

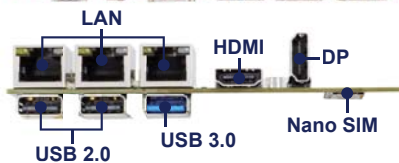
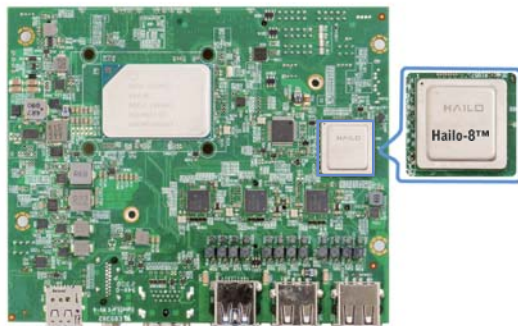
# 21640HL

+ Onboard Hailo-8™ AI Accelerator

2.5" SBC supports Intel® Elkhart Lake ATOM® x6000E Series  
2 x HDMI, 3 x Intel 2.5 Gb Ethernet, 4DI / 4DO, 5 x USB, 2 x COM,  
2 x M.2, 1 x Nano SIM, SMBus  
Onboard Hailo-8™ AI Accelerator

**HAILO**  
Empowering Intelligence

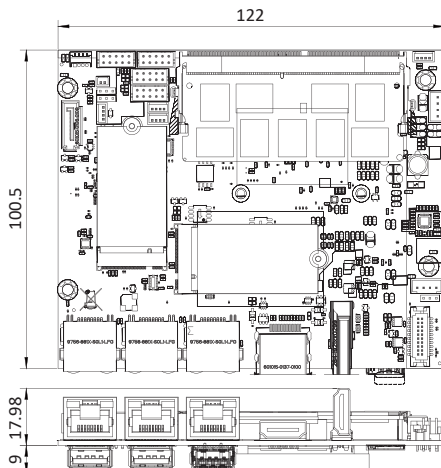
**Hailo-8™**



## Features:

- Intel® Elkhart Lake ATOM® x6413E / J6412 CPU
- Onboard Hailo-8™ AI Accelerator
- 1 x DDR4 SODIMM socket, Max. 32GB
- Independent display: 2 x HDMI (OEM to DP), 1 x eDP
- 3 x Intel 2.5 GbE LAN, 1 x USB 3.0, 5 x USB 2.0
- 2 x COM, 4DI / 4DO, 2 x M.2, 1 x Nano SIM
- TPM 2.0 (Firmware), SMBus

## Dimensions: (Unit:mm)



## Specifications :

- CPU
  - Intel® Elkhart Lake ATOM x6413E Quad Core 2.7 GHz CPU
  - Intel® Elkhart Lake Celeron J6412 Quad Core 2.6 GHz CPU
- MB Chipset
  - Intel® Elkhart Lake SoC
- Graphics
  - Intel® HD Graphics, Support DirectX 12.1 & OpenGL 4.5
- AI Accelerator
  - Onboard Hailo-8™ AI Accelerator
- System Memory
  - 1 x DDR4 3200 MHz SODIMM, Max. 32GB
- Storage
  - 1 x M.2 B Key Type 3042 / 2242 PCIe-SSD
  - 1 x M.2 B Key Type 2242 SATA-SSD
  - 1 x SATA ports 3.0 Data transfer rates up to 6.0 Gb/s (600 MB/s)
- BIOS
  - Insyde UEFI BIOS
- Display
  - 2 x HDMI (OEM Option to DP), eDP
- TPM
  - TPM 2.0 (Firmware) ; OEM Optional to Hardware TPM
- LAN
  - 3 x Intel 2.5 GbE I226-IT (external)
- Expansion Interface
  - 1 x M.2 B Key Type2242 (PCIe x2 / USB 2.0), 1 x Nano SIM
  - 1 x M.2 B Key Type2242 / 3042 (SATA / PCIe / USB 2.0-OEM to USB 3.0)

### Expansion Module

Converter Card	CN064: M.2 B key 2242 to M.2 E Key 2230, WiFi 6 + BT
	CN067: M.2 B key 2242 to M.2 B Key 2252, 4G / 5G (3.7V by BOM Control)

- USB
  - 1 x USB 3.0 (external) ; 2 x USB 2.0 (external) ; 3 x USB 2.0 (internal)

### USB Expansion

USB to	Bluetooth, COM, Mini Card, M.2, Audio board
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- Serial IO
  - 2 x RS232 / 422 / 485 (internal)
  - \*COM1, COM2 pin9 5V / 12V (Option)
- GPIO
  - Hardware digital Input & Output, 4 x DI / 4 x DO
- SMBus
  - 1 x SMBus
- WDT
  - Hardware Watch Dog Timer, 0~255 sec programmable
- Power Input
  - Wide Range +9~24V
- Dimension
  - 2.5" (122 x 100 mm)
- Operation Temperature
  - 20°C~70°C (100 % CPU Usage)
- Operation Humidity
  - 5~95%, non-condensing
- Chassis (OEM I/O Expansion by request)
  - Box PC: SKY 2, NET-III
- OS Support
  - Windows® 10 IOT (64bit)
  - Ubuntu 16.04.3 above, Fedora 26 above, CentOS 7.4 above