

VPX6U-E9171-QUAD-VO

AMD Radeon E9171 Module with 20 digital outputs, 4K or 5K

ADVANCE INFORMATION

KEY FEATURES

- Four AMD Radeon 1.25 TFLOPS GPUs
- Chip-down rugged design
- 20 independent DisplayPort 1.4 outputs
- 16 GB GDDR5 memory
- Operating power from 60 - 160W

ADDITIONAL FEATURES

- 20 DisplayPort 1.4 digital video outputs:
 - Support for High Dynamic Range (HDR) video
 - Up to 12-bit color depth
 - 5K or 4K at 60Hz
- Support for HDMI 2.0b, single link DVI, dual link DVI
- GPGPU parallel processing:
 - 32 compute units, 2048 shaders (Stream Processors)
 - DirectX® 12, OpenCL™ 2.0, OpenGL 4.5, Vulkan
 - AMD's HIP Tools for NVIDIA® CUDA™ code reuse
- 16 GB GDDR5 memory, width: 128-bit
- Memory clock 1500 MHz, bandwidth: 48 GB/s per GPU
- Support for HEVC (H.265) and AVC (H.264) hardware encode/decode, 4K at 60Hz
- PCIe Gen3 x16/x8
- Windows and Linux drivers
- Optional RTOS drivers: VxWorks, others on request

SPECIFICATIONS

- High level of ruggedization:
 - Rugged Conduction-cooled or Air-cooled
 - Operating temperature: -40° to +85°C
 - Vibration (sine wave): 10G peak, 5 - 2000Hz
 - Shock: 30G peak for air-cooled, 40G peak for conduction-cooled
- Dimensions: 160mm x 233mm x 25.4mm
- Weight: with default conduction-cooled plates: TBD; with default air-cooled plates: TBD
- +12V or +5V power source options
- ANSI/VITA 48 (VPX REDI), 65 (OpenVPX)

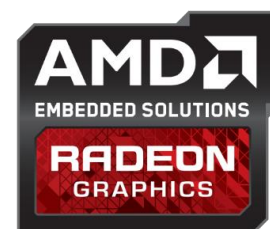
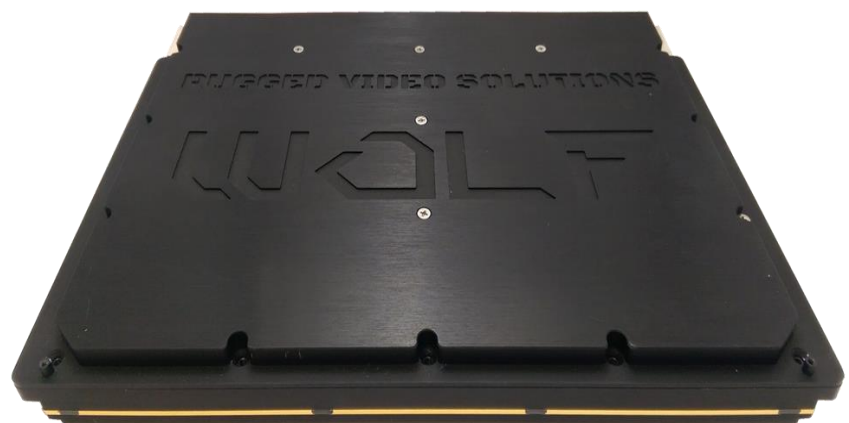
OVERVIEW

WOLF's VPX6U-E9171-QUAD-VO board incorporates AMD's latest 14nm Polaris architecture to provide a significant performance increase compared to the previous generation AMD GPUs, with each GPU providing processing at 1.25 TFLOPS and highly efficient operating power which is dynamically controllable from 15 to 40 Watts.

The VPX6U-E9171-QUAD-VO is capable of driving up to 20 outputs, with up to 20 4K displays (4096x2160 @60Hz) or up to 8 5K displays (5120x2880 @60Hz). DisplayPort 1.4 is supported, with High Dynamic Range (HDR) video and up to 12-bit color depth.

This board can provide 5 TFLOPS of single-precision GPGPU parallel processing capability. AMD GPUs are optimized for OpenCL, the open and cross-platform programming standard. For those with existing CUDA code, AMD's HIP Tools can be used to port CUDA code to C++, giving developers a way to reuse code that was previously locked to a proprietary hardware.

