![brainchip logo]

BrainChip granted two new US patents

- Patent US 11,157,800 "Neural processor based accelerator system and method"
- Patent US 11,157,798 "Intelligent Autonomous Feature Extraction System Using Two Hardware Spiking Neutral Networks with Spike Timing Dependent Plasticity"
- One further patent expected to be granted soon

Sydney – 27th October 2021: BrainChip Holdings Ltd (ASX:BRN, OTCQX: BRCHF), the world's first commercial producer of neuromorphic artificial intelligence chips today announced that the US Patents and Trademarks Office (USPTO) has granted two new US patents. The patent grant became official on the USPTO web site at 12:05pm on the 26th of October.

BrainChip CEO and founder Peter van der Made said, "These new patents, incremental to the patent that was granted last week, and the four patents previously granted to BrainChip, represent a significant milestone in protecting our IP and "future proofing" the development of forthcoming generations of Akida neuromorphic AI products.

The Akida technology and chip are now protected with seven patents. We intent to increase our patent portfolio significantly over the next few years as we continue to research and expand the horizon of Artificial Intelligence capabilities".

Patent US 11,157,800:

This patent protects a configurable spiking neural network based accelerator system and a method for performing functions associated by a configurable spiking neural network.

Key Features:

- The accelerator system includes artificial spiking neurons and dynamic synapses that perform dedicated neural computation tasks

- Configuration parameters set by a host computer, configure the spiking neural network and thereby define its function. The configuration parameters include the connections between neurons and synapses, neuron types, neurotransmitter types, and neuromodulation sensitivities of specific neurons. All subsequent neural processing is performed by the artificial spiking neurons and synapses in hardware.

- The inference and efficacy of connections between neurons and synapses can be determined by autonomous learning by the digital hardware logic operating without software involvement.

Details of the patent can be obtained at - https://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=%2Fnetahtml%2FPTO%2Fsrchnum.htm&r=1&f=G&l=50&s1=11,157,800.PN.&OS=PN/11,157,800&RS=PN/11,157,800

Patent US 11,157,798:

This patent protects a system and a method for autonomously extracting features in an artificial neural network.

Key Features:

- Embodiments of the present invention provide a system for autonomous feature extraction for improved machine learning, feature extraction and output labeling, through spike timing dependent plasticity and lateral inhibition

- The system includes feedforward hardware-only circuitry that includes a hierarchical arrangement of a first artificial spiking neural network and a second artificial spiking neural network

- The first artificial spiking neural network includes a first plurality of digital neurons that laterally inhibits other digital neurons of the first artificial spiking neural network, wherein the other neurons learn different features to the one of the first plurality of digital neurons

Details of the patent can be obtained at - https://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=%2Fnetahtml%2FPTO%2Fsrchnum.htm&r=1&f=G&l=50&s1=11,157,798.PN.&OS=PN/11,157,798&RS=PN/11,157,798

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

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

centre. 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 centres.

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