Processor Enablement

Freescale's Processor Enablement through Single Board Computers
Easing the "make vs buy" decision

Today, OEMs are faced with the increasing challenge of bringing innovative products to the market quicker. In many cases, their resources have seen a dramatic change from hardware to software engineering. Add to this the increasing complexity of today's high-performance microprocessors with high-speed memory and input/output (I/O) signals. To aid OEMs in designing with our latest microprocessors, Freescale offers a robust ecosystem of software and hardware enablement.

Single Board Computer (SBC)

The embedded SBC industry has developed the expertise necessary to assist OEMs with the challenges of time to market and dealing with high-speed processors, memory and I/O signals. These companies take an active role in standards development for form factors, signals and operating systems which ultimately help with the final board cost and reduce the OEM's time to market. Companies such as Emerson Network Power,

Mercury Computer Systems, GE Intelligent Platforms, Kontron, Curtiss Wright, Eurotech and many others provide a broad spectrum of form factors, processors, features and software enablement to ease the "make vs. buy" decision process for OEMs.

Freescale's SBC Enablement

Freescale has long-standing relationships within the SBC industry. We serve the aerospace and defense, networking, telecom and industrial markets. Our support for these markets is not silicon alone. A close working relationship with OS and tool vendors is essential to ensure our customers have access to complete solutions, enabling them to achieve their time to market goals. Mentor Graphics®, Green Hills®, Wind River®, QNX®, DC-I and SYSGO provide the real-time OS and Linux® requirements of our customers.

Figure 1: Emerson Network Power COM Express™ compatible module based on the QorIQ P2020 processor

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Figure 2: Advantech AMC-4201 AdvancedMC™ board featuring the QorIQ P4080 processor

Figure 3: Curtiss Wright VPX6-187 based on the QorIQ P4080 processor

In addition, Freescale is an active member of standards committees that support this industry, such as Power.org™, RapidIO® Trade Association, PICMG® and The Multicore Association™. These standards bodies work with other industry participants to provide specifications that allow for richer and more cost-effective market solution. Freescale's participation allows for a broad ecosystem that enables Freescale technologies and products. To ease the "make vs. buy" decision, Freescale is providing a series of development systems that include a COM Express compatible module on a carrier card. These systems aid in software development and provide access to the processor, built on Power Architecture® technology. The orderable part numbers for the Freescale development systems are:

- P4080COME-DS-PB
- P2020COME-DS-PB
- P1022COME-DS-PB

More Information

The Freescale Alliance Program highlights ecosystem partners that provide products and services enabling Freescale products. Our SBC partners provide a complete spectrum of single board computers and supporting software. Figure 4 below illustrates a subset of SBC vendors who provide Freescale processors on standard form factors.

For current information about SBC products based on Freescale processors, please visit freescale.com/SBC.

Figure 4: SBCs Based on Freescale Processors Built on Power Architecture® Technology							
	ATCA	AMC	COM Express	Compact-PCI	VME	PMCs	ATX, uATX
Freescale	√	√	√			√	√
Curtiss Wright				√	√		
KONTRON		√		√	√	√	
Emerson Network Power	√	√	√	√	√	√	
EuroTech			√				
GE Intelligent Platforms				√	√	√	
Interphase		√			√		
Mercury	√	√					
RadiSys	√	√					
TQ Embedded							

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