HAILO

Hailo-8™ Al Processor

Delivering data center class performance to edge devices



Key Features & Benefits

Unprecedented AI compute power of 26 Tera-Operations Per Second (TOPS)

Best-in-class power efficiency with typical power consumption of 2.5W

Enabling real-time, low latency & high-efficiency AI inferencing on edge devices Highest cost-efficiency (TOPS/\$) compared with existing solutions

Scalable:

- → Enabling simultaneous processing of multi-streams & multi-models
- Supporting multiple Hailo-8™ devices

Commercial, Industrial & Automotive grades, supporting:

- → Industrial: -40°C to 85°C
- → Automotive: -40°C to 105°C

Easy hardware integration; Does not require external memory

Key Benefits of High-Performance Al Analytics on the Edge

Advanced analytics algorithms can run on high-resolution & high-frame rate video, resulting in:

- → High accuracy & ability to detect small objects
- → Detection of fast-moving objects
- Significant reduction in false alerts
- Generation of comprehensive metadata

Low latency & real-time alerts

Efficiency & cost-savings

More robust capabilities & richer applications

Hailo-8™ Offering

Chip On Board (COB)



Hailo-8™





Hailo-8™ Century

Modules enable fast time to market & easy HW integration







Hailo-8™ M.2 Key M B+M A+E

Hailo-8R™ mPCle

Hailo-8™ Architecture

Unique, powerful and scalable structure-driven dataflow architecture that takes advantage of the core properties of neural networks. It enables edge devices to run deep learning applications at full scale more efficiently, effectively, and substantially than traditional solutions, while significantly lowering costs.

Starter Kit

M.2 module with Hailo-8™ for development & prototyping of edge AI & specifically, video analytics solutions



Comprehensive Software Suite

Al software suite which seamlessly integrates with existing deep learning development frameworks to allow smooth and easy integration in existing development ecosystems. The Hailo AI software suite includes:

Model Build Environment Runtime Environment Model Build Computer Host Processor User **Model Zoo** Machine Learning Applications Frameworks **TAPPAS** A variety of common & state-of-the-art pre-A set of full application Application examples **1** () trained and retrainable examples, implementing pipeline elements and models in TensorFlow & ONNX pre-trained AI tasks User **Hailo Dataflow HailoRT** Models OS IP Compiler Production-grade, Stack A software toolset for precompiled, runtime optimization & translation software for the host Ethernet 1 PCIe processor of trained models to Hailo-8™ format Hailo Dataflow Hailo-8™ Device ■ Hailo SW component Other SW component

Neural Network Models & Application Support

Al frameworks: TensorFlow. TensorFlow Lite, Keras, PyTorch & ONNX

Host Architectures: X86, ARM

OSs: Linux, Windows

Comprehensive dataflow compiler enables customer to port their neural network models easily & quickly

Automotive Compliance

A-SPICE L2 development flow

AEC-Q100 Grade 2 compliant

ISO-26262 ASI-B (D) compliant

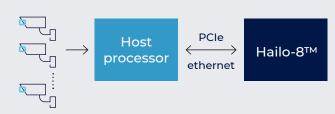
Hailo Ecosystem

Hailo collaborates with partners globally to offer products for edge solutions — from small and fanless devices, to ruggedized industrial appliances, high capacity video analytics platforms, embedded computing platforms for automotive & robotics and more.

To select your Hailo-based AI platform click here

System Usage

Co-processor connected to the various types of host processors via PCIe



Industries



Automotive



Industrial Automation



Security



Retail