

Embedded Feature Product Comparison - SoMs and SBCs



	ConnectCore® 6UL	ConnectCore® 6	ConnectCore® 6UL SBC Express	ConnectCore® 6UL SBC Pro	ConnectCore® 6 SBC
Form Factor L x W x H	SMT 29 mm x 29 mm x 3.5 mm 76-pad castellated vias, or LGA-245	SMT 50 X 50 X 5 mm LGA-400	SBC 87 mm x 63 mm	SBC (Pico-ITX) 100 mm x 72 mm	SBC (Pico-ITX) 100 mm x 72 mm
CPU	NXP i.MX6UL Cortex-A7 528 MHz	Freescale i.MX6 Cortex-A9 Multi-Core (2-4) Up to 1.2 GHz	NXP i.MX6UL Cortex-A7 528 MHz	NXP i.MX6UL Cortex-A7 528 MHz	Freescale i.MX6 Cortex-A9 Multi-Core (2-4) Up to 1.2 GHz
Network Connectivity	802.11a/b/g/n/ac (1x1) Bluetooth 4.2 Dual 10/100 Ethernet, or Ethernet only	802.11a/b/g/n (1x1) Bluetooth 4.0 Gigabit Ethernet, or Ethernet only	802.11a/b/g/n/ac (1x1) Bluetooth 4.2 RJ45 10/100 Ethernet On-board antenna	802.11a/b/g/n/ac Bluetooth 4.2 Dual 10/100 Ethernet External antenna	802.11a/b/g/n (1x1) Bluetooth 4.0 Gigabit Ethernet External antenna
Memory	Up to 2 GB NAND flash, Up to 1 GB DDR3	Up to 64 GB eMMC flash Up to 2 GB DDR3 (64-bit)	256 MB high-reliability NAND flash (SLC), 256 MB DDR3	Up to 2 GB NAND flash Up to 1 GB DDR3	Up to 64 GB eMMC flash Up to 2 GB DDR3 (64-bit)
Graphics	2D Pixel Processing Pipeline (PXP), 8-/16-/18-/24-bit parallel LCD Display up to WXGA (1366x768), 8/10/16/24-bit Parallel, CSI with BT.656 support	Up to 4 displays, 1080p, LVDS, parallel, HDMI, 2D/3D acceleration	8-bit LCD Parallel (optional, via expansion connector)	24-bit Parallel RGB (40-pin header), and 18-bit LVDS (20-pin header)	Up to 4 displays, 1080p, LVDS, parallel, HDMI, 2D/3D acceleration
OS Support	Yocto Project Linux	Yocto Project Linux Android Windows Embedded Compact*	Yocto Project Linux	Yocto Project Linux	Yocto Project Linux Android Windows Embedded Compact*
Wireless Certifications	US, Canada, EU, Japan, Australia, New Zealand	US, Canada, EU, Japan, Australia, New Zealand	US, Canada, EU, Japan, Australia, New Zealand	US, Canada, EU, Japan, Australia, New Zealand	US, Canada, EU, Japan, Australia, New Zealand
Environmental	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	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	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	Temperature: EC 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	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
Operating Temp	-40° C to +85° C	-20° C to +70° C -40° C to +85° C	-40° C to +85° C	-40° C to +85° C	-20° C to +70° C -40° C to +85° C
Development Kits	CC-WMX6UL-START CC-WMX6UL-KIT	CC-WMX6-KIT	CC-WMX6UL-START CC-WMX6UL-KIT	CC-WMX6UL-START CC-WMX6UL-KIT	CC-WMX6-KIT

*Third party partner

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Accelerate Development of Smart/Connected Devices

