

VPX3-P5000 Series

Rugged 3U VPX NVIDIA Pascal GPGPU Blade

Features

- NVIDIA Pascal architecture GP104/GP107 GPU with up to 2048 CUDA cores
- Up to 16GB GDDR5 Memory with NVIDIA GPUDirect™ DMA technology
- PCIe x16 Gen3 to P1
- Four DisplayPort 1.4 outputs



Specifications

• GPU

NVIDIA Pascal P5000, 6.4 TFLOPs
 NVIDIA Pascal P3000, 3.9 TFLOPs
 NVIDIA Pascal P2000, 2.3 TFLOPs
 NVIDIA Pascal P1000, 1.8 TFLOPs

CUDA

VPX3-P5000: 2048 CUDA cores
 VPX3-P3000: 1280 CUDA cores
 VPX3-P2000: 768 CUDA cores
 VPX3-P1000: 512 CUDA cores

Memory

VPX3-P5000: 16GB GDDR5; 256-bit width
 VPX3-P3000: 6GB GDDR5; 192-bit width
 VPX3-P2000/P1000: 4GB GDDR5; 128-bit width

BIOS

NVIDIA VBIOS

Graphics Support

Open GL 4.5
 Open CL 1.2
 DirectX® 12
 H/W encode/decode H.265 (HEVC), H.264 (AVC)

A.I. Training Framework Support

TensorFlow, Pytorch, Caffe, MXNet, MATLAB, Chainer, PaddlePaddle

A.I. Inference Engine Support

TensorRT

VITA Standards

VITA 46.0 VPX Base Standard
 VITA 46.4 PCI Express on VPX Fabric Connector
 VITA 48.0 Ruggedized Enhanced Design Implementation Mechanical Base Specification
 VITA 65 OpenVPX Architecture Framework for VPX

OpenVPX Profiles

Module Profile: MOD3-PER-2F-16.3.1-3
 Slot Profile: SLT3-PER-2F-14.3.1

• Connectivity

Graphics

Four DisplayPort 1.4 outputs to P2

PCI Express

PCIe x16 Gen3 to P1

• OS Support

Windows 10 64-bit
 Linux and RTOS by request

• Miscellaneous

LED

Status LED

Reset Button

Board reset button on front panel

• Mechanical & Environmental

Form Factor

Conduction cooled 3U VPX

Operating Temperature

-40°C to +75°C (at wedge lock)

Storage Temp.

-50°C to +100°C

Relative Humidity

95% non-condensing

Vibration

5Hz-2KHz, 12Grms, random, each axis, operating

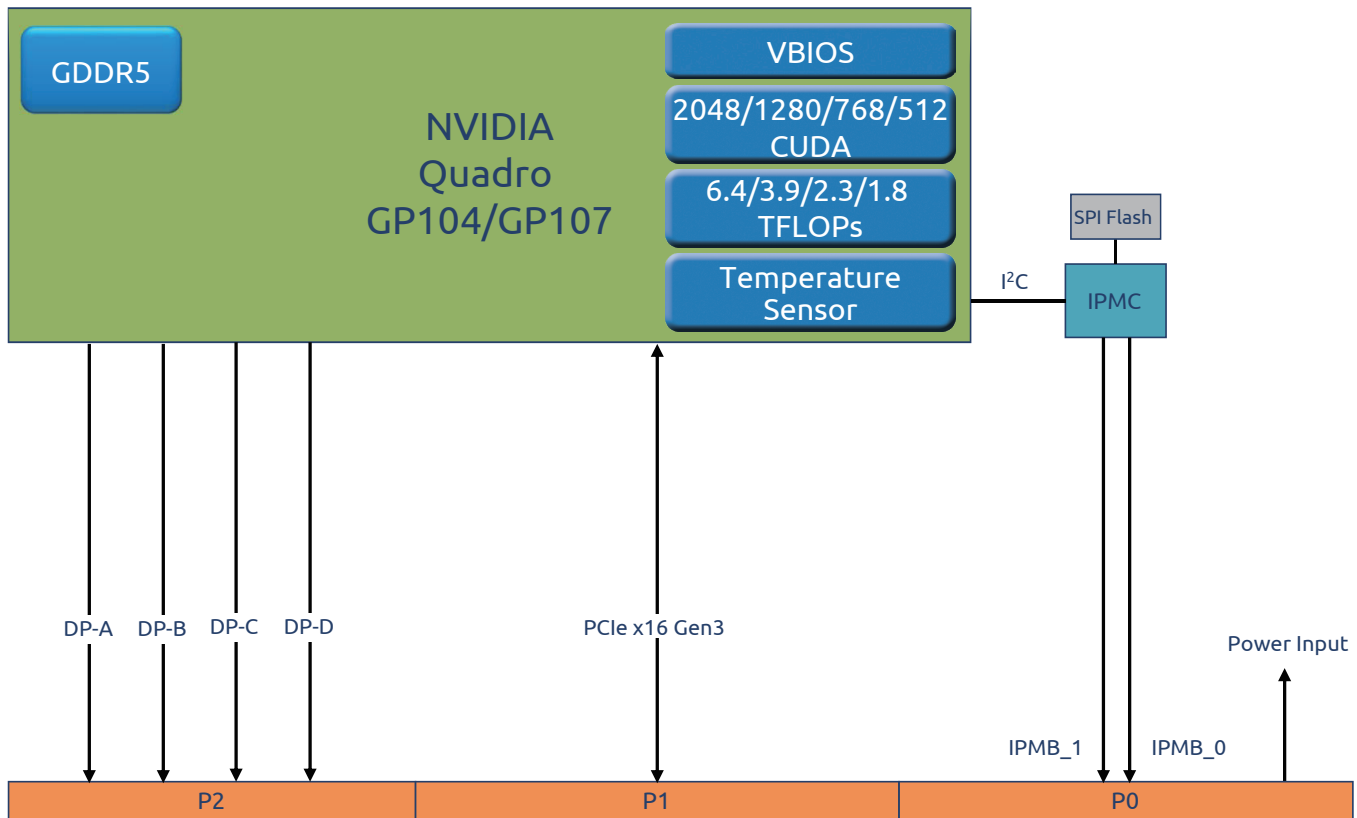
Shock

Sawtooth 40G, 11ms, each axis, operating

EMI/EMC

CE, FCC Class A

VPX3-P5000 Series Block Diagram



Ordering Information

GPGPU Blades

- VPX3-P5000-4DP-R1**
 3U VPX NVIDIA Pascal P5000, 2048 CUDA cores, 16GB GDDR5 memory, PCIe x16 Gen3, 4x DisplayPort, conduction cooled version, -40°C to +75°C
- VPX3-P3000-4DP-R1**
 3U VPX NVIDIA Pascal P3000, 1280 CUDA cores, 6GB GDDR5 memory, PCIe x16 Gen3, 4x DisplayPort, conduction cooled version, -40°C to +75°C
- VPX3-P2000-4DP-R1**
 3U VPX NVIDIA Pascal P2000, 768 CUDA cores, 4GB GDDR5 memory, PCIe x16 Gen3, 4x DisplayPort, conduction cooled version, -40°C to +75°C
- VPX3-P1000-4DP-R1**
 3U VPX NVIDIA Pascal P1000, 512 CUDA cores, 4GB GDDR5 memory, PCIe x16 Gen3, 4x DisplayPort, conduction cooled version, -40°C to +75°C

Accessories

- VPX3-RMXM-4DP**
 RTM for VPX3-P1000/P2000/P3000/P5000-4DP series provides four DisplayPort outputs