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)

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-Bandwidth 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

Applications

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

Slot numbers are logical, physical slot numbers may be different

VPX 3U CPU Blade
VPX3G10
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