

# Freescal<sup>e</sup> and Embedded Linux<sup>®</sup>

## *If it's embedded, we've got you covered*

Freescal<sup>e</sup> Semiconductor is at the forefront of delivering solutions that help you easily deploy Linux<sup>®</sup> software for your specific designs. We enable a broad span of products across a wide range of markets—networking systems, industrial control, consumer electronics, wireless platforms and automotive operation—with our full range of silicon, software and tools specifically designed for Linux. Here's just a sampling of what we provide.

## **Networking**

Freescal<sup>e</sup>'s host processors containing PowerPC<sup>™</sup> cores are a staple in networking communications markets, largely evidenced through the industry-leading PowerQUICC<sup>™</sup> line of communications processors. With our partners, we offer processing and Linux solutions for almost every networking application you can imagine—from SOHO routers to voice-over-IP systems, wireless basestations, telecom switches and storage subsystems. Our Linux development solutions for processors

based on PowerPC cores, including board bring-up, kernel-level debugging and driver development, make it fast and easy to deploy Linux software on this popular architecture.

Freescal<sup>e</sup> also collaborates on embedded Linux solutions for carrier grade Linux, which is used to develop and deploy a complete range of network equipment applications in the telecommunications industry, including Advanced Telecom Computing Architecture (ATCA) systems.

## **Industrial Control**

Industrial market opportunities for embedded Linux applications continue to grow—ranging from factory automation to commercial robotics.

The CodeWarrior<sup>™</sup> suites for Linux OS host development environments support Freescal<sup>e</sup>'s i.MX and ColdFire architectures as well as the PowerPC architecture, and enable Freescal<sup>e</sup> customers in the industrial controls market to assimilate Linux software into next-generation products.

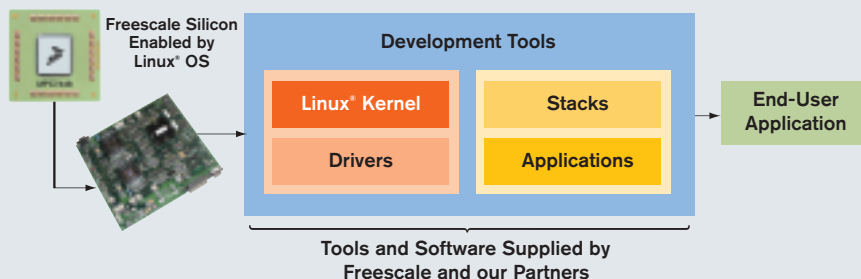
## **Consumer Electronics**

Freescal<sup>e</sup>'s embedded Linux applications give our customers the right tools to take the latest consumer technology to the next level. Our solutions enable them to quickly deliver innovative, quality products—such as mobile phones, personal video recorders and set-top boxes—to the consumer market.

The PowerPC architecture with AltiVec<sup>™</sup> technology is being used in the embedded Linux consumer market. Linux OS running on the PowerPC architecture offers a streamlined, high-performance platform for

home media applications—much of which can be implemented “royalty free.”

The i.MX family of applications processors provides Linux board support packages and third-party development tools to accelerate and simplify your design process. The i.MX21 V2IP Reference Platform, based on Linux OS, enables rapid development of devices supporting emerging multimedia services over the Internet Protocol. And the i.MX21 VirtuaLab is an online Linux development platform complete with hardware and software tools, offered at no additional cost.



### Wireless

Freescale's embedded Linux platforms deliver control, flexibility and advanced functionality to mobile and wireless device manufacturers.

For example, the Freescale Mobile Extreme Convergence (MXC) mobile phone platforms and multimedia applications processors enabled by Linux OS are powering smartphones, portable media players, PDAs, mobile gaming and a variety of other devices. The Freescale wireless solutions leveraging Linux OS include:

- > The MXC mobile phone platforms
- > The i.MX family of applications processors

### Automotive

Freescale has automotive-grade Linux software specifically engineered to meet industry requirements such as:

- > Fast device boot time
- > Real-time execution environment
- > Comprehensive power management framework
- > Small footprint embedded GUI

Freescale offers comprehensive Linux development solutions designed to support the entire development process. The Freescale MPC5200 platform containing a PowerPC core includes custom board support packages to support board bring-up and Linux kernel-level debugging, and CodeWarrior development and analysis tools to support application creation and testing.

### Freedom to Innovate

Linux frees developers to innovate and to offer differentiated, cost-effective solutions for their customers. It is easy to modify and optimize for a wide variety of applications that would fit just about any developer's needs. That's why Linux software is becoming the OS solution of choice for many developers.

Freescale works with best-in-class companies worldwide that offer Linux expertise in various areas—from Linux-ready hardware platforms to embedded Linux operating systems to end-user applications. With our partners, we bring highly reliable, customizable solutions to embedded Linux markets.

We offer a single source for development, run control, code analysis and development tools, as well as hardware, software, services and commercial Linux distributions. This single source strategy delivers turnkey development capabilities for an out-of-the-box experience that speeds time to market. It also provides a unified development tool chain that enables managed collaboration for entire engineering organizations. Plus, our participation in the remarkable Linux community helps keep the Linux kernel, utilities and applications robust and competitive in the market.

### We See Linux in Your Future

How can you create cutting-edge, embedded designs that will revolutionize the way our world connects? With Freescale and embedded Linux software, of course. Freescale is committed to offering innovative embedded Linux solutions that will open up your design possibilities now and in the future.

**Learn More:** For more information on Freescale's Linux solutions, go to [www.freescale.com/linux](http://www.freescale.com/linux).