

# Hyperscale clouds of tomorrow

Based on AMD EPYC™  
Processor

Authorised  
Hyperscalers  
Partner



Network | Storage | Compute | Converged | Hyperconverged

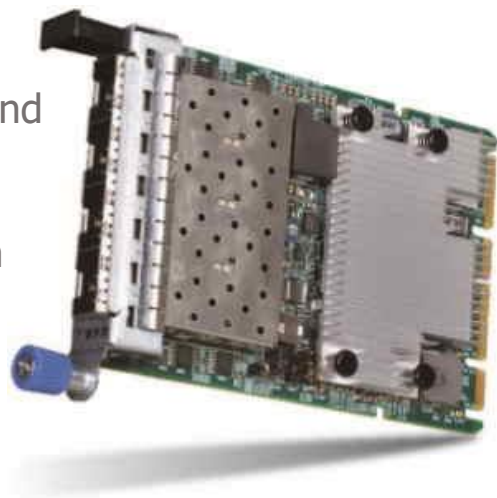
 **HYPER  
SCALERS**

Solving Information  
Technology's Complexity

**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

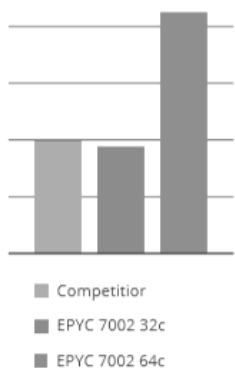
- Dual 64-core AMD EPYC™ 7002 series processors score more than twice as the 2-Socket competitor in system level performance.
- The 2nd Gen EPYC™ CPU gained over 200% improvement on CPU and memory processing than the 1st Gen.

### SpecCPU 2017 SPECrate Integer

Node performance with Integer workloads

+219%  
than competitor's top bin CPU

+130.2%  
than EPYC™ 7601

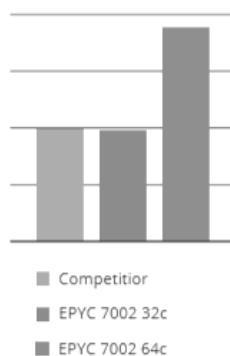


### SpecCPU 2017 SPECrate FP

Node performance with floating point workloads

+84.4%  
than competitor's top bin CPU

+85.7%  
than EPYC™ 7601

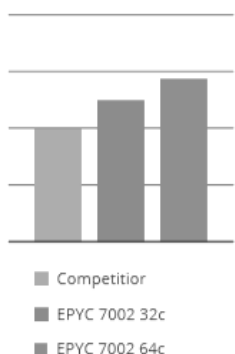


### Stream

Pure memory throughput

+41.7%  
than competitor's top bin CPU

+16.8%  
than EPYC™ 7601

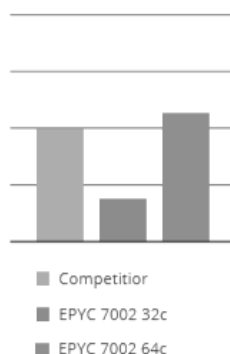


### High-Performance Linpack (HPL)

CPU and memory processing

+13.9%  
than competitor's top bin CPU

+213.3%  
than EPYC™ 7601



# CPU Spec to Spec Comparison

Feature	AMD EPYC™ Processor	Competition
Max core count per socket	<b>64</b> cores / <b>128</b> threads	28 cores / 56 threads
Max TDP	<b>225W</b> configured to <b>240W</b>	205W
Memory channels /socket	<b>8ch</b> , 2DPC	6Ch, 2DPC
Memory frequency	<b>3200Mhz</b>	Up to 2933mhz
CPU interlinks	xGMI-2 <b>16</b> GT/s	10 GT/s
PCIe Lane	<b>128</b> PCIe Lanes <b>4.0</b>	48 PCIe lanes 3.0

## PCIe 4.0 vs PCIe 3.0

Feature	PCIe 4.0	PCIe 3.0
Bandwidth	<b>16</b> Gb/s	8 Gb/s
Throughput with PCIe x 8 slot	<b>100</b> GbE NIC Support	50 GbE NIC Support
Throughput with PCIe x 16 slot	<b>200</b> GbE NIC Support	100 GbE NIC Support

## 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 design



**2.5" SKU** – 12 \* U.2 NVMe

**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 Control**

- (1) OCP 3.0 mezzanine
- (2) 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



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



- Scalable configurations built for AI
- Diversified IO options for diversified workloads
- Full featured design optimized for PCIe 4.0



SKU	LFF Tiered SKU	SFF Tiered Expander SKU	SFF SKU - All NVMe
<b>Processor</b>	(2) AMD EPYC™ 7002 Series Processor, Up to 225W TDP (240W cTDP1)		
<b>Memory</b>	Up to 4TB memory capacity with (32) DDR4 DIMM slots. Supporting up to 3200 Mhz 1DPC2.		
<b>Drive Bay</b>	Front (4) 3.5" SATA/SAS drives (8) 3.5"/2.5" SATA/SAS/NVMe drives Rear (Optional) (2) U.2 SSD	Front (16) 2.5" SATA/SAS + (8) 2.5" SATA/SAS/NVMe (SAS/SATA via SAS Mezz) Rear (Optional) (2) U.2 SSD	Front (16) 2.5" SATA/SAS PTP + (8) 2.5" SATA/SAS/NVMe (SAS/SATA via SAS Mezz) Rear (Optional) (2) 2.5" SATA/NVMe SSD
<b>Expansion Slot</b>	(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		
<b>Network Controller</b>	(1) PCIe 4.0 x8 OCP 3.0 mezz slot (1) Dedicated 1 GbE management port		
<b>Power Supply</b>	1+1 High efficiency redundant hot-plug Platinum/Titanium 1600W/2200W AC PSU, 1600W -48V DC PSU		
<b>Form Factor</b>	2U Rackmount		

