

BrainChip announces availability of the 2nd Generation Akida IP Solution

- The 2nd generation of BrainChip's digital, neuromorphic Akida™ IP solution is now available.
- Adds advanced support for complex traditional neural network models, vision transformers and parallel processing of sequential, temporal data at the Edge.
- Enables the design of a wide range of compelling implantable, wearable, or portable Edge AI devices that consume very little energy.

Sydney – 3rd October 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, announces the Early Access availability of its 2nd generation Akida™ IP solution.

The 2nd generation Akida platform is designed for extremely energy-efficient processing of complex neural network models on Edge devices. The support for 8-bit weights, activations, and long-range skip connections, expands the reach of models that are accelerated completely in Akida's hardware, along with other features and capabilities that help to future-proof the product.

The introduction of Temporal Event Based Neural Nets (TENNs) revolutionises the advanced processing for multi-dimensional streaming and time-series data. This can radically reduce model size and improve performance, as well as efficiency, without compromising accuracy, which is an important consideration for Edge devices.

Combining the benefits of TENNs with hardware acceleration of Vision Transformer (ViT) models unlocks the potential to create game-changing Edge devices that can process advanced vision and video applications in milliwatts or audio and other similar applications in microwatts at the sensor.

The second generation MetaTF software enables developers to evaluate the capabilities of Akida, optimize, and customize their designs to get a head start on architecting their System on a Chip (SoC) along with their software solutions. In addition to TensorFlow, MetaTF will support ONNX which allows for greater compatibility across various frameworks including PyTorch.

The 2nd generation Akida platform delivers ultra-efficient, real-time AI processing on multi-dimensional, streaming data including audio, speech, vision and is ideal for multi-sensor applications. This is a critical need in a wide range of markets such Smart Home, Smart City, Industrial, Healthcare and Automotive, as they embrace a Hybrid AI approach to scale and reduce dependency on the Cloud. This hybrid architecture is the steppingstone to the Artificial Intelligence of Things (AIoT), which is projected to be a \$1.2T market in 2030 according to Forbes Business Insights.

"This is a significant step in BrainChip's vision to bring unprecedented AI processing power to Edge devices, untethered from the cloud," said Sean Hehir, CEO, BrainChip. "With Akida's 2nd generation in advanced engagements with target customers, and MetaTF enabling early evaluation for a broader market, we are excited to accelerate the market towards the promise of Edge AI".

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

About BrainChip Holdings Ltd (ASX: BRN, OTCQX: BRCHE, 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.

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