Radxa VMARC-Q9075

High-Performance SMARC SoM for Qualcomm IQ-9075

Draft 0.9

2026-06-01

Radxa Computer

Contents

1 Revision Control Table

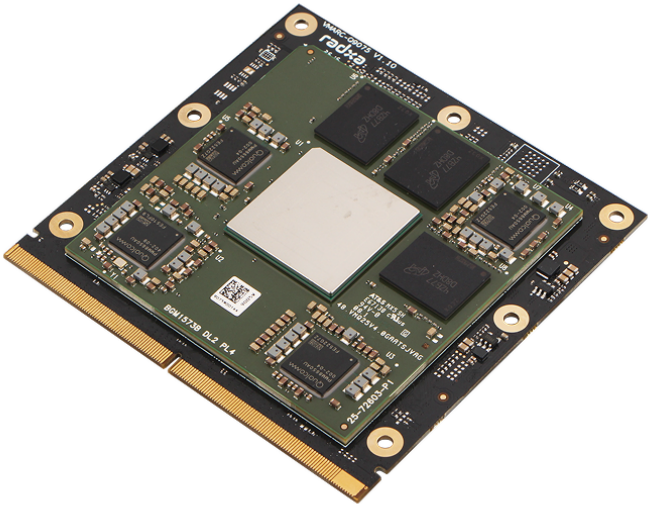
Version	Date	Changes from previous version
0.9	2026-06-01	First version

2 Introduction

Radxa VMARC-Q9075 is a high-performance SMARC compute module (82 mm × 80 mm) built around the Qualcomm Dragonwing IQ-9075, designed for edge AI, robotics, and industrial systems.

It integrates an 8-core Kryo Gen 6 CPU (up to 2.36GHz), an Adreno 663 GPU, and a Hexagon Tensor Processor (HTP) NPU delivering up to 200 Sparse TOPS@INT8. With up to 36GB LPDDR5 memory (up to 6400 MT/s) and onboard storage (32MB SPI Flash and 128GB UFS 3.1), it provides strong compute performance and fast data access for on-device workloads.

For I/O expansion, VMARC-Q9075 offers MIPI DSI, eDP, HDMI TX, and DP TX display interfaces, dual MIPI CSI camera inputs, 2x USB 3.2 Gen 2 plus 4x USB 2.0, 2x PCIe Gen4 x2, dual 2.5GbE PHY, and rich peripheral interfaces including CAN, I2S, UART, and SPI. The module supports a 12 V DC input and operates from 0°C to +60°C.



3 Specifications

Product Name	Radxa VMARC-Q9075
Form Factor	SMARC(82mm x 80mm)
SoC	Qualcomm Dragonwing IQ-9075
CPU	8-core Kryo Gen 6, up to 2.36GHz
GPU	Qualcomm Adreno 663 - Delivers 1.2 TFLOPS FP32 with secure GPU compute - Supports Vulkan 1.2, OpenGL ES 3.2, OpenCL 2.0 FP - Supports Adreno NN Direct
NPU	200 Sparse TOPS@INT8 - Features the Hexagon Tensor Processor (HTP) with quad HVX and dual HMX - Supports deep-learning frameworks: TensorFlow, PyTorch, ONNX, Paddle, Caffe, DarkNet, etc.
Display	1x MIPI DSI 1x Embedded DisplayPort (eDP) 1x HDMI TX signals 1x DisplayPort (DP) TX signals (HDMI TO DP)
MCU	4-core Cortex-R52, up to 1.85GHz
Memory	LPDDR5 - Capacity: 36GB - Memory bus width: 96-bit - Data rate: up to 6400 MT/s
Codec	Adreno VPU 765 Video Decoder:

	- Supports AV1, HEVC, H.264, H.265, VP9, and MPEG2 formats - Capabilities: 1x 8Kp60 / 2x 8Kp30 / 4x 4Kp60 / 8x 4Kp30 / 16x 1080p60 / 32x 1080p30 Video Encoder: - Supports H.264, H.265, HEIF, and HEIC formats - Capabilities: 2x 4Kp60 / 4x 4Kp30 / 8x 1080p60 / 16x 1080p30
Storage	1x Onboard 32MB SPI Flash 1x Onboard 128GB UFS 3.1 (Gear4 x2)
Camera	MIPI CSI (4-lane) MIPI CSI (2-lane)
Networking	2× 2.5GbE PHY
USB	2x USB 3.2 Gen 2 (10Gbps) 4x USB 2.0
PCIe	2x PCIe Gen4 x2
GPIO	2x CAN 2x I2S 4x UART 2x SPI GPIO
Power	DC Input (12 V)
Connector	314-pin MXM 3.0 Connector
Dimension	82 mm x 80 mm
Operation Temperature	0°C to +60°C

4 Software Support

- Ubuntu Linux
- Yocto Linux
- ROS / ROS2

5 Mechanical Specification

Dimension: 82 mm x 80 mm

6 Availability

Radxa guarantees availability of the Radxa VMARC-Q9075 until at least January 2031.

7 Support

For support, please refer to the hardware documentation section of the Radxa Documentation Center and post questions to the Radxa Forum.