VPX3G10

Rugged 3U VPX GPGPU Blade

Features

- NVIDIA GeForce GT 745M GPU (Kepler refresh)
- 384 CUDA cores for maximum processing power
- Dual channel GDDR5 soldered memory, 2GB
- 16-lanes PCIe Gen3 (x16/x8/x4/x1)
- Four single-link DVI and one VGA to P2 (conduction cooled)

VPX™   VPX REDI™   OpenVPX™   CONDUCTION COOLED

Specifications

- **Processor & System**

  GPU
  NVIDIA GeForce GT 745M
  NVIDIA CUDA Technology(compute capability 3.0), 384 cores
  NVIDIA Optimus Technology
  NVIDIA PhysX Technology
  NVIDIA PureVideo Technology
  H.264 video encoding
  High-Bandwith Digital Content Protection (HDCP) support
  GPU Boost 2.0
  OpenGL 4.4
  OpenCL 1.2
  Microsoft DirectX 11.1

  Memory
  Dual channel GDDR5 SDRAM with ECC, 2GB
  128bit memory interface

  Display
  Digital display support up to 1920 x 1200
  Max. Analog display support up to 2048 x 1536

  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

  Module Profile
  MOD3-PER-2F-16.3.1-3

  Slot Profile
  SLT3-PER-2F-14.3.1

- **Connectivity**

  PCI Express
  1x PCIe x16 Gen3 (x8/x4/x1) to P1

  Graphics
  One VGA port on front panel (air cooled version)
  Four single-link DVI and one VGA to P2 (conduction cooled version)

- **Operating System**

  OS
  Microsoft Windows 7
  Microsoft Windows 8
  Red Hat Enterprise Linux
  (Please contact ADLINK for other OS support)

- **Miscellaneous**

  LED: Power good

- **Mechanical & Environmental**

  Form Factor: 3U VPX 0.8"
  100mm x 160mm (LxW)

  Operating Temperature
  -40°C to +85°C (at wedge-lock)
  Storage Temperature: -50°C to +100°C

  RH Humidity
  95% non-condensing

  Shock
  Sawtooth 40G, 11ms, each axis, operating (conduction cooled version)
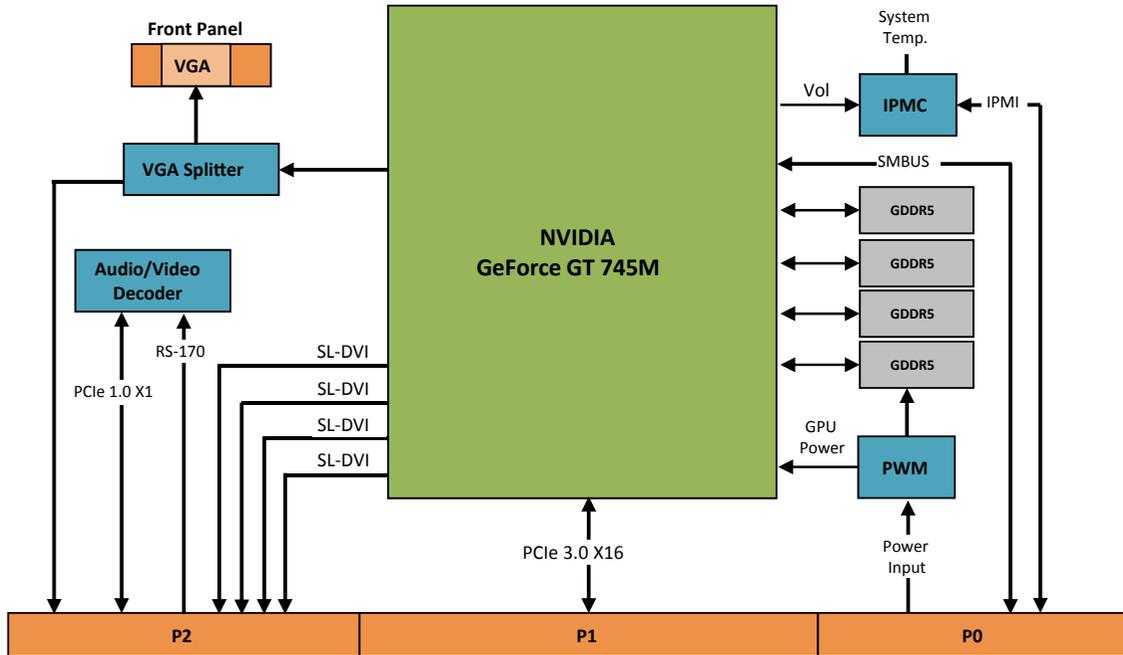 20g peak, 11ms (air cooled version)

