

1100 - INPUT QUEUE 1120 - GPU STREAMING MULTIPROCESSORS SIG[0] (2.4KB) V0, F0 V1, F1 V2, F2 V3, F3 V4, F4 1110 - BATCH SIG[1] (2.4KB) FORMATION SIG[2] (2.4KB) OPTIMAL SIZE: B = f(P, T, M) 1130 - PARALLEL NTT ENGINES P: POWER BUDGET MONTGOMERY MULT MOD q T: THERMAL STATE BARRETT REDUCTION M: MEMORY AVAIL SIG[N-1] (2.4KB) 1105 - ML-DSA 1140 - VERIFICATION LOGIC LEVEL 2/3/5 POLYNOMIAL OPERATIONS q = 8380417 HASH VERIFICATION AGGREGATION 1180 - OUTPUT REDUCTION BATCH RESULT VALID: V\_COUNT | INVALID: I\_COUNT @ 200+ SIG/W

FIG. 12 - ENERGY CONSUMPTION COMPARISON

CONFIGURATION	THROUGHPUT	POWER (W)	EFFICIENCY
1200 - BASELINE GPU	1,000/s	300	3.33/W
1210 - BASIC OPTIM	10,000/s	200	50/W
1220 - WITH DVFS	25,000/s	150	166.7/W
1230 - THERMAL AWARE	60,000/s	300	200/W
1240 - FULL SYSTEM	100,000/s	400	250/W
1250 - PEAK EFFICIENCY	45,000/s	72	625/W

1260 - IMPROVEMENT: 40-187X OVER BASELINE

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