

Table 1: Mastrovito Multipliers (Time in seconds)

Datapath Size	Abstraction	PolyBori	ZBDD Reductions	ZBDD/Remainder	CS
163	1,443	70	10	811/765	153,243
233	1,913	105	14	772/699	167,803
283	11,116	316	45	1413/1,402	399,687
409	17,848	596	75	1313/1,227	508,507
571	192,032	CR	616	2849/2,840	1,628,169

Table 2: Montgomery Flat Multipliers (Time in seconds)

Input Size	Abstraction	PolyBori	ZBDD Reductions	ZBDD/Remainder	CS
163	6,897	9294	9,595	39,380/765	823,532,290
233	63,805	1749	1,452	4,411/699	186,078,425
283	TO	TO	247,837	117,359/1,402	8,788,000,132
409	TO	RN	32,226	9,534/1,227	1,378,051,033
571	TO	CR	96,348	TO/2849	TO

Table 3: Montgomery Blocks Max Nodes / Remainder

Input/Blocks		163	233	283	409	571
Block A	MN/MR	64/9	10/5	155/10	11/5	296/9
	CS	300,887	98,457	2,267,183	344,594	
Block B	MN/MR	64/9	10/5	155/10	11/5	296/9
	CS	300,887	98,457	2,267,183	344,594	
Block C	MN/MR	3,263/3,210	705/701	13,344/10,307	1,235/1,229	82,532/82,148
	CS	300,887	98,457	2,267,183	344,594	
Block D	MN/MR	112/58	12/7	292/147	14/8	578/291
	CS	300,887	98,457	2,267,183	344,594	
Collapse	MN/MR	18,024/765	1,485/699	42,055/1,402	3,013/1,227	166,979/2,840
	CS	1,779,192	320,808		1,270,459	95,506,620

Table 4: Montgomery Blocks(Time in seconds)

Input Bit-width	Block	F4	ZR		PB	
			Reduction	Collapse	Reduction	Collapse
163	Block A	25	1	33	12	
	Block B	25	1		12	
	Block Mid	73	12		18	
	Block Out	24	1		13	
	Total	73	45			
233	Block A	142	<1	9	34	
	Block B	141	<1		36	
	Block Mid	408	13		39	
	Block Out	140	<1		33	
	Total	408	22			
283	Block A	330	28	158	98	
	Block B	329	29		101	
	Block Mid	883	254		202	
	Block Out	321	30		92	
	Total	883	412			
409	Block A	1,322	<1	58	188	
	Block B	1,335	<1		189	
	Block Mid	4,471	117		200	
	Block Out	1,338	<1		191	
	Total	4,471	175			
571	Block A	5,371	725	1,516	1620	
	Block B	5,421	752		1843	
	Block Mid	37,804	4,164		5445	
	Block Out	5,539	747		1831	
	Total	37,804	5680			