOM) solution based on the NXP® i.MX6 Cortex™-A9 processor family.

With processor speeds up to 1.2 GHz and fully pin-compatible single-/dual-/quad-core variants, the ConnectCore 6N offers a truly future-proof platform solution with scalable performance and pre-certified wireless 802.11a/b/g/n/ac and Bluetooth® 5.0, including Bluetooth Low Energy, connectivity.

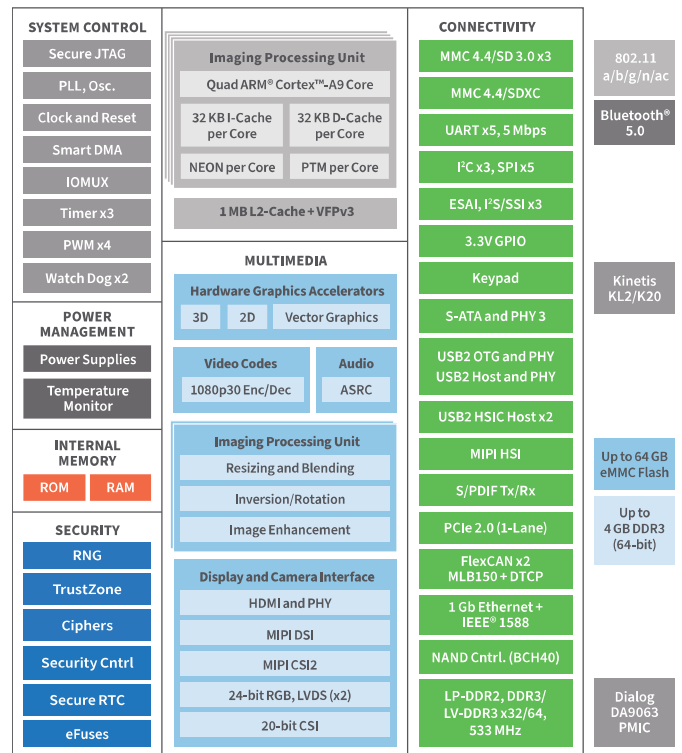
Its low-profile, surface-mount design maximizes integration flexibility and significantly reduces design risk in a highly cost-effective, reliable form factor with optimized heat dissipation capabilities even in the most demanding quad-core system configurations.

Digi ConnectCore 6N comes with a complete Board Support Package (BSP) for both Linux® and Android™ platforms supporting secure remote management and web services through Digi Remote Manager®.

## BENEFITS

- Scalable Cortex-A9 multi-core performance
- Cost-effective, reliable, low-profile surface-mount module form factor
- Pre-certified 802.11a/b/g/n/ac and Bluetooth 5.0
- Smart Power Management Architecture with PMIC
- Android, Yocto Project Linux and Windows® Embedded Compact software platform support
- Reliable design with IEC 60068 and HALT verification
- Designed for long-term availability

