



FOR IMMEDIATE RELEASE

Kalray Launches Krypto128 Accelerator Card

New PCIe Card Drastically Accelerates Storage Computation Pipeline

Santa Clara Calif., – August 8, 2016 – Kalray Inc., provider of data center infrastructure accelerator solutions for storage and networking, today announced in conjunction with the Flash Memory Summit, general availability of the Krypto128, a programmable acceleration card based on “Bostan,” its 2nd generation MPPA[®] high-speed I/O processor. The Flash Memory Summit is taking place at the Santa Clara Convention Center, in Santa Clara, Calif., from August 8-11. Kalray will be exhibiting at booth #908.

The Bostan processor combines high computing performance with real-time processing and low power consumption, which makes it an ideal solution for data center infrastructure acceleration. In general, other vendors offer hardware solutions based on ASIC technology to accelerate functions such as encryption. Kalray has been able to reach the same levels of performance with a C/C++ programmable solution, giving customers more flexibility.

Kalray will target two main markets with its Krypto128 card. The first market concerns storage computation pipelines, which include algorithms such as compression, encryption, erasure coding and integrity checks. This computation pipeline can be found at several places in the data center, either in the main server, if SSDs are attached to it, or in the storage proxy I/O server - or even in the all-flash array cabinet storage server. In any of these cases, this suite of computation on the data before writing or after reading to or from the SSDs requires numerous cycles of the main processor and can be offloaded easily on the Krypto128 PCIe card.

Kalray has customer use cases in which a Krypto128 card can offload and replace up to 8 Intel Xeon E5 2630v3 @2.4Ghz when implementing a Lz4 compression, an AES128 encryption, an erasure coding (8 to 10) and a CRC 32 bits on 4K block of data, resulting in a significant 3 x system cost reduction.

Kalray’s solution is fully programmable (C/C++) enabling customers to benefit from a wide choice of algorithms (AES256/126... Sha256/128... CRC32...) and from the flexibility to determine the order of execution of the computation pipeline. Depending on which algorithm is implemented, performance of up to 60Gbits of bandwidth can be achieved.

“Kalray is fully committed to offering solutions to our customers that help them to quickly introduce SSD technology, with all its latency benefits, into their data center,” said Eric Baissus, CEO of Kalray. “And, more importantly, this gives them the possibility to scale up the technology in a cost effective manner.”

The second market targeted by the Krypto128 concerns IPsec and OpenSSL transparent acceleration into VPN routers or secure gateways. These are commonly found in the network between, for instance, a private enterprise data center located at the customer premises and a remote public cloud where the customer may rent some hardware services. Performance in these use cases is phenomenal and can go up to 120Gbits of bandwidth.

Kalray provides all the basic software modules required to implement those functions. Communication between the main server and the Krypto128 card is mainly based on the standard socket API with an AF_ALG extension interfacing with MPPA specialized engines, which in turn enables transparent acceleration for either the storage computation pipeline or OpenSSL and IPsec stack. Kalray also offers all software acceleration engines implemented on the MPPA high-speed I/O processor, from crypto, Sha, CRC and compression, to erasure coding. In addition, the customer is able to customize and add new features.

Product Highlights

Krypto128 is a single width, full height, half-length PCIe programmable card. It supports 16 lanes Gen3 PCIe and typically consumes 25W.

At the heart of the Krypto128 card is the Bostan processor, which is the first manycore processor to integrate up to 288 C/C++ programmable CPU cores and 128 crypto co-processors with a fully deterministic and real-time architecture.

About Kalray

Kalray Inc., is a fabless semiconductor company and pioneer in many-core processor solutions. Its innovative MPPA[®] architecture uniquely delivers high-speed I/O processing, enabling real-time acceleration for cloud applications in security, networking and storage. For more information, visit <http://www.kalrayinc.com>

###

Press Contact

Sacha Arts
Bella Vista Communications
s.arts@me.com
+1 408-458-6316

