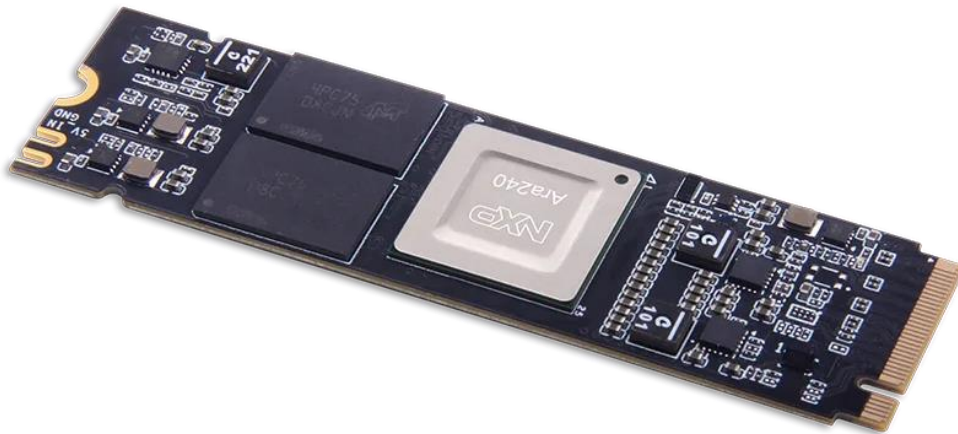


深圳金亚太科技有限公司

**Shenzhen Geniatech Inc.,Ltd.**

# **SPECIFICATION**

**MODEL:AIM-M-K**



# Confirmation

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

APPROVED BY GENIATECH		
PREPARED BY 编写	CHECKED BY 审核	APPROVED BY 批准

Please return the original copy after approved by your company with stamp and signature.  
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# 1. GENERAL DESCRIPTION

AIM-M-K is an AI module with 40TOS of arithmetic power, interfaced with a M.2 connector for stability and reliability, paired with NXP's latest Ara-240 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:

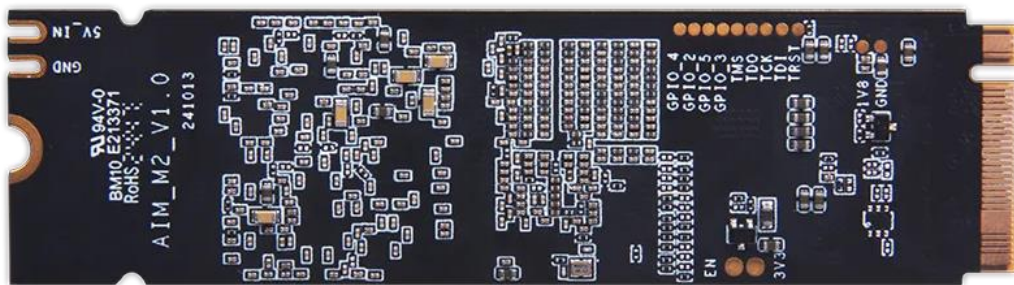
- (I) Support AI Frameworks:TensorFlow,Torchscript,,,PyTorch&ONNX.Caffe,Mxnet
- (II) Support llama2.0 and Yolov8
- (III) Processors(tested):NXP,Nvidia,Qualcomm,xilinx
- (IV) High Speed interface:4 lane PCIE Gen4
- (V) Gen AI and transformer model support
- (VI) Multi-chip support for scalable
- (VII) Stable Diffusion 1.4-10s(20 iteration)
- (VIII) Resnet50-2ms Latency

## 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,safety&security  
Drones:sense,avoid and navigate  
Facial Recognition  
Object Localization and Detection  
Semantic Segmentation  
Pose Estimation