## BLOCK DIAGRAM



## RELATED PRODUCTS



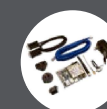
ConnectCore® 6 SBC



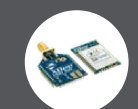
ConnectCore® 8M Nano/Mini



ConnectCard® for i.MX28



ConnectCore® 6 LCD Kit



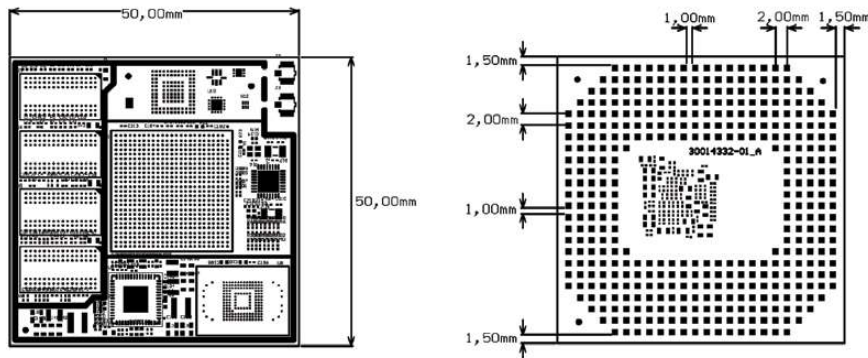
Digi XBee® ZigBee

# SPECIFICATIONS

# Digi ConnectCore® 6N

## FEATURES

<b>APPLICATION PROCESSOR</b>	NXP® i.MX6 Solo/DualLite/Dual/Quad with up to four Cortex®-A9 cores; Industrial (800/850 MHz), Commercial (1/1.2 GHz) i.MX6 variants; 32 KB I-Cache/32 KB D-Cache, up to 1 MB L2-Cache
<b>MEMORY</b>	Up to 64 GB eMMC flash, up to 2 GB DDR3 (64-bit)
<b>PMIC</b>	Dialog DA9063
<b>GRAPHICS</b>	Multi-stream-capable HD video engine with 1080p60 decode, 1080p30 encode and 3D video playback in HD in high-performance families; superior 3D graphics performance with up to 4 shaders at 200 Mt/s with OpenCL support; separate 2D and/or Vertex acceleration engines for UI support; stereoscopic image sensor support for 3D imaging
<b>SECURITY</b>	RNG, TrustZone, Ciphers, Security Cntrl, Secure RTC, Secure JTAG, eFuses (OTP)
<b>PERIPHERALS/INTERFACES</b>	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, 3.3 V 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
<b>EXTERNAL BUS</b>	26-bit address / up to 32-bit data (multiplexed and non-multiplexed modes)
<b>ETHERNET</b>	1 Gbit Ethernet + IEEE 1588 (MII10, MII100, RMII, RGMII)
<b>WI-FI</b>	802.11a/b/g/n/ac
<b>BLUETOOTH</b>	Bluetooth 5.0
<b>OPERATING TEMPERATURE</b>	Industrial: -40° C to 85° C (-40° F to 185° F) / Ext. Commercial: -20° C to 70° C (-4° F to 158° 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, Brazil
<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 60068-2-27, HALT
<b>MECHANICAL DIMENSIONS</b>	LGA-400, 2 mm pitch, fully shielded (heat-spreading)
<b>PRODUCT WARRANTY</b>	3-year



PART NUMBERS	DESCRIPTION
<b>KITS</b>	
CC-WMX6N-KIT	ConnectCore 6N SBC Development Kit: ConnectCore 6N Development Kit with SBC baseboard, UART console cable, power supply and accessories (Linux, Android)
<b>CONNECTCORE 6N - ETHERNET ONLY MODULES</b>	
CC-MX-L76C-Z1	ConnectCore 6N SOM, i.MX6DualLite, Industrial, 800 MHz, -40 to 85° C, 4 GB eMMC flash, 512 MB DDR3, Ethernet
CC-MX-L77C-Z1	ConnectCore 6N SOM, i.MX6DualLite, Industrial, 800 MHz, -40 to 85° C, 4 GB eMMC flash, 1 GB DDR3, Ethernet
<b>CONNECTCORE 6N - WIRELESS MODULES</b>	
CC-WMX-L76C-N	ConnectCore 6N SOM, i.MX6DualLite, Industrial, 800 MHz, -40 to 85° C, 4 GB eMMC flash, 512 MB DDR3, 802.11a/b/g/n/ac, Bluetooth 5.0, Ethernet
CC-WMX-L87C-N	ConnectCore 6N SOM, i.MX6Dual, Industrial, 800 MHz, -40 to 85° C, 4 GB eMMC flash, 1 GB DDR3, 802.11a/b/g/n/ac, Bluetooth 5.0, Ethernet
CC-WMX-K87C-N	ConnectCore 6N SOM, i.MX6Dual, Ext. Commercial, 1.0 GHz, -20 to 70° C, 4 GB eMMC flash, 1 GB DDR3, 802.11a/b/g/n/ac, Bluetooth 5.0, Ethernet
CC-WMX-L97D-N	ConnectCore 6N SOM, i.MX6Quad, Industrial, 800 MHz, -40 to 85° C, 8 GB eMMC flash, 1 GB DDR3, 802.11a/b/g/n/ac, Bluetooth 5.0, Ethernet
CC-WMX-J97C-N	ConnectCore 6N SOM, i.MX6Quad, Ext. Commercial, 1.2 GHz, -20 to 70° C, 4 GB eMMC flash, 1 GB DDR3, 802.11a/b/g/n/ac, Bluetooth 5.0, Ethernet
CC-WMX-J98C-N	ConnectCore 6N SOM, i.MX6Quad, Ext. Commercial, 1.2 GHz, -20 to 70° C, 4 GB eMMC flash, 2 GB DDR3, 802.11a/b/g/n/ac, Bluetooth 5.0, Ethernet
<b>CONNECTCORE 6N - SBC</b>	
CC-SB-WMX-J97C-N	ConnectCore 6N SBC, i.MX6Quad, Ext. Commercial, 1.2 GHz, -20 to 70° C, 4 GB eMMC flash, 1 GB DDR3, 802.11a/b/g/n/ac, Bluetooth 5.0, Ethernet
CC-SB-WMX-L87C-N	ConnectCore 6N SBC, i.MX6Dual, Industrial, 800 MHz, -40 to 85° C, 4 GB eMMC flash, 1 GB DDR3, 802.11a/b/g/n/ac, Bluetooth 5.0, Ethernet
<b>ACCESSORIES</b>	
CC-ACC-LCDH-10	LCD Application Kit, including 10 in WXGA (high resolution) LCD panel

FOR MORE INFORMATION  
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