NVIDIA A100 PCIe 40GB vs Tenstorrent Blackhole p100a

Side by side datacenter GPU specifications from the Flopper.io database.

OVERVIEW

	NVIDIA A100 PCIe 40GB	Tenstorrent Blackhole p100a
FP32 TFLOPS	**19.5**	—
Memory	**40 GB**	**28 GB**
Memory Bandwidth	**1.6 TB/s**	**448 GB/s**
TDP	**250 W**	**300 W**

PERFORMANCE BY PRECISION

Precision	NVIDIA A100 PCIe 40GB peak TFLOPS (dense)	Tenstorrent Blackhole p100a peak TFLOPS (dense)
FP64	9.7	—
FP32	19.5	—
TF32	156.0	—
BF16	312.0	—
FP16	312.0	—
FP8	—	664.0
FP6	—	—
FP4	—	—
INT8	624.0	—
INT4	1248.0	—

SPECIFICATIONS

	NVIDIA A100 PCIe 40GB	Tenstorrent Blackhole p100a
Architecture	Ampere	Blackhole
Process Node	7nm	—
Launch Year	2020	—
Form Factor	PCIe	PCIe
Memory Type	—	GDDR6
Interface Width	—	—

	NVIDIA A100 PCIe 40GB	Tenstorrent Blackhole p100a
Interconnect	–	–
TDP	250 W	300 W
FP32 Efficiency	0.08 TFLOPS/W	–