  Vibration
  15Hz-2KHz, 12Grms, random, each axis, operating (conduction cooled version)
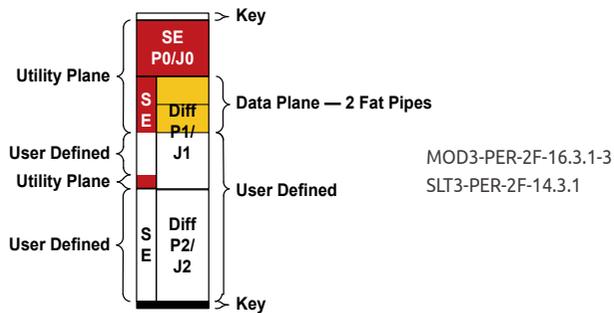 Random: 0.002g2/Hz from 10 to 2000Hz; Sine: 2G, 5 to 500Hz (air cooled version)
  Power: +5V

- **Safety & EMI**
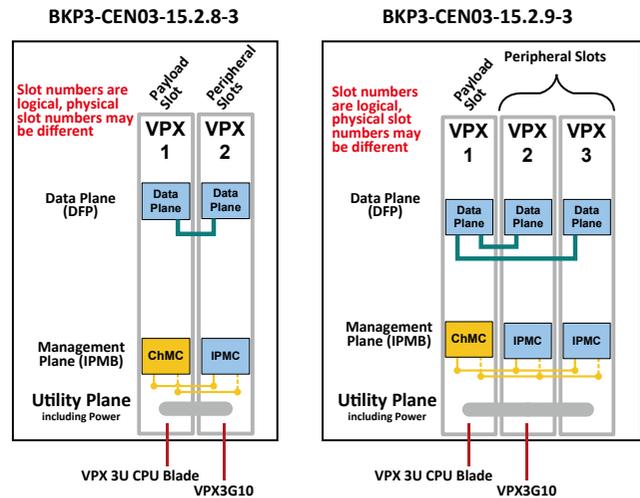
  Certification: CE/ FCC Class A

Block Diagram of VPX3G10

OpenVPX Compliant Profiles

MOD3-PER-2F-16.3.1-3
SLT3-PER-2F-14.3.1

Applications

BKP3-CEN03-15.2.8-3

BKP3-CEN03-15.2.9-3

Ordering Information

GPGPU Board

- **VPX3G10-R**
  3U VPX NVIDIA GT745M GPU card, conduction cooled

- **VPX3G10-A**
  3U VPX NVIDIA GT745M GPU card, air cooled

- **tBP-VPX3000**
  3-slot testbed for VPX-3000; SLT1-2: VITA65 SLT3-PAY-2F2U-14.2.3, BKP3-DIS02-15.2.8-1 SLT3 I/O: 2 x COM-RJ-45, 1 x GbE-RJ-45, 1 x DVI-I, 2 x USB, 2 x SATA 6G, 2 x PCIex4, Line-in/out Jacks

- **3U Test Frame**
  3U VPX test frame with tBP-VPX3000 backplane for users to validate VPX3000 functionality