

1

2023

2023

2023

1

3

3

1.1

3 4

3

3

5 10

1000 /

1.2

1 2

2

2

2

1

2

1 2

1 2

1000 /

1.3

1

3

2 3

2 3

2

3

2 3

2

3

500 /

1.4

600

3 20%

5

2 3 1 2

1 2

500 /

1.5

600

2

3

1~2

500 /

2.1

3D

3 5

3 5

3 5

3 5

5 8

500 /

2.2

3 5

3 5

1

1

500 /

2.3

3 5

18

18 30

85%

85% 1

500 /

3.1

HAPS Synopsys Protium Cadence

		IP	IP
		INT4/INT8/INT16/INT32/FP32	
		1600	160
/	/		30ns
			96Gbps
STDP		JTAG/Ethernet/USB	
	1000	/	
3.2			

5

500 /

3.3

1000

2

500

/

3.4

/

32MB

4TSOPS

100

3

500 /

4.1

1

2

3

IP

IP

C++/Python/Matlab

/

50%

3000

/

4.2

1000

-

300

3

1

1000

/

4.3

CRISPR/Cas9

2

3

1

1

1000 /

4.4

- -

1

1

2

2

1000 /