

## DUAL NVIDIA® QUADRO® PASCAL™ P5000, 12.4 TFLOPS, 8 VIDEO OUTPUTS

### KEY FEATURES

- Dual NVIDIA P5000, 12.4 TFLOPS GPGPU Engine
- 8 independent DisplayPort 1.4 outputs
- 32 GB GDDR5 memory with NVIDIA GPUDirect™ DMA technology
- PCIe x16 Gen3
- Operating power configurable hard cap: 80 – 200W

### ADDITIONAL FEATURES

- Up to 8 DisplayPort 1.4 digital video outputs:
  - support for High Dynamic Range (HDR) video
  - 4K at 120Hz or 5K at 60Hz with 10-bit color depth
- Pascal GPGPU parallel processing:
  - 4096 CUDA® cores
  - CUDA Toolkit 8.0, CUDA Compute version 6.0
  - OpenCL™ 1.2, DirectX® 12, OpenGL 4.5
  - Vulkan 1.0
- Memory width: 256-bit width to each GPU
- Maximum memory bandwidth: 192 GB/s to each GPU
- NVENC/NVDEC accelerator for HEVC (H.265) and AVC (H.264) hardware encode/decode

### SPECIFICATIONS

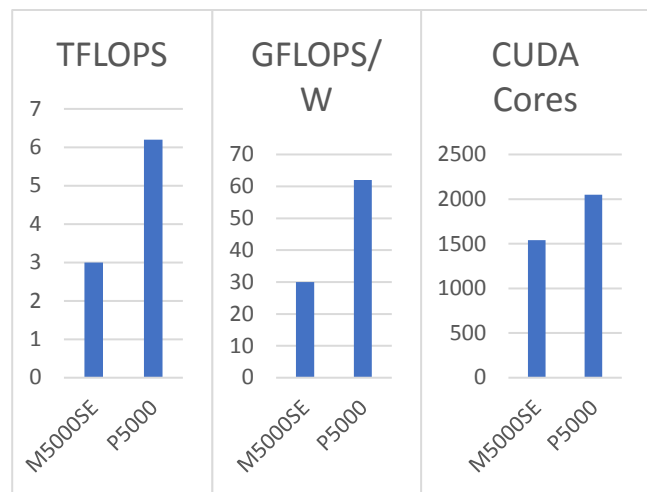
- High level of ruggedization:
  - Rugged air-cooled (AC) or conduction-cooled (CC)
  - Operating temperature: -40° to +71°C for CC, -20° to +71°C for AC
  - Vibration (sine wave): 5g peak, 5 - 2000Hz for CC
  - Vibration (random): 0.04 g2/Hz, 5-2000 Hz, 1hr/axis
  - Shock: 20g, 11ms half-sign shock pulses
- Front I/O and Rear I/O configurations
- Windows and Linux drivers
- Supported VPX configurations:
  - VPX-REDI (ANSI/VITA 48.x)
  - OpenVPX (ANSI/VITA 65)

### OVERVIEW

The VPX6U-P5000-DUAL-VO board uses two advanced NVIDIA Quadro Pascal 16nm GPUs. This rugged Pascal-based board includes eight DisplayPort 1.4 outputs, which provides support for High Dynamic Range (HDR) video, and resolutions of 4K at 120Hz or 5K at 60Hz with 10-bit color depth.

The board implements PCIe x16 Gen3, with a flexible, highly configurable PCIe interface, supporting a variety of OpenVPX profiles and enabling a broad range of bridge link configurations.

The rugged VPX6U-P5000-DUAL-VO board includes air-cooled and conduction cooled options. For additional options contact WOLF to discuss MCOTS and custom design services.