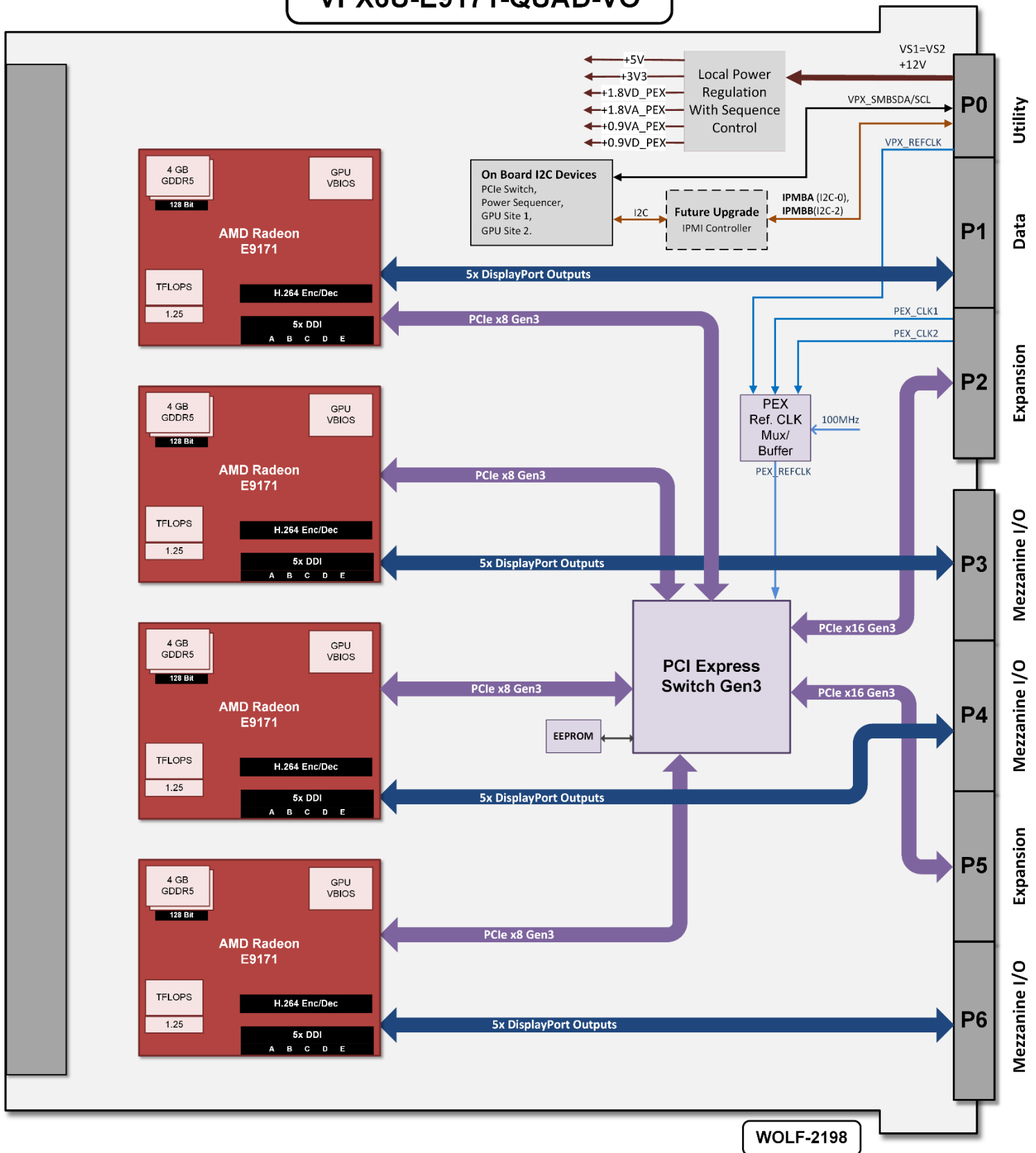
Optional RTOS drivers are available for this board, including VxWorks, Integrity, LynxOS, and others on request. Windows and Linux drivers are also available.



This is advance information and is subject to change

ADVANCE INFORMATION

VPX6U-E9171-QUAD-VO



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ORDERING CODES

The following table defines series of common order codes for the VPX6U-E8860-VO module. The asterisks denote characters of the part number that are defined based on common configuration options. Some common configuration options for this module are:

- Display Interfaces
- Conformal Coating Type
- Default Power Threshold
- +12V / +5V Main Power
- Cooling Architecture
- RTOS options
- COTS, MCOTS or Variant Locked

Ordering Number	Description
6U VPX AMD E9171 Single Slot Configurations	
219823-F7**VPX6v10	6U VPX, Air Cooled, 1", AMD E9176
219833-F7**VPX6v10	6U VPX, Conduction Cooled, 1", AMD E9176

Contact Sales for the latest Ordering Numbers and available options

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:

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

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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GOVERNMENT-INDUSTRY
GIDEP
DATA EXCHANGE PROGRAM

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