



Product Selection Guide Data Center Accelerator Cards



Breathe New Life
into Your Data Center

	Product Name	Alveo U200	Alveo U250	Alveo U280	Alveo U50
Dimensions	Width	Dual Slot	Dual Slot	Dual Slot	Single Slot
	Form Factor, Passive Form Factor, Active	Full Height, ¾ Length Full Height, Full Length	Full Height, ¾ Length Full Height, Full Length	Full Height, ¾ Length Full Height, Full Length	Half Height, ½ Length
Logic Resources ¹	Look-Up Tables	1,182K	1,728K	1,304K	872K
	Registers	2,364K	3,456K	2,607K	1,743K
	DSP Slices	6,840	12,288	9,024	5,952
DRAM Memory	DDR Format	4x 16GB 72b DIMM DDR4	4x 16GB 72b DIMM DDR4	2x 16GB 72b DIMM DDR4	–
	DDR Total Capacity	64GB	64GB	32GB	–
	DDR Max Data Rate	2400MT/s	2400MT/s	2400MT/s	–
	DDR Total Bandwidth	77GB/s	77GB/s	38GB/s	–
	HBM2 Total Capacity	–	–	8GB	8GB
	HBM2 Total Bandwidth	–	–	460GB/s	316GB/s ⁴
Internal SRAM	Total Capacity	43MB	57MB	43MB	28MB
	Total Bandwidth	37TB/s	47TB/s	35TB/s	24TB/s
Interfaces	PCI Express®	Gen3 x16	Gen3 x16	Gen3 x16, 2xGen4 x8, CCIX	Gen3 x16, 2xGen4 x8, CCIX
	Network Interface	2x QSFP28	2x QSFP28	2x QSFP28	U50 ² - 1x QSFP28 U50DD ³ - 2x SFP-DD
Power and Thermal	Thermal Cooling	Passive, Active	Passive, Active	Passive, Active	Passive
	Typical Power	100W	110W	100W	50W
	Maximum Power	225W	225W	225W	75W
Time Stamp	Clock Precision	–	–	–	IEEE Std 1588
Compute Performance	INT8 TOPs	18.6	33.3	24.5	16.2
	Machine Learning	Machine Learning Solution Brief			
	Acceleration Applications	Acceleration Application Solutions			

Notes

- 1. Logic resources shown without shell usage; refer to card user guides for shell resource usage
- 2. U50 is a production qualified card for volume deployment
- 3. U50DD is an engineering sample card not for volume production
- 4. For A-U50DD-P00G-ES3-G and A-U50-P00G-PQ-G measured 316 GB/s peak HBM2 bandwidth, 201 GB/s nominal

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Alveo Data Center Accelerator Cards

Ordering Information



A

Product Name
Alveo

U###yy

Card Name
U200
U250
U280
U50DD
U50

P

Cooling
P: Passive
A: Active

64G

DDR Memory
00G: 0GB
32G: 32GB
64G: 64GB

PQ

Solution Qualification
ESx: Engineering sample, not
qualified for volume production
PQ: Fully qualified for volume
production

G

RoHS Indicator
G: RoHS 6/6

U### - 3 Digits for Full Height
U## - 2 Digits for Half Height
yy - Feature option

For valid ordering codes (SKUs), go to the product data sheet(s): <http://www.xilinx.com/alveo>