



Applications

- Development Platform for Xilinx Q Grade MPSoCs
- High Altitude Sensor Processing
- Harsh SWaP Limited Environments

Summary

The **ADM-VPX3-9Z5/DEV** is an OpenVPX MPSoC FPGA System on Module (SoM) utilizing the Xilinx Zynq UltraScale+ XQZU19EG M-temp device. The ADM-VPX3-9Z5/DEV has been developed in partnership with Xilinx and Texas Instruments and features Mil-temp range (-55C to +125C) board components throughout for reliability. The ADM-VPX3-9Z5/DEV is suitable for high-altitude applications and is compliant with LVAUX mode for Single Event Effects (SEE).

The ADM-VPX3-9Z5/DEV provides flexible IO via an FMC+ Site and via the VPX backplane, dual 8GB DDR4-2400 SDRAM (PL and PS), 1Gb QSPI configuration Flash, System Monitoring and Mil-temp enhanced products for Power and Temperature Sensing solutions from Texas Instruments. The ADM-VPX3-9Z5/DEV is compatible with a development Rear Transition Module (p/n ADM-VPX3-9Z5-RTM).

Target Device

- Xilinx Zynq UltraScale+ MPSoC XQZU19EG-1 (FFRC1760M)
- LUTs = 523k FFs = 1045k DSPs = 1968
- BRAM = 34.6Mb URAM = 36Mb
- 4x Arm® Cortex™-A53 MPCore™
- 2x Arm Cortex-R5 MPCore
- 1x Arm Mail™-400 MP2
- 5x PCI Express Gen3 x16 cores
- 4x 100G Ethernet MAC/PCS with RS-FEC

Application Data Memory

- 1x PS - 1G x 72 (8GiB) DDR4-2400
- 1x PL - 1G x 72 (8GiB) DDR4-2400

Configuration Memory

- QSPI 2x 512Mb Flash Memory

Configuration Modes

Flexible boot options from on-board SPI Flash or uSD Flash

Deliverables

- ADM-VPX3-9Z5/DEV Board
- One Year Warranty
- One Year Technical Support

Board Features

- FMC+ HPC Interface
- Compliant with Xilinx LVAUX mode for XQ UltraScale+
- Military-Grade Power Supplies from Texas Instruments

Host Interface

- Host System Controller Capable
- PCI Express (PS or PL)
- 10Gigabit Ethernet

Board Format

OpenVPX / SOSA Compliant VPX3

Input/Output Interfaces

- FMC+ HPC interface**
- + 24x HSSIO
- + 160/80x Single Ended/Differential Pair I/O

OpenVPX Interface

- + 8x HSSIO (P1)
- + 16x HSSIO (P2)

Environmental Specification

Temperature Ranges

Cooling Option	Operating Temperatures		Storage Temperatures	
	Min	Max	Min	Max
MIL	-55°C	+105°C	-60°C	+150°C

Operating Humidity

Up to 95% (non-condensing)

EMC Standards

- FCC 47CFR Part 2
- EN55022:2010 Equipment ClassB

Ordering Information

Order Code: ADM-VPX3-9Z5/DEV/PB

note

Fitted with Xilinx Zynq UltraScale+ XQZU19EG-1M, Q Grade FPGA MIL temp range. Tin/Lead Solder.

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