Apex Xavier Spec

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简介 Brief

米文Apex Xavier是一款嵌入式人工智能计算机，能够为众多终端设备赋予人工智能计算力，从而有效降低人工智能产品的落地门槛。Apex Xavier可以在满足抗振防水等工业级标准的同时，提供高达32Tops计算能力，能够很好的满足低速无人驾驶等场景的视觉计算需求。除此之外Apex Xavier还可提供高效的多传感器时钟同步功能与基于主流的AI算法加速SDK。

MiiVii Apex Xavier is an embedded AI supercomputer. It delivers massive computing capabilities and essential features to terminal devices. With shock resistance connector and waterproof design, MiiVii Apex Xavier is suitable for outdoor usage. In addition, MiiVii Apex Xavier offers clock synchronization function and a variety of algorithm acceleration SDK.



特性 Features

- 通过CE认证

CE certified

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- IP4X防护等级[1]

IP4X Protection[2]

- 高效直触式被动散热

High performance passive cooling system

- 8×GMSL视频输入接口

8×GMSL Camera supported

- -20℃-60℃工作温度

-20℃-60℃ Operating temperature

- 内部提供双M.2接口拓展

2×M.2 Slot

1. Apex Xavier非调试接口的接头选型均为IP67级别。若对整体产品有高防水抗振要求则需要联系米文动力定制外壳并封装调试接口。

2. Professional IO ports are IP67-rated. To achieve IP67 rating of Apex Xavier, please contact MiiVii for a second version of case design.

产品规格 Specifications

处理器模组 Processor

	Specification
Processor	NVIDIA Jetson AGX Xavier
AI Performance	Up to 32T OPS
CPU	8-core ARM v8.2 64-bit CPU
GPU	512-core Volta GPU
Memory	32GB 256-Bit LPDDR4[1]
DL Accelerator	2×NV DLA Engines
Storage	32GB eMMC 5.1
Video Encode	4x 4Kp60 8x 4Kp30 16x 1080p60 32x 1080p30 (H.265) 4x 4Kp60 8x 4Kp30 14x 1080p60 30x 1080p30 (H.264)

Video Decode	2x 8Kp30 6x 4Kp60 12x 4Kp30 26x 1080p60 52x 1080p30 (H.265) 4x 4Kp60 8x 4Kp30 16x 1080p60 32x 1080p30 (H.264)

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Jetson AGX Xavier DRAM内存规格由16GB提升到32GB。

接口 I/O

	Interface	Quantity	Note
Network	Ethernet	1×8pin Waterproof Gigabit Ethernet port 1×RJ45 Gigabit Network port	Alternative RJ45 and waterproof port
	WIFI	1	2.4G/5.8G 300Mbps
Camera	Camera	8×CSI 1 Lane GMSL FAKRA Z TYPE	9V Transmission distance up to 15 meters
Video output	Video out	1×GMSL FAKRA Z TYPE	
	HDMI	1×HDMI 2.0 TYPE A	
USB	USB	2×USB 3.1 TYPE A 1×Micro USB	USB 5V, 1A Micro USB 5V, 0.5A
I/O	GPIO	5xGPIO	In 0-12V, Out 3.3V
	CAN	2	DB9 Terminal With CAN chip Terminal resistor 120
	UART	1xDebug 2xTTL/RS232 2xRS232/422/485	DB9 Terminal TTL 3.3V
	SPI	1	3.3V
	I2C	1	3.3V
	I2S	1	3.3V
	Sync I/O	1xSYNC_IN 2xSYNC_OUT 2xSYNC_PPS	DB9 Terminal SYNC_IN 0-12V, SYNC_OUT 3.3V, SYNC_PPS 3.3V
User Expansion	TF	1xTF Slot	MicroSD card supported
	M.2	1×M.2 M Key 1×M.2 B Key	2280 SIZE NVME SSD 4G LTE
Function Key	Power KEY	1	Button

	Reset KEY	1	Button
	Recovery KEY	1	Button

供电 Power Supply

Power Supply	Spec
Input Type	DC
Input Voltage	Wide input 12-50V DC
Typical consumption	30W

