

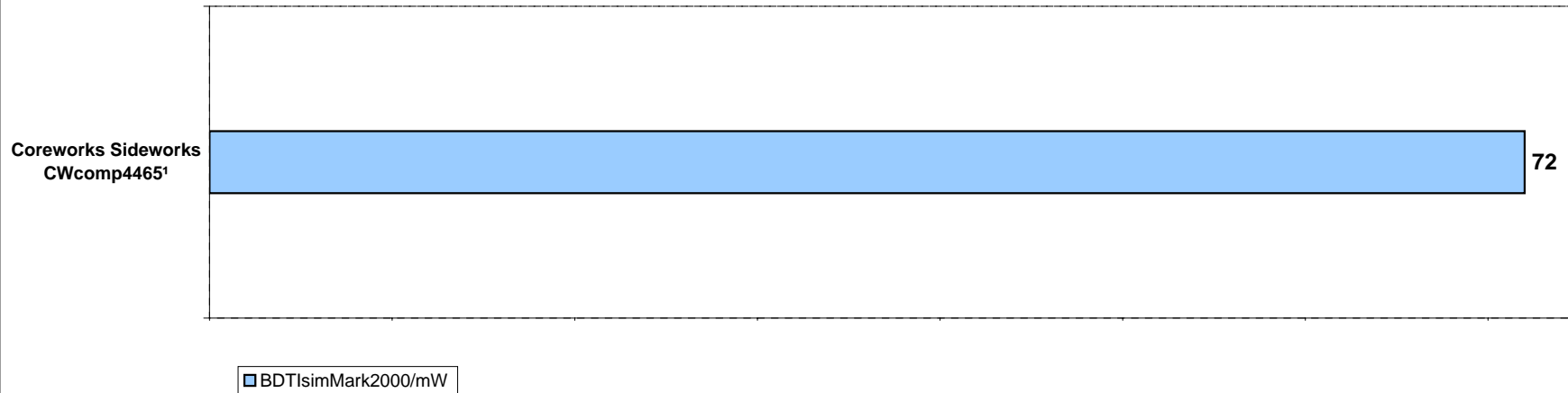
# Speed per Milliwatt Ratios for Fixed-Point Licensable Cores (65nm)

Updated October 2009

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Contact BDTI for authorization to publish scores.

See page 3 for details.



All processors benchmarked with 16-bit fixed-point data. All cores include at least 16 KB on-core memory and use worst-case clock speeds for the TSMC CLN65GP process and the Artisan Advantage core cell library. Vendors can choose different speed/area/power trade-offs; to understand the trade-offs, please view all BDTI metrics for each core. BDTIsimMark2000™ scores may be based on projected clock speeds. For information, see [www.BDTI.com/benchmarks.html](http://www.BDTI.com/benchmarks.html).

<sup>1</sup>Coreworks scores include both a customized SideWorks DSP engine and the FireWorks 32-bit RISC processor. The SideWorks core used to implement the BDTI DSP Kernel Benchmarks includes four 16-bit multiplier units, six 32-bit ALUs, five shift units, six data multiplexing units, two data de-multiplexing units, two bit-reverse units, a bit unpack unit, and 6K bytes of memory. Different versions of the SideWorks core will yield different performance, power consumption, and die size figures than those reported here.

