

Poptart AI E3.S Module



Dual TPU for 52 TOPS

Performance vs Power

The Poptart E3.S AI module provides 52 TOPS from as little as 10 Watts. It uses 2 Hailo-8 Edge AI processors, featuring up to 26 tera-operations per second (TOPS) each, which significantly outperforms other edge processor modules. Using an E3.S, it's possible to power both AI processors to deliver performance over power efficiency that is superior to other leading solutions by a considerable order of magnitude.

Plug-and-Play & Hot-Swap for Servers

Designed for easy deployment, the Poptart E3.S can be inserted directly into E3.S slots, typically used for SSDs, to instantly enhance artificial intelligence capabilities in large server configurations. It can support multiple parallel neural networks processing data from a large array of camera inputs or function as a unified Large Language Model array to tackle complex AI tasks. At much lower power than GPU modules or Add-In-Cards, a solution using Poptart can change the game for a data center's power envelope.

Neural Network Models & Application Support

The AI Processors integrated onto the Poptart E3.S have a robust software suite that supports state-of-the-art deep learning models & applications out-of-the-box. With a comprehensive dataflow compiler that enables customers to port their neural network models easily & quickly. With support for AI frameworks: TensorFlow, TensorFlow Lite, Keras, PyTorch & ONNX, Poptart supports Edge Neural Nets today and LLM Generative AI in the future.

The Poptart E3.S uses two Hailo-8 Edge AI processors, featuring up to 26 tera-operations per second (TOPS) each. With an architecture that takes advantage of the core properties of neural networks, the Hailo-8 neural chips designed onto the E3.S allow edge devices to run deep learning applications at full scale more efficiently, effectively, and sustainably than other AI chips and solutions.

Part Number	Description
UCT201-021-E3	Dual AI TPU (7.5mm Heatsink) w/12 lane Switch

Poptart AI Module	
AI Processor	Hailo-8 (Dual)
Form Factor	E3.S (EDSFF)
Power (Max)	10 Watts
Performance	52 TOPS
Interface	EDSFF (PCIe Gen 3)
Supported Frameworks	TensorFlow, TensorFlow Lite, ONNX, Keras, Pytorch
Supported OS	Linux, Windows
Certification	CE, FCC, VCCI, KCC, WEEE
Dimension	7.5mm x 76mm x 112.75mm
Operating Temperature	0°C ~ 70°C

Poptart (UCT201-021-E3) Performance (With Atom X6414RE)

Network (AI)	Frames per Second (HW)
Resnet_V1_50-Imagenet	2692.61
Yolov3_Gluon	50
Yolov3	50.4
Yolov4-leaky	56.59
Centerpose_regentx_1.6gf	4633.13

Eight Poptart (UCT201-021-E3) Module Performance (w/AMD Genoa System)

Network (AI)	Frames per Second (HW)
Resnet_V1_50-Imagenet	21.5K
Yolov3_Gluon	400
Yolov3	403.2
Yolov4-leaky	452.72
Centerpose_regentx_1.6gf	37.1K