ADM-VPX3-7V2

Applications

- Digital Signal Processing
- Radar/Sonar Beamforming
- EL/UNT
- Image/Video Processing
- Data Encryption

Board Features

- Separate PCI Express Bridge FPGA
- High-density FMC Interface
- 2GByte on-board DDR3-1600 SDRAM

FPGA Features

- 3x PCIe® Gen2 (690T 2x Gen3)

Summary

The **ADM-VPX3-7V2** is a high performance reconfigurable 3U OpenVPX format board based on the Xilinx Virtex-7 range of Platform FPGAs.

Features include PCI Express Gen2 interface, external memory, high density I/O using a Vita 57 standard, high Pin Count FMC interface, Gigabit Ethernet interface, system monitoring and flash boot facilities.

A comprehensive cross platform API with support for **Microsoft Windows**, **Linux** and **VxWorks** provides access to the full functionality of these hardware features.

Placing the PCI Express bridge in bypass allows the creation of a Gen 2 x8 PCI Express endpoint design directly into the target FPGA (Target FPGAs VX330T and VX690T can also support Gen3 x8 PCI Express designs).

The **ADM-VPX3-7V2** is available in a cost reduced form without a separate Bridge FPGA for high-volume production orders. A Rear Transition Module (RTM) is available to accelerate development by providing monitor and control access to all Rear (backplane) IO signals.

Target Devices

Xilinx Virtex-7: XC7V585T (FF(G)1761)

FPGA Specification

LUTs = 582k
FFs = 728k
DSPs = 1260
BRAM = 28.6Mb

3x PCIe® Gen2 (690T 2x Gen3)

Application Data Memory

4x SDRAM 512MB DDR3-1600

FPGA Configuration Memory

BPI 512MBit Flash Memory
Configured as 2x Bridge

FPGA Configuration Modes

PCI Express direct to SelectMAP port
From Flash direct on power up
External JTAG connector

Deliverables

ADM-VPX3-7V2 Board
One Year Warranty
One Year Technical Support

Host Interface

PCI Express Gen2 x1, x2 or x4 link to separate bridge device with 2GB/s local link to user FPGA
4 DMA Controllers
Interrupt Controller

Board Format

3U VPX (OpenVPX Compliant)

Input/Output Interfaces

80 Pairsx GPIO

10x High-Speed Serial Links

10x High-Speed Serial Links (compliant to VITA 46.9 X24S+X12D+X8D)

32x GPIO (compliant to VITA 46.9 X24S+X12D+X8D)

ALPHA DATA

Support

Comprehensive Software Development Kit with source code for example software and FPGA designs.

Environmental Specification

Temperature Ranges

Cooling Option	Operating Temperatures		Storage Temperatures	
	Min	Max	Min	Max
AC0	0°C	55°C	-40°C	85°C
ACE	0°C	70°C	-55°C	100°C
AC1	-40°C	70°C	-55°C	100°C
CC0	0°C	55°C	-40°C	85°C
CCE	0°C	70°C	-55°C	100°C
CC1	-40°C	70°C	-55°C	100°C

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

EMC Standards

FCC 47CFR Part 2
EN55022:2010 Equipment ClassB
EN55024:2010
EN60950-1:2006 (+A12:2011)

Conformal Coating Options
Acrylic or Polyurethane
Contact sales for specification of coatings.