# S43KL-1U Revolutionary Single Socket Compute Server



- An "EPYC" single socket compute server to challenge traditional dual socket systems
- Automate your processes with AI on a budget
- Full featured design optimized for PCIe 4.0



	SFF 2.5" SKU	LFF 3.5" SKU
<b>Processor</b>	(1) AMD EPYC™ 7002 Series Processor, up to 225W TDP (240W cTDP)	
<b>Memory</b>	Up to 2TB memory capacity with (32) DDR4 DIMM slots. Supporting 3200 Mhz 1DPC	
<b>Storage</b>	(12) 2.5" hot-plug SATA/NVMe SSD	(4) 3.5" SATA/SAS drives Optional (4) 9mm NVMe/SATA/SAS drives
<b>Network Control</b>	(1) OCP 3.0 mezzanine (2) 1 GbE dedicated management port	
<b>Expansion Slot</b>	(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 FHH	
<b>Form Factor</b>	1U Rackmount	



# D42A-2U All NVMe Server Perfect for CDN & Big Data Analytics



- Perfectly compatible with both EPYC™ 7001 and 7002 Series Processors
- Supports up to 24 U.2 NVMe SSDs
- Up to two PCIe x16 slots for up to 2x 200GbE NICs
- All tool-less design with easy service motherboard tray

## 24 U.2 NVMe SKU

## 20 U.2 NVMe SKU

<b>Processor</b>	(1) AMD EPYC™ 7002 Series Processor, up to 225W TDP (240W cTDP)	
<b>Memory</b>	Up to 2TB memory capacity with (32) DDR4 DIMM slots. Supporting 3200 Mhz 1DPC	
<b>Storage</b>	(24) 2.5" hot-plug SATA/NVMe SSD	(20) 2.5" hot-plug SATA/NVMe SSD
<b>Network Control</b>	(1) OCP 3.0 mezzanine (2) 1 GbE dedicated management port	
<b>Expansion Slot</b>	(1) PCIe 3.0 x8 OCP 2.0 mezzanine Type A (1) PCIe 3.0 x16 HHHL or (2) PCIe 3.0 x8 HHHL	(1) PCIe 3.0 x8 OCP 2.0 mezzanine Type A (2) PCIe 3.0 x16 HHHL or (1) PCIe 3.0 x16 + (2) PCIe 3.0 x8
<b>Form Factor</b>	1U Rackmount	

# S43CA-2U Density Optimized "EPYC" Multi-node Server



- High Density server design powered by the latest AMD EPYC™ 7002 Series processors
- Single socket EPYC processor with 16 DIMMs per node optimized for compute-centric Data Center requirements
- Aggregated networking infrastructure services



## SFF 2.5" SKU

## LFF 3.5" SKU

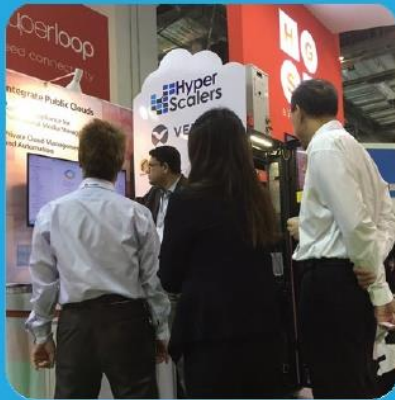
<b>Processor</b>	(1) AMD EPYC™ 7002 Series Processor per node (4), up to 225W TDP (240W cTDP)	
<b>Memory</b>	(16) DDR4 DIMM slots per node, Supporting 3200 MHz 1DPC per node (4)	
<b>Storage</b>	(2) 2280/22110 NVMe M.2 per node	
<b>Front IO</b>	Option 1: (1) PCIe 4.0 x16 FHHL expansion slot per node (2) PCIe 4.0 x16 HHHL expansion slot per node (2) 2.5" hot-plug NVMe/SATA SSD per node Option 2: (5) 2.5" hot-plug NVMe/SATA SSD per node	
<b>Expansion Slot</b>	(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 FHH	
<b>Rear IO</b>	(1 or 2) single/dual 100G port pass-through module	
<b>Form Factor</b>	1U Rackmount	





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### About Hyperscalers

Hyperscalers is the world's first open Original Equipment Manufacturer offering proprietary-free alternative to traditional Tier 1 OEM vendors.

Hereto to solve Information technology's complexity, Hyperscalers developed the IP Appliance Design Process. Which is basically a process along with a utility, being the Appliance Optimizer Utility, which together, assists service providers 'productize' delivery of their Digital-IP.

### Technology Partners



### Hyperscalers Australia Head Quarters

10 of 65 Tennant Street Fyshwick  
ACT 2609 Australia  
P +61 1300 113 112  
E info@hyperscalers.com

Operating out of USA, India, EU  
[www.hyperscalers.com](http://www.hyperscalers.com)