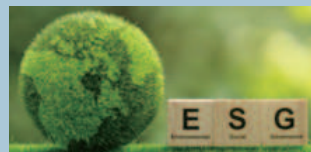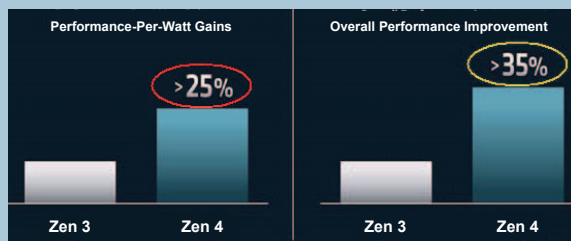# ARAVision

Aquila / Aquila-3D Avenger SE 1U CPU Overclocked HFT Server
The world's fastest AMD CPU 1U rack mount over-clocking server

Key Features

* The world's fastest AMD CPU 1U rack mount over-clocking server
* Born for major purposed applications and dedicated trading system
* Best liquid-cooled designed, all CPU cores up to 5.5GHz (16 cores)
* Best liquid-cooled designed, all CPU cores up to 5.5GHz (12 cores)
* AMD CPU based, offer the largest L3 cache (more than Intel) for using
* Excellent liquid-cooled and thermal flow only in 1U form
* Most 3 x high-speed I/O slots for different AP designed architectures
* Up to 80%~95% performance than traditional general purposed server
* Considerations for global environmental protection & sustainable use
* Liquid-cooled model downgrade to air-flow cooling model for IT using
* Provide downgrade to air-flow cooling model suite when need & apply

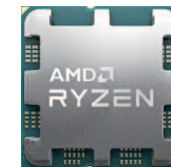## AMD DIE MCM：from Zen3 to Zen4 (Info is from AMD website)

* Another big improvement in the Zen4 architecture is that it not only continues the 3D V-Cache architecture, but also doubles the L2 cache in the CPU compared to Zen3.

* The Fetch Engine technology of AMD Zen4 architecture effectively improves the transmission bandwidth and speed of each Core and Cache, allowing programs to achieve faster triggering effects.

* Higher Performance with Lower Power Consumption
  AMD Zen4 architecture uses TSMC 5nm process, which has the advantages of high performance and low power consumption compared to Zen3, allowing ESG goals to be implemented in the financial trading market.

Aquila / Aquila-3D Avenger SE Series :

16/12 physical cores, provide liquid-cooled for choice

►**Aquila Avenger SE Z4R7950X (16 cores)**
   All cores up to 5.5GHz (CCD0 5.5GHz, CCD1 5.5GHz), L3 cache 64MB
►**Aquila Avenger SE Z4R7900X (12 cores)**
   All cores up to 5.5GHz (CCD0 5.5GHz, CCD1 5.5GHz), L3 cache 64MB
* DDR5 Memory frequency at least 5600MHz

►**Aquila-3D Avenger SE Z4D7950X (16 cores)**
   All cores up to 5.5GHz, (CCD0 w/ 3D V-cache 5.0+GHz, CCD1 5.5GHz), L3 cache 128MB (64+64)
►**Aquila-3D Avenger SE Z4D7900X (12 cores)**
   All cores up to 5.5GHz, (CCD0 w/ 3D V-cache 4.9+GHz, CCD1 5.5GHz), L3 cache 128MB (64+64)
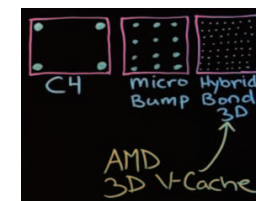* DDR5 Memory frequency at least 5600MHz

AMD 3D V-Cache™ Technology (Aquila-3D only)

The access time of programs and data in the cache is about 8~10ns, but it must be at least 10 times in the memory. From Zen3 to Zen4, AMD CPU has massive L3 cache capacity, which can achieve higher execution efficiency.

AMD opens a new era, providing more L3 cache capacity to the CPU. 3D V-Cache™ Technology is a new innovation, opening a new horizon of massive CPU cache.

ARAVision also adjusts and optimizes the cache frequency, and effectively applies it in the HFT field.

We give you best 風水

Aquila Avenger SE

Form Factor	1U chassis with rail kit
Processor	**Aquila Avenger SE (Z4R7950X)** AMD Ryzen 7950X (Zen4) 16 cores 64MB L3 cache base 4.5GHz CPU freq. x1 (All cores are 5.5GHz CPU frequency via PBO2 & on liquid-cooled operation) **Aquila Avenger SE (Z4R7900X)** AMD Ryzen 7900X (Zen4) 12 cores 64MB L3 cache base 4.7GHz CPU freq. x1 (All cores are 5.5GHz CPU frequency via PBO2 & on liquid-cooled operation)
Chipset	AMD B650E
Memory	64GB (32GBx2) DDR5-5600 LP DIMM (Max. 192GB)
Expansion Slots	PCI-E 3.0 x16 slots x2 (speed for x16/x4), can option to PCI-E 3.0 x16 slots x3 (speed for x16/x4/x1) * Can option the upgrade suits to PCI-E 4.0 x16 slot x2 (speed for x16/x4) for special need, like X3522
SSD	500GB/1TB NVMe M.2 PCI-E SSD x1 (Max.2), M.2 SATA SSD board Kits (Max.2, optional)
HFT I/O Card	Solarflare X3522, X2522-25G-Plus or X2522-10G-Plus ultra low latency NIC x1 (option for more)
Input / Output	ASPEED AST2600 Dedicated IPMI RJ45 LAN port x1 On-board with 1Gbps RJ45 LAN port x2 USB 3.0 port x1 (Rear), USB 2.0 port x2 (Front) VGA port x1 * Option : COM port x1
Power Supply	750W high efficiency redundant PSU platinum level
OS	Preinstall optimized HFT OS (option for RHEL 8.x, Ubuntu 22.04 LTS, Windows Server 2019/2022)
Warranty	2 years hardware warranty 1 year on-side service. (limited in Taiwan)

Aquila-3D Avenger SE

Form Factor	1U chassis with rail kit

Processor	**Aquila Avenger-3D SE (Z4D7950X)**
	AMD Ryzen 7950X3D (Zen4 3D V-Cache) 16 cores 128MB L3 cache base 4.2GHz CPU freq. x1
	(CCD0：All 8 cores are 5.0+GHz CPU frequency w/ 64MB 3D V-Cache Stacked &
	  CCD1：All 8 cores are 5.5GHz CPU frequency via PBO2 & on liquid-cooled operation)
	Aquila Avenger-3D SE (Z4D7900X)
	AMD Ryzen 7900X3D (Zen4 3D V-Cache) 12 cores 128MB L3 cache base 4.4GHz CPU freq. x1
	(CCD0：All 6 cores are 4.9+GHz CPU frequency w/ 64MB 3D V-Cache Stacked &
	  CCD1：All 6 cores are 5.5GHz CPU frequency via PBO2 & on liquid-cooled operation)

Chipset	AMD B650E
Memory	64GB (32GBx2) DDR5-5600 LP DIMM (Max. 192GB)
Expansion Slots	PCI-E 3.0 x16 slots x2 (speed for x16/x4), can option to PCI-E 3.0 x16 slots x3 (speed for x16/x4/x1) * Can option the upgrade suits to PCI-E 4.0 x16 slot x2 (speed for x16/x4) for special need, like X3522
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欲瞭解更多相關資訊，歡迎與我們連繫：(02)2912-0128