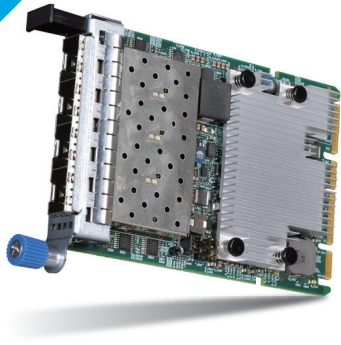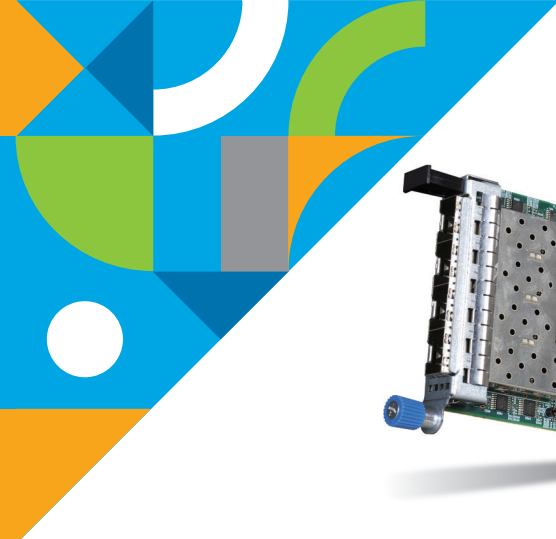# TOTAL CLOUD SOLUTIONS

Based on AMD EPYC™ Processors

QCT

AMD EPYC

Next Generation Network: OCP 3.0 Mezzanine

- Up to 200GbE with PCIe x16 bandwidth
- Hardware optimized for Pull-Tab, Ejector and Internal lock types of OCP Mezzanine
- PCIe 4.0 ready; backward compatible with PCIe 3.0
- OCP 3.0 to OCP 2.0 adapter for legacy utilizations

Breakthrough Performance

- Dual 64-core AMD EPYC™ 7002 series processors score more than twice as the 2-Socket competitor in system level performance.
- The 2nd Gen EPYC™ CPU gained over 200% improvement on CPU and memory processing than the 1st Gen.

* Performance data all based on dual socket QCT platforms from QCT lab.

* EPYC 7002 data based on pre-production sample with AGESA 1.0.0.0 for early reference. Test result with MP CPU and final AGESA may be updated without prior notice.

SpecCPU 2017 SPECrate Integer
Node performance with Integer workloads

+219%
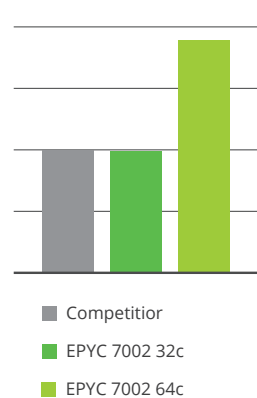than competitor's top bin CPU

+130.2%
than EPYC™ 7601

- Competitior
- EPYC 7002 32c
- EPYC 7002 64c
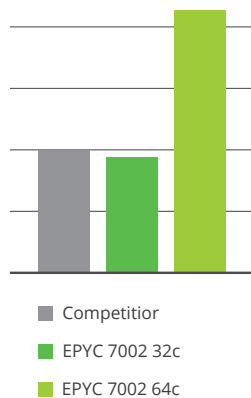
SpecCPU 2017 SPECrate FP
Node performance with floating point workloads

