



## H1 2019 BUSINESS REPORT AND SALES OUTLOOK

- Market launch of the NVMe-TCP solution for new-generation storage servers this summer;
- Coolidge available for initial customer assessments in H2 2019;
- Advanced negotiations with storage server industry leaders for the adoption of Coolidge in next generation intelligent storage servers;
- Partnership entered into with NXP Semiconductors, in the field of autonomous vehicles, to develop a joint solution;
- Sales ramp up confirmed for 2019;
- €23.3 million of available cash allowing implementation of the roadmap.

**Grenoble, July 17, 2019** - Kalray (Euronext Growth Paris: ALKAL), the pioneer in processors for new intelligent systems, takes stock of its activity in the first half of 2019 (from January 1 to June 30, 2019) and looks back over the highlights for that period.

**Eric Baissus, President of Kalray's Executive Board, commented as follows:**

*"Acceleration technologies and artificial intelligence are crucial for the future of many leading companies. Kalray has been able to position itself as a key player in these sectors by forging substantial and sustainable relationships with market leaders, as shown by our recent strategic partnerships in the automotive sector with NXP and eSOL and by the integration of our technology in major collaborative ES3CAP<sup>1</sup> and EPI<sup>2</sup> programs.*

*We are now ready to kick-start our sales ramp-up, firstly with the market launch of our first product, NVMe-TCP, which will be announced at the Flash Memory Summit in August 2019, utilizing our current generation of processor, Bostan, and then with the arrival of Coolidge, our third-generation processor, the first prototypes of which will be sent out to our customers with our software development environment by the end of 2019."*

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<sup>1</sup> "Embedded Smart Safe Secure Computing Autonomous Platform"

<sup>2</sup> "European Processor Initiative"





## A PROMISING SALES OUTLOOK

On the **data centers** market, which remains Kalray's largest market in the short term, the company has focused its efforts on supporting its customers for the integration of its solution into customer products aiming for new-generation storage solutions.

- The company will launch the **NVMe-TCP** this summer at the global Flash Memory Summit. NVMe-TCP is a further development of the NVMe-oF standard, enabling the use of new-generation flash memory (SSD) whilst facilitating their integration in data centers. The company is targeting initial sales of NVMe-TCP cards this year;
- Kalray is in advanced negotiations with two major players in global storage for the integration of Coolidge in their next generation storage servers ;
- At the same time, Kalray is continuing to work on rolling out the use of its acceleration technologies in data centers, in particular risk analysis for commercial banks and artificial intelligence. These advances will enhance the existing offer for the storage industry, which remains the company's priority in 2019.

Kalray also remains very well positioned in another market, the **intelligent vehicle market**, in light of the continued interest shown by the automotive industry since the beginning of the year:

- In January 2019, at CES in Las Vegas, **NXP Semiconductors**, the leader in technology for new-generation vehicles, and Kalray announced their strategic alliance aimed at supplying a safe, reliable solution for autonomous vehicles, which is currently a major challenge. This partnership will combine Kalray's high-performance intelligent MPPA® processors with the decision-making power of NXP processors within NXP's BlueBox solution, which will equip level 3 (partial autonomy), 4 and eventually 5 (fully autonomous) vehicles;
- At the Apollo Baidu Conference held in Beijing in May, Chinese firm **Baidu** confirmed the selection of Kalray and the MPPA® platform as one of the cornerstones of its Apollo solution, designed for autonomous vehicles and utilized by a number of autonomous vehicle manufacturers;
- A **first tier car manufacturer** has also selected Kalray as part of a large-scale project for a level 3 autonomous vehicle<sup>3</sup>, scheduled to enter production in 2022 and MPPA® is under evaluation by a number of other leading OEMs;
- Lastly, Kalray has announced its collaboration with **eSOL**, a major player in the embedded market and the automotive sector in particular, and one of the leading developers of real-time embedded software which will integrate Kalray's MPPA® processor.

