

CPU Performance Analysis Report 4.2.1

Measured time	Sat Jul 9 20:27:47 2022
Node name	28-3109c

Process no.	0
CMG no.	0
Measured region	axhelm_kernel, 1

Vector length (bit)	512
CPU frequency (GHz)	1.999

Statistics		Execution time (s)	GFLOPS	Floating-point operation peak ratio (%)	Memory throughput (GB/s)	Memory throughput peak ratio (%)	Effective instruction	Floating-point operation	SIMD instruction rate (%) (/Effective instruction)	SVE operation rate (%)	Floating-point pipeline Active element rate (%)	IPC	GIPS
Process	Thread												
0	0	1.09E-01	8.02	12.54%	5.80		1.74E+08	8.77E+08	75.39%	100.00%	91.69%	0.79	1.59
0	1	1.09E-01	8.03	12.55%	5.87		1.73E+08	8.77E+08	75.41%	100.00%	91.75%	0.79	1.59
0	2	1.09E-01	8.03	12.55%	5.83		1.73E+08	8.77E+08	75.41%	100.00%	91.78%	0.79	1.59
0	3	1.09E-01	8.02	12.54%	5.77		1.73E+08	8.77E+08	75.41%	100.00%	91.78%	0.79	1.59
0	4	1.09E-01	8.03	12.55%	5.97		1.73E+08	8.77E+08	75.41%	100.00%	91.78%	0.79	1.59
0	5	1.09E-01	8.02	12.54%	5.83	27.47%	1.73E+08	8.77E+08	75.41%	100.00%	91.78%	0.79	1.59
0	6	1.09E-01	8.02	12.54%	5.85		1.73E+08	8.77E+08	75.41%	100.00%	91.77%	0.79	1.59
0	7	1.09E-01	8.02	12.54%	5.90		1.73E+08	8.77E+08	75.41%	100.00%	91.77%	0.79	1.59
0	8	1.09E-01	8.03	12.55%	5.87		1.73E+08	8.77E+08	75.41%	100.00%	91.78%	0.79	1.59
0	9	1.09E-01	8.02	12.54%	5.85		1.73E+08	8.77E+08	75.41%	100.00%	91.77%	0.79	1.59
0	10	1.09E-01	8.02	12.54%	5.89		1.73E+08	8.77E+08	75.41%	100.00%	91.77%	0.79	1.59
0	11	1.09E-01	8.02	12.54%	5.88		1.73E+08	8.77E+08	75.41%	100.00%	91.78%	0.79	1.59
CMG 0 total		1.09E-01	96.30	12.54%	70.31	27.47%	2.08E+09	1.05E+10	75.41%	100.00%	91.77%	0.79	19.06

Busy		Floating-point operation pipeline A busy rate (%)	Floating-point operation pipeline B busy rate (%)	Integer operation pipeline A busy rate (%)	Integer operation pipeline B busy rate (%)	L1 busy rate (%)	L2 busy rate (%)	Memory busy rate (%)	Address calculation operation pipeline A busy rate (%)	Address calculation operation pipeline B busy rate (%)	Floating-point pipeline A Active element rate (%)	Floating-point pipeline B Active element rate (%)	L1 pipeline 0 Active element rate (%)	L1 pipeline 1 Active element rate (%)	SFI(Store Fetch Interlock) rate
Process	Thread														
0	0	22.26%	16.20%	2.05%	4.60%	26.06%			24.12%	15.97%	85.65%	100.00%	100.00%	100.00%	0.01
0	1	22.27%	16.25%	2.08%	4.68%	26.89%			24.24%	16.00%	85.74%	100.00%	100.00%	100.00%	0.01
0	2	22.25%	16.24%	2.03%	4.65%	26.83%			24.14%	15.94%	85.78%	100.00%	100.00%	100.00%	0.01
0	3	22.29%	16.22%	2.03%	4.64%	26.82%			24.14%	15.94%	85.80%	100.00%	100.00%	100.00%	0.01
0	4	22.25%	16.24%	2.04%	4.66%	26.84%			24.17%	15.97%	85.78%	100.00%	100.00%	100.00%	0.01
0	5	22.26%	16.24%	2.04%	4.64%	26.85%			24.14%	15.93%	85.78%	100.00%	100.00%	100.00%	0.01
0	6	22.28%	16.22%	2.05%	4.67%	26.92%	23.42%	27.47%	24.20%	15.96%	85.77%	100.00%	100.00%	100.00%	0.01
0	7	22.26%	16.24%	2.04%	4.67%	26.89%			24.20%	15.98%	85.77%	100.00%	100.00%	100.00%	0.01
0	8	22.26%	16.22%	2.02%	4.64%	26.86%			24.15%	15.94%	85.79%	100.00%	100.00%	100.00%	0.01
0	9	22.28%	16.21%	2.04%	4.65%	26.89%			24.19%	15.95%	85.78%	100.00%	100.00%	100.00%	0.01
0	10	22.27%	16.22%	2.06%	4.69%	26.87%			24.21%	15.96%	85.77%	100.00%	100.00%	100.00%	0.01
0	11	22.26%	16.23%	2.08%	4.69%	26.86%			24.24%	15.98%	85.78%	100.00%	100.00%	100.00%	0.01
CMG 0 total		22.27%	16.23%	2.05%	4.66%	26.80%	23.42%	27.47%	24.18%	15.96%	85.77%	100.00%	100.00%	100.00%	0.01

