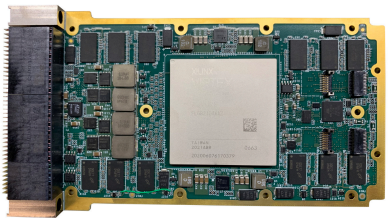
ADM-VPX3-9V2

Datasheet Revision: 2.1
9th February 2021

AD01377



Applications

- High-speed Smart Switching
- Edge Machine Learning Inference
- Signal Processing
- Radar/Sonar
- Multiple Network Interface

Board Features

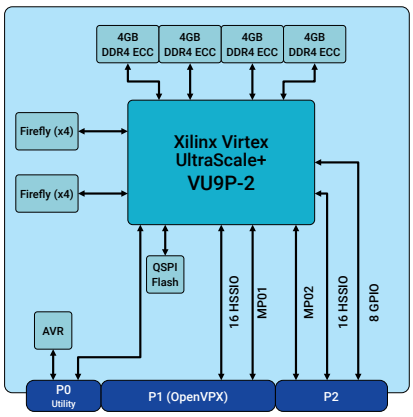
- Xilinx Virtex UltraScale+ XCVU9P-2 and XCVU13P-2 FPGAs
- 16GByte on-board DDR4-2666 SDRAM
- Fully ruggedized for VITA 48.2 REDI compliance
- 0.8inch pitch without rear cover for highest density
- 1inch pitch with rear cover for improved thermal path
- Convenient front panel debug breakout

Summary

The **ADM-VPX3-9V2** is a high performance reconfigurable 3U OpenVPX format board based on the Xilinx Virtex UltraScale Plus range of Platform FPGAs.

The **ADM-VPX3-9V2** is SOSA Aligned and compliant with OpenVPX compliant slot Standards:

SLT3-PAY-2F1F2U-14.2.1	SLT3-PAY-1F2F2U-14.2.2
SLT3-PAY-1D-14.2.6	SLT3-PAY-1F1F2U-14.2.4
SLT3-PAY-2F-14.2.7	SLT3-PAY-1F4U-14.2.8
SLT3-PAY-8U-14.2.9	SLT3-PAY-1F1U-14.2.10
SLT3-PAY-2F4F2U-14.2.11	SLT3-PAY-1F2U-14.2.12
SLT3-PAY-3F2U-14.2.13	SLT3-PAY-2U2U-14.2.17
SLT3-PER-2F-14.3.1	SLT3-PER-1F-14.3.2
SLT3-PER-1U-14.3.3	SLT3-PER-1Q-14.3.4
SLT3-SWH-6F6U-14.4.1	SLT3-SWH-8F-14.4.2
SLT3-SWH-2F24U-14.4.3	SLT3-SWH-4F-14.4.4
SLT3-SWH-2F8U-14.4.5	SLT3-SWH-6F8U-14.4.9
SLT3-SWH-6F8U-14.4.9	



Target Devices

Xilinx Virtex UltraScale+
XCVU9P-2, XCVU13P-2 (B2104)

LUTs = 1728k FFs = 3456k DSPs = 12288
BRAM = 94.5Mb(75.0Mb) URAM = 360Mb (270Mb)

4x PCIe® Gen3x16
8x 150G Interlaken
12x 100G Ethernet w/KR4 RS-FEC
Up to 12288x DSP Slices

Application Data Memory

4x 4GBytes @72bit wide ECC DDR4-2666

Configuration Memory

QSPI 2Gb (x4 Interface) Flash Memory

Configuration Modes

Via QSFP or JTAG

Deliverables

ADM-VPX3-9V2 Board
One Year Warranty
One Year Technical Support

Host Interface

PCI Express Gen3 x16

Input/Output Interfaces

Firefly
4x HSSIO - Firefly Interface 28Gbps per channel (up to 112Gbps total Bandwidth per Firefly Connection)

HSSIO P1
Configurable as 4 fat pipes

Serial Comms P1
MP01 (Maintenance Port). Compatible with RS232 and 3.3V UART (build option dependent)

HSSIO P2
Configurable as 4 fat pipes

Serial Comms P2
MP02 (Maintenance Port). Compatible with RS232 and 3.3V UART (build option dependent) - can be discrete GPIO if comms port not required

GPIO P2
Single Ended GPIO (x8 if MP02 is not required)

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Support

In development: a comprehensive Software Development Kit with source code for example software and FPGA designs. The ADM-VPX3-9V2 shall be compatible with the ADXDMA driver and API for Windows and Linux.

Board Format

3U VPX (OpenVPX Compliant)

Environmental Specification

Cooling Option	Operating Temperatures		Storage Temperatures	
	Min	Max	Min	Max

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

EMC Standards

FCC 47CFR Part 2
EN55022:2010 Equipment ClassB

Conformal Coating Options

Acrylic or Polyurethane
Contact sales for specification of coatings.

Ordering Information

Order Code: ADM-VPX3-9V2/9P-2(c)(a)

Option	Code	Description of Options
Cooling	c	/AC1 = air cooled industrial, /CC1 = conduction cooled industrial
Conformal Coating	a	blank = no conformal coating, A = Acrylic, P = Polyurethane
note	Contact Sales for other ordering options	

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