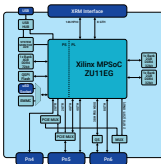


AD01437



Applications

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

Summary

The ADM-XRC-9Z1 is a high performance System On Module (SOM) based on the Xilinx Zynq UltraScale+ MPSoC, which combines FPGA Fabric and ARM CPU cores in a single low-power device.

The module is provided in rugged XMC format and is available in Industrial temperature grades with Air or Conduction Cooling.

Board Features

- Xilinx MPSoC XCZU11EG
- Quad ARM® Cortex™-A53 MPCore™
- Dual ARM® Cortex™-R5 MPCore™
- On-board microcontroller accessible via USB

Target Device

Xilinx Zynq UltraScale+
XCZU11EG-2 (FFVF1517)

FPGA Specification

Logic Cells = 653k DSPs = 2928
BRAM = 21.1Mb URAM = 22.5Mb
4x ARM® Cortex™-A53 MPCore™ - 1.5GHz
2x ARM® Cortex™-R5 MPCore™ - 600MHz
1x PCIe Gen3x8 in PL
1x PCIe Gen2x4 to ARM PS

Application Data Memory

1x 32Gb DDR4 - 4GB @ 72bits wide
(Connected to PS)
2x 8Gb DDR4 - 2GB @ 32bits wide
(Connected to PL)
1x microSD

Configuration Memory

QSPI 2048Mb Flash Memory

Configuration Modes

PS - Configured via QSPI, uSD or EMMC

Deliverables

ADM-XRC-9Z1 Board
One Year Warranty
One Year Technical Support
RD-9Z1 Reference Designs

Host Interface

Default: PCI Express Gen3 x8 (PL)
Alternative mode bifurcated Gen3x4 on PS to PL and Gen2x4 to PS (GTRs)

Input/Output Interfaces

XRM IO
8x HSSIO Links
146x LVCMOS/LVDS IO

PCI Express
Gen2 x4 or Gen3 x8 (G2x4 from PS or G3x4/x8 from PL)

Ethernet
2x Gigabit connectivity to P4 from PS

Serial Low-Speed Comms
2x RS232 or RS485 connectivity from PS

CAN Interface
1x CAN connectivity from PS

High-Speed Serial IO
8x HSSIO connectivity from PL
2x HSSIO connectivity from PL or PS

Discrete Parallel IO
38x HPIO connectivity from PL

Support

ARM centric Targeted Reference Design and Board Support Package and Gen3x8 example PCIe reference designs compatible with the ADXDMA driver and API for Windows and Linux.

Board Format

XMC (Switched Mezzanine Card, VITA 42, 43)
 WxHxD = 149mm x 12.72mm x 74mm
 Weight = 131g

Environmental Specification

| Cooling Option | Operating Temperatures | | Storage Temperatures | |
|----------------|------------------------|-------|----------------------|--------|
| | Min | Max | Min | Max |
| AC1 | -40°C | +70°C | -55°C | +100°C |
| CC1 | -40°C | +85°C | -55°C | +100°C |

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-XRC-9Z1/11EG(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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