

Table 1: Performance of KALI over the benchmarks (AD=AS_DECLARED, OD=IN_ORDER_SIZE_DESC, OA=IN_ORDER_SIZE_ASC, RD=RANDOM)

Bench.	AD w/ order. Size	AD w/ order. Time [ms]	AD w/o order. Size	AD w/o order. Time [ms]	OD w/ order. Size	OD w/ order. Time [ms]	OD w/o order. Size	OD w/o order. Time [ms]	OA w/ order. Size	OA w/ order. Time [ms]	OA w/o order. Size	OA w/o order. Time [ms]	RD w/ order. Size	RD w/ order. Time [ms]	RD w/o order. Size	RD w/o order. Time [ms]
U.BOOL.0	15 ± 1	8 ± 1	14 ± 2	19 ± 40	15 ± 2	7 ± 1	19 ± 6	7 ± 2	15 ± 2	8 ± 1	15 ± 2	7 ± 1	21 ± 6	12 ± 8	25 ± 6	11 ± 2
U.BOOL.1	10 ± 1	4 ± 1	11 ± 1	4 ± 1	11 ± 1	5 ± 1	10 ± 0	5 ± 1	10 ± 1	5 ± 0	11 ± 0	5 ± 1	10 ± 1	5 ± 0	11 ± 1	5 ± 1
U.BOOL.2	16 ± 3	11 ± 1	15 ± 1	10 ± 1	16 ± 2	12 ± 2	15 ± 1	10 ± 1	14 ± 1	11 ± 1	16 ± 2	10 ± 1	16 ± 2	11 ± 1	15 ± 1	11 ± 1
U.BOOL.3	16 ± 1	16 ± 1	16 ± 1	13 ± 1	16 ± 2	17 ± 2	16 ± 1	14 ± 1	16 ± 1	16 ± 1	16 ± 1	15 ± 1	16 ± 1	16 ± 1	15 ± 1	14 ± 1
U.BOOL.4	16 ± 3	12 ± 1	15 ± 1	11 ± 1	16 ± 2	13 ± 1	16 ± 1	12 ± 1	16 ± 1	13 ± 1	16 ± 1	12 ± 1	16 ± 2	13 ± 1	16 ± 1	12 ± 1
U.ALL.0	498 ± 14	3,646 ± 273	519 ± 15	3,691 ± 155	505 ± 13	3,734 ± 233	525 ± 12	3,771 ± 159	506 ± 10	3,684 ± 178	534 ± 12	3,916 ± 124	502 ± 8	3,630 ± 168	524 ± 13	3,862 ± 232
U.ALL.1	867 ± 17	31,200 ± 909	1,003 ± 24	35,936 ± 1,189	867 ± 13	31,617 ± 914	986 ± 18	34,332 ± 922	868 ± 12	30,669 ± 711	984 ± 10	35,056 ± 1,056	872 ± 9	31,437 ± 1,359	1,001 ± 23	35,682 ± 1,243
U.ALL.2	144 ± 0	23 ± 2	144 ± 0	23 ± 3	144 ± 0	22 ± 1	144 ± 0	23 ± 2	144 ± 0	27 ± 6	144 ± 0	24 ± 3	144 ± 0	24 ± 1	144 ± 0	24 ± 3
U.ALL.3	157 ± 7	632 ± 38	167 ± 5	706 ± 43	155 ± 6	643 ± 27	168 ± 2	672 ± 20	154 ± 5	690 ± 32	167 ± 3	681 ± 49	159 ± 4	618 ± 23	166 ± 5	656 ± 28
U.ALL.4	559 ± 6	950 ± 66	561 ± 4	1,168 ± 600	559 ± 4	898 ± 56	558 ± 8	967 ± 131	558 ± 12	880 ± 67	558 ± 6	907 ± 69	560 ± 6	927 ± 74	561 ± 5	931 ± 47
MCA.0	1,424 ± 1	10,176 ± 250	1,424 ± 2	9,685 ± 468	1,424 ± 2	10,137 ± 365	1,425 ± 2	9,586 ± 320	1,424 ± 2	10,186 ± 294	1,425 ± 1	9,608 ± 254	1,423 ± 2	10,252 ± 309	1,424 ± 3	9,651 ± 438
MCA.1	2,407 ± 20	62,660 ± 797	2,339 ± 24	59,277 ± 726	2,426 ± 20	62,856 ± 698	2,338 ± 22	60,112 ± 648	2,421 ± 13	63,522 ± 500	2,320 ± 18	59,539 ± 1,041	2,414 ± 25	64,139 ± 680	2,330 ± 21	60,131 ± 1,006
MCA.2	1,390 ± 4	15,721 ± 389	1,397 ± 4	14,266 ± 378	1,391 ± 5	16,054 ± 450	1,399 ± 10	14,020 ± 482	1,474 ± 9	15,356 ± 333	1,469 ± 5	13,840 ± 181	1,442 ± 41	15,654 ± 217	1,428 ± 40	14,080 ± 362
MCA.3	71 ± 2	56 ± 4	70 ± 2	53 ± 4	70 ± 2	57 ± 2	70 ± 3	53 ± 2	70 ± 3	66 ± 8	70 ± 1	53 ± 2	71 ± 2	69 ± 26	71 ± 2	67 ± 4
