

## Speed per Dollar Ratios for Fixed-Point Packaged Processors (Single-Core / Single-Thread Scores)

Updated January 2012

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|  |                     |         |
|--|---------------------|---------|
| ADI ADSP-218x                                | BDTImark2000™/\$    | 8–31    |
| ADI ADSP-219x                                | BDTImark2000™/\$    | 9–30    |
| ADI ADSP-BF5xx (Blackfin)                    | n/a                 |         |
| ADI ADSP-TS201S (TigerSHARC)                 | BDTImark2000™/\$    | 16–23   |
| ADI ADSP-TS202S/203S (TigerSHARC)            | BDTImark2000™/\$    | 24–28   |
| Freescale DSP563xx <sup>1</sup>              | n/a                 |         |
| Freescale DSP5672x <sup>1</sup>              | n/a                 |         |
| Freescale DSP56F8xx (56800)                  | n/a                 |         |
| Freescale DSP5685x/56F8xxx (56800E)          | n/a                 |         |
| Freescale MSC71xx (SC1400)                   | BDTIsimMark2000™/\$ | 60–78   |
| Freescale MSC81xx (SC140)                    | n/a                 |         |
| Freescale MSC814x (SC3400)                   | n/a                 |         |
| Freescale MSC815x/825x (SC3850)              | n/a                 |         |
| Freescale MSC815x/825x (SC3850) <sup>2</sup> | n/a                 |         |
| Marvell PXA255                               | n/a                 |         |
| Marvell PXA27x                               | n/a                 |         |
| Microchip dsPIC3x                            | BDTIsimMark2000™/\$ | 12–62   |
| NEC μPD77050 (SPXK5)                         | n/a                 |         |
| Qualcomm Hexagon V2 (single-thread)          | n/a                 |         |
| Texas Instruments TMS320C54x                 | n/a                 |         |
| Texas Instruments TMS320C55x                 | BDTImark2000™/\$    | 54–323  |
| Texas Instruments C55x+ <sup>2</sup>         | n/a                 |         |
| Texas Instruments TMS320C62x                 | n/a                 |         |
| Texas Instruments OMAP35x                    | BDTIsimMark2000™/\$ | 109–201 |
| Texas Instruments TMS320C64x                 | BDTImark2000™/\$    | 45–212  |
| Texas Instruments TMS320C64x+                | n/a                 |         |
| Texas Instruments TMS320C66x                 | n/a                 |         |
| VeriSilicon VSI40x                           | n/a                 |         |

<sup>1</sup> Benchmarked with 24-bit fixed-point data; all other processors benchmarked with 16-bit fixed-point data

<sup>2</sup> Not available to the general market

BDTImark2000™/\$

BDTIsimMark2000™/\$

BDTIsimMark2000™ scores may be based on projected clock speeds. For information, see [www.BDTI.com/Services/Benchmarks](http://www.BDTI.com/Services/Benchmarks)

