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ASX Announcement

BrainChip Granted New US Patent

- Patent US 11,853,862 "Method, Digital Electronic Circuit and System for Unsupervised Detection of Repeating Patterns in a Series of Events" issued to BrainChip.
- BrainChip's portfolio now comprises 19 issued patents.

Sydney – 27 December 2023:

BrainChip Holdings Ltd ("BrainChip" or the "Company") (ASX: BRN, OTCQX: BRCHF, ADR: BCHPY), the world's first commercial producer of ultra-low power neuromorphic AI IP, today announced that its patent portfolio is further strengthened with the issue of another US patent.

1. US 11,853,862 Issuance:

Patent, US 11,853,862 was issued on 26 December 2023 by the US Patents and Trademarks Office (USPTO). The patent is considered by the Company to be a valuable IP asset that facilitates learning in a digital hardware implementation of a spiking network which is economical in terms of computing time, energy consumption and silicon area, while being very effective for performing robust unsupervised detection (i.e. learning) of repeating patterns, even where these patterns are embedded in a high level of noise.

BrainChip's Akida™ IP and MetaTF™ tools seamlessly transform contemporary neural networks into event-based or spiking networks. This patented technology uniquely synergizes with the converted spiking networks, enabling the streamlined deployment of edge learning algorithms and unlocking use cases that conventional AI tools or solutions cannot attain.

Key features of patent:

- Learning is performed by the swapping of weights within a binary weight vector such that the weight vector becomes representative of an input signal while keeping constant the active number of weights resulting in homeostasis.
- The bit-swap learning method can be implemented with minimal digital logic in silicon, and hence enables in-situ learning within an edge device. This method provides for the rapid customization of a device.
- The learning method works with only a few presentations of new data speeding up the learning process and addressing limited data set challenges faced by numerous sensor use cases.

- The learning method simplifies the implementation of the Spike Timing Dependent Plasticity (STDP) learning rule which requires the capture and processing of precise spike timing information.

BrainChip's portfolio now comprises 19 issued patents. In addition, there are 30 pending patent applications across the US, Europe, Australia, Canada, Japan, Korea, India, Brazil, Russia, Mexico, and Israel.

This announcement is authorised for release by the BRN Board of Directors.

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About BrainChip Holdings Ltd (ASX: BRN, OTCQX: BRCHF, ADR: BCHPY)

BrainChip is the worldwide leader in edge AI on-chip processing and learning. The company's first-to-market neuromorphic processor, Akida™, mimics the human brain to analyse only essential sensor inputs at the point of acquisition, processing data with unparalleled efficiency, precision, and economy of energy. Keeping machine learning local to the chip, independent of the cloud, also dramatically reduces latency while improving privacy and data security. In enabling effective edge compute to be universally deployable across real-world applications such as connected cars, consumer electronics, and industrial IoT, BrainChip is proving that on-chip AI, close to the sensor, is the future, for its customers' products, as well as the planet. Explore the benefits of Essential AI at www.brainchip.com.
Follow BrainChip on Twitter: https://www.twitter.com/BrainChip_inc
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Additional information is available at https://www.brainchipinc.com

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