Speed per Milliwatt Ratios for Fixed-Point Packaged Processors

Updated November 2013

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See page 2 for details.

Processor	Ratio
ADI ADSP-218x	4.5
ADI ADSP-219x	0.9
ADI ADSP-BF5xx (Blackfin)	n/a
ADI ADSP-BF60x (Blackfin)	n/a
ADI ADSP-TS201S (TigerSHARC)	1.6–2.4
ADI ADSP-TS202S/203S (TigerSHARC)	2.4
Freescale B4860 (SC3900)	n/a
Freescale DSP563xx[1]	0.6–4.3
Freescale DSP5672x[1]	n/a
Freescale DSP5685x/56F8xxx (56800E)	n/a
Freescale DSP56F8xx (56800)	n/a
Freescale MSC71xx (SC1400)	10.1
Freescale MSC814x (SC3400)	n/a
Freescale MSC815x/825x (SC3850)	n/a
Freescale MSC815x/825x (SC3850)[2]	n/a
Freescale MSC81xx (SC140)	n/a
Marvell PXA255	n/a
Marvell PXA27x	n/a
Microchip dsPIC3x	n/a
NEC µPD77050 (SPXK5)	n/a
Qualcomm Hexagon V2 (1 thread)[3]	n/a
Qualcomm Hexagon V2 (6 threads)[3]	n/a
Qualcomm Hexagon V4 (1 thread)[3]	n/a
Qualcomm Hexagon V4 (3 threads)[3]	n/a
Qualcomm Hexagon V5 (1 thread)[3]	n/a
Qualcomm Hexagon V5 (3 threads)[3]	n/a
Texas Instruments C55+[2]	n/a
Texas Instruments OMAP35x[4]	n/a
Texas Instruments TMS320C54x	n/a
Texas Instruments TMS320C55x	3.4–9
Texas Instruments TMS320C62x	n/a
Texas Instruments TMS320C64x	5–8.1
Texas Instruments TMS320C64x+	n/a
Texas Instruments TMS320C66x	n/a
VeriSilicon VSI40x	n/a

[1] Benchmarked with 24-bit fixed-point data; all other processors benchmarked with 16-bit fixed-point data

[2] Not available to the general market

[3] Lower range of score is official single-thread BDTIsimMark2000, higher score is projecteded best case score
using the maximum number of available threads (not an offical BDTIsimMark2000 score).

[4] Metrics are for ARM Cortex-A8 core only ('C64x+ DSP is also available in some family members)

BDTIsimMark2000™ scores may be based on projected clock speeds. For information, see **www.BDTI.com/benchmarks.html**

■ **BDTImark2000™/$**

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Processor Family	Clock Rate (min-max)	BDTImark2000™, *BDTIsimMark2000™* (min-max)	Power (min-max)	BDTImark2000™/mW, *BDTIsimMark2000™/mW* (min-max)
ADI ADSP-218x	80 MHz	**240**	54 mW	4.5
ADI ADSP-219x	100–160 MHz	**250–410**	460 mW	0.9
ADI ADSP-BF5xx (Blackfin)	200–600 MHz	**1120–3360**	n/a	n/a
ADI ADSP-BF60x (Blackfin)	400–500 MHz	**5260–6580**	n/a	n/a
ADI ADSP-TS201S (TigerSHARC)	500–600 MHz	**5330–6400**	2583–3907 mW	1.6–2.4
ADI ADSP-TS202S/203S (TigerSHARC)	500 MHz	**5130**	2583 mW	2.4
Freescale B4860 (SC3900)	1200 MHz	**37460**	n/a	n/a
Freescale DSP563xx[1]	150–275 MHz	**450–820**	n/a	0.6–4.3
Freescale DSP5672x[1]	200–250 MHz	**590–740**	n/a	n/a
Freescale DSP5685x/56F8xxx (56800E)	32–120 MHz	*90–340*	n/a	n/a
Freescale DSP56F8xx (56800)	60–80 MHz	*80-110*	n/a	n/a
Freescale MSC71xx (SC1400)	200–300 MHz	**2240–3370**	222–333 mW	10.1
Freescale MSC814x (SC3400)	800–1000 MHz	**9520–11900**	n/a	n/a
Freescale MSC815x/825x (SC3850)	1000 MHz	**15420**	n/a	n/a
Freescale MSC815x/825x (SC3850)[2]	1200 MHz	*18500*	n/a	n/a
Freescale MSC81xx (SC140)	300–500 MHz	**3370–5610**	n/a	n/a
Marvell PXA255	200–400 MHz	**470–930**	n/a	n/a
Marvell PXA27x	312–624 MHz	*1070–2140*	n/a	n/a
Microchip dsPIC3x	16–70 MHz	*50–220*	n/a	n/a
NEC μPD77050 (SPXK5)	250 MHz	*1770*	n/a	n/a
Qualcomm Hexagon V2 (1 thread)[3]	67–100 MHz	*1040–1550*	n/a	n/a
Qualcomm Hexagon V2 (6 threads)[3]	67–100 MHz	*6240–*	n/a	n/a
Qualcomm Hexagon V4 (1 thread)[3]	100–233 MHz	*1810–4220*	n/a	n/a
Qualcomm Hexagon V4 (3 threads)[3]	100–233 MHz	*5430–*	n/a	n/a
Texas Instruments C55x+[2]	400–500 MHz	**2530–3160**	n/a	n/a
Texas Instruments OMAP35x[4]	600–720 MHz	**4540–5450**	n/a	n/a
Texas Instruments TMS320C54x	50–160 MHz	*150–500*	n/a	n/a
Texas Instruments TMS320C55x	50–300 MHz	**240–1460**	58–300 mW	3.4–9
Texas Instruments TMS320C62x	150–300 MHz	*960–1920*	n/a	n/a
Texas Instruments TMS320C64x	400–1000 MHz	**3650–9130**	654–1303 mW	5–8.1
Texas Instruments TMS320C64x+	400–1200 MHz	**4390–13170**	n/a	n/a
Texas Instruments TMS320C66x	850–1500 MHz	**11350–20030**	n/a	n/a
VeriSilicon VSI40x	120–200 MHz	**560–940**	n/a	n/a

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BDTImark2000™, BDTIsimMark2000™: The BDTImark2000™ and BDTIsimMark2000™ provide a summary measure of signal processing speed.
BDTIsimMark2000™ scores may be based on projected clock speeds. For information see **www.BDTI.com/benchmarks.html.**

Note: In general, BDTImark2000™/mW and BDTIsimMark2000™/mW scores cannot be computed from the speed and power data presented here. For example, the fastest processors are not always the highest-power processors. Therefore, it is not always possible to calculate a speed per milliwatt ratio by dividing the maximum speed for a family by the maximum power for the family.