

mixbench (v0.04-13-g597b700)

----- Device specifications -----

Device: NVIDIA RTX 4000 Ada Generation
 CUDA driver version: 12.70
 GPU dock rate: 2175 MHz
 Memory clock rate: 4500 MHz
 Memory bus width: 160 bits
 WarpSize: 32
 L2 cache size: 40960 KB
 Total global mem: 20044 MB
 ECC enabled: No
 Compute Capability: 8.9
 Total SPs: 6144 (48 MPs x 128 SPs/MP)
 Compute throughput: 26726.40 GFlops (theoretical single precision FMAs)
 Memory bandwidth: 360.04 GB/sec

Total GPU memory 21018050560, free 20843790336
 Buffer size: 256MB
 Trade-off type: compute with global memory (block strided)
 Elements per thread: 8
 Thread fusion degree: 4

| Compute iters | Single Precision ops | | | | Double precision ops | | | | Half precision ops | | | | Integer operations | | | |
|---------------|----------------------|---------|----------|--------|----------------------|---------|--------|--------|--------------------|---------|----------|--------|--------------------|---------|----------|--------|
| | Flops/byte | ex.time | GFLOPS | GB/sec | Flops/byte | ex.time | GFLOPS | GB/sec | Flops/byte | ex.time | GFLOPS | GB/sec | lops/byte | ex.time | GIOPS | GB/sec |
| 0 | 0.25 | 0.47 | 71.73 | 286.93 | 0.125 | 0.78 | 43.14 | 345.08 | 0.5 | 0.4 | 169.34 | 338.69 | 0.25 | 0.4 | 84.89 | 339.56 |
| 1 | 0.75 | 0.4 | 254.67 | 339.56 | 0.375 | 0.78 | 129.52 | 345.38 | 1.5 | 0.4 | 509.35 | 339.56 | 0.75 | 0.39 | 256 | 341.33 |
| 2 | 1.25 | 0.39 | 425.56 | 340.45 | 0.625 | 0.78 | 215.38 | 344.6 | 2.5 | 0.4 | 848.91 | 339.56 | 1.25 | 0.39 | 425.56 | 340.45 |
| 3 | 1.75 | 0.4 | 592.94 | 338.82 | 0.875 | 0.78 | 300.23 | 343.12 | 3.5 | 0.4 | 1185.41 | 338.69 | 1.75 | 0.4 | 592.85 | 338.77 |
| 4 | 2.25 | 0.4 | 762.42 | 338.85 | 1.125 | 0.9 | 335.51 | 298.23 | 4.5 | 0.4 | 1525.08 | 338.91 | 2.25 | 0.4 | 762.6 | 338.93 |
| 5 | 2.75 | 0.4 | 933.8 | 339.56 | 1.375 | 1.09 | 338.1 | 245.89 | 5.5 | 0.4 | 1862.78 | 338.69 | 2.75 | 0.4 | 929.74 | 338.09 |
| 6 | 3.25 | 0.4 | 1103.59 | 339.56 | 1.625 | 1.28 | 340.24 | 209.38 | 6.5 | 0.4 | 2167.86 | 333.52 | 3.25 | 0.4 | 1097.9 | 337.81 |
| 7 | 3.75 | 0.4 | 1270.28 | 338.74 | 1.875 | 1.47 | 341.41 | 182.09 | 7.5 | 0.4 | 2540.15 | 338.69 | 3.75 | 0.4 | 1264.46 | 337.19 |
| 8 | 4.25 | 0.4 | 1439.42 | 338.69 | 2.125 | 1.67 | 341.96 | 160.92 | 8.5 | 0.4 | 2865.19 | 337.08 | 4.25 | 0.4 | 1435.71 | 337.81 |
| 9 | 4.75 | 0.4 | 1604.62 | 337.81 | 2.375 | 1.86 | 342.48 | 144.2 | 9.5 | 0.4 | 3202.02 | 337.05 | 4.75 | 0.4 | 1593.33 | 335.44 |
| 10 | 5.25 | 0.4 | 1778.11 | 338.69 | 2.625 | 2.05 | 343.26 | 130.77 | 10.5 | 0.4 | 3537.93 | 336.95 | 5.25 | 0.4 | 1764.43 | 336.08 |
| 11 | 5.75 | 0.4 | 1952.5 | 339.56 | 2.875 | 2.25 | 343.51 | 119.48 | 11.5 | 0.4 | 3855.06 | 335.22 | 5.75 | 0.4 | 1927.53 | 335.22 |
| 12 | 6.25 | 0.4 | 2111.34 | 337.81 | 3.125 | 2.54 | 330.46 | 105.75 | 12.5 | 0.41 | 4106.27 | 328.5 | 6.25 | 0.4 | 2073.92 | 331.83 |
| 13 | 6.75 | 0.4 | 2257.88 | 334.5 | 3.375 | 2.63 | 344.26 | 102 | 13.5 | 0.4 | 4479.68 | 331.83 | 6.75 | 0.4 | 2244.45 | 332.51 |
