KALRAY'S FLASHBOX™ WINS COVETED FLASH MEMORY SUMMIT AWARD FOR MOST INNOVATIVE TECHNOLOGY

Flashbox™ is a New Generation of High Performance, Low-Power and High-Available Storage Appliances Powered by Kalray's DPU Processor

Santa Clara, California – USA & Grenoble - France, August 4, 2022 – Kalray (Euronext Growth Paris : ALKAL), a leading provider of the new generation of processors and acceleration cards specialized in Intelligent Data Processing from Cloud to Edge, is delighted to announce it has won the coveted Flash Memory Summit award for most innovative technology.

Flash Memory Summit (FMS) is the world's premier flash memory conference and exposition, held at the Santa Clara Convention Center, California, USA. The Flash Memory Summit Awards represent an industry recognition of innovation that Kalray's Flashbox™ solution brings to the market.

"Designing an enterprise storage array today can benefit from a disaggregated architecture that can address performance at the highest levels and capacity expansion in a cost-effective manner." **said Jay Kramer, Chairman of the Awards Program and President of Network Storage Advisors Inc.** *"We are proud to recognize the collaboration between Viking and Kalray which provides an integrated storage solution delivering several millions of IOPS using 12x 100 Gb/s network interface connections distributed across six DPUs-based acceleration cards."*

Flashbox™ is a new concept of All-Flash-Array, based on Kalray's MPPA® DPU processor ("Data Processing Unit") and co-designed with Viking Enterprise Solutions.

Whereas most advanced All-Flash Array solutions currently use multiple adapter cards with power-hungry and expensive CPUs (x86) that run storage services, the concept of Flashbox™ is to run all of the critical functions of a disaggregated storage appliance on a single chip: the Kalray MPPA® DPU. This solution delivers an unprecedent level of integration, speed, scalability and performance at an affordable cost. Thanks to Flashbox™ All-Flash-Array, data centers can reduce critical metrics such as $/IOP and IOPs/watt.

"It is a great honor to win a Flash Memory Summit award for our innovative concept of Flashbox™ All-Flash Array." **said Kalray CEO, Éric Baissus.** *"We strongly believe that wide adoption of NVMe requires adopting new innovative approaches. This is Flashbox™. Flashbox™ is a unique high-performance, low power, cost-effective,*

high-available new generation of storage appliances based on Kalray's DPU technology. Powered by our Smart Storage Acceleration Card, Flashbox™ allows data center customers to disaggregate their Flash tier while maintaining the same performance of local NVMe, thereby optimizing both Flash performance and capacity across the compute tier of their data center."

A unique concept on the market today, Flashbox™ benefits from ultra-fast interfaces and low power consumption. It can deliver unprecedent performance figures using 12x 100 Gb/s network interface connections distributed across six K200-LP™ cards and is based on market standards such as Storage Performance Development Kit (SPDK), NVMe/TCP or RDMA over Converged Ethernet (RoCEv1/v2).

Flashbox™ is a 2U array, with support for 24 U.2 NVMe SSDs. Flashbox™ JBOF (Just A Bunch of Flash) replaces x86 servers of traditional storage nodes with Kalray PCIe cards (K200-LP™) which incorporate the Kalray DPU. The high-availability Flashbox™ has two Viking Enterprise Solutions fabric modules, each module has a PCIe switch network and supports three PCIe add-in card slots (half-height, half-length). Each Kalray DPU PCIe add-in card can run all the critical functions and data services required of a storage appliance. Flashbox™ can scale from two to six of the K200-LP™ PCIe add-in cards allowing the end customer to scale performance independently of capacity of the array. This unique solution is lower cost and significantly lower power from a traditional NVMe storage array.

Additionally, users will be able to take advantage of current and future data services integrated into the solution software stack such as data reduction (compression or deduplication), data availability (RAID or erasure encoding) or data security (encryption). This will further enhance critical business metrics by offloading these services from the data center compute tiers. Flashbox™ offers the ideal SDS (software defined storage) solution by abstracting and disaggregating the Flash tier from the compute tier.

About KALRAY

Kalray (Euronext Growth Paris - FR0010722819 - ALKAL) is a fabless semiconductor company, a leading provider of a new class of processors, specialized in Intelligent Data Processing from Cloud to Edge. Kalray's team have created and developed its leading-edge technology and products to help its clients maximize the market possibilities presented by a world dominated by massive, disparate and pervasive data.

Thanks to Kalray's patented manycore architecture, Kalray's MPPA® Intelligent Data Processors are natively capable of managing multiple workloads with no bottlenecks to enable smarter, more efficient and energy-wise data-intensive applications. Kalray's offering includes processors, acceleration cards with associated software environment and appliances, allowing its customers to

design the best solutions in fast growing sectors such as modern data centers, 5G, AI and Edge Computing, autonomous vehicles and others.

Founded in 2008 as a spin-off of CEA French lab, with investors such as Alliance Venture (Renault-Nissan-Mitsubishi), Safran, NXP Semiconductors, CEA and Bpifrance, Kalray is dedicated through technology, expertise and passion to offer more: More for a smart world, more for the planet, more for customers and developers. www.kalrayinc.com

About Viking Enterprise Solutions

Viking Enterprise Solutions, a product division of Sanmina Corporation, provides advanced data center products including solid-state memory and disk-based storage server appliances, JBOD storage systems and other products for a variety of data center and storage applications. Viking Enterprise Solutions award winning products are tailored for integration into OEM, system integrator and data center products, reducing development and operating costs while improving time-to-market. www.vikingenterprisesolutions.com

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