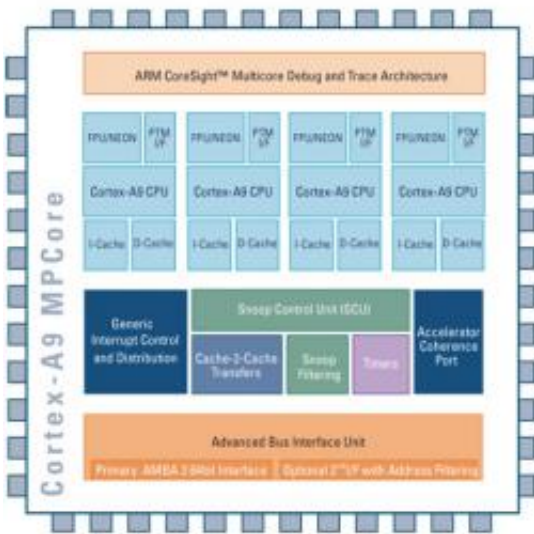


# Multi-core ARM Chips Slated For Smartphones Next Year

June 16 2009, by John Messina



ARM is the chip design company that makes processors for smartphones like the Palm Pre and Apple iPhone 3G. By next year we can expect to see dual-core processors in smartphones, with quad-core to follow sometime in the future.

The Palm Pre currently uses a processor based on the Cortex A8. The Apple [iPhone](#) uses an Apple branded chip that is also based on the ARM design.

The next generation ARM processors, known as Cortex-A9, will be the next generation dual-core processor for smartphones.

Reference designs for ARM's next-generation Cortex-A9 call for versions with either two or four cores, with dual-core versions "definitely" slated to turn up in smartphones that will ship sometime in 2010, James Bruce, wireless segment manager for ARM, told CNet News.com in a phone interview earlier this week.

"What we've done on the A9 is actually make it more power efficient than the A8," he said. "The dual-core A9 will be coming out on 45-nanometer rather than the (current) 65-nanometer process."

With power consumption being a critical concern for smartphones, the A9 will actually be more power efficient than the A8. Since the A9 will be using 45-nanometer rather than the current 65-nanometer process, the smaller geometrics provides a faster and more power efficient processor.

James Bruce continued by stating; "With the dual-core running at maximum load there's probably going to be an increase of about 10 to 20 percent in power consumption but in general day to day use you're actually going to see better battery life."

"You're getting a 2X increase (over the previous ARM design)," Bruce said of the A8 in the upcoming iPhone 3G S. "And actually the A9 takes that even further. It's a superscalar design but it's also an out-of-order design as well. There are some out-of-order aspects with the A8 but the A9 is a very aggressive out-of-order processor."

Enhanced graphics will follow with the upcoming multi-core OMAP 4 processor from Texas Instruments which is also based on the ARM Cortex-9 and will boast graphics that support 1080p video and HD recording and playback.

These next generation processors will lead the way for high-end smartphones that will begin to imitate PC hardware attributes.

More information: [news.cnet.com/8301-13924\\_3-10263278-64.html](http://news.cnet.com/8301-13924_3-10263278-64.html)

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