



Application: Software Development

Industry: Hardware/ Software IP Platform

Customer Challenge

Recore Systems' new FlexaWare platform is a many-core embedded system comprised of three closely connected components: many-core hardware platform, a runtime OS supporting the many cores, and a software development environment. This all-new platform mandated testing of important design concepts immediately in a high-level simulation environment, and time to market was crucial. The FlexaWare hardware platform supports a variety of applications, including embedded vision.

Imperas Solution

Recore Systems selected Imperas virtual platform software development tools for this many-core hardware and software program based on the rich component library already on offer as Imperas Extendable Platform Kits™ (EPKs™). EPKs are virtual platforms (simulation models) of target devices, including processor model(s) plus peripheral models sufficient to boot an operating system or run bare metal applications. Imperas EPKs are designed to provide a base for developers to run high-speed simulations of various SoCs and platforms.

Benefits

Imperas delivered a simulation framework that could support design space exploration as well as software development and test. The Imperas EPKs helped dramatically in getting Recore started quickly and in accelerating FlexaWare development. EPKs allowed Recore developers to modify and extend the functionality of the virtual platform to reflect their own platform by integrating more component models, running different operating systems, and adding a variety of software applications.

Business Challenges

- Time to market
- Fast software development
- Enhanced productivity

Design Challenges

- Many core embedded system with runtime OS and software development environment
- Testing new design concepts
- Software development, debug and test

Results

- Quick start in 20 minutes
- Reference architecture in a few days
- Saved software and hardware debugging time
- Enhanced team productivity

“Imperas allowed us to quickly add our own components and build the topologies which we wanted to test. We had our first demo up and running in 20 minutes, and it took us just a few days to build a reference hardware architecture based on components in the EPK. Last but not least, after just a few months we could start playing with our own many-core operating system on our many-core hardware design. The ease of use of the EPK, together with excellent Imperas documentation and support, have kick-started our FlexaWare platform development.”

Gerard Rauwerda, CTO, Recore Systems