VPX6U-P5200E-DUAL-VO

Dual NVIDIA Pascal GP104, 17.4 TFLOPS, 8 Video Outputs

Key Features

- Dual NVIDIA GP104, 17.4 TFLOPS, GPGPU Engine
- Chip-down WOLF design and fabrication meets military and aerospace specifications
- 8 independent DisplayPort 1.4 outputs
- 32 GB GDDR5 memory with NVIDIA GPUDirect™ DMA technology
- Operating power configurable hard cap: 100 – 260W

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:
  - ☐ 5120 CUDA® cores
  - ☐ CUDA Toolkit 9, CUDA Compute version 6.1
  - ☐ OpenCL™ 1.2, DirectX® 12, OpenGL 4.5, Vulkan
- Memory width: 256-bit width to each GPU
- Maximum memory bandwidth: 243 GB/s to each GPU
- NVENC/NVDEC accelerator for HEVC (H.265) and AVC (H.264) hardware encode/decode
- PCIe x16 Gen3
- Windows and Linux drivers

Specifications

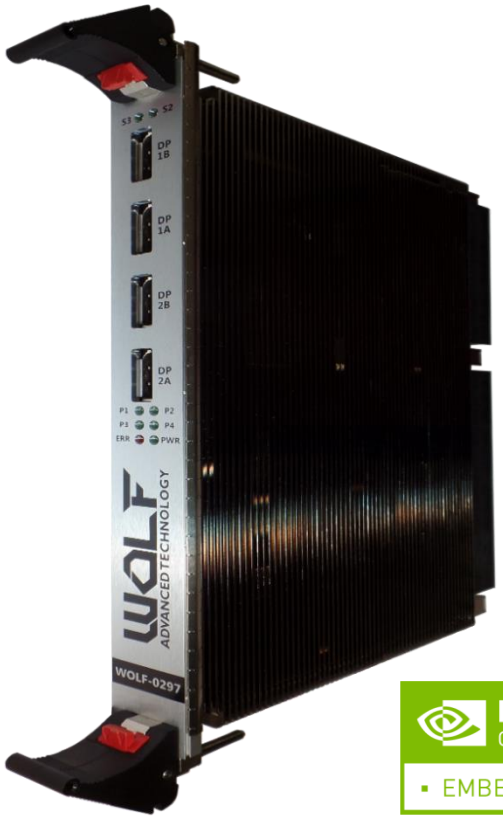
- Manufactured in North America with full component traceability
- Component derating meets or exceeds NASA and Rome Labs specifications for reliability
- High level of ruggedization:
  - ☐ Rugged air-cooled (AC) or conduction-cooled (CC)
  - ☐ Operating temperature: -40° to +85°C (CC), -40° to +71°C (AC)
  - ☐ Vibration (sine wave): 10G peak, 5 - 2000Hz
  - ☐ Shock: 40g peak 11ms half-sign shock pulses
- Front I/O and Rear I/O configurations
- Supported VPX configurations:
  - ☐ VPX-REDI (ANSI/VITA 48.x)
  - ☐ OpenVPX (ANSI/VITA 65)

Overview

The VPX6U-P5200E-DUAL-VO module uses two advanced NVIDIA® Quadro® Pascal™ GPUs in a WOLF chip-down design. It supports eight DisplayPort 1.4 outputs, with support for High Dynamic Range (HDR) video, and resolutions of 4K at 120Hz or 5K at 60Hz with 10-bit color depth.

WOLF designs and manufactures these rugged modules in North America with full component traceability, specifically for use in the harsh environments encountered in aerospace and defense applications. They are designed to pass MIL-STD-810 and DO-160 environmental tests. They are manufactured to IPC-A-610 CLASS 3 and IPC 6012 CLASS 3 for high reliability electronic products. They are compliant with IPC J-STD-001 soldering standards.