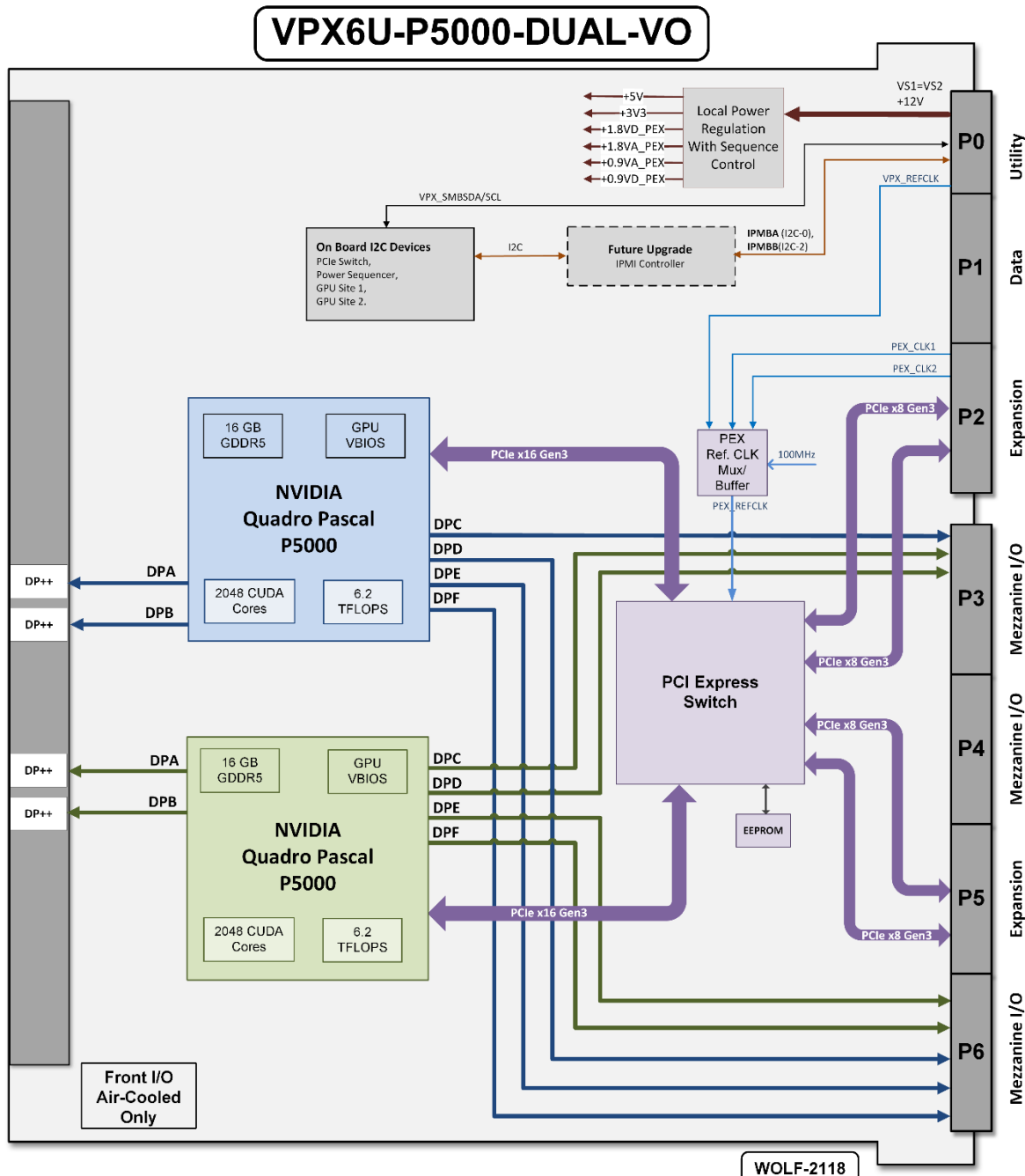


WOLF- 2118 VPX Module

## NVIDIA QUADRO PASCAL P5000

Quadro Pascal P5000 is an enormous leap in processing power compared to the previous generation Maxwell M5000SE. Each GPU can provide up to 6.2 TFLOPS of CUDA processing at a modest operating power, providing a huge improvement to 62 GFLOPS/Watt, making it an excellent choice for aerospace and defense applications. With its impressive processing power the board excels at data processing which benefits from advanced parallel processing, such as video stabilization, image processing, terrain analysis, object tracking or 3D visualization of geospatial data.

