



# CONNECTCORE® 6UL STARTER KIT

Compact and easy-to-use development and rapid prototyping platform for smart connected devices and applications

The ConnectCore 6UL Starter Kit provides a universal and powerful platform for your smart connected devices. It delivers an extremely compact and flexible development and rapid prototyping kit for the ConnectCore 6UL System-on-Module (SOM), which is suited for use in a wide range of connected applications.

## BUILD. CONNECT. EVERYTHING.

The ConnectCore 6UL SBC Express is a SOM built on the low-power NXP i.MX6UL application processor, 256 MB flash, 256 MB RAM, integrated 10/100 Mbit Ethernet, pre-certified dual-band 802.11ac wireless LAN + Bluetooth 4.2 connectivity with an integrated high-efficiency antenna and a focused set of key peripheral interfaces.

The simplified but also rugged board design offers USB host/device connections, microSD storage and embedded expansion connectors for development and prototyping purposes. These include Grove connectors, which allow you to instantly connect and integrate a wide range of compatible off-the-shelf sensors and peripherals, effortlessly.

Digi's Yocto Project Linux BSP and software support is provided with full source code access straight out of the box. Whether you are building a connected device for medical, healthcare, energy or industrial applications, or prototyping new connected product concepts, the ConnectCore 6UL Starter Kit is the ideal platform to get you started. And if you need additional help with your project, Digi also offers professional support and design services to help you go to market smarter and faster.

### THE KIT INCLUDES:

- ✓ 1 ConnectCore 6UL SBC Express w/Ethernet and 802.11a/b/g/n/ac + Bluetooth 4.2
- ✓ 1 Micro-USB Y-Cable

NUMBER	DESCRIPTION
CC-WMX6UL-START	ConnectCore 6UL Starter Kit

### FEATURES AND BENEFITS

- Very compact 87 x 63 mm form factor
- NXP i.MX6UL with 256 MB NAND flash and 256 MB DDR3
- Pre-certified dual-band 802.11ac Wi-Fi connectivity
- Bluetooth 4.2, with Bluetooth Low Energy support
- Integrated on-board high-efficiency antenna
- 10/100 Mbit Ethernet networking
- Grove and expansion connectors for flexibility
- Rugged design with mounting options
- Power option via USB connector
- Industrial operating temperature range
- Complete Yocto Project Linux BSP with source code



## SPECIFICATIONS

## ConnectCore® 6UL SBC Express

## PERFORMANCE\*

<b>APPLICATION PROCESSOR</b>	NXP i.MX6UL-2, ARM® Cortex®-A7 @ 528 MHz, 128 KB L2 cache, with NEON™ MPE (Media Processor Engine) co-processor
<b>MEMORY</b>	256 MB high-reliability NAND flash (SLC), 256 MB DDR3

## WIRED NETWORK CONNECTIVITY

<b>ETHERNET</b>	1 x 10/100 Mbit Ethernet
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## WIRELESS NETWORK CONNECTIVITY

<b>WI-FI</b>	Dual-band 802.11a/b/g/n/ac 1x1 (MCS 0-9)
<b>BLUETOOTH</b>	Bluetooth 4.2, with Bluetooth Low Energy support
<b>ANTENNA</b>	On-board Isolated Magnetic Dipole™ (IMD) stamped metal antenna (2.4/5 GHz)

## PERIPHERALS/INTERFACES

<b>ETHERNET</b>	RJ-45
<b>USB HOST</b>	Dual Type-A
<b>USB DEVICE</b>	Micro-USB
<b>CONSOLE</b>	Micro-USB
<b>EXTERNAL STORAGE</b>	microSD
<b>GROVE***</b>	1 x Grove D, 1 x Grove A, 1 x Grove I <sup>2</sup> C
<b>EXPANSION</b>	JTAG, SWD, PWM, GPIO SPI, I <sup>2</sup> C, UART
<b>COIN CELL</b>	2-pin header
<b>DISPLAY</b>	Optional, through Raspberry Pi HAT compatible display accessories
<b>LED</b>	Power, Console RX/TX, User
<b>BUTTONS</b>	Power, Reset, User
<b>BOOT SELECT SWITCH</b>	NAND/microSD
<b>DEBUG</b>	Tag-Connect for JTAG and SWD

## CERTIFICATIONS\*

<b>RADIO APPROVALS</b>	US, Canada, EU, Japan, Australia, New Zealand
<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 UL/UR (or equivalent)

## POWER REQUIREMENTS

<b>SUPPLY VOLTAGE</b>	5 VDC @ 200 mA (typical), Also see ConnectCore 6UL product brief for module-only power consumption guidance
<b>POWER CONNECTORS</b>	Micro-USB, or dedicated power connector (header)

## ENVIRONMENTAL

<b>OPERATING TEMPERATURE</b>	-40° C to 85° C
<b>STORAGE TEMPERATURE</b>	-50° C to +125° C
<b>RELATIVE HUMIDITY</b>	Relative humidity 5% to 90% (non-condensing)
<b>ALTITUDE</b>	Altitude 12,000 feet (3,658 meters)
<b>DESIGN VERIFICATION</b>	Temperature: IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-78; Vibration/Shock: IEC 60068-2-6, IEC 60068-2-64, IEC 60068-2-27, HALT

## MECHANICAL

<b>DIMENSIONS</b>	87 x 63 mm
<b>WEIGHT</b>	0.9 lbs / 408 g

\* Populates ConnectCore 6UL module P/N CC-WMX-JN58-NE (castellated edge mounting). \*\*Final certifications pending. \*\*\*MCA link option through zero-ohm resistor placement.



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