MCA.4	1,500 ± 2	11,985 ± 497	1,502 ± 3	11,344 ± 375	1,499 ± 1	12,174 ± 497	1,501 ± 2	11,430 ± 492	1,499 ± 2	11,853 ± 433	1,501 ± 2	11,078 ± 314	1,499 ± 2	12,120 ± 537	1,500 ± 2	11,583 ± 506
BOOLC.0	46 ± 2	2,018 ± 129	44 ± 1	2,088 ± 141	44 ± 2	1,901 ± 60	43 ± 2	1,948 ± 121	45 ± 1	1,920 ± 82	44 ± 1	1,965 ± 72	46 ± 2	1,930 ± 84	43 ± 2	1,903 ± 80
BOOLC.1	47 ± 2	1,982 ± 100	44 ± 2	2,418 ± 799	47 ± 1	1,979 ± 133	46 ± 2	1,935 ± 32	48 ± 2	1,952 ± 78	44 ± 1	1,951 ± 76	48 ± 1	1,886 ± 46	44 ± 1	1,936 ± 97
BOOLC.2	29 ± 1	1,530 ± 89	29 ± 1	1,695 ± 98	28 ± 2	1,496 ± 75	30 ± 2	1,623 ± 62	29 ± 1	1,535 ± 69	31 ± 1	1,672 ± 84	30 ± 2	1,573 ± 58	29 ± 2	1,622 ± 106
BOOLC.3	14 ± 1	1,418 ± 57	14 ± 2	1,436 ± 69	13 ± 1	1,362 ± 27	13 ± 2	1,417 ± 58	14 ± 2	1,415 ± 70	13 ± 1	1,404 ± 50	14 ± 2	1,391 ± 53	15 ± 2	1,468 ± 54
BOOLC.4	40 ± 2	104 ± 9	38 ± 3	99 ± 8	40 ± 2	103 ± 9	39 ± 2	106 ± 6	41 ± 2	102 ± 9	38 ± 1	99 ± 4	40 ± 2	103 ± 8	38 ± 2	104 ± 10
MCAC.0	5 ± 1	262 ± 14	4 ± 1	255 ± 8	5 ± 0	259 ± 11	5 ± 0	256 ± 10	5 ± 1	260 ± 12	5 ± 0	260 ± 11	5 ± 1	261 ± 18	5 ± 0	255 ± 9
MCAC.1	16 ± 2	1,261 ± 38	17 ± 1	1,352 ± 42	15 ± 1	1,264 ± 47	17 ± 1	1,295 ± 42	16 ± 1	1,256 ± 27	17 ± 1	1,272 ± 41	16 ± 1	1,257 ± 20	18 ± 2	1,292 ± 38
MCAC.2	2,253 ± 11	36,043 ± 441	2,212 ± 21	35,505 ± 610	2,253 ± 20	35,827 ± 386	2,200 ± 13	35,408 ± 339	2,248 ± 16	35,798 ± 341	2,206 ± 17	35,390 ± 536	2,244 ± 14	35,675 ± 477	2,209 ± 20	35,448 ± 346
MCAC.3	1,808 ± 16	31,449 ± 458	1,817 ± 12	36,288 ± 1,542	1,816 ± 18	31,188 ± 397	1,825 ± 14	35,138 ± 422	1,822 ± 16	31,620 ± 348	1,822 ± 16	35,940 ± 494	1,821 ± 13	31,610 ± 367	1,817 ± 19	36,022 ± 817
MCAC.4	586 ± 2	1,950 ± 66	582 ± 1	1,960 ± 201	586 ± 2	2,084 ± 222	583 ± 1	1,906 ± 129	587 ± 2	2,088 ± 200	583 ± 2	1,885 ± 168	586 ± 2	2,064 ± 198	583 ± 1	1,820 ± 42
NUMC.0	NA	timeout	NA	timeout	NA	timeout	NA	timeout	NA	timeout	NA	timeout	NA	timeout	NA	timeout
NUMC.1	4,408 ± 28	79,500 ± 1,230	4,458 ± 23	54,438 ± 703	4,419 ± 11	80,156 ± 760	4,466 ± 23	55,195 ± 1,048	4,433 ± 25	79,333 ± 878	4,460 ± 16	54,755 ± 588	4,424 ± 25	79,270 ± 821	4,464 ± 23	54,649 ± 653
NUMC.2	6 ± 0	1,650 ± 31	6 ± 1	1,771 ± 385	5 ± 1	1,726 ± 28	6 ± 1	1,708 ± 16	5 ± 1	1,685 ± 27	5 ± 0	1,769 ± 82	5 ± 1	1,682 ± 17	6 ± 1	1,693 ± 20
NUMC.3	3,138 ± 19	76,557 ± 841	3,279 ± 22	84,195 ± 893	3,149 ± 16	76,786 ± 389	3,263 ± 21	84,451 ± 583	3,151 ± 17	77,466 ± 337	3,273 ± 29	84,699 ± 842	3,148 ± 16	76,712 ± 877	3,274 ± 27	84,541 ± 952
NUMC.4	337 ± 1	1,553 ± 230	335 ± 1	1,230 ± 177	336 ± 1	1,584 ± 209	336 ± 1	1,240 ± 178	336 ± 1	1,644 ± 123	335 ± 1	1,361 ± 202	336 ± 1	1,694 ± 178	336 ± 1	1,300 ± 319