结构 Mechanical

Mechanical	Spec
Dimensions (W×H×D)	245mm×68mm×172mm (I/O ports and mounting holes included) 213mm×68mm×143mm (I/O ports and mounting holes excluded)
Weight	2.2Kg

环境 Environmental

Environmental	Spec
Operating Temperature	-20℃-70℃, 0.2~0.3m/s air flow[5]
Storage Temperature	-25℃-80℃
Storage Humidity	10%-90% non-condensing
Vibration	5gn,10Hz~150Hz,3 Axis[6]
Protection	IP4X[7]

认证 Certification

Certification	Status
CE	Passed
CCC, FCC, RoHS, SRRC	Processing

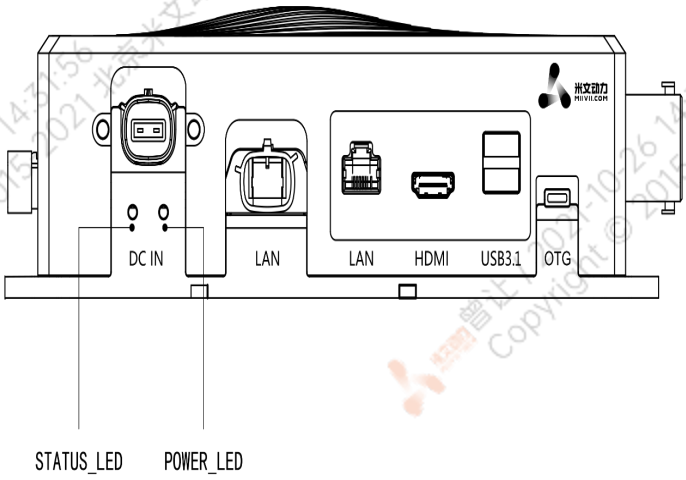
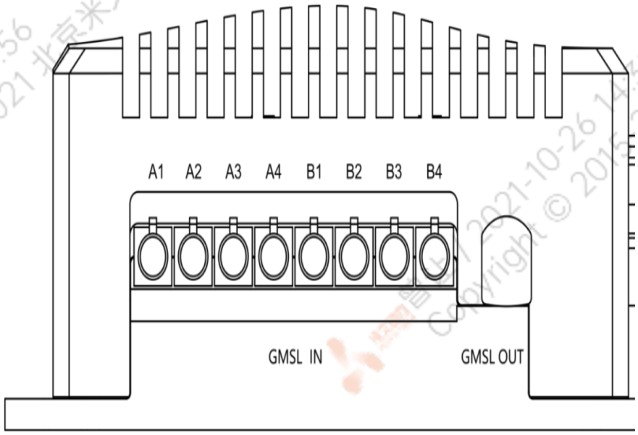
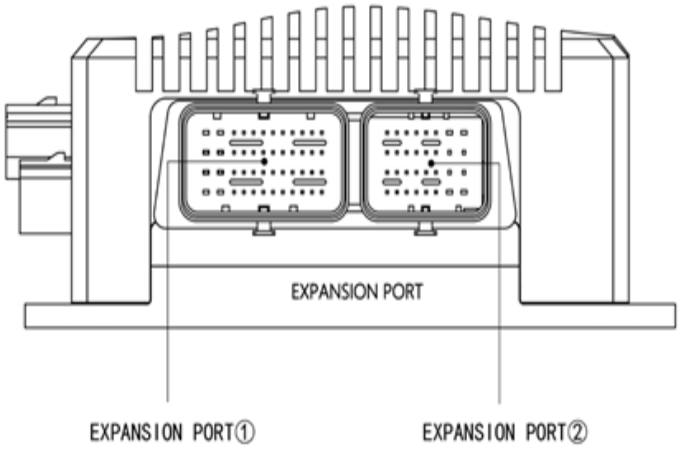
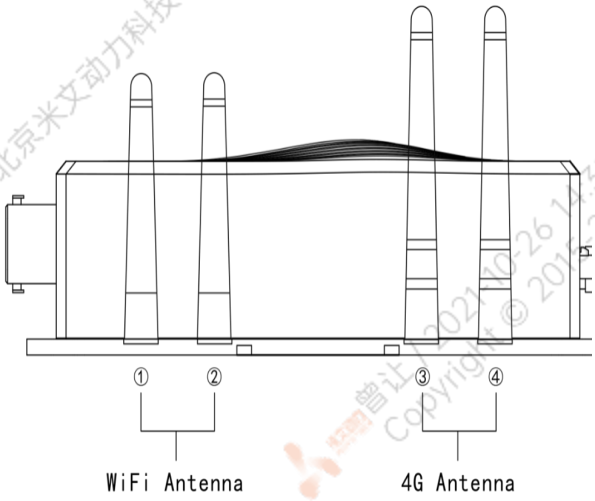
4. Jetson AGX Xavier DRAM内存规格由16GB提升到32GB。

