Annexes

A1. Simple Matrix Multiplication

A1.1. Execution time(s) in **C/C++**

Matrix Size	Run 1	Run 2	Run 3	Run 4	Run 5	Average
600	0.156473	0.15188	0.151824	0.152013	0.152402	0.1529184
1000	0.713673	0.714407	0.713482	0.716356	0.71333	0.7142496
1400	2.4863	2.47637	2.46733	2.46895	2.46793	2.473376
1800	5.72767	5.63599	5.62894	5.64934	5.63852	5.656092
2200	11.1453	11.1486	11.1097	11.123	11.2369	11.1527
2600	19.9657	19.1603	19.1716	19.1409	19.2362	19.33494
3000	30.8034	30.6192	30.7175	30.6117	31.1882	30.788

A1.2. Execution time(s) in **Java**

Matrix Size	Run 1	Run 2	Run 3	Run 4	Run 5	Average
600	0.16999934	0.1765279	0.16310286	0.17976499	0.18465061	0.1748091
1000	0.79386711	0.7822918	0.77569189	0.80021024	0.77804421	0.7860210
1400	2.96853353	2.9699088	2.96976547	2.96522132	2.97747331	2.9701805
1800	6.80396769	6.6848152	6.65355320	6.67964609	6.67205640	6.6988077
2200	22.6728126	22.398445	22.5654971	22.5503350	22.5569167	22.548801
2600	50.3835923	50.247332	50.5536660	50.4349316	50.7189607	50.467696
3000	87.2125192	78.998666	79.5200636	79.6858574	78.3904231	80.761505

A1.3. Number of cache misses in **C/C++**

Matrix Size	Cache	Run 1	Run 2	Run 3	Run 4	Run 5	Average
600	L1	243578032	239597597	239601861	239593049	239600533	240394214.4
	L2	232433	167093	163573	171489	191069	185131.4
1000	L1	1137922914	1139490643	1139461735	1139462158	1139471068	1139161704
	L2	1121165	587043	752318	651519	570497	736508.4
1400	L1	3115004586	3116398119	3116398586	3116398043	3116386976	3116117262
	L2	23533057	20463195	19471500	19617189	19808747	20578737.6
1800	L1	6609019409	6611579015	6611240228	6611265929	6611623928	6610945702
	L2	303245249	296272383	310466354	311034470	297949211	303793533.4
2200	L1	12051235914	12051796342	12051406074	12051725966	12051351947	12051503249
	L2	953042307	944334154	956917026	937813220	961399014	950701144.2
2600	L1	19874476951	19873781267	19873124910	19873821167	1987367631 4	19873776122
	L2	1852341213	1816926903	1992153957	1829622635	1854971048	1869203151
3000	L1	30525424058	30524818540	30526441206	30525341104	3052598750 2	30525602482
	L2	3142732044	3132018598	2968991975	3207940685	3121304016	3114597464

A1.4. Average data collected throughout the algorithm 1

Matrix Size	Java FLOPS	C++ FLOPS
600	2471266566	2825036098
1000	2544461065	2800141575
1400	1847699154	2218829648
1800	1741205373	2062201251
2200	944440444.8	1909492769
2600	696524754.4	1818055810
3000	668635377.3	1753930103

A2. Line Matrix Multiplication

A2.1. Execution time(s) in **C/C++**

Matrix Size	Run 1	Run 2	Run 3	Run 4	Run 5	Average Time
600	0.110287	0.108293	0.107249	0.107594	0.107888	0.1082622
1000	0.50316	0.498466	0.497302	0.499451	0.500512	0.4997782
1400	1.43704	1.42846	1.42308	1.43169	1.426	1.429254
1800	3.18011	3.06733	3.06583	3.06335	3.0736	3.090044
2200	5.596	5.57554	5.5812	5.57575	5.56581	5.57886
2600	9.13853	9.13726	9.86001	9.39314	9.20996	9.34778
3000	14.0788	14.0603	14.1119	14.0494	14.0632	14.07272
4096	35.5109	35.7014	35.5203	35.4368	35.417	35.51728

6144	125.86	125.25	126.155	124.791	125.963	125.6038
8192	294.954	294.115	294.517	294.319	294.926	294.5662
10240	577.744	577.255	577.273	577.26	577.008	577.308

