ADM-VPX3-9Z5

Datasheet Revision: 2.2
30th May 2023

AD01391

Applications

- Embedded Systems requiring Mil-Temp AMD XQ Zynq UltraScale+ MPSOC
- High Altitude Sensor Processing
- Harsh SWaP limited Environments

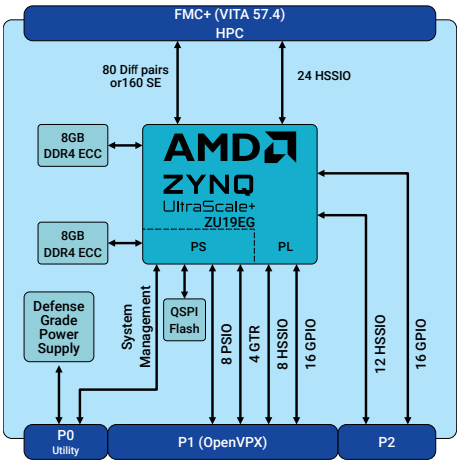
Board Features

- Compliant with AMD LVAUX mode for XQ UltraScale+
- Complete Mil-temp enhanced products for power management & signal conditioning
- FMC+ HPC Interface

Summary

The **ADM-VPX3-9Z5** is an OpenVPX MPSoC FPGA System on Module (SoM) utilizing the AMD Zynq UltraScale+ XQZU19EG M-temp device. The **ADM-VPX3-9Z5** has been developed in partnership with AMD and Texas Instruments and features Mil-temp range (-55C to +125C) board components throughout for reliability. The **ADM-VPX3-9Z5** is suitable for high-altitude applications and is compliant with LVAUX mode for Single Event Effects (SEE) mitigation. The Open Group Sensor Open Systems Architecture™ influenced the development of this board and the **ADM-VPX3-9Z5** is aligned with the SOSA™ Technical Standard.

The **ADM-VPX3-9Z5** 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.



Target Device

AMD 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 Mali™-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

Deliverables

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

Host Interface

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

Input/Output Interfaces

FMC+ HPC Interface
HSSIO
Single Ended/Differential Pair I/O

OpenVPX Interface
HSSIO (P1)
HSSIO (P2)

ALPHA DATA
www.alpha-data.com

UK Office
Address: Suite L4A, 160 Dundee Street, Edinburgh, EH11 1DQ, UK
Telephone: +44 131 558 2600
Fax: +44 131 558 2700
email: sales@alpha-data.com

USA Office
10822 West Toller Drive, Suite 250
Littleton, CO 80127
(303) 954 8768
(866) 820 9956 - toll free
sales@alpha-data.com

Board Format

3U VPX (OpenVPX Compliant)

Environmental Specification

Cooling Option	Operating Temperatures		Storage Temperatures	
	Min	Max	Min	Max
MIL	-55°C	+105°C	-60°C	+150°C
IND	-40°C	+85°C	-55°C	+125°C

Operating Humidity : Up to 95% (non-condensing)

EMC Standards

Ordering Information		
Order Code: ADM-VPX3-9Z5(T)		
Option	Code	Description of Options
Configuration Type	T	/CC4/PB = Fitted with XQZU19EG-1M, Q Grade FPGA, Conduction Cooled MIL temp, Tin/Lead Solder, /Z19-2/CC3/PB = Fitted with XQZU19EG-2I, Q Grade FPGA, Conduction Cooled IND temp, Tin/Lead Solder

www.alpha-data.com

UK Office
Address: Suite L4A, 160 Dundee Street, Edinburgh, EH11 1DQ, UK
Telephone: +44 131 558 2600
Fax: +44 131 558 2700
email: sales@alpha-data.com

USA Office
10822 West Toller Drive, Suite 250
Littleton, CO 80127
(303) 954 8768
(866) 820 9956 - toll free
sales@alpha-data.com