



SECURE, CONNECTED
DEVELOPMENT KIT



DIGI CONNECTCORE 8X SBC PRO DEVELOPMENT KIT

Design and build your connected products on an industrial and productization-ready single board computer platform

Digi ConnectCore® 8X SBC Pro development kit delivers a powerful, secure and cost-effective single board computer with complete support for Linux and Android.

Digi ConnectCore 8X SBC Pro development kit reduces time-to-market by virtually eliminating the traditional risk, effort and complexity of custom board designs without sacrificing flexibility or capabilities.

VERSATILE CONNECTIVITY ACROSS INDUSTRIES

Streamline the process to design, build, test and deploy secure, industrial-ready products with the Digi ConnectCore 8X SBC Pro development kit. A range of applications support healthcare, transportation, energy, utility, agricultural, building automation and other industrial markets.

The compact form factor integrates an on-board dual-band antenna option, USB connectivity and Digi XBee® RF connector. Additional features include cellular connectivity options, multi-display/camera and audio support, external storage and expansion connectors.

Digi also offers optional services including cellular integration support, certification assistance and custom design services to get your product to market faster and smarter.

THE KIT INCLUDES:

- Digi ConnectCore® 8X SBC Pro with dual-ethernet, 802.11a/b/g/n/ac and Bluetooth® 5
- Console port cable
- Two dual-band antennas
- Power supply and accessories

NUMBER	DESCRIPTION
CC-WMX8-KIT	Digi ConnectCore 8X SBC Pro development kit

FEATURES AND BENEFITS

- Industrial i.MX 8X quad-core SOM and SBC platform family
- Compact Pico-ITX form factor (100 mm x 72 mm)
- Power management with both hardware and software support for low-power designs
- Multi-display and camera capabilities with hardware acceleration
- Pre-certified dual-band 802.11a/b/g/n/ac 2x2 and Bluetooth 5 connectivity
- Seamless cellular modem and Digi XBee® 3 integration
- Cloud and edge compute services integration
- Built-in Digi TrustFence® device security
- Yocto Project Linux and Android support

SPECIFICATIONS	Digi ConnectCore® 8X SBC Pro
APPLICATION PROCESSOR	NXP i.MX 8QuadXPlus <ul style="list-style-type: none"> • 4x Cortex-A35 cores @ 1.0 GHz • 1x Cortex-M4F @ 264 MHz core for real-time processing • 1x Tensilica® Hi-Fi 4 DSP
MEMORY	Up to 16 GB eMMC, up to 2 GB LPDDR4 (32-bit)
GRAPHICS	Multi-stream-capable HD video engine with H.265 (4Kp30), H.264 (1080p60), VP6/VP8 (1080p60), MPEG-2 (1080p60), MPEG4 (1080p), RealVideo (1080p) decode and H.264 (1080p30) encode; 3D video playback in HD in high-performance families; superior 3D graphics performance with up to 4 shaders
DISPLAYS	2x LVDS/MIPI with backlight control and I2C touch interface
CAMERA	1x 8-bit parallel camera interface, 1x MIPI camera 2x lanes
AUDIO	2x line-in, 1x line-out, 1x mic-In, 1x headset on 3.5 mm audio jack
UART/CONSOLE	4-pin header (console), 2x UARTs on expansion connector
SECURITY	Digi TrustFence®, TRNG, TrustZone, ciphers, security control, secure RTC, secure JTAG, eFuses (OTP)
ETHERNET	2x Gigabit Ethernet 10/100/1000M with AVB on RJ-45, with 2 LEDs for link/speed/activity
WI-FI	2 x 2 MIMO 802.11a/b/g/n/ac: 2.412 - 2.484 GHz, 4.900 - 5.850 GHz Security: WEP, WPA-PSK/WPA2-personal, WPA/WPA2 enterprise, 802.11i, soft access point mode (up to 10 clients)
BLUETOOTH	Bluetooth® 5
ANTENNA CONNECTORS	2x U.FL on module
DIGI XBEE RF	Standard Digi XBee® socket
USB	2x USB 2.0 Host, 1 x USB 3.0 on Type-C connector
PCI EXPRESS MINI CARD*	Full-size card support, with on-board micro SIM slot support – dedicated 3 A power supply
OTHER CONNECTIVITY	2x CAN, 1x SPI, 1x I2C, 1x expansion connector
EXTERNAL STORAGE	MicroSD
BOOT CONFIGURATION	On module eMMC, on SBC microSD, serial downloader and boot from fuses
DEBUG	1x JTAG for i.MX 8X (Tag-Connect), 1x SWD for MCA (Tag-Connect and header)
BUTTONS	1x power button (power on, power off, sleep, wake-up), 1x reset button
LEDS	2x user LEDs (1x yellow, 1x green), 1x power LED (3.3 V)
POWER INPUTS	5 VDC @ 500 mA (typical, depending on use-case), 1x coin cell 2-pin header
POWER SUPPLY CONNECTOR	Main power supply via 2 mm locking barrel connector, or dedicated power connector (2-pin header)
POWER OUTPUTS	3.3 V Out (2-pin header), 5 V Out (2-pin header)
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	Relative humidity 5% to 90% (non-condensing)
RADIO APPROVALS (PENDING)	US, Canada, EU, Japan, Australia/New Zealand
EMISSIONS/ IMMUNITY/ SAFETY (PENDING)	FCC Part 15 Class B, EN 55024, EN 55032 Class B, ICES-003 Class B, VCCI Class II, FCC Part 15 Subpart C Section 15.247 and 15.407, IC (Industry Canada), EN 300 328, EN 301 893, EN 300 440, EN 301 489-1/-17, EN 55024, EN 301 489-3
DESIGN VERIFICATION (PENDING)	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	100 mm x 72 mm (3.9 in x 2.8 in)

*PCIe is only supported on wired variants

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