Qualcomm Centriq 2400 Processor

Qualcomm Datacenter Technologies, Inc has developed the world's first 10nm server processor, tailored to the emerging demands of highly-scalable, performant, power-efficient servers that will fuel the next wave of cloud datacenters. This single-chip, platform-level solution delivers a balanced combination of compute, memory and high speed I/O for high performance per thread at a superior performance per Watt. Our custom, highly scalable 48-core design features the Qualcomm Falkor CPU, an Armv8 CPU core that's optimized for cloud-computing workloads. The Qualcomm Centriq 2400 is Arm SBSA Level 3 Compliant - simplifying development efforts for our ecosystem partners.

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Specifications

CPU	**CPU Cache:** 64KB L1 instruction cache with 24KB single-cycle L0 cache, 32KB L1 data cache, Dual-core structure with 512KB shared unified L2 cache with ECC, Up to 60MB distributed unified L3 cache with ECC, Integrated L2 snoop filter, Cache QoS
Process	**Process Technology:** 10nm FinFET
Memory	**Memory Bandwidth:** 6 DDR4 memory channels, Up to 2667 MT/s per channel, 128 GB/s peak aggegate bandwidth, Inline bandwidth compression
	Memory Capacity: 6 x 128 GB/Channel - 768 GB capacity
	Memory Type: 64-bit DDR4 channels with 8-bit ECC, RDIMM and LRDIMM, Up to quad rank 3DS
Interface	**Supported Interfaces:** 32 lanes PCI Express Gen 3 up to x16, 6 controllers, 8 lanes SATA Gen 3, I²C, GPIO, SPI

Qualcomm High-Speed Coherent Interconnect

Features: Qualcomm proprietary protocol, Full cache and IO coherency, Bi-directional segmented coherent ring, Up to 268 GBps per ring segment, Shortest path routing

SOC

Features: Distributed architecture, Single chip platform-level solution, Arm SBSA Level 3 compliant, Integrated management controller

Package

Package Type: LGA (socketed)

Package Size: 55x55 mm

Pins: 2808 pins

Pitch: 1.0 mm Pitch