

AMD's Bulldozer architecture to battle Intel's Core i7

March 15 2011, by John Messina



AMD's Bulldozer is a multi-threaded high performance x86 CPU that includes the 32-nm Zambezi chips with 4, 6, or 8 cores.

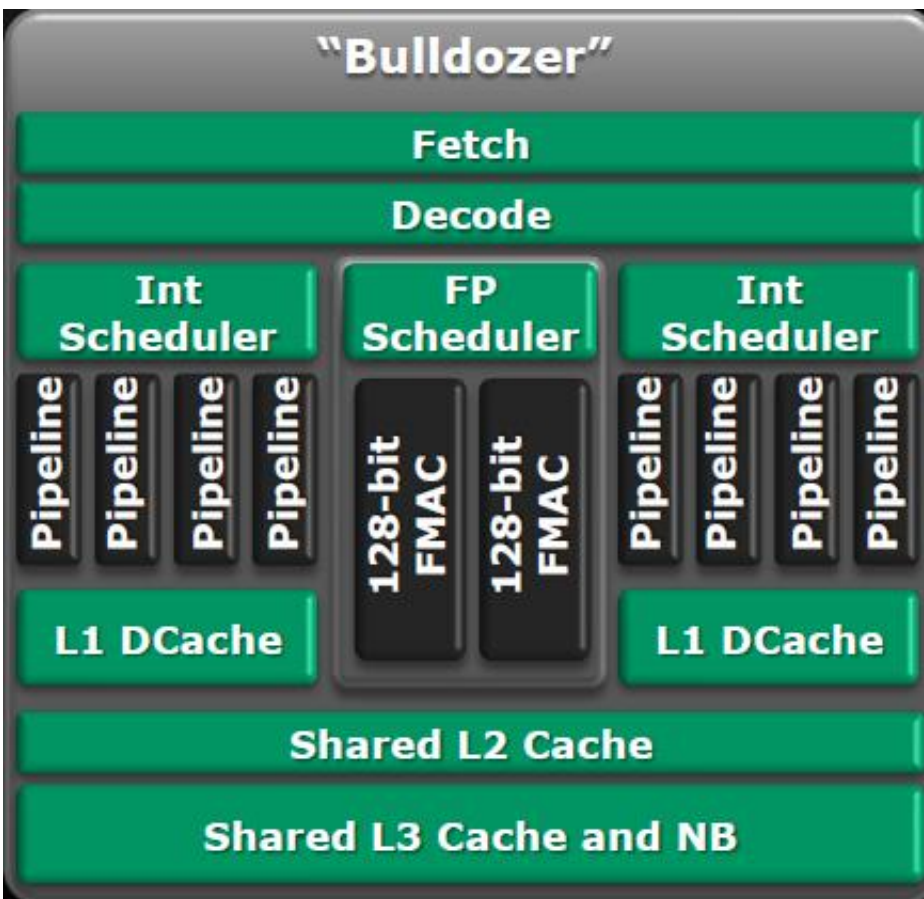
(PhysOrg.com) -- AMD's upcoming four-, six- and eight-core processors, code name Zambezi, is based on its Bulldozer architecture and will target Intel's flagship 9000 series six-core desktop CPU's. AMD's Zambezi processors will feature AMD's TurboCore 2.0 technology and will be listed under their FX line-up.

At present AMD is not able to compete in performance against Intel's Core i7 series "Sandy Bridge" but aims to go to battle with its next generation Bulldozer-chips.

According to report from X-bit Labs, leaked AMD documents reveal that Zambezi processors offer similar capabilities to Intel's Core i7 Sandy Bridge processors. The report also states that AMD's Zambezi

features more over-clocked cores, dual graphics, OpenCL and GPU capabilities. This makes Zambezi more of an integrated graphics chip than a desktop CPU.

AMD's Zambezi chip will feature eight processing engines with its cores packed into four modules. The Bulldozer [architecture](#) includes two integer units, along with one floating-point unit and two threads on separate integer units instead of the single-core solution.



Based on the diagram AMD intends to dramatically improve multithreading performance of its CPUs: two INT schedulers, an FP scheduler and separate data caches for each of four cores. Credit: AMD

Because of Intel's manufacturing processing error discovered in their Series 6 Sandy Bridge Support chipsets, AMD hopes to gain some market share utilizing their Bulldozer micro-architecture.

According to IDC's latest estimates, [Intel](#) holds an 80.8 percent share of the PC [processor](#) market in the fourth quarter which is a 0.4 percent increase. AMD, on the other hand, only holds a market share of 19.9 percent and is down 0.4 percent.

AMD plans to come out fighting by leveraging their Zambezi processors utilizing their Bulldozer architecture. An [AMD](#) spokesperson told CRN, on Monday, that their Zambezi CPU carrying the FX brand is planned to be introduced in Q2 of this year.

More information: via [Xbitlabs](#) and [CRN](#)

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