HAILO

Hailo-8L Entry-Level AI Accelerator

Delivering data center class performance to edge devices

Key Features & Benefits

13 Tera-Operations Per Second (TOPS)

Enabling real-time, low latency & high-efficiency AI inferencing on edge devices

Easy hardware integration; Does not require external memory

Best-in-class power efficiency with typical power consumption of 1.5W

High cost-efficiency (TOPS/$) compared with existing solutions

Commercial & industrial grades, supporting -40°C to 85°C

Robust software suite supports state-of-the-art deep learning models & applications out-of-the-box

Scalable:
→ Enabling simultaneous processing of multi-streams & multi-models
→ Future-ready — software compatibility when migrating to Hailo-8 for more powerful AI

Key Benefits of High-Performance AI Analytics on the Edge

Advanced AI video analytics for:
→ 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

Hailo-8L Offering

Chip On Board (COB)

Hailo-8L

Modules enable fast time to market & easy HW integration
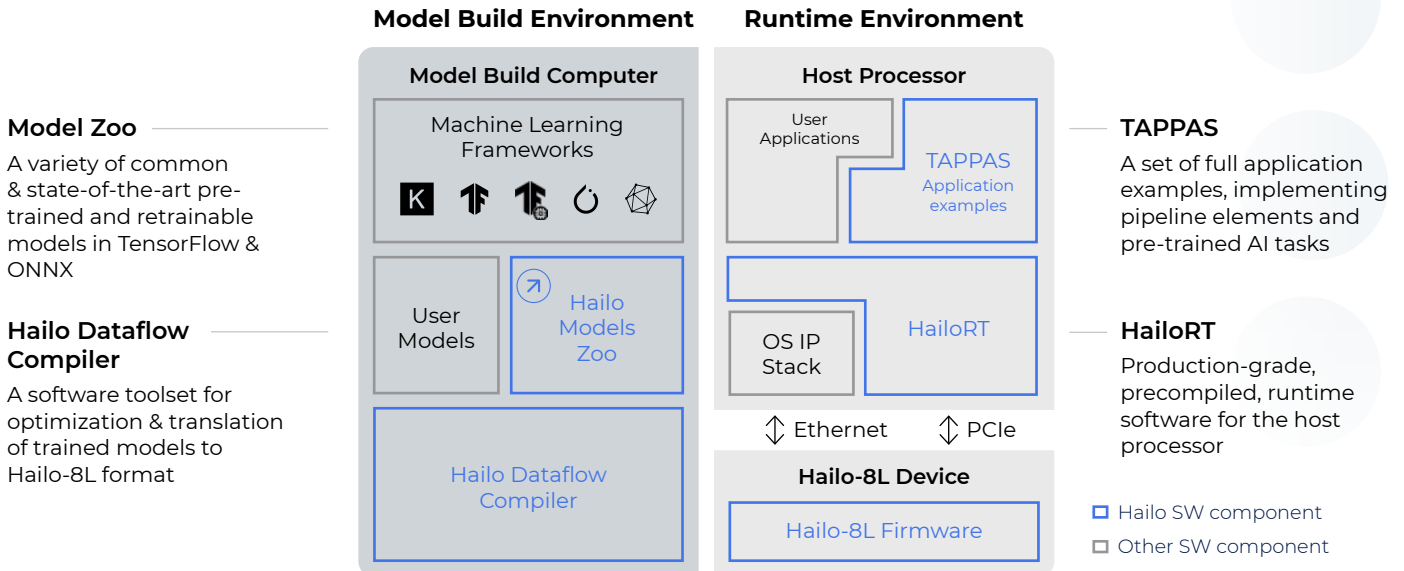

Hailo-8L M.2 Key B+M

Hailo-8L M.2 Key A+E

Hailo-8L 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 is future proof, supporting all Hailo-8 product lines, and includes:

Model Zoo

A variety 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

Model Build Environment

Model Build Computer

- Machine Learning Frameworks
- User Models
- Hailo Models Zoo
- Hailo Dataflow Compiler

Runtime Environment

Host Processor

- User Applications
- TAPPAS Application examples
- OS IP Stack
- HailoRT

↕ Ethernet   ↕ PCIe

Hailo-8L Device

- Hailo-8L Firmware

☐ Hailo SW component
☐ Other SW component

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

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

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

Host processor ⟷ PCIe / ethernet ⟷ Hailo-8L