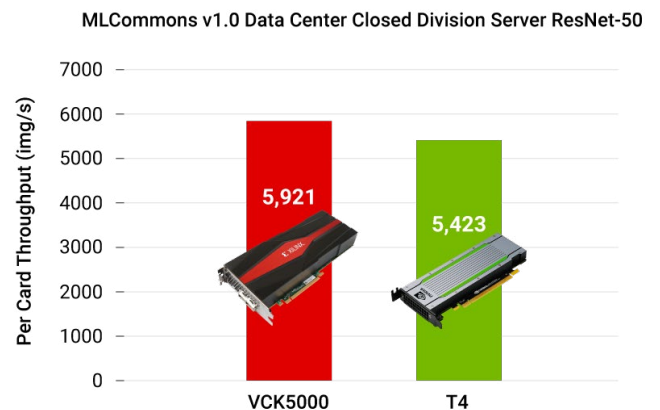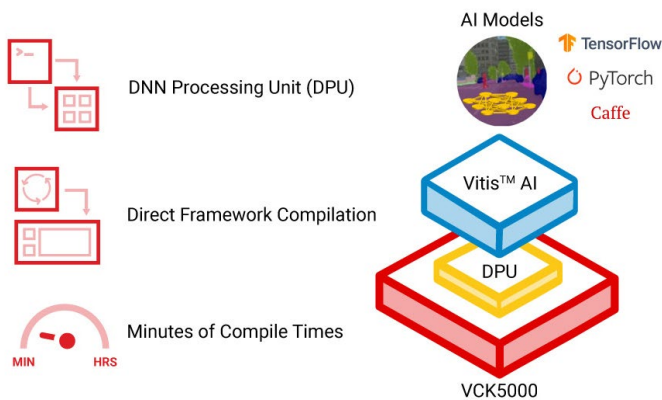**ΣXILINX**

VCK5000
Versal Development Card for AI Inference

OVERVIEW

The Xilinx® VCK5000 Versal Development Card is built on the Xilinx 7nm Versal™ ACAP architecture and is designed for designs requiring high throughput AI inference and signal processing compute performance.

Delivering 100X greater compute power than today's server-class CPUs and better ML perf inference performance than today's server-class GPU, with standardized development flows, the VCK5000 is an ideal development platform for cloud acceleration and edge computing applications.

VCK5000 is fully supported by Vitis™ AI development environment which consists of optimized IP, tools, libraries, models, and example designs. It is designed with high efficiency and ease-of-use in mind, unleashing the full potential of AI acceleration on VCK5000. You can run Tensorflow, Pytorch, Caffe models using Python or C++ APIs in minutes without any prior hardware knowledge about FPGA.

MLCommons v1.0 Data Center Closed Division Server ResNet-50

ΣXILINX

Adaptable. Intelligent.

HIGHLIGHTS

Superior AI Inference Platform

> 145TOPS (Int8) @ $2,495

> AI inference with AI Engine outperforms nVidia T4 on MLPerf 1.0

Solutions Out-of-Box

> Vitis AI 1.3 with 2 DPU variants (384 vs 288 AIE cores)

> 50+ model zoo support

> Natural Language (BERT) demo

> MLPerf submission ResNet-50 demo (11% better than T4)

> Getting started with Vitis AI, Board user guide

Cloud <-> On-Premises

> Deploy solutions on the cloud or on-premises interchangeably

> Scalable to application requirements

SPECIFICATION

FEATURES	VCK5000
ACAP Device	VC1902
Form Factor	Full Height, Full Length, Dual Slot (Active cooling) Full Height, ¾ Length, Dual Slot (Passive cooling)
Peak INT8 TOPS	145
DDR Memory Bandwidth	102.4GB/s
Internal SRAM Bandwidth	23.5TB/s
Look-up Tables (LUTS)	899,840
PCI Express	Gen3 x 16 / Gen4 x 8
Network Interfaces	2x QSFP28 (100GbE)
Max Total Power (W)	225
Thermal Options	Active or Passive

TAKE THE NEXT STEP

Learn more about Xilinx VCK5000 www.xilinx.com/products/boards-and-kits/vck5000.html

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