NG-Box™

DPU-accelerated NVMe storage for the most demanding workloads

ACCELERATE YOUR WORKLOADS

Combining the convenience and ease of use of established storage architectures with the power of NVMe over fabrics, NG-Box delivers best in class storage performance efficiency in the smallest possible solution package and best TCO.

Gain the benefits of NVMe
With the convenience of trusted established storage array architectures.

Increase productivity and processing times
Boasting up to 40GB/s read and 2M IOPs per unit, NG-Box supports demanding AI and HPC workloads with ease.

Scale to meet any demands
Start from a single unit, and scale effortlessly to handle more demanding applications required by AI model training and HPC simulations.

Protect valuable datasets
Ensure data integrity and confidentiality with robust security that meets academic and research sector compliance standards.

NG-Box is a perfect match for SSDs
Making them accessible in parallel via the NVMe protocol.

NG-Box™ is a disaggregated NVMe storage array designed to leverage the full potential of NVMe flash devices at any scale while ensuring the lowest storage total cost of ownership (TCO).

Based on the latest generation Dell 2U dual-socket rack server, it is equipped with the 3rd generation Kalray DPU Smart Storage Accelerator (SSA) card which enables NG-Box to power the most demanding workflows.

Designed to excel at unstructured data-intensive workloads, NG-Box pairs seamlessly with Kalray's NGenea suite, to offer reliable, fast, and scalable on-premises storage and data management for the world's most demanding HPC and AI workloads. NG-Box is a perfect match for use cases such as simulation, analysis, checkpointing, AI model training, inference, and more.

NG-Box as part of Kalray NGenea Suite: boost efficiency and streamline operations

Pairs seamlessly with Kalray's NG-Stor™ storage solution and NG-Hub™ data management platform.

- Demanding workloads get what they need, without compromise. Powerful workflow tools eliminate wait-time for transfers to complete, ensuring data is available to compute applications and users whenever needed.

- Integrated telemetry streaming and RESTful API-based management and monitoring capabilities deliver enhanced visibility and control for optimal node management.

- Cohesive data management features allow for optimal utilization of all your storage in a single namespace, and the availability of your data to applications and users globally.

- Beyond infrastructure management, Kalray provides integrated tools and automation to enable scale, global collaboration, and intuitive workflow management.

NG-Box™ powers demanding workflows | UP to **40GB/s** Per NG-Box | UP to **2M IOPS**

A POWERFUL PARTNERSHIP

Kalray's DPU-enabled storage appliance, NG-Box™, is built on Dell PowerEdge R750 rack servers. NG-Box is a disaggregated NVMe storage array designed to excel at unstructured data workloads and to offer reliable, fast, and scalable on-premises storage for the world's most demanding workflows.

Kalray is a Dell Technologies partner and combines its solutions with Dell servers, storage, and networking offerings.

NG-Box /NVMe configuration	Maximum IOPS	Sustained throughput	Number of NVMe SSD
NG-Box 8x	2M	40GB/s read 20GB/s write	8
NG-Box 16x	2M	40GB/s read 20GB/s write	8
NG-Box 24x	2M	40GB/s read 20GB/s write	24

FEATURES	TECHNICAL SPECIFICATIONS
Processor	• 2 x Intel Xeon Silver 4316 2.3G, 20C/40T, 10.4GT/s. 30M Cache. Turbo HT (150W)
Memory	• 128GB RDIMM @ 3200 MT/s
Storage controllers[1]	• NVMe: 1 or 2 x Kalray K200-LP, 1 MPPA Coolidge 1.2 Smart Storage Accelerator (SSA) • System: BOSS-S2 controller card + with 2 M.2 480GB (RAID 1)
Drive Configurations[1]	• 1.96TB, 3.84TB, 7.68TB, 15.36 TB drives
Power Supplies[1]	• 1400 W Platinum AC/240 mixed mode
Cooling	• Air cooling
Fans	• Six high-performance hot plug fans
Dimensions	• Height – 86.8 mm (3.41 inches) • Width – 482 mm (18.97 inches) • Depth – 758.3 mm (29.85 inches) - without bezel - 772.14 mm (30.39 inches) - with bezel
Form Factor	• 2U Dell PowerEdge R750 rack server
Management and Monitoring	• GUI, CLI and RESTful API options available via NG-Stor
Security	• Secure Erase • Encryption at rest
Embedded NIC	• 2 x 1 GbE LOM
Network	• 4 x 4 X 100 and 200Gb Ethernet Ports2 x Mellanox ConnectX-

[1] *Depending on configuration*

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THE POWER OF MORE