
Radxa rCore-Q8750 Product Brief

SoM Powered by Qualcomm Dragonwing Q-8750

Draft 0.9

2026-10-27



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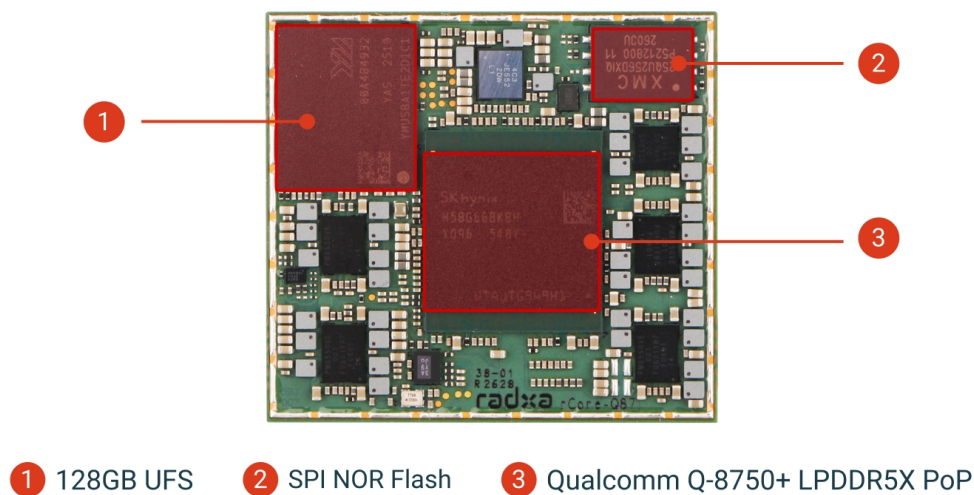
1 Revision Control Table

Version	Date	Changes from previous version
0.9	2026-10-27	First release

2 Introduction

Radxa rCore-Q8750 is a high-performance SoM powered by Qualcomm® Dragonwing™ Q-8750 in a compact 36 × 32.5 mm footprint. It combines an 8-core Oryon™ CPU up to 4.32 GHz and Adreno™ 830 GPU with up to 24 GB LPDDR5X memory and 128 GB UFS storage, delivering up to 77 Dense TOPS of AI compute depending on SKU for edge AI, machine vision, and industrial applications.

The module supports up to 6× 4-lane MIPI CSI camera inputs, up to 8K60 video decoding and 8K30 encoding, dual 4-lane MIPI DSI displays, plus PCIe Gen 3, USB 3.1 Gen 2, and QUP peripherals for storage, display, and capture expansion. Support for Radxa OS and Ubuntu provides a foundation for embedded product development and integration.



3 Specification

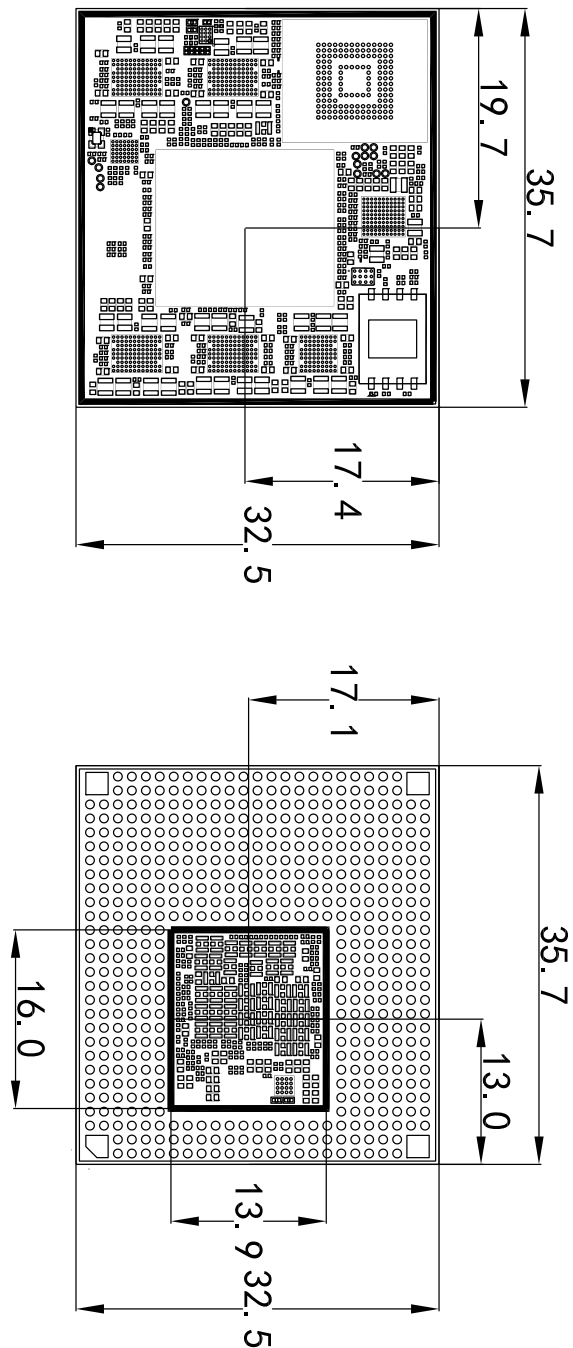
Product Name	Radxa rCore-Q8750
SoC	Qualcomm® Dragonwing™ Q-8750 - CQ8750S / CQ8725S options
CPU	8-core Qualcomm® Oryon™ CPU - Up to 4.32 GHz - 3 nm process
AI Performance	Qualcomm® Hexagon™ - Up to 77 Dense TOPS - Varies by SKU
GPU	Qualcomm® Adreno™ 830 GPU - Up to 1.1 GHz - Hardware-accelerated ray tracing - OpenGL® ES 3.2 - Vulkan® 1.3 - OpenCL™ 3.0 Full Profile - Adreno NN Direct - GMEM improvements for compute and graphics
Memory	LPDDR5X - Up to 24 GB - Memory bus width: 64-bit
Codec	Qualcomm® Adreno 8-series VPU - Video decode: H.265, H.264, VP9 and AV1, up to 4K240 or 8K60 - Video encode: H.264 and H.265, up to 4K120 or 8K30 - Concurrent: 4K60 decode and 4K60 encode

Display	Qualcomm® Adreno 8-series DPU - Up to 2× 4-lane MIPI DSI - DP 1.4 over USB-C, up to 8K60 with MST
Camera	Qualcomm® Spectra™ ISP 8-series - Up to 6× 4-lane MIPI CSI - Up to 5 cameras operating concurrently - Up to 3× 48 MP @ 30 fps ZSL - Up to 320 MP non-ZSL snapshot
Storage	On-Module 128 GB UFS On-Module SPI NOR Flash microSD: SD v3.0 support NVMe: NVMe over PCIe
PCIe	1× PCIe Gen 3 ×2
USB	USB 3.1 Gen 2 (10 Gbps) - USB-C with DisplayPort 1.4 Alt Mode - eUSB 2.0
Audio	Qualcomm® Hexagon™ V79, 4-thread DSP - SoundWire - DMICs - Qualcomm® Aqstic™ audio technologies
Connectivity	QUP - Support UART, I2C, I3C, SPI
Package	516-Ball BGA Package

4 Software Support

- Radxa OS
- Ubuntu
- ...

5 Mechanical Specification



Unit: mm

6 Availability

Radxa guarantees availability of the Radxa rCore-Q8750 until at least 2036.

7 Support

For support, please refer to the hardware documentation section of the [Radxa Documentation Center](#) and post questions to the [Radxa Forum](#).