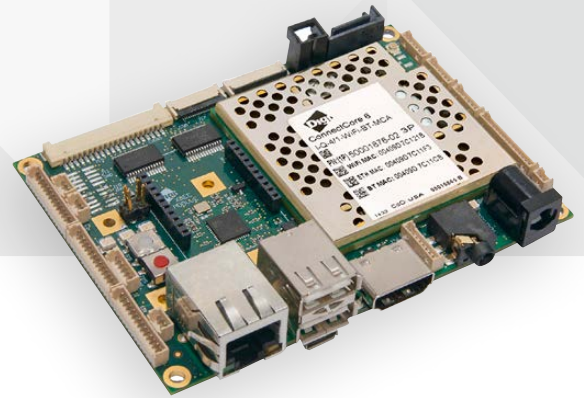




CONNECTED SINGLE BOARD COMPUTER SOLUTION



# CONNECTCORE® 6 SBC

Flexible, compact and reliable Freescale i.MX6 SBC with integrated Ethernet, Wi-Fi, Bluetooth 4.0, XBee® and cellular connectivity options

The ConnectCore 6 SBC is an ultra-compact and versatile off-the-shelf single board computer (SBC) platform. It offers significantly reduced time to market by virtually eliminating the traditional risk, effort and complexity of custom board designs without sacrificing flexibility or capabilities.

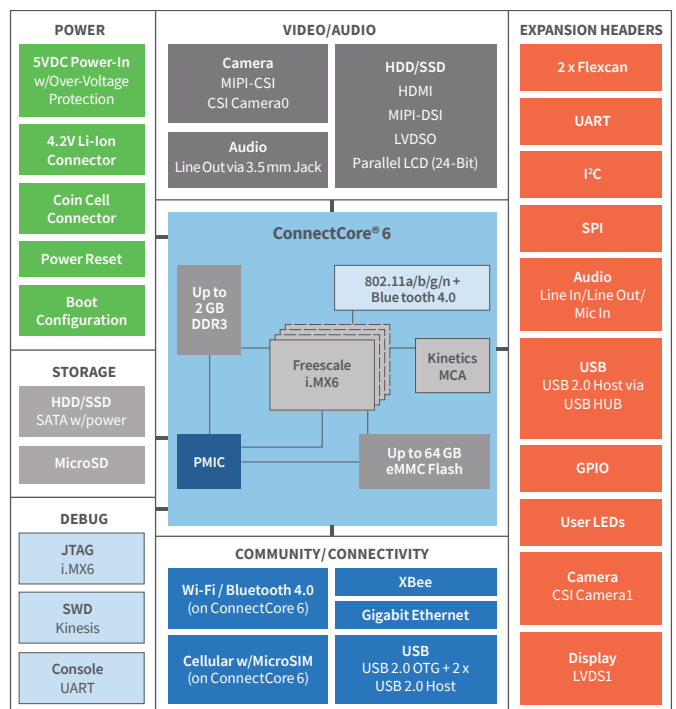
Built on the ConnectCore 6 module, it provides a common platform with scalable Freescale i.MX6 performance, pre-certified Bluetooth 4.0 and Wi-Fi integration, XBee RF module and cellular connectivity options, Gigabit Ethernet support, multi display/camera and audio support, external storage, expansion connectors, and reliability in harsh environments.

Leading and innovative features such as the Kinetis Micro Controller Assist™ (MCA) enable the development of connected products with highly optimized power footprints. Seamless Digi Device Cloud™ integration provides secure remote management and web services capabilities for the Internet of Things.

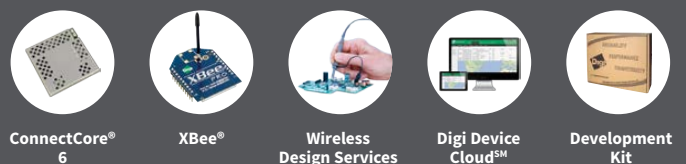
## BENEFITS

- Compact, cost-effective off-the-shelf solution built on the ConnectCore 6 module
- Gigabit Ethernet and fully pre-certified 802.11a/b/g/n and Bluetooth 4.0 option
- Ready for cellular connectivity and XBee RF module integration
- Complete set of available peripherals and interfaces with customization options
- Designed for flexibility and reliability
- Windows Embedded Compact, Linux and Android software platform support
- Seamless Device Cloud integration

## BLOCK DIAGRAM



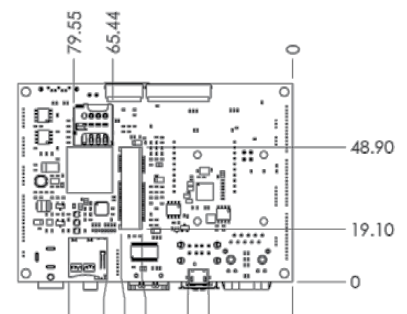
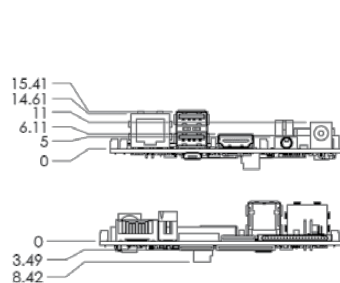
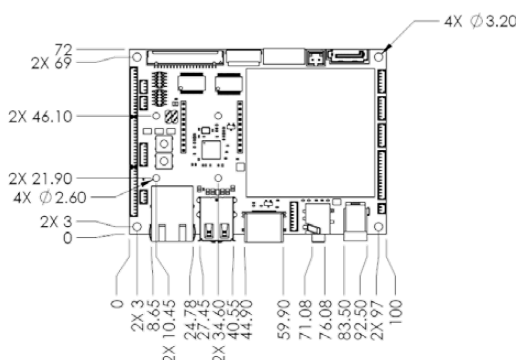
## RELATED PRODUCTS