| 14 | 7.25 | 0.4 | 2436.01 | 336 | 3.625 | 2.82 | 344.53 | 95.04 | 14.5 | 0.4 | 4848.33 | 334.37 | 7.25 | 0.41 | 2394.95 | 330.34 |
| 15 | 7.75 | 0.4 | 2604.22 | 336.03 | 3.875 | 3.01 | 345.04 | 89.04 | 15.5 | 0.41 | 5132.77 | 331.15 | 7.75 | 0.4 | 2587.02 | 333.81 |
| 16 | 8.25 | 0.4 | 2765.59 | 335.22 | 4.125 | 3.21 | 345.3 | 83.71 | 16.5 | 0.4 | 5506.96 | 333.76 | 8.25 | 0.4 | 2772.68 | 336.08 |
| 17 | 8.75 | 0.4 | 2941.42 | 336.16 | 4.375 | 3.42 | 343.27 | 78.46 | 17.5 | 0.41 | 5794.61 | 331.12 | 8.75 | 0.4 | 2948.28 | 336.95 |
| 18 | 9.25 | 0.4 | 3124.78 | 337.81 | 4.625 | 3.59 | 345.35 | 74.67 | 18.5 | 0.4 | 6154.88 | 332.7 | 9.25 | 0.4 | 3077.2 | 332.67 |
| 20 | 10.25 | 0.4 | 3438.23 | 335.44 | 5.125 | 3.98 | 345.99 | 67.51 | 20.5 | 0.41 | 6768.2 | 330.16 | 10.25 | 0.4 | 3401.24 | 331.83 |
| 22 | 11.25 | 0.4 | 3797.97 | 337.6 | 5.625 | 4.37 | 345.9 | 61.49 | 22.5 | 0.41 | 7434.95 | 330.44 | 11.25 | 0.4 | 3733.06 | 331.83 |
| 24 | 12.25 | 0.4 | 4127.59 | 336.95 | 6.125 | 4.75 | 346.34 | 56.55 | 24.5 | 0.41 | 8027.53 | 327.65 | 12.25 | 0.4 | 4096 | 334.37 |
| 28 | 14.25 | 0.4 | 4799.55 | 336.81 | 7.125 | 5.52 | 346.53 | 48.64 | 28.5 | 0.41 | 9319.22 | 326.99 | 14.25 | 0.4 | 4742.43 | 332.8 |
| 32 | 16.25 | 0.4 | 5447.37 | 335.22 | 8.125 | 6.28 | 347.19 | 42.73 | 32.5 | 0.41 | 10623.04 | 326.86 | 16.25 | 0.4 | 5447.37 | 335.22 |
| 40 | 20.25 | 0.4 | 6776.88 | 334.66 | 10.125 | 7.82 | 347.5 | 34.32 | 40.5 | 0.41 | 13237.95 | 326.86 | 20.25 | 0.41 | 6702.02 | 330.96 |
| 48 | 24.25 | 0.4 | 8114.23 | 334.61 | 12.125 | 8.94 | 364.1 | 30.03 | 48.5 | 0.42 | 15438.96 | 318.33 | 24.25 | 0.4 | 8094.21 | 333.78 |
| 56 | 28.25 | 0.4 | 9374.14 | 331.83 | 14.125 | 10.06 | 376.72 | 26.67 | 56.5 | 0.42 | 17887.85 | 316.6 | 28.25 | 0.4 | 9397.93 | 332.67 |
| 64 | 32.25 | 0.41 | 10626.62 | 329.51 | 16.125 | 11.49 | 376.71 | 23.36 | 64.5 | 0.43 | 20134.91 | 312.17 | 32.25 | 0.42 | 10358.88 | 321.21 |
| 80 | 40.25 | 0.41 | 13294.02 | 330.29 | 20.125 | 14.28 | 378.3 | 18.8 | 80.5 | 0.49 | 22213.25 | 275.94 | 40.25 | 0.49 | 10988.79 | 273.01 |
| 96 | 48.25 | 0.41 | 15810.56 | 327.68 | 24.125 | 17.12 | 378.27 | 15.68 | 96.5 | 0.52 | 24800.88 | 257 | 48.25 | 0.58 | 11200.75 | 232.14 |
| 128 | 64.25 | 0.41 | 20903.2 | 325.34 | 32.125 | 22.8 | 378.28 | 11.78 | 128.5 | 0.69 | 24841.82 | 193.32 | 64.25 | 0.75 | 11536.13 | 179.55 |
| 192 | 96.25 | 0.55 | 23492.89 | 244.08 | 48.125 | 34.1 | 378.79 | 7.87 | 192.5 | 1.01 | 25494.27 | 132.44 | 96.25 | 1.1 | 11769.73 | 122.28 |
| 256 | 128.25 | 0.7 | 24661.63 | 192.29 | 64.125 | 45.45 | 378.76 | 5.91 | 256.5 | 1.3 | 26514.17 | 103.37 | 128.25 | 1.44 | 11913.52 | 92.89 |
| 512 | 256.25 | 1.32 | 26078.28 | 101.77 | 128.125 | 90.77 | 378.9 | 2.96 | 512.5 | 2.49 | 27598.71 | 53.85 | 256.25 | 2.81 | 12250.7 | 47.81 |
| 1024 | 512.25 | 2.54 | 27029.64 | 52.77 | 256.125 | 181.4 | 379.01 | 1.48 | 1024.5 | 4.87 | 28223.37 | 27.55 | 512.25 | 5.6 | 12285.75 | 23.98 |