RAPIDISE
QUALITY DELIVERED

RISE Q9

Introducing RISE Q9 SOM, powered by the Qualcomm® Dragonwing™ IQ9 Series Processor (QCS9100). This next-generation System-on-Module delivers up to 100 dense TOPS of AI performance, enabling advanced edge AI, NLP, generative AI, robotics, and machine vision applications. Designed for high-performance industrial deployments, the RISE Q9 integrates high-speed interfaces such as PCIe Gen4, USB 3.1, and Ethernet with TSN, while supporting multiple cameras and displays for real-time AI processing at the edge.

FEATURES

- Triple ISP Camera & five concurrent cameras Support
- Robust enterprise Wi-Fi 6 and Wi-Fi 6E connectivity
- AI performance of up to 100 TOPS
- Enhanced interfaces & peripherals
- Extended-life software & hardware
- On board location connectivity

Technical Specification

SOC	QCS9100
CPU	Octa-Core Kyro Gen 6 2.36 GHz
AI Performance	Hexagon Llama 2 7 Bn, 22 tokens/sec 100 dense TOPS
GPU	Adreno 663 GPU 800 MHz
Memory	6x16 LPDDR5 @ 3200 MHz
Addressable Memory	Up to 36 GB with inline ECC
Audio DSP (LPASS)	1980 MPPS, 7x TDM/I2S 3x High-Speed I2S for Radio FE
Display Support	Max 48 Mpix and 12 displays with no superframe 5x 4K60, 3x 4K60 + 8x 1080p60, 2x DSI + 2x DP/eDP MST2 + 2x DP/eDP MST4
Video Decode	1x 8K60, 2x 8K30, 4x 4K60, 8x 4K30, 16x 1080p60, 32x 1080p30 Formats: AV1, H.264, H.265, VP9, MPEG2
Video Encode	2x 4K60, 4x 4K30, 8x 1080p60, 16x 1080p30 Formats: H.264, H.265, HEIF/ HEIC
Camera	Up to 16 cameras, max 12 MP sensor resolution, 4x 4-lane CSI2
PCIe	2x PCIe Gen 4: 1x 2-lane + 1x 4-lane (Root Complex & Endpoint)
USB	2x USB 3.1 Gen 2, 1x USB 2.0
Networking	2x 2.5 GbE w/ TSN (SGMII)
Other I/O	21x QUP_SEs (supports UART/I2C/SPI), 149x GPIOs
Storage	2x UFS 3.1 Gen 4 2-lane, 1x 8-bit SDCC5, NVMe over PCIe
Wi-Fi/Bluetooth/WAN	Support through companion chips: QCA6698AQ, SDX35, SDX72
Power (SoC only)	3.8W–20W
Operating System	Linux Yocto, Linux Ubuntu
Package	25.0 mm x 25.0 mm / 0.6 mm ball pitch
Temperature Range	-40°C to 115°C (Tj)
Longevity	2038[2] (subject to change without notice)

Explore our full product portfolio at www.rapidise.co
For partnerships and enterprise deployments, contact: sales@rapidise.co

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