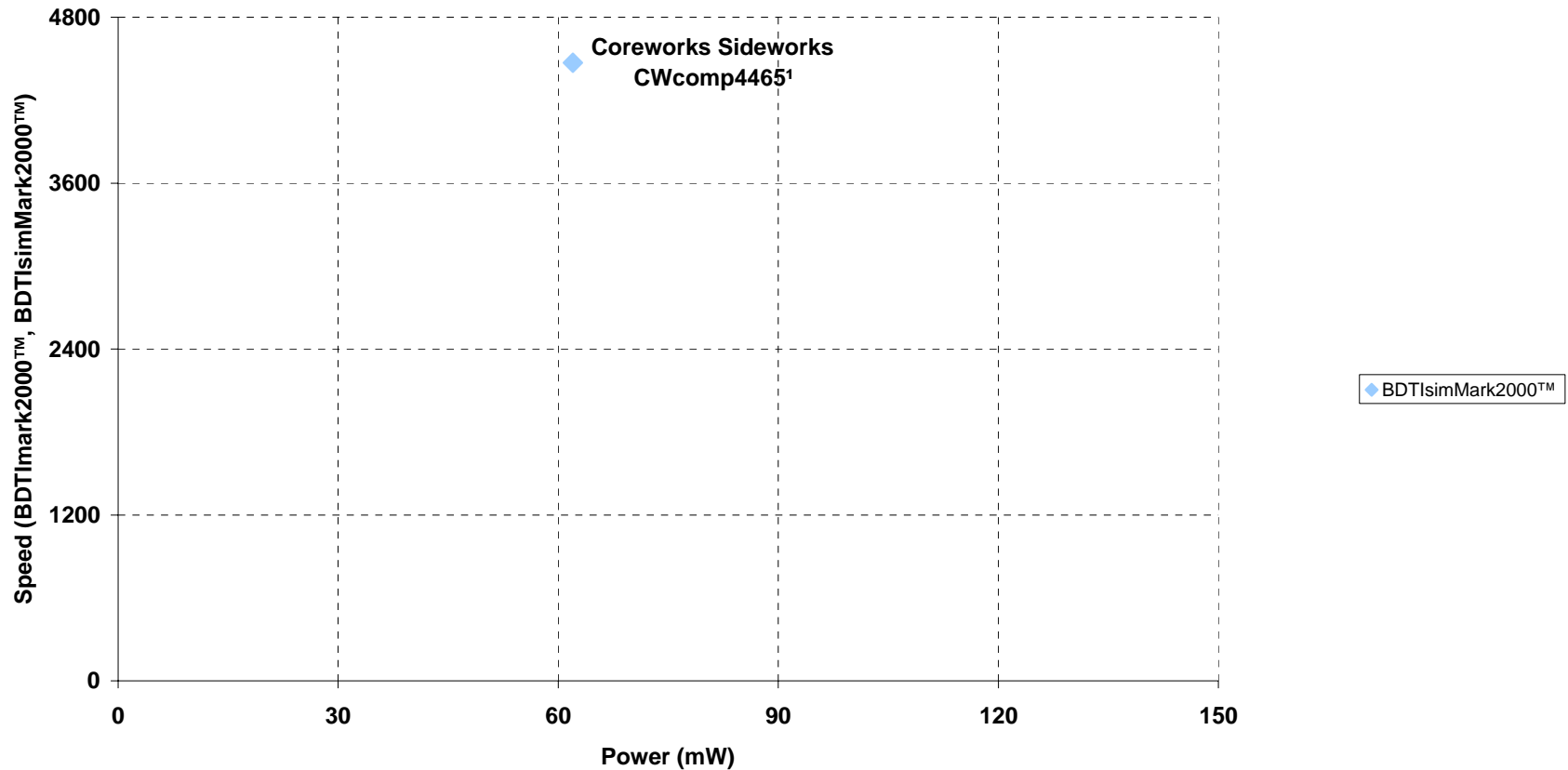
# Speed vs. Power for Fixed-Point Licensable Cores (65nm)

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Processor Family	Clock Rate	BDTImark2000™, BDTIsimMark2000™	Power	BDTImark2000™/mW, BDTIsimMark2000™/mW
Coreworks Sideworks CWcomp4465 <sup>1</sup>	383	4470	62 mW	72

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**Clock rate:** Clock speeds assume worst-case process, voltage, and temperature variations

**Power:** Power estimates assume typical process, voltage, and temperature variations

Power for core only; does not include power for caches or other memories

**BDTImark2000™, BDTIsimMark2000™:** The BDTImark2000™ and BDTIsimMark2000™ provide a summary measure of signal processing speed. BDTIsimMark2000™ scores may be based on projected clock speeds.

For more info and scores see [www.BDTI.com/benchmarks.html](http://www.BDTI.com/benchmarks.html)