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



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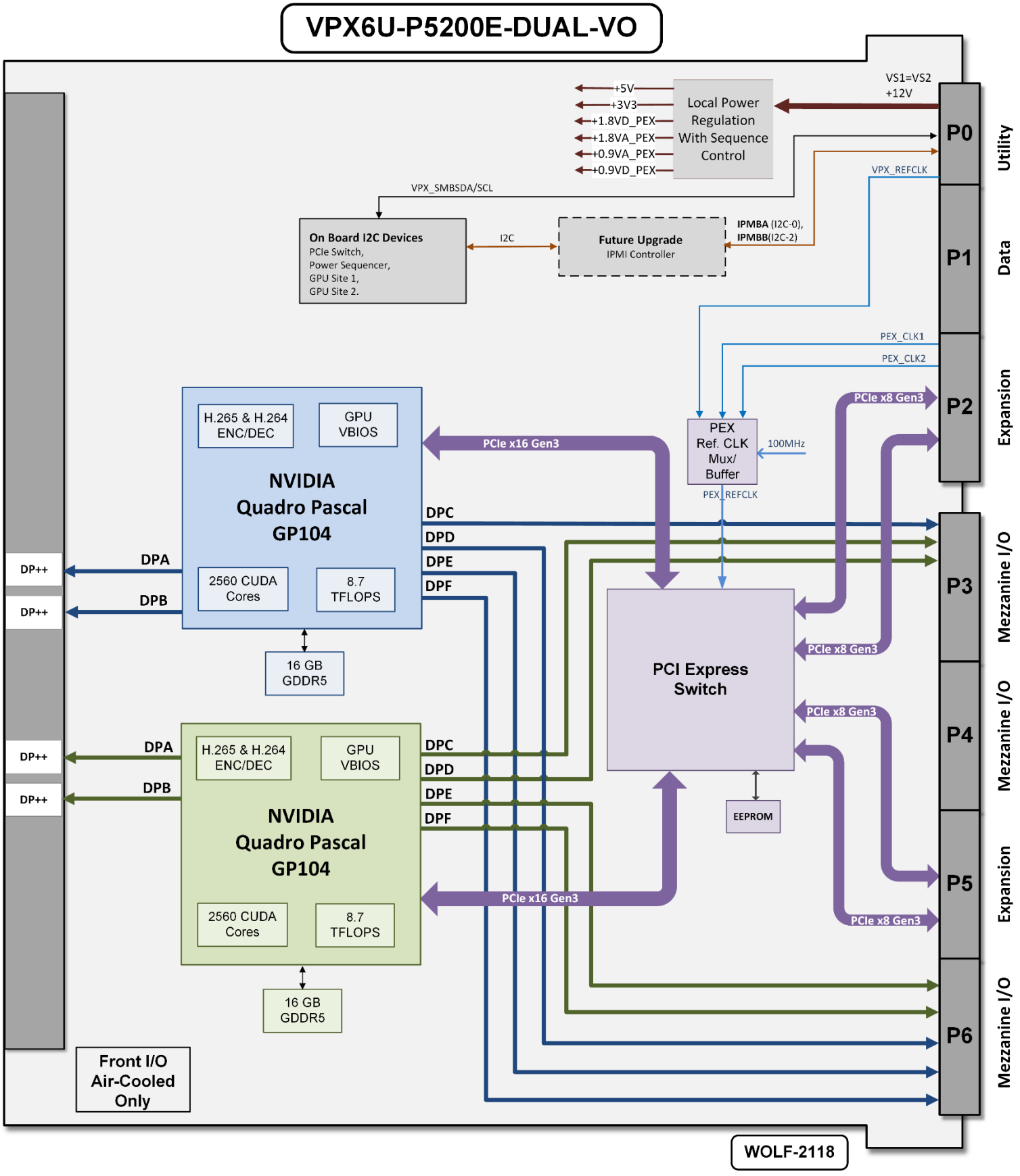
EMBEDDED

WOLF- 2118 Chip-Down VPX Module

VPX6U-P5200E-DUAL-VO



WOLF- 2118 Chip-Down VPX Module

ORDERING CODES FOR VPX6U-P5200E-DUAL-VO

Part Number	Description
21182x-FJ0**VPX6v10	Air Cooled, Dual GP104
21183x-FJ0**VPX6v10	Conduction Cooled, Dual GP104
21182x-F40**VPX6v10	Air Cooled, Single GP104
21183x-F40**VPX6v10	Conduction Cooled, Single GP104

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, PCIe Bus Choices, Modified Power Cap, video termination, other

MANUFACTURING AND QUALITY ASSURANCE

WOLF designs modules to pass the following environmental standards:

- MIL-STD-810 (United States Military Standard for Environmental Engineering Considerations and Laboratory Tests)
- MIL-HDBK-217 (Reliability Prediction of Electronic Equipment)
- RTCA DO-160 (Environmental Conditions and Test Procedures for Airborne Equipment) on request

WOLF complies with the following quality management systems:

- ISO 9001:2015: Quality management systems (certified)
- SAE AS5553: Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition (compliant)
- SAE AS9100D: Quality Management System - Requirements for Aviation, Space and Defense Organizations (preparing for certification in 2019)

Boards are manufactured to meet the following standards:

- 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 (Requirements for Soldered Electrical and Electronic Assemblies)

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WOLF- 2118 Chip-Down VPX Module