HAILO

Hailo-8 AI 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 AI 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

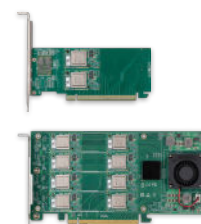## Hailo-8 Offering

Chip On Board (COB)

Hailo-8

Modules enable fast time to market & easy HW integration

Hailo-8 M.2
Key M   B+M   A+E

Hailo-8R mPCIe

Hailo-8 Century High Performance PCIe Cards

Small form factor
52-104 TOPS
0802S, 0802, 0803, 0804

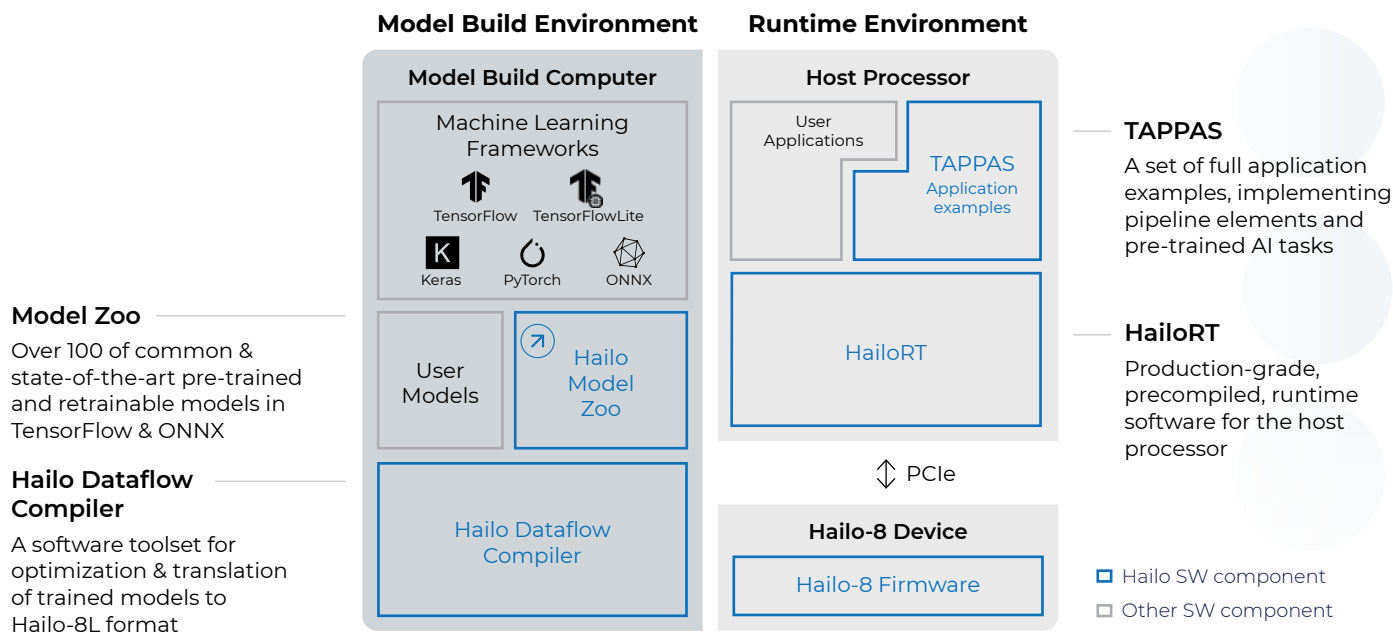**Wide host compatibility**
104-208 TOPS
0804S, 0805S, 0806S, 0807S, 0808S

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.

Comprehensive Software Suite

AI 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

Machine Learning Frameworks

TensorFlow TensorFlowLite

Keras PyTorch ONNX

User Models

Hailo Model Zoo

Hailo Dataflow Compiler

Host Processor

User Applications

TAPPAS Application examples

HailoRT

PCIe

Hailo-8 Device

Hailo-8 Firmware

Model Zoo

Over 100 of common & state-of-the-art pre-trained and retrainable models in TensorFlow & ONNX

Hailo Dataflow Compiler

A software toolset for optimization & translation of trained models to Hailo-8L format

TAPPAS

A set of full application examples, implementing pipeline elements and pre-trained AI tasks

HailoRT

Production-grade, precompiled, runtime software for the host processor

☐ Hailo SW component
☐ Other SW component

Neural Network Models & Application Support

AI 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 leading partners to seamlessly integrate their products with ours, creating easy-to-use, dependable, and high-quality solutions that adhere to the industry's most rigorous standards. Our extensive network of trusted partners covers various regions and market segments, delivering innovative solutions to our customers.

To view our extensive network click here

System Usage

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

Host processor — PCIe — Hailo-8

Part Number
Hailo-8 Industrial: HNC18BI11BH

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

Click to order Hailo-8 M.2 Starter Kit

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