Quadro Pascal GPU architecture also provides a more powerful Unified Memory feature. Pascal's larger virtual memory address space enable GPUs to access the entire system memory plus the memory of all GPUs in the system, while the on-demand page migration engine allows the system to migrate pages from anywhere in the system to the GPU's memory for efficient processing. This improved memory handling results in significantly improved algorithm efficiency.



WOLF- 2118 VPX Module

## ORDERING CODES FOR VPX6U-P5000-DUAL-VO

Part Number	Description
21182x-FU0**VPX6v10	Air Cooled, Dual P5000
21183x-FU0**VPX6v10	Conduction Cooled, Dual P5000
21182x-FC0**VPX6v10	Air Cooled, Single P5000
21183x-FC0**VPX6v10	Conduction Cooled, Single P5000

x = 1 (0.8”), 2 (0.85”), 3 (1.0”), or 6 (1.0” – 1101)

\*\* Contact Sales for code definition. Code can specify: Conformal Coating, PCI3 Bus Choices, Modified Power Cap, video termination, other

## MANUFACTURING AND QUALITY ASSURANCE

WOLF stress tests to MIL-STD-810 (United States Military Standard for Environmental Engineering Considerations and Laboratory Tests) and MIL-HDBK-217 (Reliability Prediction of Electronic Equipment); Alternately will stress test to RTCA DO-160 (Environmental Conditions and Test Procedures for Airborne Equipment) on request.

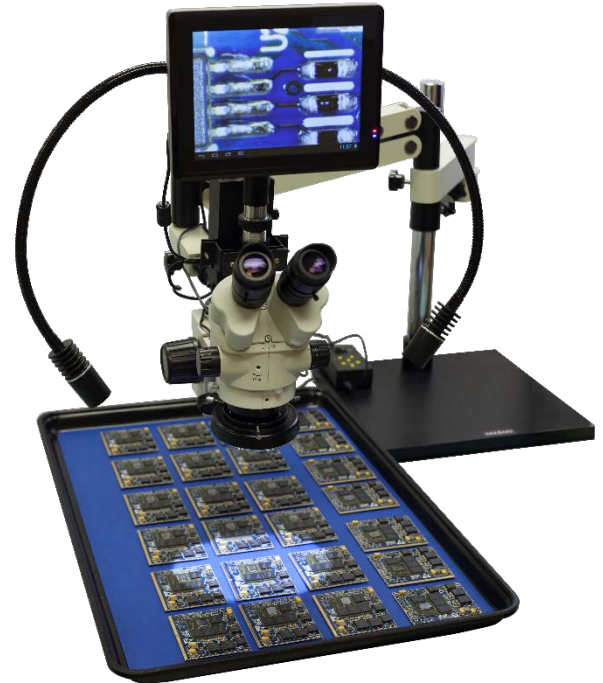
WOLF products meet the following quality standards:

- ISO 9001:2015 (Quality management systems)
- IPC-A-610 CLASS 3 (Acceptability of Electronic Assemblies)
- IPC 6012 CLASS 3 (Qualification and Performance Specification for Rigid Printed Boards, Class 3 for High Reliability Electronic Products)
- IPC J-STD-001 Certified (Requirements for Soldered Electrical and Electronic Assemblies)

Boards are manufactured to meet the following standards:

- SAE AS9100D (Quality Management System - Requirements for Aviation, Space and Defense Organizations)
- SAE AS5553 (Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition)

Caveat: integrated third party MXM modules may not meet the same standards as WOLF manufactured modules.



For further information or pricing, please contact us:

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