SPECIFICATIONS	ConnectCore® 6 SBC
<b>APPLICATION PROCESSOR</b>	On-board ConnectCore 6 multi-chip module with Freescale i.MX6Solo/i.MX6DualLite/i.MX6Dual/i.MX6Quad, Industrial (800/850 MHz) and Commercial (1/1.2 GHz) options
<b>MEMORY</b>	Up to 64 GB eMMC flash, up to 2 GB DDR3 (64-bit)
<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 w/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>DISPLAYS</b>	1 x HDMI (Type A) 2 x LVDS with backlight control and I2C touch interface (Hirose DF14A-20P-1.25H and Molex 53047-1410) 1 x Parallel LCD (24-bit) with backlight control and I2C touch interface (Omron XF2M-4015-1A) 1 x MIPI-DSI with backlight control and I2C touch interface (Omron XF2M-2015-1A)
<b>CAMERA</b>	1 x 8-Bit Parallel Camera Interface 1 (Omron XF2M-2015-1A) 1 x 8-Bit Parallel Camera Interface 0 (Molex 53047-1410) 1 x MIPI CSI-2 (Omron XF2M-2415-1A, compatible with e-con Systems e-CAM50IMX6 module)
<b>USB 2.0</b>	2 x USB Host (Dual Type A) 1 x USB OTG (Micro AB) 1 x USB Host (Molex 53047-0610)
<b>AUDIO</b>	1 x Line-In (3.5 mm stereo jack, CUI SJ1-3515-SMT) 1 x Line-In, 1 x Line-Out, 1 x Mic-In (Molex 53047-0810) On-board Freescale SGT15000 audio codec
<b>CONSOLE (RS232)</b>	Molex 53047-0310
<b>SATA 3.0 W/5V POWER</b>	3M 5607-5102-SH, Molex 70543-0001
<b>MICRO-SIM</b>	Yes
<b>PCI EXPRESS MINI CARD</b>	Foxconn AS0B226-S68Q-7H Provides PCI Express x1, USB 2.0 Host, I2C, SIM, Reset, Wake-Up signals Supports mounting of half-size and full-size PCI Express Mini Cards
<b>BOOT CONFIGURATION</b>	eMMC / SD / SATA
<b>XBEE SOCKET</b>	Samtec MMS-110-01-L-SV
<b>WI-FI</b>	802.11a/b/g/n: 2.412 - 2.484 GHz, 4.900 - 5.850 GHz 802.11b: 1, 2, 5.5, 11 Mbps (17 dBm typical ±2 dBm) 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps (15 dBm typical ±2 dBm) 802.11n: 15, 30, 45, 60, 90, 120, 135, 150 Mbps (12 dBm typical ±2 dBm), HT40, MCS 0-7 Security: WEP, WPA-PSK/WPA2-Personal, WPA/WPA2 Enterprise, 802.11i, Access Point Mode, Wi-Fi Direct Industry Certifications: Wi-Fi Alliance Logo Certification Ready, CCXv4 ASD Ready
<b>BLUETOOTH*</b>	Class 1.5, Bluetooth 2.1 + EDR, Bluetooth 3.0 + HS 802.11 AMP, Bluetooth Low Energy Profiles: GAP, SPP, HSP, HFP, FTP, PAN, OPP, HID, A2DP, AVRCP, HDP
<b>ANTENNA CONNECTORS</b>	1 x U.FL / 2 x U.FL
<b>GIGABIT ETHERNET</b>	RJ-45, with 2 LEDs for link/speed/activity
<b>CAN BUS</b>	2 x FlexCAN (Molex 53047-0610)

SPECIFICATIONS	ConnectCore® 6 SBC
<b>GPIO/I2C/SPI/UART</b>	1 x GPIO (8 x i.MX GPIOs + 4 Kinetis GPIOs, Molex 53047-1410) 1 x I2C (Molex 53047-0310), 1 x SPI (Molex 53047-0610) 3 x UART (4-wire TX/RX/RTS/CTS, 1 shared with XBee socket, Molex 53047-1410)
<b>DEBUG</b>	1 x JTAG for i.MX6 (FCI 20021111-00010T4LF) 1 x SWD for Kinetis MCA (FCI 20021111-00010T4LF) Headers populated on development units only Production units without header for plug of nails (Tag-Connect TC2050-IDC-NL)
<b>POWER BUTTON</b>	Power on, power off, sleep, wake-up
<b>RESET BUTTON</b>	Yes
<b>USER LEDS</b>	1 x Red, 1 x Yellow, 1 x Green
<b>COIN CELL CONNECTOR</b>	Molex 53047-0210
<b>SUPPLY VOLTAGE</b>	5VDC
<b>POWER SUPPLY CONNECTOR</b>	Barrel connector, 2 mm, locking
<b>OPERATING TEMPERATURE</b>	0°C to +70° C / -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>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)
<b>OPERATIONAL RELIABILITY*</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
<b>MECHANICAL DIMENSIONS</b>	Pico-ITX form factor, 72 mm x 100 mm

PART NUMBERS	DESCRIPTION
CC-SB-WMX-J97C	ConnectCore 6 SBC, i.MX6Quad, 1.2 GHz, -20 to 70°C, 4 GB flash, 1 GB DDR3, Microcontroller Assist (MKL14Z32VFT4), 802.11abgn, Bluetooth 4.0, Gigabit Ethernet
CC-WMX6-KIT	ConnectCore 6 Development Kit (Early Access)



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