

深圳金亚太科技有限公司

Shenzhen Geniatech Co.,Ltd.

SPECIFICATION

MODEL:AIM-M2

Confirmation

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

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1. GENERAL DESCRIPTION

AIM-M2 is an AI module with 40TOS of arithmetic power, interfaced with a B2B connector for stability and reliability, paired with Kinara's latest Ara-2 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

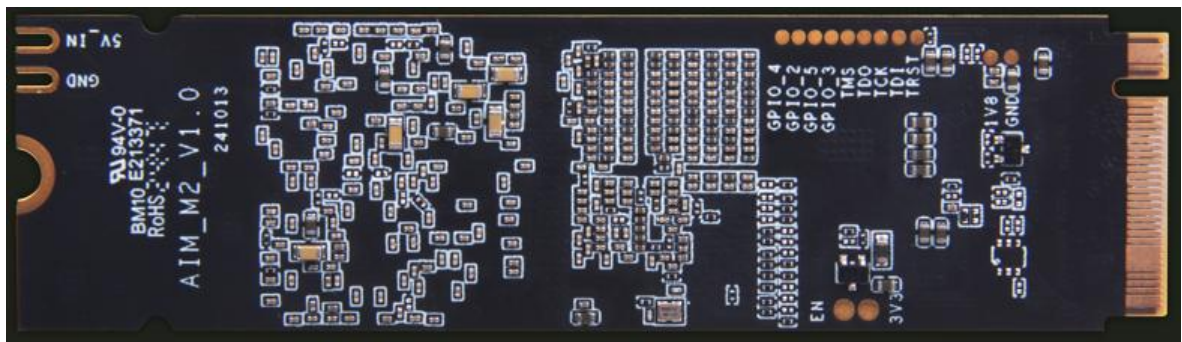
Product Feature:

- (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,safty&security
Drones:sense,avoid and navigate
Facial Recognition
Object Localization and Detection
Semantic Segmentation
Pose Estimation

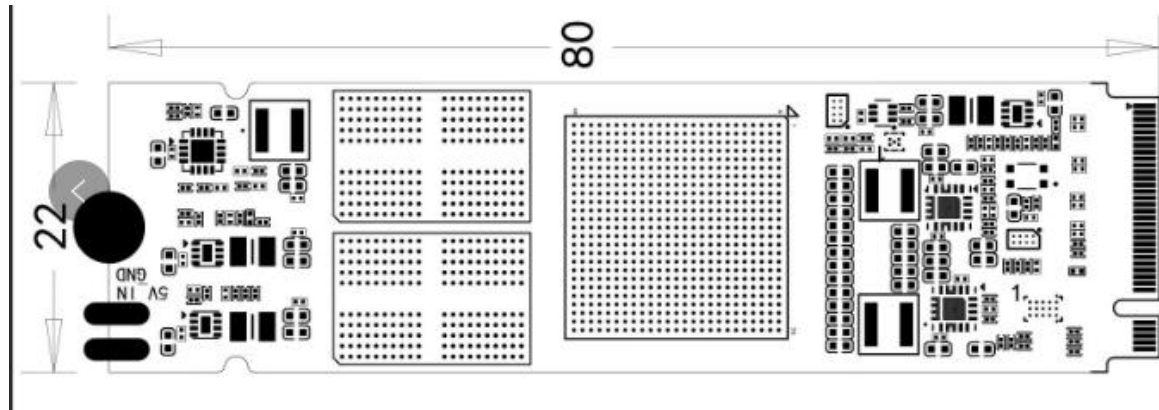
2. PRODUCT PICTURES



Below pictures are for reference only:

3. BOARD VIEW

3.1 DIMENSION

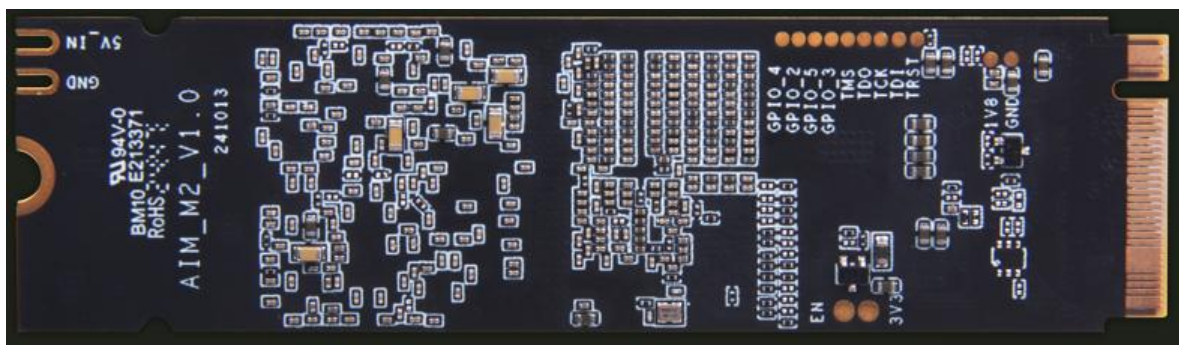


4. specification

Chipset	Kinara Ara-2	
Market area	Global	
	Arithmetic power	40TOPS
Processor	NPU	Ara-2
	RAM	16GB(4GB/8GB Option)
	PCB Thickness	0.9mm
	Size	22*80mm

Host interface	Hardware interface	M.2(M-KEY)
	High speed interface	4 Lane PCIe Gen4
Operating 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°C
3. Operation temperature: 0 °C ~ 50°C)
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.