Valencia AI-H

Intel® Atom based Edge AI Analytics Product powered by Hailo-8™

Product Description

Empowering Visual Inspection with Silicom's Valencia Edge AI Analytics Products using Hailo-8™ M.2 Module: Unleashing AI Inference for Unmatched Performance

Silicom, a pioneer in edge computing, is revolutionizing the field of visual inspection with its Valencia Edge AI Analytics Products.

Powered by the advanced Hailo-8™ M.2 Module, Silicom's solutions deliver exceptional AI inference capabilities, enabling organizations to achieve unparalleled performance and accuracy in visual inspection tasks. In this product introduction, we will explore how Silicom's Valencia Edge AI Analytics Products, equipped with the Hailo-8™ M.2 Module, empower industries to optimize visual inspection processes, enhance efficiency, and drive operational excellence.

Unleashing AI Inference with the Hailo-8™ M.2 Module:

At the core of Silicom's Valencia Edge AI Analytics Products lies the powerful Hailo-8™ M.2 Module. This cutting-edge module is purpose-built for edge computing, offering impressive deep learning and AI inferencing capabilities. With its dedicated Neural Processing Unit (NPU) and advanced architecture, the Hailo-8™ M.2 Module accelerates data processing, enabling real-time analysis of visual data with unparalleled performance. By harnessing the power of the Hailo-8™ M.2 Module, Silicom's Valencia Edge AI Analytics Products deliver swift and precise visual inspection results, revolutionizing the way organizations approach quality control and automation.

Enhancing Visual Inspection Performance:

Silicom's Valencia Edge AI Analytics Products, powered by the Hailo-8™ M.2 Module, excel in enhancing visual inspection performance. Leveraging advanced deep learning algorithms, these solutions enable the rapid detection, classification, and analysis of visual data, delivering superior accuracy and efficiency. From identifying defects in manufacturing processes to detecting anomalies in security surveillance, Silicom's Valencia Edge AI Analytics Products provide real-time insights and empower organizations to make data-driven decisions swiftly.

Realizing Operational Efficiency and Cost Savings:

By integrating the Hailo-8™ M.2 Module into the Valencia Edge AI Analytics Products, Silicom enables organizations to achieve operational efficiency and cost savings. Traditional visual inspection methods often rely on manual labor and subjective interpretation, resulting in time-consuming processes and potential errors. However, with Silicom's solutions, powered by the Hailo-8™ M.2 Module, automated visual inspection becomes a reality. The accelerated AI inference capabilities enable faster inspection cycles, reduced human intervention, and improved quality control. As a result, organizations can streamline operations, increase productivity, and minimize costly rework or product recalls.

Seamless Integration and Customization:

Silicom's Valencia Edge AI Analytics Products, coupled with the Hailo-8™ M.2 Module, offer seamless integration and customization options to suit diverse industry requirements. The modular design of the Hailo-8™ M.2 Module enables easy integration into Silicom's products, ensuring compatibility and flexibility. Additionally, Silicom's solutions support customization, allowing organizations to train and deploy specific AI models tailored to their unique visual inspection use cases. This flexibility ensures optimal performance and accuracy, making Silicom's Valencia Edge AI Analytics Products a versatile choice for a wide range of industries.

Silicom's Valencia Edge AI Analytics Products, powered by the Hailo-8™ M.2 Module, represent a breakthrough in visual inspection solutions. By leveraging the advanced AI inference capabilities of the Hailo-8™ M.2 Module, these products empower organizations to optimize visual inspection processes, enhance efficiency, and drive operational excellence. With superior performance, real-time insights, and seamless integration, Silicom's Valencia Edge AI Analytics Products enable industries to achieve unmatched accuracy, productivity, and cost savings in their visual inspection workflows.

Key features

- Intel Atom C1100 power optimized Edge-AI, memory, and storage scale for edge needs
- Native 2.5GbE support
- Expansion options for additional network ports including 10G SFP+ and PoE++
- Powered by Hailo-8™ AI processor with up to 26 TOPS and best-in-class power efficiency

Technical Specifications

General Technical Specifications	
CPU:	• Intel® Atom® C1100 (2-core), C1110 (4core), or C1130 (8-core)
Memory:	• 4GB, 8GB, 12GB, 16GB LPDDR5 Options (Future support for 32GB)
Storage:	• UFS SSD (32GB – 1TB) • eMMC (4GB-256GB) • NVMe M.2 SSD

Network:	• 4x 2.5GbE RJ45
	• Expansion Options
	  ○ 2x 10GbE SFP+
	  ○ 2x 1GbE RJ45 with PoE++ and 2x 1GbE SFP

AI accelerator:	• Hailo-8™ AI processor with up to 26 TOPS and best-in-class power efficiency • PCIe Gen-3.0, 2 or 4 lanes (up to 32 Gbs) • Support TensorFLow, TensorFlow Lite, ONNX, Keras, Pytorch

I/O Connectors:	• 1x USB-A 3.2 • Cisco RJ-45 and micro-USB Console Port (auto-detect)
Security:	• TPM2.0 • Secure Boot • Hardware Root of Trust
Other:	• Two programmable buttons (protruding and recessed) • Three programmable RGB LED's
Form Factor:	• Fan-less Desktop, 220x180x60mm • Fan-Cooled Desktop, 220x180x44mm • Wallmount and Rackmount Kits
Power Input:	• +12 VDC locking barrel jack, external desktop PSU, regional AC cord options

Order Information

P/N	Description	Notes:
80500-0225-E07	Valencia AI-H, 4-core, 8GB LPDDR5, 32GB UFS, 16GB eMMC, Hailo-8	