Cache		L1 miss rate (/Effective instruction)	Load-store instruction	L1D miss	L1D miss rate (/Load-store instruction)	L1D miss demand rate (%) (/L1D miss)	L1D miss hardware prefetch rate (%) (/L1D miss)	L1D miss software prefetch rate (%) (/L1D miss)	L2 miss	L2 miss rate (/Load-store instruction)	L2 miss demand rate (%) (/L2 miss)	L2 miss hardware prefetch rate (%) (/L2 miss)	L2 miss software prefetch rate (%) (/L2 miss)	L1D TLB miss rate (/Load-store instruction)	L2D TLB miss rate (/Load-store instruction)
Process	Thread														
0	0	0.00	7.30E+07	2.44E+06	0.03	50.51%	37.55%	11.94%	2.25E+06	0.03	35.05%	55.87%	9.08%	0.00000	0.00000
0	1	0.00	7.30E+07	2.48E+06	0.03	50.03%	37.37%	12.60%	2.25E+06	0.03	35.58%	55.28%	9.15%	0.00000	0.00000
0	2	0.00	7.30E+07	2.48E+06	0.03	49.97%	37.54%	12.49%	2.24E+06	0.03	35.72%	55.51%	8.77%	0.00000	0.00000
0	3	0.00	7.30E+07	2.48E+06	0.03	50.08%	37.38%	12.54%	2.24E+06	0.03	35.43%	55.29%	9.28%	0.00000	0.00000
0	4	0.00	7.30E+07	2.48E+06	0.03	50.10%	37.33%	12.56%	2.24E+06	0.03	35.79%	55.33%	8.89%	0.00000	0.00000
0	5	0.00	7.30E+07	2.48E+06	0.03	49.98%	37.36%	12.66%	2.24E+06	0.03	35.43%	55.40%	9.17%	0.00000	0.00000
0	6	0.00	7.30E+07	2.48E+06	0.03	49.93%	37.46%	12.61%	2.24E+06	0.03	35.54%	55.53%	8.93%	0.00000	0.00000
0	7	0.00	7.30E+07	2.48E+06	0.03	50.09%	37.28%	12.63%	2.24E+06	0.03	35.48%	55.31%	9.22%	0.00000	0.00000
0	8	0.00	7.30E+07	2.48E+06	0.03	50.06%	37.39%	12.55%	2.24E+06	0.03	35.66%	55.47%	8.87%	0.00000	0.00000
0	9	0.00	7.30E+07	2.48E+06	0.03	50.10%	37.35%	12.55%	2.24E+06	0.03	35.48%	55.31%	9.21%	0.00000	0.00000
0	10	0.00	7.30E+07	2.48E+06	0.03	50.21%	37.20%	12.59%	2.24E+06	0.03	36.01%	55.14%	8.85%	0.00000	0.00000
0	11	0.00	7.30E+07	2.48E+06	0.03	50.08%	37.31%	12.61%	2.24E+06	0.03	35.28%	55.49%	9.24%	0.00000	0.00000
CMG 0 total		0.00	8.76E+08	2.97E+07	0.03	50.09%	37.38%	12.53%	2.69E+07	0.03	35.54%	55.41%	9.05%	0.00000	0.00000

Instruction		Load-store instruction															Prefetch instruction			Floating-point instruction				Floating-point move and conversion instruction		Integer instruction	Branch instruction	Predicate instruction	Crypto-graphic instruction	Other instruction	Total									
		Load instruction							Store instruction											Floating-point exception FMA and reciprocal	FMA instruction	Floating-point reciprocal instruction	Floating-point conversion instruction	Floating-point move instruction																
		SIMD							Non-SIMD								Contiguous prefetch instruction	Gathering prefetch instruction	Scalar prefetch instruction						DCZVA instruction															
		Single vector contiguous load instruction	Multiple vector contiguous store load instruction	Non- contiguous gather load instruction	Broadcast load instruction	Floating- point register fill instruction	Predicate register fill instruction	First-fault load instruction	Non-SIMD load instruction	Single vector contiguous store instruction	Multiple vector contiguous store instruction	Non- contiguous scatter store instruction	Floating- point register spill instruction	Predicate register spill instruction	Non-SIMD store instruction																									
Process	Thread	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total
		0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2	3	4	5	6	7	8	9	10	11	CMG 0 total	0	1	2										