

Benchmark	Used <sup>1</sup>	Source	Description	Code structure & characteristics									
				NCSL	T	L	N	A	B	CP	MF	C	
base64	Both	Online <sup>2</sup>	Computes the base64 encoding	32	1	✓		✓	✓				
radix4Div	Both	Online <sup>3</sup>	Optimized Software Division for platforms without hardware support	63	1	✓			✓	✓			
B.Radix4Div	Both	Online <sup>3</sup> modified	Software Division for platforms without hardware support	37	1	✓			✓	✓			
dijkstra	Prof.	Online <sup>4</sup>	Find shortest paths from source to all vertices in the given graph	34	1	✓	✓	✓	✓	✓	✓		
sha256	Prof.	Online <sup>5</sup>	Implementation of the SHA-256 hashing algorithm	168	1	✓		✓	✓		✓		
FIR	Both	XMOS	Finite Impulse Response filter	40	1	✓		✓	✓				
P. FIR.7T	Both			103	7	✓		✓	✓			✓	
biquad	Both	XMOS	Signal equaliser using biquad filtering	49	1			✓	✓				
biquad.2T	RSA			55	2			✓	✓		✓		
biquad.4T	RSA			57	4			✓	✓		✓		
P. Biquad.7T	Both			94	7			✓	✓		✓	✓	
SFloatAdd32bit	Prof.	SoftFloat	Single point F. addition for platforms without hardware support	359	1				✓	✓	✓		
SFloatSub32bit	Prof.	SoftFloat	Single point F. subtraction for platforms without hardware support	371	1				✓	✓	✓		
matMul	Both	MDH WCET	Matrix multiplication of two square matrices	15	1	✓	✓	✓					
matMul.2T	Both			25	2	✓	✓	✓					
matMul.4T	Both			27	4	✓	✓	✓					
jpegdct	Both	MDH WCET	Performs a JPEG discrete cosine transform	35	1	✓	✓	✓	✓				
jpegdct.2T	Both			43	2	✓	✓	✓	✓		✓		
jpegdct.4T	Both			45	4	✓	✓	✓	✓		✓		
ndes	Prof.	MDH WCET	Complex embedded code	253	1	✓		✓	✓		✓		
qsort	Prof.	MDH WCET	Non-recursive version of quick sort algorithm	101	1	✓	✓	✓			✓		
bs	Prof.	MDH WCET	Binary search	90	1	✓		✓	✓				
minver	Prof.	MDH WCET	Inversion of Matrix	155	1	✓	✓	✓	✓		✓		
ludcmp	Prof.	MDH WCET	LU decomposition algorithm	89	1	✓	✓	✓			✓		
nsichneu	Prof.	MDH WCET	Simulate an extended Petri Net	1469	1	✓							
cnt	Both	MDH WCET	Counts non-negative numbers in a matrix	29	1	✓	✓	✓					
st	Both	MDH WCET	Statistics program	85	1			✓	✓	program	✓		
mac	Both	MDH WCET	Dot product of two vectors and sum of squares	11	1	✓		✓					
crc	Prof.	BEEBS	Cyclic redundancy check computation on 40 bytes of data	18	1	✓		✓	✓				
recursion	Prof.	BEEBS	A simple example of recursive code	50	1						✓		
bsort100	Both	BEEBS	Bubblesort program	66	1	✓	✓		✓				
levenshtein	Both	BEEBS	Measures the difference between two strings	26	1	✓	✓	✓	✓	✓	✓		

**NCSL**: Non-comment source-lines **T**: Number of threads **L**: Contains loops **N**: Nested loops **A**: Uses arrays/matrices **B**: Bitwise operations **CP**: Complex CFG structure **MF**: Multiple functions **C**: Contains thread communications.

<sup>1</sup> Indicates the energy estimation method(s) applied on the benchmark: **RSA**: Used only with Bound Static Analysis, **Prof.**: Used only with Profiling, **Both**: Used with both RSA and profiling

<sup>2</sup> Retrieved from <http://stackoverflow.com/questions/342409>, Nov 2014.

<sup>3</sup> Retrieved from <http://tinyurl.com/ld7exmd>, Nov 2014.

<sup>4</sup> Retrieved from <http://www.geeksforgeeks.org/greedy-algorithms-set-6-dijkstras-shortest-path-algorithm/>, Nov 2014.

<sup>5</sup> Retrieved from <https://github.com/B-Con/crypto-algorithms>, Jul 2016.

Table I: Description and attributes of benchmarks.