



## ASX Announcement

### BrainChip Holdings Ltd December 2019 Quarter Update

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- Cash Balance as of 31 December 2019 US\$7.6M
  - Release of 14.98M collateral shares issued in conjunction with Convertible Securities Agreement subsequent to 31 December
  - Company attends two industry conferences and conducts an Akida workshop
  - Company granted a US patent for a dynamic neural network within an AI device
  - Convertible Securities obligation reduced by US\$1.01M during the quarter
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**Sydney, Australia – 30 January 2020:** BrainChip Holdings Ltd (**ASX: BRN**), a leading provider of ultra-low power, high performance edge AI technology, provides the following update for the quarter ending 31 December 2019 to accompany the Company's Appendix 4C lodged with the ASX and supplement the Year-End Update provided on 3 January 2020.

The Company ended the December quarter with US\$7.6M in cash. Cash outflows for the December quarter were US\$2.54M. Total cash inflows for the December quarter were US\$359,000 including research and development rebates, receipts from customers and interest income. For the March 2020 quarter the Company forecasts total cash outflows of US\$3.97M. Total cash outflows include non-recurring expenses of US\$1.5M associated with the Akida device development previously forecasted in the December 2019 quarter. This leaves a March quarter cash outflow before the non-recurring Akida development expense of US\$2.47M

Subsequent to the quarter the Company received US\$342,000 for the release of 10M Collateral Shares issued in conjunction with the Convertible Securities Agreement entered into on 26 June 2019. In addition, a further US\$136,799 of Convertible Notes were retired and this was used to reduce the collateral shares outstanding by 4,979,475. The Company continues to control expenses, primarily employee headcount, while completing the Akida development and marketing the Company's intellectual property.

The Company attended two industry conferences and conducted an Akida Workshop in Perth, Western Australia during the quarter.

- At the Neural Information Processing Conference in Vancouver, Canada the Company presented a demonstration featuring its Akida™ Neuromorphic System-on-Chip Technology (NSoC), recognizing and classifying hand gestures for robotics applications in conjunction with Tata Consulting Services Pty
- Anil Mankar CDO, presented the Akida NSoC at the Linley Fall Processor Conference. Subsequently Linley's analysts outlined Akida's core capabilities, architecture,



throughput potential and pointed out Akida's biologically inspired design that mimics the spiking behavior of biological neurons. The report also describes BrainChip's two business models related to Akida and its deployment.

- Peter van der Made CTO, introduced developers and data scientists to the Akida device and development environment in advance of production. Mr van der Made facilitated the installation and execution of the Akida Development Environment (ADE). The focus of the workshop included the novelty of the design, utilization of Akida as a complete network and application of the ultra-low power Akida design for edge applications.
- The Company was granted United States Patent number 10,410,117 which addresses a dynamic neural network within an AI device. During a learning process, values are generated and stored in the synaptic registers of the AI device to generate a training model. Training models are themselves stored in the dynamic neural function library of the AI device, and the function library can then be used to train another device.
- During the quarter Convertible Securities obligation was reduced by US\$1.01M satisfied by the issuance of 41.2M ordinary shares.



The Company is pleased to provide additional information on the Company's activities below.

The Company expects to begin wafer fabrication of the Akida NSoC as foundry services and scheduled wafer starts become available. Costs associated with the development and manufacturing of the Akida device are included in the Company's budgeted expenses. Verification, package design, test hardware and software development will be completed in parallel with physical design and wafer fabrication.

The Company continues to prioritize engineering, sales and marketing resources on potential customers for the Akida NSoC and IP. The Company focuses exclusively on edge applications for both IP and the Akida device. Edge applications include use cases where data is acquired by a variety of transducers and a benefit is derived by processing the information at the transducer, rather than sending all data to an enterprise data center or cloud for processing. By providing analytics and correlation at the edge an AI enabled edge device reduces system latency, frees system bus bandwidth and system processor capacity.

The Company continues with the Akida product development and engagements with early access manufacturers to bring a first-in-kind product to market. The Akida NSoC enables AI Edge solutions for high-growth, high-volume applications that have been difficult to achieve with existing AI architectures.



The Company competes with other well-financed private companies and time-to-market and performance are paramount for success. The Akida device for AI Edge applications is a major technology advancement and the intellectual property is now available to license.

**This announcement was 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. Additional information is available at <https://www.brainchipinc.com>.

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