



ASX Announcement

## BrainChip and VORAGO Technologies Agree to Collaborate through the Akida™ Early Access Program

*Agreement to Support Phase I of NASA Program for Radiation-Hardened Neuromorphic Processor*

**Aliso Viejo, California – 01 September 2020** – [BrainChip Holdings Ltd](#) (ASX: BRN), a leading provider of ultra-low power high performance AI technology, today announced that VORAGO Technologies has signed the Akida Early Access Program Agreement. The collaboration is intended to support a Phase I NASA program for a neuromorphic processor that meets spaceflight requirements. The BrainChip Early Access Program is available to a select group of customers that require early access to the Akida device, evaluation boards and dedicated support. The EAP agreement includes payments that are intended to offset the Company's expenses to support partner needs.

The Akida neuromorphic processor is uniquely suited for spaceflight and aerospace applications. The device is a complete neural processor and does not require an external CPU, memory or Deep Learning Accelerator (DLA). Reducing component count, size and power consumption are paramount concerns in spaceflight and aerospace applications. The level of integration and ultra-low power performance of Akida supports these critical criteria. Additionally, Akida provides incremental learning. With incremental learning new classifiers can be added to the network without retraining the entire network. The benefit in spaceflight and aerospace applications is significant as real-time local incremental learning allows continuous operation when new discoveries or circumstances occur.

VORAGO Technologies is a privately held, high technology company based in Austin, Texas with over 15 years of experience in providing radiation-hardened and extreme-temperature solutions for the Hi-reliability marketplace, and recognized as one of Inc 5000's Fastest Growing Private Companies in America. VORAGO's patented HARDSIL® technology uses cost-effective high-volume manufacturing to harden any commercially designed semiconductor component for extreme environment operation, and has created a number of solutions throughout Aerospace, Defense and Industrial applications. VORAGO Technologies opens up a new world of possibilities for customer designs, no matter how hostile the environment. [www.voragotech.com](http://www.voragotech.com)

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Louis DiNardo, BrainChip CEO commented, “We are both excited and proud to participate in this Phase I program with VORAGO Technologies and support NASA’s desire to leverage neuromorphic computing in spaceflight applications. The combination of benefits from the Akida neuromorphic processor and a radiation-hardened process brings significant new capabilities to spaceflight and aerospace applications”.

Bernd Lienhard, VORAGO CEO added, “We are thrilled and honored to partner with BrainChip to harness the radiation hardening capabilities of our patented HARDSIL® technology for the Phase I program with NASA. Our ongoing mission of creating components with increased availability and unmatched solutions in aerospace and defense applications paired with the Akida neuromorphic processor will create unprecedented standards moving forward in the industry.”

**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 is producing a groundbreaking neuromorphic processor that brings artificial intelligence to the edge in a way that is beyond the capabilities of other products. The chip is high performance, small, ultra-low power and enables a wide array of edge capabilities that include on-chip training, learning and inference. The event-based neural network processor is inspired by the spiking nature of the human brain and is implemented in an industry standard digital process. By mimicking brain processing BrainChip has pioneered a processing architecture, 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 through transmission via the cloud to a data center. Akida is designed to provide a complete ultra-low power and fast AI Edge Network for vision, audio, olfactory 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 of data centers.

## About VORAGO

VORAGO Technologies is a privately held, high technology company based in Austin, Texas with over 15 years of experience in providing radiation-hardened and extreme-temperature solutions for the Hi-rel marketplace. VORAGO's patented HARDSIL® technology uses cost-effective high-volume manufacturing to harden any commercially designed semiconductor component for extreme environment operation, and has created a number of solutions throughout Aerospace, Defense and Industrial applications. VORAGO Technologies opens up a new world of possibilities for your designs, no matter how hostile the environment. [www.voragotech.com](http://www.voragotech.com)

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

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