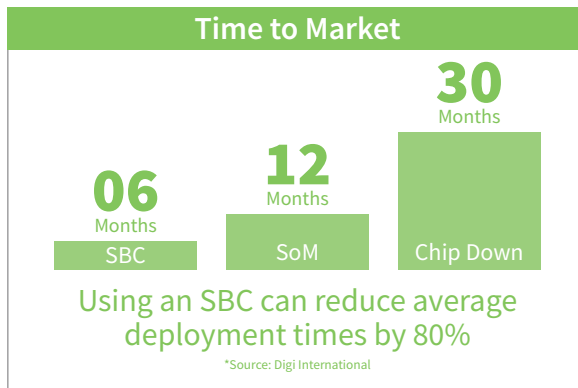
Digi offers a selection of ultra-compact and highly integrated embedded System of Modules (SoM) and Single-Board Computers (SBC) for building intelligent and secure connected devices that require long-term availability. Develop and deploy diagnostics, logging, monitoring and control applications within a variety of demanding industries, including medical device, transportation, industrial, energy and smart cities.

How to Decide When to Buy vs. Build

Using a System-on-Module (SOM) or Single Board Computer (SBC) is a common way to connect a product to the Internet of Things (IoT). The major benefit is the reuse of Digi's development and wireless connectivity expertise reducing design complexity and accelerating time-to-market.

Questions to Consider:

- What are the development cost and risk (NRE)?
- What certifications and approvals are required (testing and validation)?
- How much does it cost to maintain and stay current (Moore's Law)?
- What are the production and production management cost (supply chain)?
- What is the core competency of your organization (opportunity cost)?



Embedded SOMs and SBCs enables original equipment manufacturers to achieve:

Faster Time to Market - Wireless connectivity and certification hurdles lengthen product-development cycles. Smart, connected device makers want proven components so they can bring products to market faster.

Connected - Smart devices need to be connected—in most cases wirelessly. Connectivity enables OEMs to access and manage devices remotely. Digi offers a wide array of short and long range wireless connectivity options that integrate with our SOMs and SBCs.

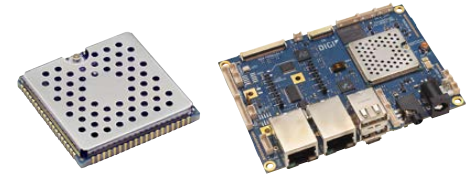
Simplicity - Sophisticated devices require simpler interfaces. Arcane codes and keypads are shifting to visual displays and touchscreens—requiring greater computing power.

Reliability and Longevity - Embedded devices must withstand daily intensive use in critical situations over a period of years. Manufacturers need stable, long-term availability of components and parts to ensure a lengthy product lifecycle.

Digi International has many SBC options ready to deploy. Need something customized or build-to-suit, our Wireless Design Services has years of experience and a library of proven IP to build exactly to your specs.

System of Modules (SoM) and Single-Board Computers (SBC)

SOMs give OEMs the hardware platform and BSP software in a compact form factor. While SBCs connect all the peripheral I/O and power further accelerating the development cycle.



Digi TrustFence™

Digi TrustFence is a device security framework that simplifies building secure connected products. Designed for the long product life cycles of embedded devices,

TrustFence allows you to easily integrate device security, device identity, and data privacy capabilities, resulting in dramatically accelerated time-to-market and continued focus on performance and scalability. Digi TrustFence is engineering security into IoT devices that can grow and adapt with new and evolving threats.



Digi TrustFence delivers built-in security with a full range of features including:

Secure Boot - Ensures only signed software images can run on a device

Encrypted Storage - Local file system encryption keeps internal device data safe

Protected Ports - Access-controlled internal and external ports prevent unwanted “back doors”

Configuration - Best Practices and Monitoring Support and guidelines for properly securing a device. Furthermore, Digi monitors security threats and issues alerts and notifications.

Worldwide Deployment & Connectivity Options

- Pre-certified for use in various regions of the world
- Wi-Fi 802.11a/b/g/n/ac, Bluetooth 4.2, and integrated dual 10/100 Ethernet connectivity

Embedded Software

The IoT is bringing software to devices not typically thought of as computers. Board Support Packages (BSP) for Yocto Linux, Android, and Windows Embedded allowing OEMs to choose the best embedded operating system for their application.

