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 and Bluetooth® 5 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 with Ethernet, 802.11a/b/g/n/ac and Bluetooth 5

✓ 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 5, 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*

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

WIRED NETWORK CONNECTIVITY

ETHERNET	1 x 10/100 Mbit Ethernet

WIRELESS NETWORK CONNECTIVITY

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

PERIHPERALS/INTERFACES

ETHERNET	RJ-45
USB HOST	Dual Type-A
USB DEVICE	Micro-USB
CONSOLE	Micro-USB
EXTERNAL STORAGE	microSD
GROVE***	1 x Grove D, 1 x Grove A, 1 x Grove I²C
EXPANSION	JTAG, SWD, PWM, GPIO SPI, I²C, UART
COIN CELL	2-pin header
DISPLAY	Optional, through Raspberry Pi HAT compatible display accessories
LED	Power, Console RX/TX, User
BUTTONS	Power, Reset, User
BOOT SELECT SWITCH	NAND/microSD
DEBUG	Tag-Connect for JTAG and SWD

CERTIFICATIONS*

RADIO APPROVALS	US, Canada, EU, Japan, 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)

POWER REQUIREMENTS

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

ENVIRONMENTAL

OPERATING TEMPERATURE	-40° C to 85° C (-40° F to 185° F)
STORAGE TEMPERATURE	-50° C to 125° C (-58° C to 257° F)
RELATIVE HUMIDITY	Relative humidity 5% to 90% (non-condensing)
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	87 mm x 63 mm (3.43 in x 2.48 in)
WEIGHT	408 g (0.9 lbs)

* 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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