

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.

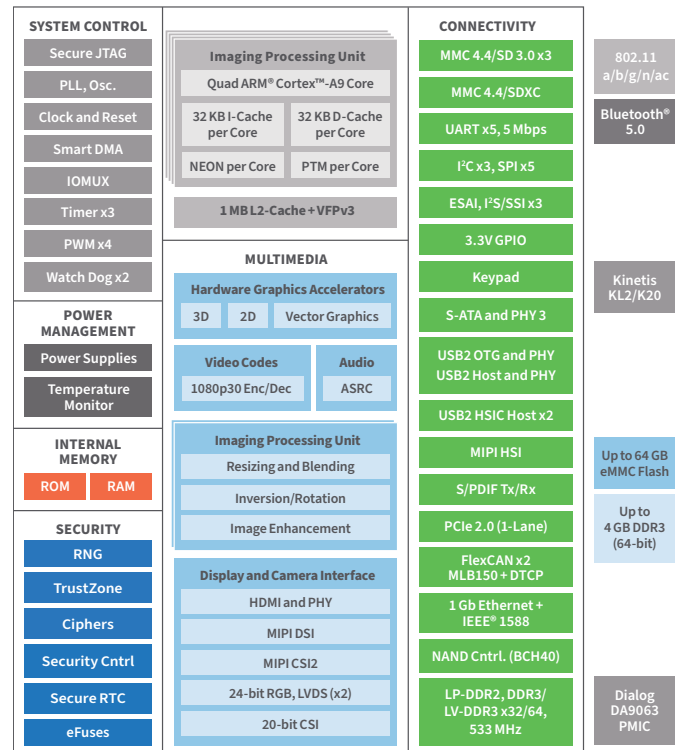
Its low-profile, surface-mount design maximizes integration flexibility and significantly reduces design risk in a highly cost-effective, reliable form factor with optimized heat dissipation capabilities even in the most demanding quad-core system configurations.

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



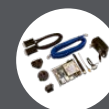
ConnectCore® 6 SBC



ConnectCore® 8M Nano/Mini



ConnectCard® for i.MX28



ConnectCore® 6 LCD Kit



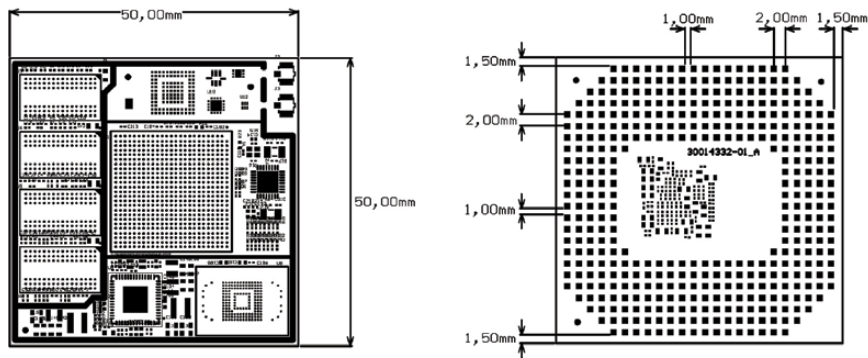
Digi XBee® ZigBee

SPECIFICATIONS

Digi ConnectCore® 6N

FEATURES

| | |
|--------------------------------------|---|
| APPLICATION PROCESSOR | 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 |
| MEMORY | Up to 64 GB eMMC flash, up to 2 GB DDR3 (64-bit) |
| PMIC | Dialog DA9063 |
| GRAPHICS | 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 |
| 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, 3.3 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 |
| EXTERNAL BUS | 26-bit address / up to 32-bit data (multiplexed and non-multiplexed modes) |
| ETHERNET | 1 Gbit Ethernet + IEEE 1588 (MII10, MII100, RMII, RGMII) |
| WI-FI | 802.11a/b/g/n/ac |
| BLUETOOTH | Bluetooth 5.0 |
| OPERATING TEMPERATURE | 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 |
| STORAGE TEMPERATURE | -50° C to 125° C (-58° F to 257° F) |
| RELATIVE HUMIDITY | 5% to 90% (non-condensing) |
| RADIO APPROVALS | US, Canada, EU, Japan, Australia/New Zealand, Brazil |
| 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 (IEC 62368-1) |
| DESIGN VERIFICATION | Temperature: IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-78; Vibration/shock: IEC 60068-2-6, IEC 60068-2-27, HALT |
| MECHANICAL DIMENSIONS | LGA-400, 2 mm pitch, fully shielded (heat-spreading) |
| PRODUCT WARRANTY | 3-year |



| PART NUMBERS | DESCRIPTION |
|---|--|
| KITS | |
| CC-WMX6N-KIT | ConnectCore 6N SBC Development Kit: ConnectCore 6N Development Kit with SBC baseboard, UART console cable, power supply and accessories (Linux, Android) |
| CONNECTCORE 6N - ETHERNET ONLY MODULES | |
| 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 |
| CONNECTCORE 6N - WIRELESS MODULES | |
| 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 |
| CONNECTCORE 6N - SBC | |
| 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 |
| ACCESSORIES | |
| CC-ACC-LCDH-10 | LCD Application Kit, including 10 in WXGA (high resolution) LCD panel |

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