5. According to GB/T 2423-2008 60℃以上运行时，运行频率降低 Working frequency is subject to change after temperature reaches 60℃

6. According to GB/T 2423.10-2008

7. Apex Xavier非调试接口的接头选型均为IP67级别。若对整体产品有高防水抗振要求则需要联系米文动力定制外壳并封装调试接口。

产品外观 Appearance

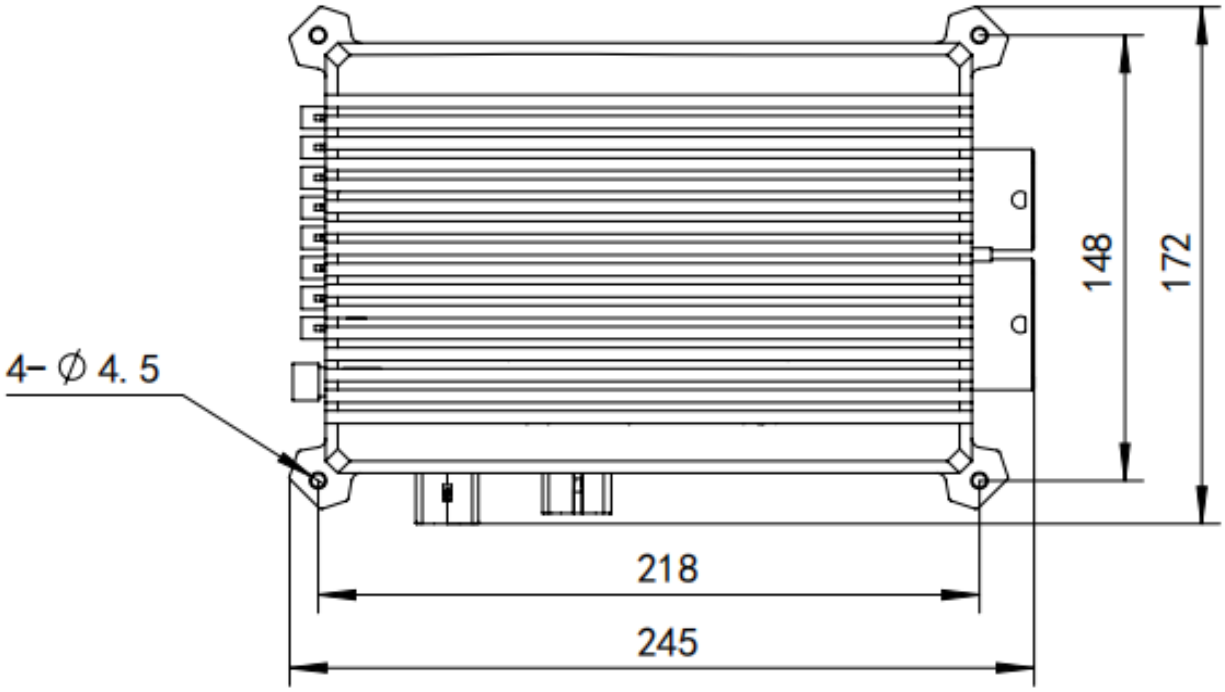
正视图 Front view	左视图 Left view
	
右视图 Right view	**后视图 rear view**
	

尺寸及安装 Install Dimension

Apex Xavier主体尺寸及安装孔位尺寸如图:

Dimensions and mounting hole position as below:

上视图 Up view(Unit:mm)



左视图 Left view(Unit:mm)

