



VPX3-493

3U VPX GPU with NVIDIA® Turing® T1000

The **VPX3-493 GPU (graphics processor unit) application accelerator brings the latest NVIDIA Turing architecture graphics processor units to the rugged deployed application developer.**

The rugged 3U OpenVPX™ form factor VPX3-493 supports NVIDIA's size, weight, power and cost (SWAP-C) optimized 2.6 TFLOPS T1000 GPU devices.

The ascendance of GPUs in the field of high-performance computing is demonstrated in the NVIDIA Turing architecture, with many features improving GPU computing over prior generations. These features include a new unified shared memory architecture, the addition of Turing Tensor cores, support for GDDR6 memory, and many other enhancements designed to improve CUDA-based application performance and programmer productivity.

The VPX3-493 is designed to work with Intel® processor-based single board computers (SBC) such as the Curtiss-Wright VPX3-1260 8th Gen Xeon board. The x16 Gen3 PCIe interface presented by the VPX3-493 can be used with x4 and x8 capable hosts. In addition, the PCIe switch can be configured to support one x8 or two x4 downstream PCIe ports (contact the factory for more information).

The VPX3-493 also supports IPMI with on-board voltage, current and thermal sensors.

A block diagram of the VPX3-493 is shown in Figure 1.

Key Features

- ISR and EW applications where TFLOPS of accelerated processing is required
- Massive data ingest of modern Radar SIGINT, EO/IR sensors
- Unparalleled HPEC performance

Applications

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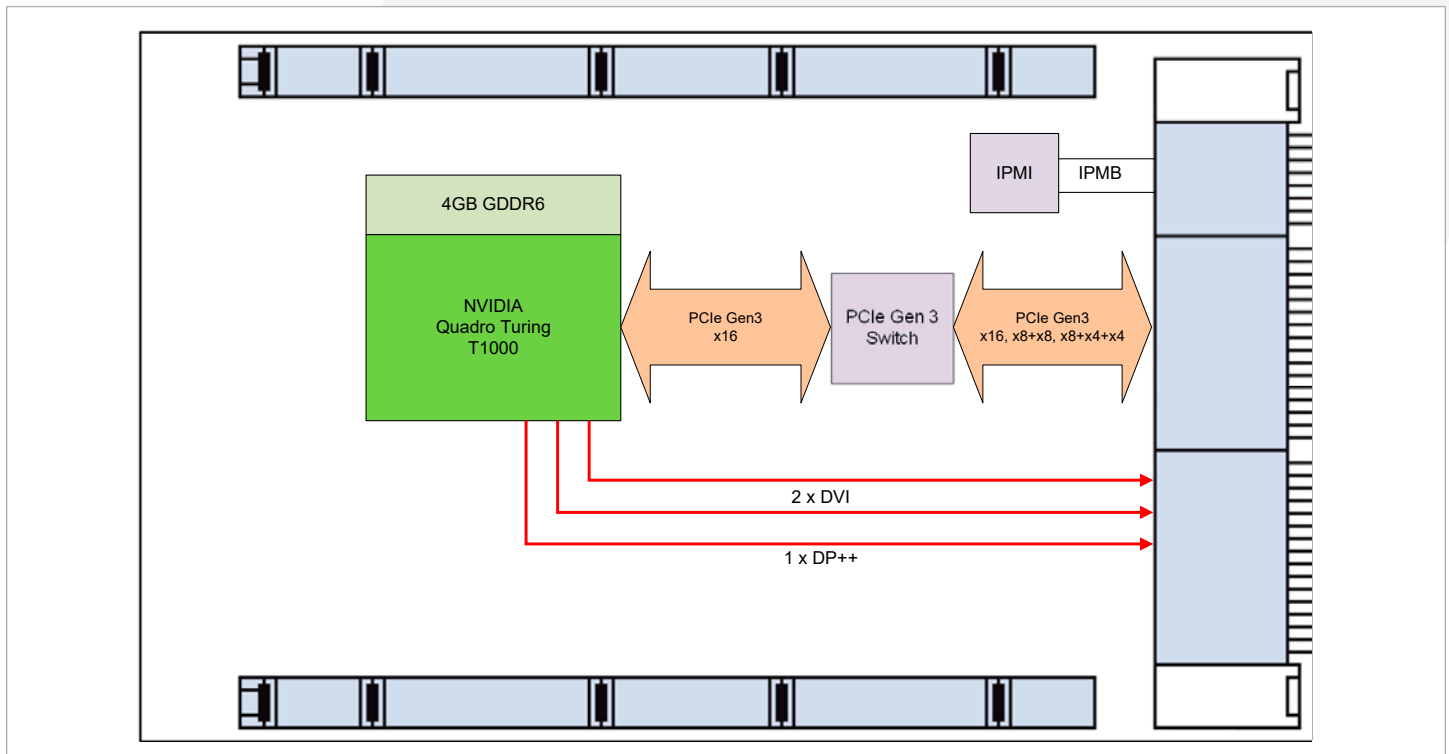


Figure 1: VPX3-493 Functional Block Diagram

Specifications

Form factor

- 3U VPX – VITA 48 1" pitch

Weight

- All ruggedization levels: 650 g

Environmental

- Conduction-cooled Level 200: -40°C to +85°C card edge

Input/Output

- Flexible PCIe connectivity through a 32 lane Gen 3 PCIe switch
- Two DVI video outputs: 1920 x 1200
- Two DisplayPort++ 1.4 up to 4K @ 120Hz

Ruggedization Levels

- Conduction-cooled cards are available in Level 200 with Humiseal 1B73 acrylic conformal-coating. For additional types of conformal coating, please contact Curtiss-Wright.

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TABLE 1	POWER REQUIREMENTS
SUPPLY RAIL	USAGE
12V (Vs1)	Main power* 5.5A (max typical)
3.3V AUX	IPMI Controller 100mA

Note: *The VPX3-493 power consumption will vary depending on the particular GPU, application usage and ambient temperature. Consult the user manual or factory for power characterization information

Variants and Customization

Please contact Curtiss-Wright if there are additional requirements, as we are continuously monitoring the market to assess if and when variants with different features should be introduced.

Curtiss-Wright also has a Modified COTS (MCOTS) program where standard COTS products can be modified for simple changes such as matching existing system pinouts, or more complex modifications like form-factor and/or functional customizations.

Ordering Information

VPX3-493-C251000 - Level 200, Nvidia T1000

Contact Factory