



Company news

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XMOS Timing Analyzer Transforms Embedded Systems Development

New development tool simplifies development cycles, accurately predicts performance of time-critical programs

Bristol, UK and Sunnyvale, Calif. – **May 18, 2010**– [XMOS®](#) today announced the availability of the XMOS Timing Analyzer (XTA), which accelerates the design of embedded applications and simplifies performance optimization. Together with the deterministic nature of XMOS [XCore® processors](#), XTA makes it simple to develop software that meets timing deadlines – every time it executes. XTA is part of the XMOS [Development Tools](#) 10.4 release.

Based on static code analysis, XTA guarantees timing of real-time system functions such as control and DSP algorithms. Using XCore processors, functions traditionally implemented in hardware, such as I/O interfaces, can be implemented entirely in software and timed.

How XTA Works

Based on the fully deterministic instruction execution of XCore processors, XTA guarantees exact timing of software execution by examining object code. The time in which a program section must execute can be specified interactively in the GUI or as code assertions. If XTA detects that the program section cannot execute within the specified time, it provides immediate feedback that lets the developer identify the code that needs optimization. This significantly shortens and simplifies the development process. XTA can also be used to determine the minimum processor speed needed to meet timing requirements, supporting power optimization.

“Guaranteeing correct operation of real-time software running on an embedded processor has been a significant challenge until now,” said David May, CTO of XMOS. “In the past,

dynamic testing with a test harness or test-bench had to be relied upon to exercise the timing corner cases. In complex systems, this often means waiting until the entire system is built. XTA makes it fast and simple to ensure that embedded software meets its timing requirements.”

Key Features of the Development Tools 10.4 Release

- XTA tool for interactive timing analysis and automatic generation of scripts to check that timing requirements are met at compile time
- Visualization of memory and resources consumed by compiled programs
- Flash programming support for in-field upgrades and multiple boot images for any SPI flash device
- Support for booting programs encrypted on flash for multi-core devices such as the XMOS XS1-L2
- XMOS Tools User Guide, now provides installation instructions, a quick start guide, tutorials, in-depth documentation for field upgrades and secure booting, a command-line usage guide and a complete set of reference material

Pricing and Availability

XTA is provided as part of the XMOS Development Tools 10.4 release, available immediately, free of charge at <http://www.xmos.com/technology/design-tools>.

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