A2.2. Execution time(s) in **Java**

Matrix Size	Run 1	Run 2	Run 3	Run 4	Run 5	Average Time
600	0.0947508	0.1040403	0.0943892	0.0904343	0.0944395	0.095610879
1000	0.4564901	0.4444999	0.4384448	0.4466707	0.4387201	0.44496518
1400	1.3950614	1.3980734	1.4145929	1.3956538	1.3842416	1.397524662
1800	3.0051773	3.0298690	2.9805975	3.0339309	2.9877404	3.007463074
2200	5.5533517	5.5359520	5.5530601	5.5585647	5.5247450	5.545134729
2600	9.2234764	9.2703393	9.3037673	9.2358647	9.3133339	9.269356383
3000	14.226302	14.262918	14.230043	14.242444	14.370917	14.26652519

A2.3. Number of cache misses in **C/C++**

Matrix Size	Cache	Run 1	Run 2	Run 3	Run 4	Run 5	Average
600	L1	27590537	27527096	27534935	27537223	27528785	27543715.2
	L2	166357	157868	153335	158264	156242	158413.2
1000	L1	128567214	128234057	128302253	128253030	128334709	128338252.6
	L2	1004774	839456	920888	875262	961726	920421.2
1400	L1	356203948	356019252	355898480	356023208	355734161	355975809.8

	L2	3713109	3556833	3523706	3581884	3727537	3620613.8
1800	L1	768920431	769056758	769171801	769072393	769526050	769149486.6
	L2	13896891	9125318	9271834	9259531	9586235	10227961.8
2200	L1	2041176633	2040436943	2040960465	2040154687	2040927257	2040731197
	L2	1720549	1967585	1735431	2961812	1694729	2016021.2
2600	L1	4343781518	4343418253	4344820029	4343910055	4343703187	4343926608
	L2	2136568	2177080	2487443	2219702	2208251	2245808.8
3000	L1	6716640419	6716384671	6716638810	6716313735	6716341627	6716463852
	L2	3426144	3338970	3508176	3369018	3328124	3394086.4
4096	L1	17291350105	17292234846	17291607891	17291033957	17290894624	1729142428 5
	L2	6795508	6875996	6789046	6662672	7475869	6919818.2
6144	L1	58428243782	58394090485	58424973050	58396394764	58426332752	5841400696 7
	L2	398530026	319149475	390371428	326426367	392857311	365466921.4
8192	L1	138436737628	138418554113	138432003826	138421647128	138440886546	1.3843E+11
	L2	901453210	854762316	893560323	856761772	914596797	884226883.6
10240	L1	270350329153	270340877367	270342436941	270342485589	270333850567	2.70342E+11
	L2	1879445963	1857406882	1867130716	1857222250	1837590658	1859759294

A2.4. Average data collected throughout the algorithm 2

Matrix Size	Java FLOPS	C++ FLOPS
600	4518314271	3990312408
1000	4494733727	4001775187
1400	3926943224	3839765360
1800	3878351858	3774703532
2200	3840483783	3817267327
2600	3792280558	3760465052
3000	3785084265	3837211285
4096	N/A	3869636230
6144	N/A	3693013014
8192	N/A	3732646949
10240	N/A	3719823124

A3. Block Matrix Multiplication

A3.1. Execution time in **C/C++**

Matrix Size	Block Size	Run 1	Run 2	Run 3	Run 4	Run 5	Average Time
600	75	0.294785	0.137665	0.136824	0.131679	0.126945	0.1655796
	150	0.127054	0.122803	0.117623	0.115325	0.112276	0.1190162

