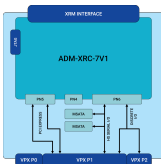


AD01260



Applications

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

Summary

The ADA-VPX3-7V1 assembly brings together the power and configurability of the ADM-XRC-7V1 FPGA XMC2 in a VPX 3U module based on the Xilinx Virtex-7 range of Platform FPGAs.

Features include PCI Express Gen2 interface, external memory, high density I/O, 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.

Target Devices

Xilinx Virtex-7
 XC7V585T, XC7VX330T, XC7VX485T,
 XC7VX690T (FF(G)1761)

LUTs = 582k FFs = 728k DSPs = 1260
 BRAM = 28Mb(27Mb)

2x PCI Express cores (Gen2 or Gen3 -
 FPGA dependent)

Application Data Memory

4x 512MB DDR3-1600

Configuration Memory

BPI 512Mbit Flash Memory
 Configured as 2x Bridge

Configuration Modes

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

Deliverables

ADA-VPX3-7V1 Board
 One Year Warranty
 One Year Technical Support

Board Features

- Air-Cooled/Conduction-Cooled Options
- Separate PCI Express Bridge
- XRM2 I/O Interface

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

Input/Output Interfaces

Discrete Digital
 LVC MOS/LVDS I/O (programmable to 1.2

High-Speed Serial Links
 High-Speed Serial Links to XRM2

High-speed serial links
 x4 PCI Express Interface

1000Base-X Ethernet
 Ethernet connectivity to VPX backplane

Discrete Digital
 Discrete I/O
 I/O compliant with VITA 46.9 X64S

Support

The ADA-VPX3-7V1 is supplied with the ADMXRCG3 Support & Development kit (SDK) along with ADB3 Driver for Windows / Linux / VxWorks.

Board Format

3U VPX
(OpenVPX Compliant) ERROR ERROR ERROR ERROR

Environmental Specification

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

Ordering Information

Order Code: ADA-VPX3-7V1/z-y(m)(c)/Pn4

Option	Code	Description of Options
Virtex-7 device	z	V585T=XC7V585T, VX330T=XC7VX330T, VX485T=XC7VX485T, VX690T=XC7VX690T
Virtex-7 speed	y	1, 2, 3
Memory	m	blank = 2GBytes on board SDRAM (Four banks of 512MBytes) /4 = 4GByte on board SDRAM (Four banks of 1GByte)
Cooling	c	blank = air cooled commercial, /ACE = air cooled extended, /AC1 = air cooled industrial, /CC1 = conduction cooled industrial
Note		not all FPGA speed grades available in all configurations. Contact Alpha Data for full details.

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