+84.4%
than competitor's top bin CPU

+85.7%
than EPYC™ 7601

- Competitior
- EPYC 7002 32c
- EPYC 7002 64c

Stream
Pure memory throughput

+41.7%
than competitor's top bin CPU

+16.8%
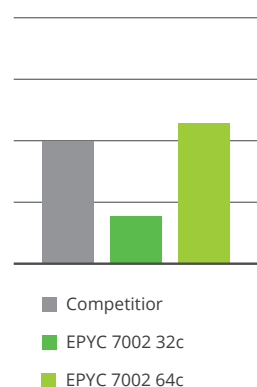than EPYC™ 7601

- Competitior
- EPYC 7002 32c
- EPYC 7002 64c
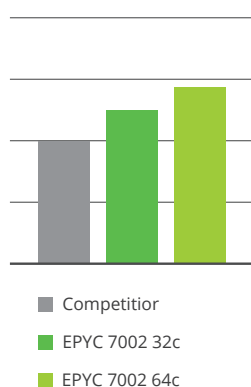
High-Performance Linpack (HPL)
CPU and memory processing

+13.9%
than competitor's top bin CPU

+213.3%
than EPYC™ 7601

- Competitior
- EPYC 7002 32c
- EPYC 7002 64c

First to Power on the AMD EPYC™ 7002 Series Processor

The QCT EPYC™ 7002 product line started way ahead of others. As a close partner with AMD developing Daytona, the 2nd generation EPYC™ 7000 processor customer reference board (CRB) since early 2018, QCT was the first to power on AMD EPYC™ 7002 series processors.

CPU Spec to Spec Comparison

Feature	AMD EPYC™ 7002 Series Processor	Competition
Max core count per socket	64 cores / 128 threads	28 cores / 56 threads
Max TDP	225W configured up to 240W	205W
Memory channels /socket	8ch, 2DPC	6ch, 2DPC
Memory frequency	3200 Mhz	Up to 2933 Mhz
CPU interlinks	xGMI-2, 16 GT/s	10.4 GT/s
PCIe Lane	128 lanes PCIe 4.0	48 lanes PCIe 3.0

PCIe 4.0 vs PCIe 3.0

Feature	PCIe 4.0	PCIe 3.0
Bandwidth	16 Gb/s	8 Gb/s
Throughput with PCIe x8 slot	100 GbE NIC support	50 GbE NIC support
Throughput with PCIe x16 slot	200 GbE NIC support	100 GbE NIC support

QuantaGrid D43K-1U Ultimate 1U Server with EPYC Performance Breakthrough

- Dual AMD EPYC processor with up to 4TB memory capacity
- Up to 5 expansion slots optimized for PCIe 4.0 and AI workloads
- Enhanced serviceability with tool-less, hot-swap designs

QuantaGrid D43K-1U is designed to unleash the power within the AMD EPYC™ 7002 Series Processors. Featuring up to 4TB memory capacity, 5 expansion slots and single width GPU support within a 1U chassis, it is the first PCIe 4.0 platform ever in the QCT product family, ready for deployment in next generation data centers.

	2.5" SKU	3.5" SKU
Processor	(2) AMD EPYC™ 7002 Series Processor, up to 225W TDP (240W cTDP)	
Memory	Up to 4TB memory capacity with (32) DDR4 DIMM slots. Supporting 3200 MHz 1DPC	
Storage	(12) 2.5" U.2 SSD	(4) 3.5" SATA/SAS drives Optional (4) 9mm NVMe/SATA/SAS drives
Network Controller	(1) OCP 3.0 mezzanine (1) 1 GbE dedicated management port	
Expansion Slot	(1) PCIe 4.0 x8 SAS mezzanine slot (1) PCIe 4.0 x8 OCP 3.0 mezzanine SFF slot (2) PCIe 4.0 x16 FHHL or (3) PCIe 4.0 x16 HHHL	
Form Factor	1U Rackmount	

QuantaGrid D43KQ-2U Highly Scalable "EPYC" 2U Server Built for AI

- Scalable configurations, Built for AI
- Diversified I/O options for diversified workloads
- Full featured design optimized for PCIe 4.0

QuantaGrid D43KQ-2U is powered by dual AMD EPYC™ 7002 Series Processors supporting up to 10 PCIe 4.0 expansion slots and AI capabilities. It features two dual-width GPU accelerators with optimized thermal conditions, 24 U.2 NVMe drives, and up to 4TB memory capacity within just a 2U rackmount QCT server.

