



CLEARCUBE

Hypercube FX with Digital Harmonic Software

Compute and storage chassis connects high-density GPUs and DAS to datacenter blades for more power, features, and capabilities

ClearCube® Hypercube FX with Digital Harmonic® Software is a powerful, flexible solution putting GPU computation, state-of-the-art imaging and signal processing software, and fast storage in the datacenter. The chassis is adaptable, so administrators can use the same chassis to connect GPUs, DAS (direct attached storage), or both to ClearCube R3092D Blades. The solution's power and flexibility enables blades, workstations, and applications to excel in many use cases and business domains.

Hypercube FX is a 4U rack mount chassis for dedicated eGPU Modules, dedicated DAS Modules, or both. The chassis provides powerful processing and high-density, high-speed, local storage for directly-connected R3092D Blades. Hypercube FX eGPUs connect to R3092D Blades through Thunderbolt® 3.0 (40-Gbps), and DAS connections use USB 3.0 (5 Gbps). Hypercube FX eGPU Modules support single- or double-wide GPUs (including NVIDIA Quadro® family, NVIDIA® GeForce™ GTX 1080 Ti, and AMD Radeon™). DAS Modules contain up to five 2.5-inch SSDs, and provide an empty slot for a cold spare SSD. Hardware-based RAID support includes RAID 0, 1, 3, 5, and 10. DAS Modules also support JBOD configurations.



Use Cases

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|--|---|---|---|------------------------------------|--|
| | AI | | | | |
| External GPU to expand R-Series Blade capabilities | Dedicated compute resource for AI (artificial intelligence), engineering, and research applications | Enhances CAD/CAM software on R3092D Blade | Clustered compute or other applications | Digital image and video processing | Image and signal analysis using advanced Digital Harmonic software |

Digital Harmonic

Digital Harmonic software for image and signal/waveform analysis provides unprecedented data and insights.

Pure Pixel

Pure Pixel™ applies brute force mathematical scoring and adjusts pixel values to dramatically enhance the information contained within an image—dramatically enhancing image resolution and clarity.

Precision Measuring Matrix (PMM)

PPM™ performs measurement, analysis, and separation of complex compound signals/waveforms to yield extraordinary detail in time/frequency/amplitude (TFA).

Domains: Angle rise and fall, time, amplitude, harmonic, start, stop, peak, and many more.



Military and Intelligence

- Drone images
- Radar, sonar, satellite imaging
- Recon images
- Voice recognition



Corporate

- Oil and gas discovery
- Engine health monitoring
- Image and video analysis



Healthcare

- Medical imaging
- Auscultations, sonogram, ultrasound



Hypercube FX with Digital Harmonic Software



DAS Module



eGPU Module



R3092D Blade PC

Hypercube FX Specifications

| | |
|--------------------------------------|--|
| Chassis Features | 4U rack mount chassis Optional redundant power supplies Dedicated 1:1 connection to eGPU and DAS Module 8 slots for eGPU Modules and DAS Modules |
| Chassis Configuration Options | 4 double-wide eGPU Modules 4 double-wide eGPU Modules and 4 DAS Modules (20 SSDs) 8 DAS Modules (40 SSDs) |
| eGPU Module Features | Supports single- or double-wide GPUs (including NVIDIA GeForce® GTX 10-series (1080Ti, GTX 1080, GTX 1070, and more), NVIDIA Quadro®, and AMD Radeon™ series) Connect to R3092D Blades through 40-Gbps USB-C cables |
| DAS Module Features | Up to five 2.5-inch SSDs per DAS Module (up to 20 SSDs per chassis) + 1 cold spare USB 3.0 enabled SSD (up to 5 Gbps) High-density direct attached storage (DAS) isolated from the network RAID configurations include RAID 0, 1, 3, 5, and 10. DAS Modules also support JBOD configurations. |
| Expandability | Flexible platform supports GPU compute resources and high-speed local DAS |
| Compatible Workstations | ClearCube R3092D Blade PC |
| Imaging Software | Pure Pixel and the Precision Measuring Matrix by Digital Harmonic (Optional) |



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Ordering Information

Call: (866) 652-3500 Email: sales@clearcube.com to order or for more information.