



## BrainChip and Socionext Provide a New Low-Power Artificial Intelligence Platform for AI Edge Applications

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- Socionext to offer its SynQuacer™ Multi-Core Processor with BrainChip's Akida™ SoC
  - BrainChip will provide training, technical and customer support
  - Companies will jointly identify target end markets and customers
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**Aliso Viejo, California – 22 March 2020** – [BrainChip Holdings Ltd](#) (ASX: BRN), a leading provider of ultra-low power high performance AI technology today announced that [Socionext Inc.](#), a leader in advanced SoC solutions for video and imaging systems, will offer customers an Artificial Intelligence Platform that includes the Akida SoC, an ultra-low power high performance AI technology.

BrainChip has developed an advanced neural networking processor that brings artificial intelligence to the edge in a way that existing technologies are not capable. This innovative, event-based, neural network processor is inspired by the event-based nature of the human brain. The resulting technology is high performance, small, ultra-low power and enables a wide array of edge capabilities that include local inference and incremental learning.

Socionext has played an important role in the implementation of BrainChip's Akida IC, which required the engineering teams from both companies to work in concert. BrainChip's AI technology provides a complete ultra-low power AI Edge Network for vision, audio, and smart transducers without the need for a host processor or external memory. The need for AI in edge computing is growing, and Socionext and BrainChip plan to work together in expanding this business in the global market.

Complementing the Akida SoC, BrainChip will provide training and technical customer support, including network simulation on the Akida Development Environment (ADE), emulation on a Field Programmable Gate Array (FPGA) and engineering support for Akida applications.

Socionext also offers a high-efficiency, parallel multi-core processor SynQuacer™ SC2A11 as a server solution for various applications. Socionext's processor is available now and the

two companies expect the Akida SoC engineering samples to be available in the third quarter of 2020.

In addition to integrating BrainChip's AI technology in an SoC, system developers and OEMs may combine BrainChip's proprietary Akida device and Socionext's processor to create high-speed, high-density, low-power systems to perform image and video analysis, recognition and segmentation in surveillance systems, live-streaming and other video applications.

"Our neural network technology enables ultra-low power AI technology to be implemented effectively in edge applications", said Louis DiNardo, CEO of BrainChip. "Edge devices have size and power consumption constraints that require a high degree of integration in IC solutions. The combination of BrainChip's technology and Socionext's ASIC expertise fulfills the requirements of edge applications. We look forward to working with the Socionext in commercial engagements."

"As a leading provider of ASICs worldwide, we are pleased to offer our customers advanced technologies driving new innovations," said Noriaki Kubo, Corporate Executive Vice President of Socionext Inc. "The Akida family of products allows us to stay at the forefront of the burgeoning AI market. BrainChip and Socionext have successfully collaborated on the Akida IC development and together, we aim to commercialize this product family and support our increasingly diverse customer base."

[This announcement is authorised for release by the BRN Board of Directors.](#)

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## **About Brainchip Holdings Ltd (ASX: BRN)**

BrainChip is a global technology company that has developed a revolutionary advanced neural networking processor that brings artificial intelligence to the edge in a way that existing technologies are not capable. The solution is high performance, small, ultra-low power and enables a wide array of edge capabilities that include local training, learning and inference. The company markets an innovative event-based neural network processor that is inspired by the spiking nature of the human brain and implements the network processor in an industry standard digital process. By mimicking brain processing BrainChip has pioneered a spiking neural network, called Akida™, which is both scalable and flexible to address the requirements in edge devices. At the edge, sensor inputs are analyzed at the point of acquisition rather than transmission to the cloud or a datacenter. Akida is designed to provide a complete ultra-low power AI Edge Network for vision, audio and smart transducer applications. The reduction in system latency provides faster response and a more power efficient system that can reduce the large carbon footprint datacenters.

## **About Socionext Inc.**

Socionext is a global, innovative enterprise that designs, develops and delivers System-on-Chip based solutions to customers worldwide. The company is focused on technologies that drive today's leading-edge applications in consumer, automotive and industrial markets.

Socionext combines world-class expertise, experience, and an extensive IP portfolio to provide exceptional solutions and ensure a better quality of experience for customers. Founded in 2015, Socionext Inc. is headquartered in Yokohama, and has offices in Japan, Asia, United States and Europe to lead its product development and sales activities. For more information, visit [www.socionext.com](http://www.socionext.com).

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Additional information is available at <https://www.brainchipinc.com>

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