	300	0.113519	0.115354	0.113789	0.113793	0.113652	0.1140214
1000	125	0.69598	0.528345	0.526637	0.525872	0.531975	0.5617618
	250	0.560721	0.563225	0.559796	0.557415	0.544132	0.5570578
	500	0.519257	0.51411	0.518023	0.520059	0.519116	0.518113
1400	175	1.60677	1.49034	1.47318	1.47427	1.47724	1.50436
	350	1.45398	1.45098	1.45196	1.44909	1.45334	1.45187
	700	1.40488	1.40211	1.40292	1.43372	1.40092	1.40891
1800	225	3.25981	3.21219	3.21162	3.20399	3.21138	3.219798
	450	3.05372	3.05531	3.05453	3.05117	3.04979	3.052904
	900	2.99194	2.97907	3.00492	2.98048	2.98965	2.989212
2200	275	5.78592	5.7483	5.75333	5.75436	5.76159	5.7607
	550	5.50573	5.50722	5.51065	5.49973	5.51602	5.50787
	1100	5.54483	5.59664	5.59943	5.5562	5.57677	5.574774
2600	325	9.37226	9.37298	9.3691	9.3881	9.37419	9.375326
	650	9.03812	9.0703	9.05139	9.02631	9.02772	9.042768
	1300	9.9452	9.9784	10.0511	10.0311	9.96412	9.993984
3000	375	14.2194	14.2188	14.1318	14.1223	14.1045	14.15936
	750	13.7667	13.8121	13.7881	13.7186	13.752	13.7675
	1500	15.9957	15.855	15.7327	15.7431	15.6728	15.79986
4096	512	35.3177	35.2475	35.2296	35.2492	35.1175	35.2323
	1024	36.6209	36.287	36.4475	36.7041	36.4053	36.49296
	2048	39.3779	39.4734	39.4074	39.3401	39.3624	39.39224
6144	768	116.84	116.978	116.643	117.167	116.499	116.8254
	1536	136.964	138.954	137.266	137.485	137.183	137.5704
	3072	134.927	133.266	134.854	133.264	133.822	134.0266
8192	1024	299.253	298.65	295.804	289.522	293.934	295.4326

	2048	333.352	330.505	331.736	332.453	330.94	331.7972
	4096	314.343	318.343	319.741	318.296	319.04	317.9526
10240	1280	609.373	622.309	616.604	610.393	609.082	613.5522
	2560	620.697	622.455	628.256	623.321	622.44	623.4338
	5120	601.604	599.722	600.607	599.562	593.843	599.0676

A3.2. Number of cache misses in **C/C++**

Matrix Size	Block Size	Cache	Run 1	Run 2	Run 3	Run 4	Run 5	Average
600	75	L1	53143307	53097059	52980693	52779932	53035653	53007328.8
		L2	350447	359196	348624	345105	363743	353423
	150	L1	40480378	40474922	40562479	40478333	40466561	40492534.6
		L2	391337	367234	499762	433369	405181	419376.6
	300	L1	34172703	34519529	34137347	34118776	34113556	34212382.2
		L2	1625807	1632843	1408479	1608118	1477472	1550543.8
1000	125	L1	200632198	200001686	201009703	200878278	199923886	200489150.2
		L2	1218482	1069314	1088612	1034920	1107365	1103738.6
	250	L1	164389897	164703463	163919204	164205502	164111584	164265930
		L2	17547640	18137518	18467246	17640794	18107855	17980210.6
	500	L1	146182204	145978352	146190434	146448616	146493615	146258644.2

		L2	9759097	9582362	9768757	9666095	9707877	9696837.6
1400	175	L1	488383930	488870899	488141221	488662178	488470316	488505708.8
		L2	20709859	23453365	17505411	24378470	24970573	22203535.6
	350	L1	423487190	422786406	423078485	423169756	422831900	423070747.4
		L2	32352505	31887242	32123357	31997678	31667549	32005666.2
	700	L1	387015448	386513742	386840111	388759656	386795008	387184793
		L2	18399616	17719147	18100022	18008549	18082140	18061894.8
1800	225	L1	984502725	983000815	985035097	981668626	983292398	983499932.2
		L2	93633750	92599699	92863349	90914737	92240293	92450365.6
	450	L1	865657122	865202418	865553503	865089545	864651755	865230868.6
		L2	55278339	55201752	55431025	55034668	55211496	55231456
	900	L1	806722799	804921049	806735846	806102420	806301710	806156764.8
		L2	33831624	32829828	33196700	33569738	33543429	33394263.8
2200	275	L1	1718403854	171772308 8	171804703 0	171653321 0	1717573173	171765607 1
		L2	149736307	149621296	148052018	146462255	14857551 6	148489478.4
	550	L1	1539373175	154010921 2	153963167 1	153952018 3	1540828692	153989258 7