<sup>3</sup> A level that allows you to assign control to the vehicle in certain situations, for example in highway traffic jams. The human driver must nevertheless remain behind the wheel. They are expected to take back control in a few seconds, when the vehicle signals that it is no longer able to drive autonomously (for example, if there are no road markings on the roadway).





## COOLIDGE ON THE LAUNCH PAD

On the technology front, Kalray confirms the availability of **Coolidge**, its third-generation processor designed especially for artificial intelligence applications, for initial customer prototyping in the second half of **2019** with production expected to begin in 2020. Coolidge has reached the end of its development process and start of production of the first prototypes is scheduled for end July.

At the same time, Kalray has continued to adapt its AccessCore™ software suite for Coolidge as well as the development of Coolidge-based boards in order to provide its customers with a comprehensive environment by 2019 year-end. Kalray has already received **initial product development requests** from customers in both the data center and automotive sectors.

Coolidge presents major improvements in the operation of MPPA® technology for both data center and intelligent vehicle customers: significant performance enhancement, expansion of artificial intelligence capacity, greater programming capabilities and high-performance interfaces, for next generation data centers.

## H1 REVENUES IN LINE WITH THE ROADMAP AND SALES OUTLOOK CONFIRMED

In H1 2019, revenues amounted to €455,000 (compared to €322,000 in H1 2018), meeting management expectations in this pre-volume phase. These revenues comprise board sales, development systems and licenses as well as services for customer assessment and qualification phases.

Kalray confirms its forecast **sales growth** for **H2 2019**. As in 2018, income will primarily come from **assessment, development and service contracts** that could reach a valuation of several tens or even hundreds of thousands of euros each, enabling Kalray to assist and work alongside its customers in developing their next generation of products. Kalray is confident that it will generate a significantly higher turnover than that achieved in 2018 (€775,000) from this revenue source alone.

This revenue could be bolstered by two other potential sources of income: the **launch of production of the first boards** based on **Bostan**, the current generation of MPPA®, designed for **data centers in particular around its NVMe-TCP offer**; and the sale of the first **MPPA® technology licenses** for integration within partner products, with two such opportunities currently under discussion.

## 60% OF 2019 STAFF HIRES COMPLETED IN H1

As announced, in order to support its expected increase in business, Kalray has continued to invest, particularly in recruiting new staff. Of the 15 new hires planned for 2019, **9 have been completed in H1**, including 7 within the R&D teams, with highly experienced candidates, particularly for tests and qualifications, as well as application development in data center and automotive teams. Kalray has also hired 2 commercial engineers.

All other operating expenses in 2019 are expected to be on a par with those of 2018.





## €23.3 MILLION OF AVAILABLE CASH AT JUNE 30, 2019

At June 30, 2019 available cash amounted to €23.3 million (compared to €28.8 million at December 31, 2018), enabling Kalray to pursue its technological roadmap and its commercial deployment plans. This level of cash includes capex related to the continued development of Coolidge over the period.

In FY 2019, Kalray forecasts cash out in line with that of FY 2018. The positive working capital variation should offset the increased investments, related primarily to the launch of Coolidge.

### Next publication:

**Wednesday, September 18, 2019 (after market close):** H1 2019 results

## ABOUT KALRAY

Kalray (Euronext Growth Paris — FR0010722819 — ALKAL) is the pioneer in processors for new intelligent systems. As a real technological breakthrough, “intelligent” processors have the capability to analyze on the fly, and in an intelligent manner, a very large amount of information, and to make decisions and interact in real time with the outside world. These intelligent processors will be deployed extensively in fast-growing sectors, such as new-generation networks (intelligent data centers) and autonomous vehicles, as well as healthcare equipment, drones, and robots. Kalray’s offering encompasses both processors and complete solutions (electronic boards and software). Created in 2008 as a spin-off of CEA (“Commissariat à l’énergie atomique et aux énergies alternatives”, the French Alternative Energies and Atomic Energy Commission), Kalray serves customers such as server manufacturers, intelligent system integrators, and consumer product manufacturers, including car makers. For more information, visit [www.kalrayinc.com](http://www.kalrayinc.com).

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