

Speed per Milliwatt Ratios for Fixed-Point Packaged Processors

Updated January 2012

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See page 2 for details.



ADI ADSP-218x	4.5
ADI ADSP-219x	0.9
ADI ADSP-BF5xx (Blackfin)	n/a
ADI ADSP-TS201S (TigerSHARC)	1.6–2.4
ADI ADSP-TS202S/203S (TigerSHARC)	2.4
Freescale DSP563xx ¹	0.6–4.3
Freescale DSP5672x ¹	n/a
Freescale DSP56F8xx (56800)	n/a
Freescale DSP5685x/56F8xxx (56800E)	n/a
Freescale MSC71xx (SC1400)	10.1
Freescale MSC81xx (SC140)	n/a
Freescale MSC814x (SC3400)	n/a
Freescale MSC815x/825x (SC3850)	n/a
Freescale MSC815x/825x (SC3850) ²	n/a
Marvell PXA255	n/a
Marvell PXA27x	n/a
Microchip dsPIC3x	n/a
NEC μPD77050 (SPXK5)	n/a
Qualcomm Hexagon V2 (single-thread)	n/a
Texas Instruments TMS320C54x	n/a
Texas Instruments TMS320C55x	3.4–9
Texas Instruments C55x+ ²	n/a
Texas Instruments TMS320C62x	n/a
Texas Instruments OMAP35x	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

■ BDTImark2000™/mW
■ BDTIsimMark2000™/mW

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

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Processor Family	Clock Rate (min-max)	BDTI _{mark} 2000™, BDTI _{sim} Mark2000™ (min-max)	Power (min-max)	BDTI _{mark} 2000™/mW, BDTI _{sim} Mark2000™/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-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 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 DSP56F8xx (56800)	60–80 MHz	50–130	n/a	n/a
Freescale DSP5685x/56F8xxx (56800E)	32–120 MHz	<i>90–340</i>	n/a	n/a
Freescale MSC71xx (SC1400)	200–300 MHz	<i>2240–3370</i>	222–333 mW	<i>10.1</i>
Freescale MSC81xx (SC140)	300–500 MHz	3370–5610	n/a	n/a
Freescale MSC814x (SC3400)	800–1000 MHz	9520–11900	n/a	n/a
Freescale MSC815x/825x (SC3850)	800–1000 MHz	12330–15420	n/a	n/a
Freescale MSC815x/825x (SC3850) ²	1200 MHz	<i>18500</i>	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	16–60 MHz	<i>50–190</i>	n/a	n/a
NEC μPD77050 (SPXK5)	250 MHz	<i>1770</i>	n/a	n/a
Qualcomm Hexagon V2 (single-thread)	100 MHz	<i>1550</i>	n/a	n/a
Texas Instruments TMS320C54x	50–160 MHz	150–500	n/a	n/a
Texas Instruments TMS320C55x	100–300 MHz	490–1460	58–300 mW	3.4–9
Texas Instruments C55x+	400–500 MHz	<i>2530–3160</i>	n/a	n/a
Texas Instruments TMS320C62x	150–300 MHz	960–1920	n/a	n/a
Texas Instruments OMAP35x	600–720 MHz	<i>4540–5450</i>	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	1000–1500 MHz	13350–20030	n/a	n/a
VeriSilicon VSI40x	120–200 MHz	560–940	n/a	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

BDTI_{mark}2000™, BDTI_{sim}Mark2000™: The BDTI_{mark}2000™ and BDTI_{sim}Mark2000™ provide a summary measure of signal processing speed. BDTI_{sim}Mark2000™ scores may be based on projected clock speeds. For information see www.BDTI.com/benchmarks.html.

Note: In general, BDTI_{mark}2000™/mW and BDTI_{sim}Mark2000™/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.