深 圳 金 亚 太 科 技 有 限 公 司

Shenzhen Geniatech Co.,Ltd.

SPECIFICATION

MODEL:AIM-H8

Confirmation

REVISION HISTORY					
VERSION	**DATE**	**BOARD ID**	**PAGE**	**DESCRIPTION**	**AUTHOR**
V1.0	2025/1/8		7	Initial Spec	

APPROVED BY GENIATECH		
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CONTENT

1. GENERAL DESCRIPTION

AIM-H8 is an AI module with 26TOS of arithmetic power, interfaced with a B2B connector for stability and reliability, paired with Hailo's Hailo-8 Edge Ai processor, which delivers industry-leading performance and low latency at low power for both generative AI applications and traditional edge computing applications, such as smart retail, smart cities, factory automation, robotics and drones

Product Feature：

(I) Support AI Frameworks:TensorFlow,Torchscript,,,PyTorch&ONNX.Caffe,Mxnet
(II) Processors(tested):NXP,Raspbery Pi,Rockchip,Renesas,TI TDA4
(IV) High Speed interface:4 lane PCIE Gen3
(V) Gen AI and transformer model support
(VI) Best-in-class power efficiency with typical power consumption of 2.5W
(VII)Enabling real-time,low latency&high-efficiency AI inferencing on edge devices
(VIII) Support multiple Hailo-8 devices

AI Applications:

Smart cities:Public safety,intelligent mobility,health monitoring,infrastructure&services
Industry4.0:manufacturing automation,robotic vision,safety&security
Smart retail:automated store,smart analytics,targeted advertising
Smart home:Lifestyle&entertainment,saftty&security
Drones:sense,avoid and navigate
Facial Recognition
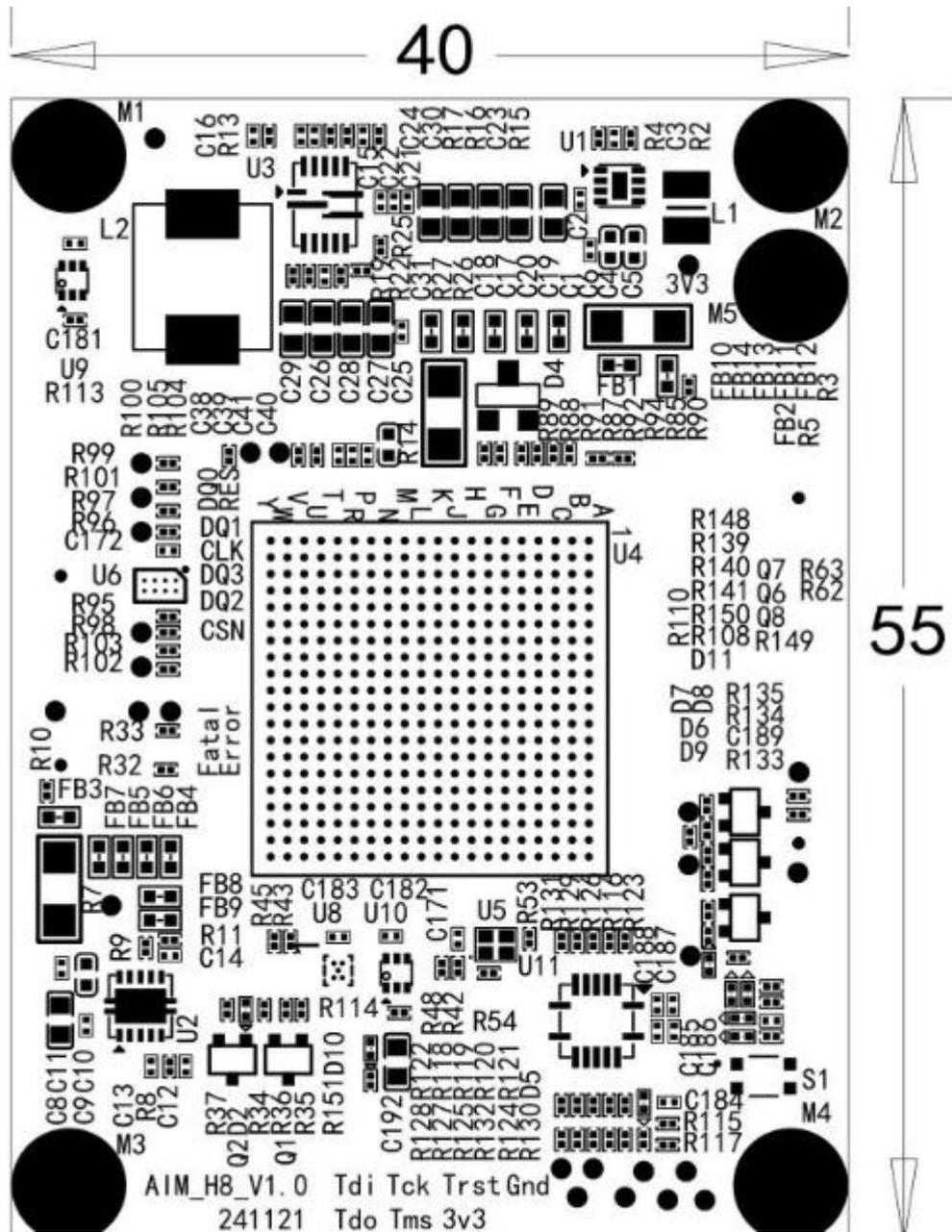Object Localization and Detection
Semantic Segmentation
Pose Estimation