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| Processor Family                             | Clock Rate<br>(min-max) | BDTI <sup>™</sup> mark2000 <sup>™</sup> ,<br>BDTIsimMark2000 <sup>™</sup><br>(min-max) | Cost<br>1K units<br>(min-max) | BDTI <sup>™</sup> mark2000 <sup>™</sup> /\$,<br>BDTIsimMark2000 <sup>™</sup> /\$<br>(min-max) |
|--|-------------------------|--|-------------------------------|---|
| ADI ADSP-218x                                | 80 MHz                  | <b>240</b>   | \$8–31                        | <b>8–31</b>   |
| ADI ADSP-219x                                | 100–160 MHz             | <b>250–410</b>   | \$13–33                       | <b>9–30</b>   |
| ADI ADSP-BF5xx (Blackfin)                    | 200–600 MHz             | <b>1120–3360</b>   | \$2–48                        | n/a   |
| ADI ADSP-TS201S (TigerSHARC)                 | 500–600 MHz             | <b>5330–6400</b>   | \$252–339                     | <b>16–23</b>  |
| ADI ADSP-TS202S/203S (TigerSHARC)            | 500 MHz                 | <b>5130</b>  | \$184–210                     | <b>24–28</b>  |
| Freescale DSP563xx <sup>1</sup>              | 150–275 MHz             | <b>450–820</b>   | \$5–45                        | n/a   |
| Freescale DSP5672x <sup>1</sup>              | 200–250 MHz             | <b>590–740</b>   | \$6–11                        | n/a   |
| Freescale DSP56F8xx (56800)                  | 60–80 MHz               | <b>50–130</b>  | n/a                           | n/a   |
| Freescale DSP5685x/56F8xxx (56800E)          | 32–120 MHz              | 90–340   | n/a                           | n/a   |
| Freescale MSC71xx (SC1400)                   | 200–300 MHz             | 2240–3370  | \$37–43                       | 60–78   |
| Freescale MSC81xx (SC140)                    | 300–500 MHz             | <b>3370–5610</b>   | \$58–127                      | n/a   |
| Freescale MSC814x (SC3400)                   | 800–1000 MHz            | <b>9520–11900</b>  | \$122–147                     | n/a   |
| Freescale MSC815x/825x (SC3850)              | 800–1000 MHz            | <b>12330–15420</b>   | n/a                           | n/a   |
| Freescale MSC815x/825x (SC3850) <sup>2</sup> | 1200 MHz                | 18500  | n/a                           | n/a   |
| Marvell PXA255                               | 200–400 MHz             | <b>470–930</b>   | n/a                           | n/a   |
| Marvell PXA27x                               | 312–624 MHz             | <b>1070–2140</b>   | n/a                           | n/a   |
| Microchip dsPIC3x                            | 16–60 MHz               | 50–190   | \$2–8                         | 12–62   |
| NEC $\mu$ PD77050 (SPXK5)                    | 250 MHz                 | 1770   | n/a                           | n/a   |
| Qualcomm Hexagon V2 (single-thread)          | 100 MHz                 | 1550   | n/a                           | n/a   |
| Texas Instruments TMS320C54x                 | 50–160 MHz              | <b>150–500</b>   | \$4–130                       | n/a   |
| Texas Instruments TMS320C55x                 | 100–300 MHz             | <b>490–1460</b>  | \$5–17                        | <b>54–323</b>   |
| Texas Instruments C55x+                      | 400–500 MHz             | 2530–3160  | n/a                           | n/a   |
| Texas Instruments TMS320C62x                 | 150–300 MHz             | <b>960–1920</b>  | n/a                           | n/a   |
| Texas Instruments OMAP35x                    | 600–720 MHz             | 4540–5450  | \$23–50                       | 109–201   |
| Texas Instruments TMS320C64x                 | 400–1000 MHz            | <b>3650–9130</b>   | \$17–202                      | <b>45–212</b>   |
| Texas Instruments TMS320C64x+                | 400–1200 MHz            | <b>4390–13170</b>  | \$10–216                      | n/a   |
| Texas Instruments TMS320C66x                 | 1000–1500 MHz           | <b>13350–20030</b>   | \$79–399                      | n/a   |
| VeriSilicon VS140x                           | 120–200 MHz             | <b>560–940</b>   | n/a                           | n/a   |

<sup>1</sup> Benchmarked with 24-bit fixed-point data; all other processors benchmarked with 16-bit fixed-point data

<sup>2</sup> Not available to the general market

**BDTI<sup>™</sup>mark2000<sup>™</sup>, BDTIsimMark2000<sup>™</sup>:** The BDTI<sup>™</sup>mark2000<sup>™</sup> and BDTIsimMark2000<sup>™</sup> provide a summary measure of signal processing speed. BDTIsimMark2000<sup>™</sup> scores may be based on projected clock speeds. For information see [www.bdti.com/Services/Benchmarks](http://www.bdti.com/Services/Benchmarks)

Note: In general, BDTI<sup>™</sup>mark2000<sup>™</sup>/\$ and BDTIsimMark2000<sup>™</sup>/\$ scores cannot be computed from the speed and pricing data presented here. For example, the fastest processors are not always the most expensive processors. Therefore, it is not always possible to calculate a speed per dollar ratio by dividing the maximum speed for a family by the maximum price for the family.