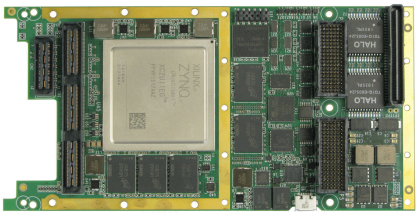
ADM-XRC-9Z1

Datasheet Revision: 1.5
7th January 2026

AD01437



Applications

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

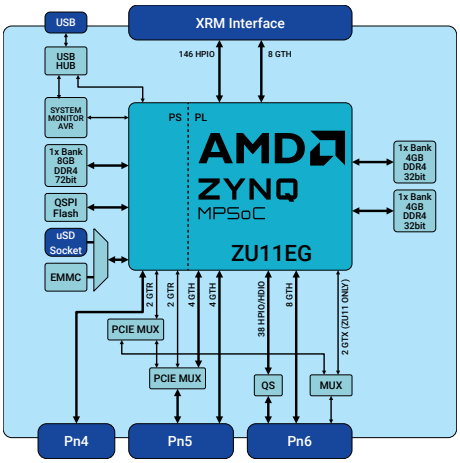
Board Features

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

Summary

The **ADM-XRC-9Z1** is a high performance System On Module (SOM) based on the AMD 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.



Target Device

AMD Zynq Ultrascale+
XCZU11EG-2 (FFVF1517)

FPGA Specification

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

Configuration Memory

QSPI 2048Mb

Configuration Modes

PS - Configured via QSPI, uSD or EMMC

Host Interface

Default: PCI Express Gen3 x8 (PL)
Alternative mode bifurcated Gen3x4 on P5 to PL and Gen2x4 to PS (GTRs)

Input/Output Interfaces

XRM IO (XRM I/O)
8x 8x HSSIO Links
146x 146x LVCMOS/LVDS IO

PCI Express (P5)
1x Gen2 x4 or Gen3 x8 (G2x4 from PS or G3x4/ x8 from PL)

Ethernet (P4)
2x 2x Gigabit connectivity to P4 from PS

Serial Low-Speed Comms (P4)
2x 2x RS232 or RS485 connectivity from PS

CAN Interface (P4)
1x 1x CAN connectivity from PS

High-Speed Serial IO (P6)
8x 8x HSSIO connectivity from PL
2x 2x HSSIO connectivity from PL or PS

Discrete Parallel IO (P6)
38x 38x HPIO connectivity from PL

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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.

Deliverables

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

Board Format

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

Environmental Specification

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

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

Conformal Coating Options

Acrylic or Polyurethane
Contact sales for specification of coatings.

Order Code: ADM-XRC-9Z1/11EG(c)(a)		
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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