		L2	85052916	8559152 5	8554871 3	8553446 3	86296312	8560478 5.8
	1100	L1	14625866 60	1463080 726	1463844 583	1464361 958	14644296 08	1463660 707
		L2	46938731	4731025 2	4797772 3	4868681 3	47914815	4776566 6.8
2600	325	L1	27441420 66	2742617 204	2743722 332	2743873 191	27436745 44	2743605 867
		L2	20842482 9	2049287 65	2082172 49	2070559 46	20712461 7	2071502 81.2
	650	L1	24988767 04	2499667 114	2498739 210	2498265 002	24993062 61	2498970 858
		L2	11777151 1	1183058 82	1180515 48	1177269 49	11858467 2	1180881 12.4
	1300	L1	24099693 02	2408008 772	2411384 507	2408431 378	24109682 98	2409752 451
		L2	66394753	6525466 9	6814025 1	6622814 9	68377628	6687909 0
3000	375	L1	41045331 48	4109063 405	4106244 305	4102479 350	41031780 82	4105099 658
		L2	27617877 5	2781732 26	2757806 77	2701715 05	27205922 3	2744726 81.2
	750	L1	37818200 78	3784057 217	3783456 783	3783877 400	37832070 62	3783283 708
		L2	16157072 6	1625841 60	1625707 89	1631922 25	16260398 4	1625043 76.8
	1500	L1	36943838 69	3684724 020	3680801 000	3683949 375	36804275 22	3684857 157
		L2	96231056	9190258 3	9190861 0	9262422 4	93590572	9325140 9
4096	512	L1	10036846 496	1003220 2089	1003876 9471	1007982 2956	10068402 328	1005120 8668

		L2	549693433	548547335	551070032	523451826	52077439 3	538707403.8
	1024	L1	9552934794	954453486 4	953980987 4	954847598 8	9536839853	954451907 5
		L2	3283649 00	332108794	329594755	333768534	3266705 50	330101506.6
	2048	L1	1182433563 5	118344061 66	118356546 41	118779436 20	1187484977 0	118494379 66
		L2	1434364 72	146283035	144780552	139966842	1400611 54	142905611
6144	768	L1	3275228377 8	328037976 38	326383666 75	328012929 45	32763577 613	327518637 30
		L2	1731547551	173831642 5	178683338 3	172857277 4	1709928620	173903975 1
	1536	L1	3256855882 5	326153439 33	325880600 65	325915877 69	3260406597 8	325935233 14
		L2	1125287253	125788531 9	115001724 4	117721312 4	1109103948	116390137 8
	3072	L1	5887710852 6	588543010 18	588781732 09	588544656 45	5886476162 0	588657620 04
		L2	6954421 18	610106093	692351290	605142805	6564617 30	651900807.2
8192	1024	L1	7638121670 9	766850310 22	765869596 24	763530529 03	7638217758 4	764776875 68
		L2	3811301935	423101699 0	407925683 8	371598565 3	3761174407	391974716 5
	2048	L1	9479150799 1	946339013 47	946636394 49	945715730 25	9476072595 9	946842695 54
		L2	2091699312	211046433 2	209414822 4	217343485 6	2109668517	211588304 8
	4096	L1	1397372637 63	139795902 065	139759303 277	139793580 380	1398153060 33	1.3978E +11

		L2	1481388476	166949257 2	164352215 3	165386604 5	1711634542	163198075 8
10240	1280	L1	1490756866643	149648246994	149440483375	149204373046	1492686023 54	1.49327E+11
		L2	5984602551	667860706 6	611556304 0	574217807 7	5602938688	602477788 4
	2560	L1	2696559638 44	269838917747	269955916793	269895913391	2698811768 38	2.69846E+11
		L2	3097924115	329652250 3	356954774 5	331984858 1	3319496824	332066795 4
	5120	L1	2724240764 53	272380436919	272404459356	272375522663	2722673077 76	2.7237E+11
		L2	2455174244	234434940 2	238485685 0	233780380 7	2040954461	231262775 3

A3.3. Average data collected throughout the algorithm 3

Matrix Size	Block Size	C++ FLOPS
600	75	2609017053
	150	3629757966
	300	3788762460
1000	125	3560227840
	250	3590291708
	500	3860161779
1400	175	3648062964
	350	3779952751
	700	3895209772

1800	225	3622587504
	450	3820624559
	900	3902031706
2200	275	3696772962
	550	3866467437
	1100	3820065172
2600	325	3749416287
	650	3887305303
	1300	3517316017
3000	375	3813731694
	750	3922280734
	1500	3417751803
4096	512	3900936171
	1024	3766177188
	2048	3488985482
6144	768	3970510420
	1536	3371775236
	3072	3460928412
8192	1024	3721700407
	2048	3313806228
	4096	3458099188
10240	1280	3500083038
	2560	3444605743
	5120	3584710053

