GPU - hw 1

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September 18, 2016

1 Q1

Gpu Model	Memory (GB)	Num Cores	Bandwidth (GB/sec)	Year
GTX Titan X [5]	12 GB GDDR5	3072	336.5	March, 2015
GTX 980 Ti [1]	6GB GDDR5	2816	336.5	June, 2015
GTX 1080 [4]	8 GB GDDR5X	2560	320	May, 2016
GTX 1070 [3]	8 GB GDDR5	1920	256	June, 2016
GTX 1060 [2]	6 GB GDDR5	1280	192	July, 2016

2 Q2

2.1 Bottlenecks

The main bottleneck in GPUs is its memory. While CPU's have evloved to use memory on the order of 72 GB or even 144GBs, GPUs have a maximum of 12GB so far.

2.2 Bottleneck set to continue

Based on the table above, we can see that the memory bottleneck can be expected to continue in the near future.

3 Q3

References

[1] Nvidia. Geforce 980 Ti. http://www.geforce.com/hardware/desktop-gpus/geforce-gtx-980-ti/speci

[2] Nvidia. Geforce GTX 1060. http://www.geforce.com/hardware/10series/geforce-gtx-1060.

[3] Nvidia. Geforce GTX 1070. http://www.geforce.com/hardware/10series/geforce-gtx-1070.

[4] Nvidia. Geforce GTX 1080. http://www.geforce.com/hardware/10series/geforce-gtx-1080.

[5] Nvidia. Geforce Titan X. http://www.geforce.com/hardware/desktop-gpus/geforce-gtx-titan-x/sp