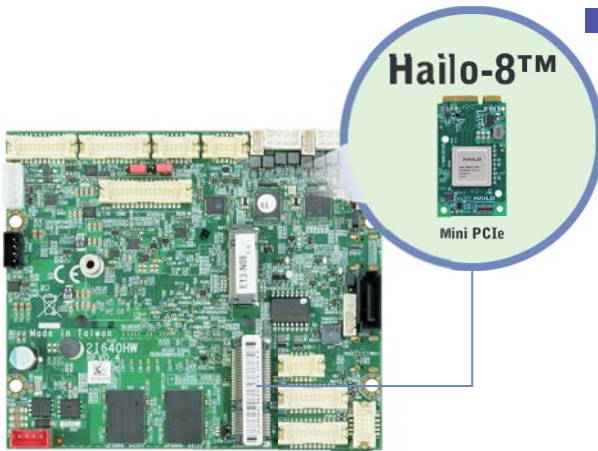


# 21640HW + Hailo-8™ AI module

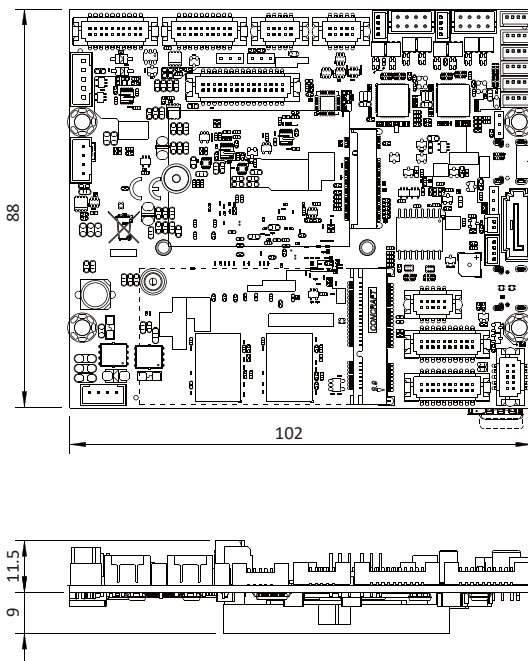
2.5" Plus wafer I/O Embedded IPC Board supports  
Intel® Elkhart Lake ATOM® x6000E Series  
HDMI, LVDS, eDP, 2 x Intel 2.5 Gb Ethernet, 6 x USB,  
Touch Screen, 4 x COM, 1 x Mini PCIe, 1 x PCIe x 2\*, 1 x M.2,  
1 x Nano SIM, HD Audio, 4DI / 4DO, SMBus  
Pre-installed Mini PCIe Hailo-8™ AI Accelerator



## Features:

- Intel® Elkhart Lake ATOM® x6413E / J6412 CPU
- On Board LPDDR4 up to 8GB
- Independent display: 1 x HDMI, 1 x LVDS, 1 x eDP
- 2 x Intel 2.5 GbE LAN, 1 x USB 3.0\*, 5 x USB 2.0
- 1 x Mini PCIe, 1 x M.2, 1 x Nano SIM, 1 x PCIe x 2\*
- 4 x COM, SMBus
- Touch Screen, HD Audio, 4DI / 4DO
- TPM 2.0

## Dimensions: (Unit:mm)



## Specifications :

- CPU  
Intel® Elkhart Lake ATOM® x6413E / J6412 CPU
- MB Chipset  
Intel® Elkhart Lake SoC
- Graphics  
Intel® HD Graphics, Support DirectX 12.1 & OpenGL 4.5
- System Memory  
On Board LPDDR4 3200 MHz, Max. 8GB
- Storage  
1 x M.2 B Key 2242 / 3042 SATA  
1 x SATA
- BIOS  
Insyde UEFI BIOS
- Display  
1 x HDMI, 1 x eDP, 1 x Dual Channel, 48 bits LVDS
- Touch  
USB interface Touch Screen controller
- TPM  
TPM 2.0 (Firmware) ; OEM Optional to Hardware TPM
- LAN  
2 x Intel 2.5 GbE I225 (internal)
- Audio  
High Definition Audio Specification, Support Line-out / Mic-in / Line-in Two channel  
Class D Audio Amplifier
- Expansion Interface  
1 x Mini PCIe (USB 2.0 / PCIe)  
1 x M.2 B Key 2242 / 3042 (SATA / USB 3.0 / 2.0)  
1 x Nano SIM (M.2)  
1 x PCIe x 2 (Type C\*) \*LEX-defined Type C pin configuration

### Expansion Options

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)
CN059	USB to Line-out / Mic-in
CC007	USB to 4 port COM
CIO116G	SMBus to 8DI + 8DO
PW351	1 port PoE PSE
PW352	2 port PoE PSE
PW301	802.3AF / AT PD module
PW205	Wide Range power board (9~36V) with power Ignition on/off delay
PW206	12V / 24V DC to DC Redundant Power Board
PW022	Wide Range power board (24V / 48V)
DP001	eDP to VGA
eDP003	eDP to DVI
eDP004	eDP to HDMI
eDP001	eDP to LVDS (OEM)

- USB  
1 x USB 3.0 (Type C\*) \*LEX-defined Type C pin configuration ; 5 x USB 2.0 (internal)
- Serial IO  
1 x RS232 / 422 / 485  
3 x RS232  
\*COM1~COM4 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 +9~36V
- Dimension  
2.5" Plus (102 x 88 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: Waterproof Box PC, Waterproof PPC
- OS Support

Windows® 10 IOT ; Windows® 11 IOT

Ubuntu 22.04 above, Ubuntu 22.04 host OS, Hailo SW via Ubuntu container

Specification are subject to change without prior notice. ODM / OEM is available.