A4. Parallel Line Matrix Multiplication

A4.1. Execution time in **C/C++** with outer loop Parallelization

Matrix Size	Run 1	Run 2	Run 3	Run 4	Run 5	Average Time
600	0.020673	0.0203274	0.0201549	0.0197385	0.0200056	0.02017988
1000	0.0938547	0.0895757	0.0930902	0.0921395	0.0903699	0.091806
1400	0.258126	0.260978	0.249926	0.250131	0.247951	0.2534224
1800	0.564917	0.547344	0.544489	0.556635	0.554116	0.5535002
2200	1.03287	1.03983	1.0365	1.03419	1.00547	1.029772
2600	1.72304	1.72962	1.72756	1.77594	1.74149	1.73953
3000	2.66819	2.68763	2.77918	2.67862	2.67612	2.697948
4096	7.23485	7.28033	7.55926	7.46173	7.4286	7.392954
6144	29.8338	28.957	30.748	29.5548	28.9015	29.59902
8192	63.4071	65.1308	62.2153	63.0867	66.2432	64.01662
10240	132.263	135.962	148.264	144.388	137.072	139.5898

A4.2. Number of cache misses in **C/C++** with outer loop Parallelization

Matrix Size	Cache	Run 1	Run 2	Run 3	Run 4	Run 5	Average
600	L1	2467124	2505215	2514845	2515232	2514406	2503364.4
	L2	17917	19688	18765	20307	19542	19243.8
1000	L1	12180344	12357485	12395412	12275284	12327261	12307157.2
	L2	96344	85853	74614	79825	74906	82308.4

1400	L1	56035374	54377069	55242505	56066001	55396085	55423406.8
	L2	81743	84710	71696	65146	77317	76122.4
1800	L1	122174125	118077037	119646235	120281154	119690261	119973762.4
	L2	139683	170329	157765	145831	155215	153764.6
2200	L1	222878846	224157465	223111974	221617835	222797751	222912774.2
	L2	237959	276045	265246	267063	261014	261465.4
2600	L1	370497987	370957443	370017558	371352740	370726303	370710406.2
	L2	427665	413673	426595	458515	402090	425707.6
3000	L1	568947133	569121557	569076053	568629179	568949402	568944664.8
	L2	629096	660356	752918	694097	692264	685746.2
4096	L1	1459843213	1460718665	1461002186	1461151942	1461399989	1460823199
	L2	1221482	1455102	1825141	1687879	1818754	1601671.6
6144	L1	4916960702	4920026451	4903807747	4907628634	4916339043	491295251 5
	L2	24470604	28160924	28643018	35209018	22449391	27786591
8192	L1	11642365804	11638699558	11643200462	11638384990	11642918648	11641113892
	L2	63196948	72984406	61405749	71593235	66258951	67087857.8
10240	L1	22692479072	22689986720	22710211350	22695735791	22690472047	22695776996

	L2	186198401	187633296	184061845	192931130	191090297	188382993.8

A4.3. Average data collected throughout the algorithm 4

Matrix Size	C++ FLOPS
600	21407461293
1000	21785068514
1400	21655544261
1800	21073163117
2200	20680305932
2600	20207757268
3000	20015211561
4096	18590532752
6144	15671345469
8192	17175408945
10240	15384244751

A4.4. Execution time in **C/C++** with outer and inner loop Parallelization

Matrix Size	Run 1	Run 2	Run 3	Run 4	Run 5	Average
600	0.0352848	0.0300527	0.0289141	0.0288482	0.0287369	0.03036734
1000	0.116877	0.116374	0.116329	0.116538	0.11583	0.1163896

1400	0.290348	0.290682	0.288811	0.288403	0.289216	0.289492
1800	0.599293	0.580936	0.580835	0.594188	0.584416	0.5879336
2200	1.02267	1.02972	1.02899	1.03602	1.04046	1.031572
2600	1.66369	1.66006	1.80608	1.6966	1.68185	1.701656
3000	2.64977	2.56617	2.55034	2.54449	2.60263	2.58268
4096	6.6343	6.72609	7.17875	6.82097	6.9987	6.871762
6144	26.868	27.7267	27.8076	29.0614	28.1405	27.92084
8192	76.1884	78.3827	75.46	78.0235	77.405	77.09192
10240	169.496	168.223	170.758	170.011	169.747	169.647

A4.5. Number of cache misses in **C/C++** with outer and inner loop Parallelization