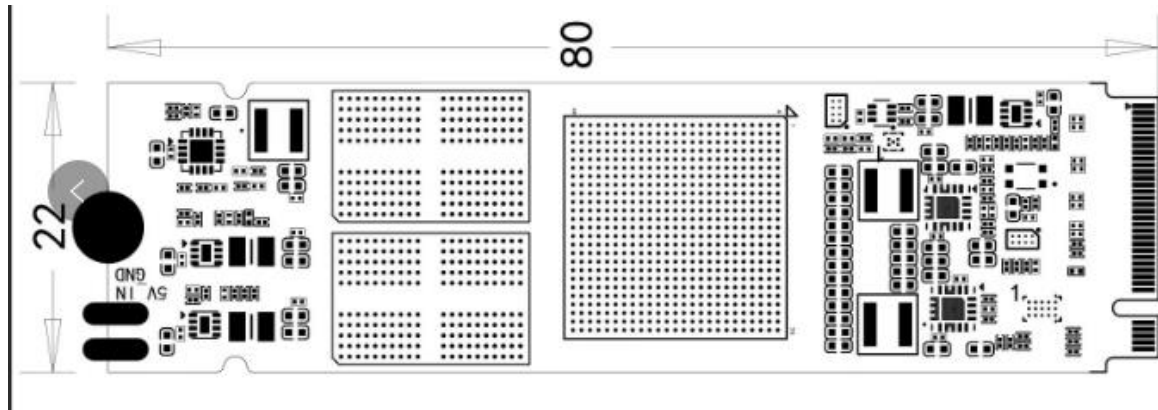
## 2. PRODUCT PICTURES

Below pictures are for reference only:



### 3. BOARD VIEW

#### 3.1 DIMENSION

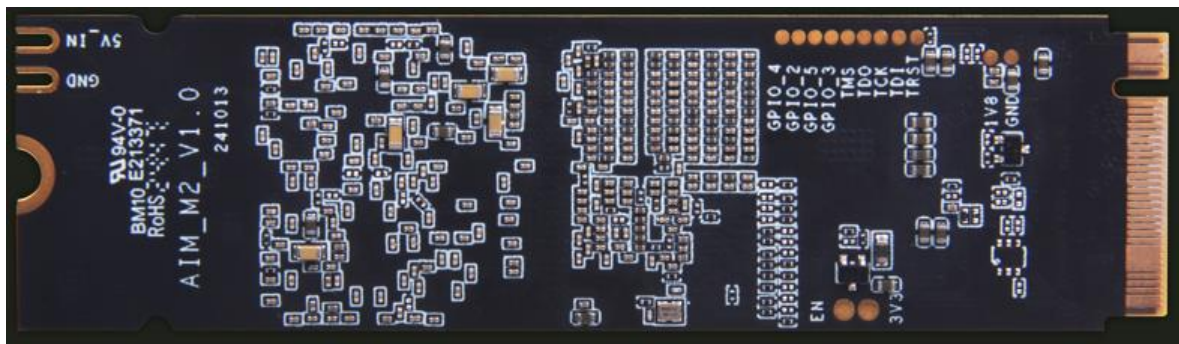


### 4. specification

Chipset	NXP Ara-240	
Market area	Global	
	Arithmetic power	40TOPS
Processor	NPU	Ara-240
	RAM	16GB(8GB Option)
	PCB Thickness	0.9mm
	Size	22*80mm
Host interface	Hardware interface	M.2(M-KEY)
	High speed interface	4 Lane PCIE Gen4
Operrating Voltage/Power	DC Support	3.3V
	Thermal Design Power	12W

	Cooling	Heatsink
Environmental and Reliability	Operating temperature	0-50°
	Storage Temperature	-40-85°
	Operating Humidity	5%-90% Relative humidity
	Storage Humidity	5%-95% Relative humidity
System	OS Support	Linux&Windows

## 6. Module Pin Definition



PIN	Default function	PIN	Default function
1	GND1	2	3V3
3	GND3	4	3V3
5	P_TXN3	6	GND
7	P_TXP3	8	NC
9	GND9	10	NC
11	P_RXN3	12	3V3
13	P_RXP3	14	3V3
15	GND15	16	3V3
17	P_TXN2	18	3V3
19	P_TXP2	20	NC
21	GND21	22	NC

23	P_RXN2	24	NC
25	P_RXP2	26	NC
27	GND27	28	NC
29	P_TXN1	30	NC
31	P_TXP1	32	NC
33	GND33	34	NC
35	P_RXN1	36	NC
37	P_RXP1	38	NC
39	GND39	40	Ara-2 I2C SDA 1V8
41	P_TXN0	42	Ara-2 I2C SCL 1V8
43	P_TXP0	44	NC
45	GND45	46	NC
47	P_RXN0	48	NC
49	P_RXP0	50	PECI_PERST
51	GND48	52	P_CLKREQ
53	P_REFCLKN	54	NC
55	P_REFCLKP	56	Ara-2 I2C SDA 3V3
57	GND57	58	Ara-2 I2C SCL 3V3
67	NC	68	NC
69	NC	70	3V3
71	NC	72	3V3
73	NC	74	3V3
75	NC		

#### 7. Precautions for use

1. Relative humidity: 10% ~ 90% .
2. Storage temperature: -40 ~ 85℃
3. Operation temperature: 0℃ ~ 50℃)
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.