2. PRODUCT PICTURES
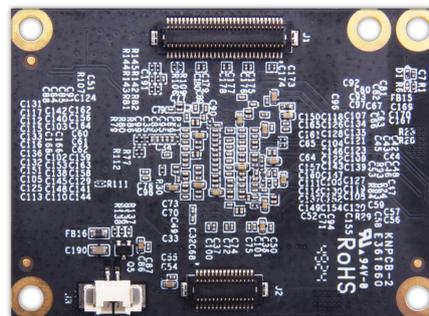

Below pictures are for reference only:

3. BOARD VIEW

3.1 DIMENSION

4. specification

Chipset		Hailo
Market area		Global
	Arithmetic power	26TOPS
Processor	NPU	Hailo-8
	RAM	internally installed
	PCB Thickness	1.2mm
	Size	40*55mm
Host interface	Hardware interface	B2B
	High speed interface	4 Lane PCIE Gen3
	Thermal Design Power	2.5W
	Cooling	Heatsink
Environmental and Reliability	Operating temperature	-40-85°
	Storage Temperature	-40-125°
	Operating Humidity	5%-90% Relative humidity
	Storage Humidity	5%-95% Relative humidity
System	OS Support	Linux&Windows

6. Module Pin Definition
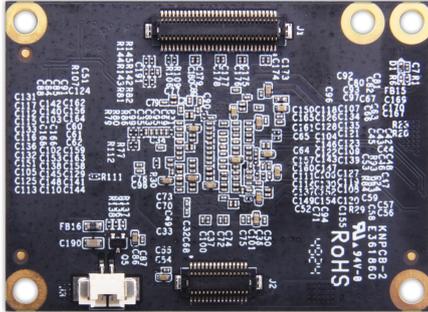
B2B PCIE 64 Pin connector Pin Definition

PIN	Default function	PIN	Default function
1	GND1	2	GND2
3	GND3	4	UART-TXD1
5	PERN3	6	UART-RXD1
7	P_ERP3	8	UART-TXD0
9	GND9	10	UART-RXD0
11	PETN3	12	GND12
13	PETP3	14	NC
15	GND15	16	USB_ID
17	PERN2	18	GND18
19	PERP2	20	U_DN
21	GND21	22	U_DP
23	PETN2	24	GND18
25	PETP2	26	NC
27	GND27	28	NC
29	PERN1	30	GND30
31	PERP1	32	NC
33	GND33	34	NC
35	PETN1	36	GND36
37	PETP1	38	NC
39	GND39	40	NC
41	PERN0	42	GND42
43	PERP0	44	NC

45	GND45	46	NC
47	PETN0	48	GND48
49	PETP0	50	PERSTN
51	GND51	52	CLKREQ_L
53	P_REFCLKN	54	PCIE_WEAK_L
55	P_REFCLKP	56	R I2C1 SDA
57	GND57	58	R I2C1 SCL
59	GND58	60	GND59
61	GND60	62	GND61
63	NC	64	NC

B2B PCIE 34 Pin connector Pin Definition

PIN	Default function	PIN	Default function
1	GND1	2	VCC2_5V
3	GND3	4	VCC4_5V
5	GND5	6	VCC6_5V
7	GND7	8	VCC8_5V
9	GND9	10	VCC10_5V
11	GND11	12	VCC12_5V
13	GND13	14	VCC14_5V
15	GND15	16	VCC16_5V
17	GND17	18	VCC18_5V
19	GND19	20	VCC20_5V
21	GND21	22	VCC22_5V
23	GND23	24	VCC24_5V
25	GND25	26	VCC28_5V
27	GND27	28	VCC30_5V
29	GND29	30	VCC32_5V
31	GND31	32	GND32_5V
33	NC	34	NC

7. Precautions for use

1. Relative humidity: 10% ~ 90% .

2. Storage temperature: -40 ~ 125℃

3. Operation temperature:-40 ~ 85℃

4. Do not squeeze、distort or disassemble the board.

5. Keep the board away from static electricity .

6. Keep the board away from water and other liquid.

7. Clean the board with soft and clean dry cloth when it's dirty.