	LFF Tiered SKU	SFF Tiered Expander SKU	SFF Pass Through SKU
Processor	(2) AMD EPYC™ 7002 Series Processors, up to 225W TDP (240W cTDP)		
Memory	Up to 4TB memory capacity with (32) DDR4 DIMM slots. Supporting 3200 MHz 1DPC		
Storage	**Front** (4) 3.5" SATA/SAS drives + (8) 3.5"/ 2.5" SATA/SAS/NVMe drives **Rear (Optional)** (2) 2.5" SATA/SAS/NVMe drives	**Front** (16) 2.5" SATA/SAS + (8) 2.5" SATA/SAS/NVMe (SAS/SATA via SAS Mezz) **Rear (Optional)** (2) 2.5" SATA/SAS/NVMe drives	**Front** (16) 2.5" SATA/SAS + (8) 2.5" SATA/SAS/NVMe (SAS/SATA via SAS Mezz) **Rear (Optional)** (2) 2.5" SATA/SAS/NVMe drives
Network Controller	(1) PCIe 4.0 x8 OCP 3.0 mezzanine (1) Dedicated 1 GbE management port		
Expansion Slot	(1) PCIe 4.0 x8 SAS mezzanine *Option 1:* (2) PCIe 4.0 x16 FHHL + (4) PCIe 4.0 x8 FHHL *Option 2:* (4) PCIe 4.0 x16 FHHL **Optional:** (1) PCIe 4.0 x8 HHHL, (1) PCIe 4.0 x16 HHHL or (2) 2.5" rear drive		
Form Factor	2U Rackmount		

*For more product information, please scan the QR Code

QuantaGrid S43KL-1U Revolutionary Single Socket Compute Server

- An "EPYC" single socket compute server to challenge traditional dual socket systems
- TCO optimized yet AI enabled
- Feature optimized for PCIe 4.0 deployment

QuantaGrid S43KL-1U is no ordinary single socket rackmount server. Geared up with one AMD EPYC™ 7002 Series Processor, featuring up to 2TB memory and five I/O slots, it aims to challenge the traditional dual socket data center ecosystem with flexible I/O options, single width GPU support, and PCIe 4.0 readiness.

	SFF SKU	LFF SKU
Processor	(1) AMD EPYC™ 7002 Series Processor, up to 225W TDP (240W cTDP)	
Memory	Up to 2TB memory capacity with (16) DDR4 DIMM slots. Supporting 3200 MHz 1DPC	
Storage	(12) 2.5" hot-plug SATA/NVMe SSD	(4) 3.5" SATA/SAS drives (4) 9mm NVMe/SATA/SAS drives (optional)
Network Controller	(1) OCP 3.0 mezzanine (1) 1 GbE dedicated management port	
Expansion Slot	(1) PCIe 4.0 x8 SAS mezzanine slot *Option 1:* (2) PCIe 4.0 x16 HHHL & (1) PCIe 4.0 x8 HHHL *Option 2:* (2) PCIe 4.0 x16 FHHL	
Form Factor	1U Rackmount	

About QCT

Quanta Cloud Technology (QCT) is a global data center solution provider. We combine the efficiency of hyperscale hardware with infrastructure software from a diversity of industry leaders to solve next-generation data center design and operation challenges. QCT serves cloud service providers, telecoms and enterprises running public, hybrid and private clouds.

Product lines include hyper-converged and software-defined data center solutions as well as servers, storage, switches, integrated racks with a diverse ecosystem of hardware component and software partners. QCT designs, manufactures, integrates and services cutting edge offerings via its own global network. The parent company of QCT is Quanta Computer, Inc., a Fortune Global 500 corporation.

www.QCT.io

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