HAILO

Empowering Intelligence

Hailo-8 Century 0802s User Guide



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Documentation Control

History Table

Version	Date	Description
1.0	April 2024	Initial release

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Table of Contents

1. Introduction 5
1.1. Purpose 5
1.2. Target Audience 5
2. System Requirements 6
3. Specifications 7
3.1. Key Properties 7
3.2. PCIe Connector Pinout 8
3.3. Mechanical Properties 8
4. Integration Flow 9
4.1. Installation 9
4.2. Thermal Design 9
4.3. Integration Tool 9
4.3.1. Installation 9
4.3.2. Tests 9

Table of Figures

Figure 1. Century-0802s 8

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1. Introduction

1.1. Purpose

This document describes how to use the Hailo-8 Century 0802s.

The Hailo-8 Century 0802s card, is part of Hailo-8 high-performance PCIe cards, enabling deep neural network inferencing in real-time, with low power consumption for a broad range of applications on host platforms with an 8/16-lane PCIe slot. The cards include multiple Hailo-8 devices.

1.2. Target Audience

The intended end users of this document are hardware/system designers integrating the Hailo-8 Century 0802s card into their AI edge devices.

Compatible with the PCIe CEM form factor, the Hailo-8 Century 0802s card can be plugged into an existing edge device with a PCIe slot.

For any questions concerning the hardware integration or software installation please contact the Hailo Application Support Team.

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2. System Requirements

Listed below are the basic system requirements for the Hailo-8 Century 0802s PCIe Card:

- **Hardware**:
  - CPU Architecture
    - x86 based; or
    - ARM aarch-64 based
  - PCIe x8 slot

- **Software**:
  - Linux Ubuntu or other distributions
  - Supported kernel versions: multiple, tested on Linux kernel versions 4.15.0-39-generic and 5.0.16-050016-generic.

  or

  - Microsoft Windows 10 64 bits

For software installation instructions please refer to the RT User guide located at the documentation tab of the Hailo Developer Zone https://hailo.ai/developer-zone/documentation/hailort/latest/?sp_referrer=install/install.html

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3. Specifications

3.1. Key Properties

Compliance	
Certification	CE; FCC Class A
Environmental	
Storage Temperature	-20° to 85° C
Operating Temperature	0° to 50° C
Storage/Operating Humidity	5% to 95% RH (non-condensing)
Physical	
Form Factor	PCIe CEM single slot low profile
Dimensions	130 mm x 68.5 mm see Section 4.3 for details
Electrical	
Thermal design power (TDP)	16W
PCI Express Specification	PCI Express CEM Rev. 3.0 Ver 1.0
Interface	PCIe Gen 3, 8-lanes
Peak Performance (INT8)	52 TOPS

Table 1. Key properties

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3.2. PCIe Connector Pinout

This adapter is compatible with per PCI Express CEM form factor and the Hailo-8 Century 0802s card can be plugged into an existing edge device with a PCIe slot

For more information, see the PCI Express CEM Specification Revision 3.0 on the PCISIG website.

3.3. Mechanical Properties

Figure 1 below displays the mechanical outline and dimensions (mm) for the Hailo-8 Century 0802s card.

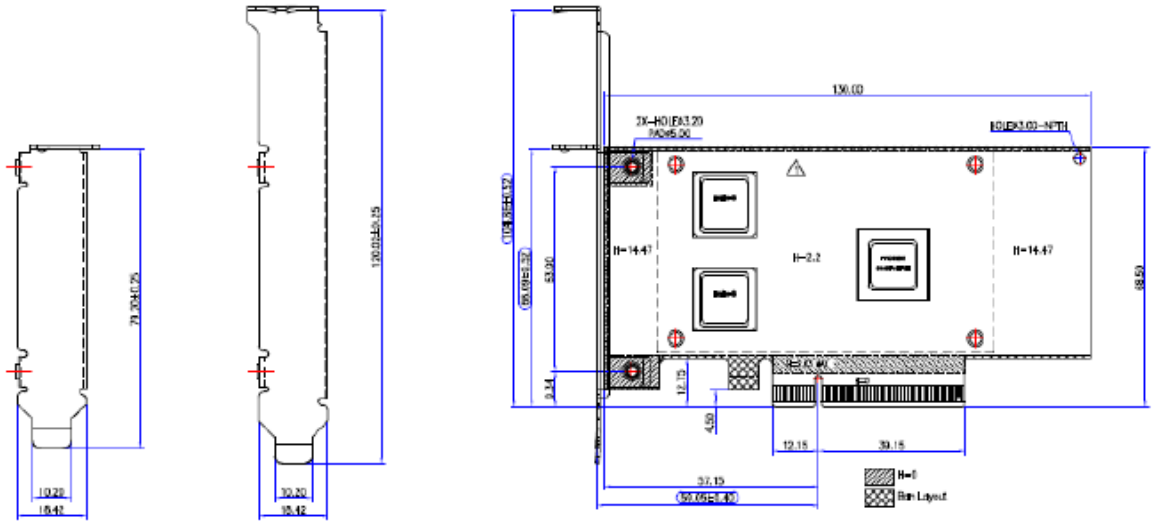


Figure 1. Century-0802s

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4. Integration Flow

The Integration Flow, which is further elaborated in this document is structured by the following installation steps:

4.1. Installation

SW Installation:

The integrator shall follow the installation guidelines as given in the 'HailoRT installation guide' that can be found in https://hailo.ai/developer-zone/documentation/

HW installation:

The Hailo-8 Century 0802s card shall be used only in systems with an available PCIe x8 slot

4.2. Thermal Design

The Hailo-8 Century 0802s are high-performance cards and are supplied with heat dissipation to ensure continued optimal performance.

4.3. Integration Tool

The User guide for the 'Hailo integration tool' can be found at the link: https://hailo.ai/developer-zone/documentation/

4.3.1. Installation

The integrator shall follow the installation instructions given in the 'Hailo Integration tool' user guide which can be found at the link: https://hailo.ai/developer-zone/documentation/.

4.3.2. Tests

The 'Hailo integration tool' supports various tests including Thermal, Stress, PCIe configuration and Performance tests.

The tests objectives, usage, parameters, output, and other information are provided in the 'Hailo Integration Tool User Guide.

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