Matrix Size	Cache	Run 1	Run 2	Run 3	Run 4	Run 5	Average
600	L1	4375985	4071487	4066928	4155646	4130844	4160178
	L2	44095	52497	49100	48930	48140	48552.4
1000	L1	24699858	25027606	25065388	25053274	24882145	24945654.2
	L2	171995	156432	157162	157928	158575	160418.4
1400	L1	70703740	70701965	70521940	70927689	70707301	70712527
	L2	521136	498795	513209	506600	510675	510083
1800	L1	146315509	144594894	145104547	145224234	144965709	145240978.6
	L2	1069755	1031609	1058330	1016063	1022770	1039705.4

2200	L1	260854083	261616970	261172040	261160647	260561477	261073043.4
	L2	1852589	1942754	1878292	1855608	1993041	1904456.8
2600	L1	422032174	422046529	421357671	421881743	422262075	421916038.4
	L2	2722878	3177142	2792702	3148460	2769794	2922195.2
3000	L1	634631361	633523747	633797889	634167351	634025657	634029201
	L2	5030017	4205737	4678503	4472816	4825680	4642550.6
4096	L1	1587337731	1586039521	1586728723	1585864238	1586248456	1586443734
	L2	11521854	12047422	12618738	12545389	12765193	12299719.2
6144	L1	5185225216	5180963170	5185451812	5185311489	5181429165	5183676170
	L2	53168825	55749267	52017168	55375471	55988714	54459889
8192	L1	12140790745	12137654852	12140849885	12134375018	12137997661	12138333632
	L2	146389215	152262585	145687655	151920951	152542841	149760649.4
10240	L1	23507631711	23482482908	23486920300	23486185376	23476595081	23487963075
	L2	379023414	376868308	386696936	386024417	397410445	385204704

A4.3. Average data collected throughout the algorithm 5

Matrix Size	C++ FLOPS
600	14225809702
1000	17183665895
1400	18957345972
1800	19838975014
2200	20644220665
2600	20657524200
3000	20908513637
4096	20000540396
6144	16613270517
8192	14262345882
10240	12658541843

A5. Regular (Sequential) Line Matrix Multiplication VS Parallel Line Matrix Multiplication

A5.1. Sequential Line Matrix Multiplication VS Outer Loop Parallel Line Matrix Multiplication

Matrix Size	Sequential Time	Parallel Time (Outer Loop)	Speedup	Efficiency
600	0.1082622	0.02017988	5.364858463	0.447071539
1000	0.4997782	0.091806	5.443851164	0.453654264
1400	1.429254	0.2534224	5.639809267	0.469984106
1800	3.090044	0.5535002	5.582733303	0.465227775
2200	5.57886	1.029772	5.417568161	0.451464013
2600	9.34778	1.73953	5.373738883	0.447811574
3000	14.07272	2.697948	5.216082741	0.434673562
4096	35.51728	7.392954	4.804206816	0.400350568
6144	125.6038	29.59902	4.243512116	0.35362601
8192	294.5662	64.01662	4.601401948	0.383450162
10240	577.308	139.5898	4.135746308	0.344645526

A5.2. Sequential Line Matrix Multiplication VS Outer and Inner Loop Parallel Line Matrix Multiplication

Matrix Size	Sequential Time	Parallel Time (Outer and Inner Loop)	Speedup	Efficiency
600	0.1082622	0.03036734	3.565086702	0.297090558
1000	0.4997782	0.1163896	4.294010805	0.357834234
1400	1.429254	0.289492	4.937110525	0.411425877
1800	3.090044	0.5879336	5.25577038	0.437980865
2200	5.57886	1.031572	5.408114993	0.450676249
2600	9.34778	1.701656	5.493342955	0.45777858
3000	14.07272	2.58268	5.448882556	0.454073546
4096	35.51728	6.871762	5.168584127	0.430715344
6144	125.6038	27.92084	4.498568095	0.374880675
8192	294.5662	77.09192	3.820973716	0.318414476
10240	577.308	169.647	3.402995632	0.283582969

A6. Hardware Specifications

CPU	AMD Ryzen 5 5500, 3.60 GHz

Cache	Total Size	Line Size	Nº of Lines	Associativity
L1 Data Cache	32 KB	64 bytes	512	8
L1 Instruction Cache	32 KB	64 bytes	512	8
L2 Unified Cache	512 KB	64 bytes	8192	8
L3 Unified Cache	16 MB	64 bytes	262 144	16