

Apex AD10 Spec

技术支持Review

简介 Brief

米文Apex AD10 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 AD10 可以在满足抗振防水等工业级标准的同时，提供高达200/275 Tops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 AD10 还可提供高效的多传感器时钟同步功能。

MiiVii Apex AD10 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 AD10 is suitable for outdoor usage. In addition, MiiVii Apex AD10 offers clock synchronization function.



米文动力
MIIVII TECH



特性 Features

- IP65 防护等级

| *IP65 Protection*

- 高效混合式散热

| *High performance active hybrid cooling system*

- 8×GMSL2视频输入接口

| 8×GMSL2 Camera supported

- -25°C-70°C工作温度

| -25°C-70°C Operating temperature

- 内部提供MINI PCIE与 M.2 2280接口拓展

| MINI PCIE Slot and M.2 2280 Slot

注1: 设备有防尘放水处理, 如客户自行安装扩展模块存在困难, 建议选购时预装相应扩展模块。

产品规格 Specifications

处理器模组 Processor

NVIDIA JETSON AGX ORIN SERIES MODULES

TECHNICAL SPECIFICATIONS

	Jetson AGX Orin 32GB	Jetson AGX Orin 64GB
AI Performance	200 TOPS (INT8)	275 TOPS (INT8)
GPU	NVIDIA Ampere architecture with 1792 NVIDIA CUDA® cores and 56 tensor cores	NVIDIA Ampere architecture with 2048 NVIDIA CUDA® cores and 64 tensor cores
Max GPU Freq	930MHz	1.3GHz
CPU	8-core Arm® Cortex®-A78AE v8.2 64-bit CPU 2MB L2 + 4MB L3	12-core Arm® Cortex®-A78AE v8.2 64-bit CPU 3MB L2 + 6MB L3
CPU Max Freq	2.2 GHz	
DL Accelerator	2x NVDLA v2.0	
DLA Max Frequency	1.4GHz	1.6GHz
Vision Accelerator	PVA v2.0	
Memory	32GB 256-bit LPDDR5 204.8GB/s	64GB 256-bit LPDDR5 204.8GB/s
Storage	64GB eMMC 5.1	
CSI Camera	Up to 6 cameras (16 via virtual channels*) 16 MIPI CSI-2 lanes D-PHY 2.1 (up to 40Gbps) C-PHY 2.0 (up to 164Gbps)	
Video Encode	1x 4K60 3x 4K30 6x 1080p60 12x 1080p30 (H.265) H.264, AV1	2x 4K60 4x 4K30 8x 1080p60 16x 1080p30 (H.265) H.264, AV1
Video Decode	1x 8K30 2x 4K60 4x 4K30 9x 1080p60 18x 1080p30 (H.265) H.264, VP9, AV1	1x 8K30 3x 4K60 7x 4K30 11x 1080p60 22x 1080p30 (H.265) H.264, VP9, AV1
UPHY	Up to 2 x8, 1 x4, 2 x1 PCIe Gen4 (Root Port and Endpoint) 3x USB 3.2	
Networking	1x GbE 1x 10GbE	
Display	1x 8K60 multi-mode DP 1.4a (+MST)/eDP 1.4a/HDMI 2.1	
Other I/O	4x USB 2.0 4x UART, 3x SPI, 4x I2S, 8x I2C, 2x CAN, DMIC & DSPK, GPIOs	
Power	15W - 40W	15W - 60W
Mechanical	100mm x 87mm 699-pin Molex Mirror Mezz Connector Integrated Thermal Transfer Plate	

* Virtual channel-related camera information for Jetson AGX Orin is not final and subject to change. Refer to the Software Features section of the latest NVIDIA Jetson Linux Developer Guide for a list of supported features.

接口 I/O

接口Interface	规格/Specifications
网络接口Network	4× Gigabit Port (可选配IEEE 802.3 at PoE+ 25.5W)
相机接口Camera	2× GMSL2 4 IN 1 MINI FAKRA TYPE (10V, Transmission distance up to 15 meters, GMSL2 compatible with GMSL1)
视频输出Video output	1× HDMI 2.0 (TYPE A)
USB	2× USB 3.0 (TYPE A)

通用输入/输出GPIO	4× In (0-12V) 4× Out (3.3V)
CAN FD	5× CAN FD (With CAN chip Terminal resistor 120)
串口UART	1×Debug (RS232) , 3×RS232, 2×RS485/RS422
同步输入/输出Sync I/O	1×SYNC_IN (0-12V) , 1×SYNC_OUT (3.3V) , 1×SYNC_PPS (3.3 V)
扩展接口User Expansion	1× M.2 M Key (PCIe x4, 2280) , 1× Mini PCIe (For 4G or WiFi expansion) , 1× Nano SIM Socket
按键Function Key	1×Power KEY, 1×Reset KEY, 1×Recovery KEY (Button)

供电 Power Supply

Power Supply	Spec
Input Type	DC
Input Voltage	Wide input 9-36V DC
Typical consumption	up to 60W

结构 Mechanical

Mechanical	Spec
Dimensions (W×D×H)	276mm×214mm×71mm(I/O ports and mounting holes included) 240mm×173mm×71mm(I/O ports and mounting holes excluded)
Weight	4.3 Kg

环境 Environmental

Environmental	Spec
Operating Temperature	-25°C-70°C
Storage Temperature	-40°C-80°C
Storage Humidity	10%-90% non-condensing
Vibration	2Grms,10Hz~500Hz,1h/axis
Protection	IP5X (默认) IP65 ¹ (可选)

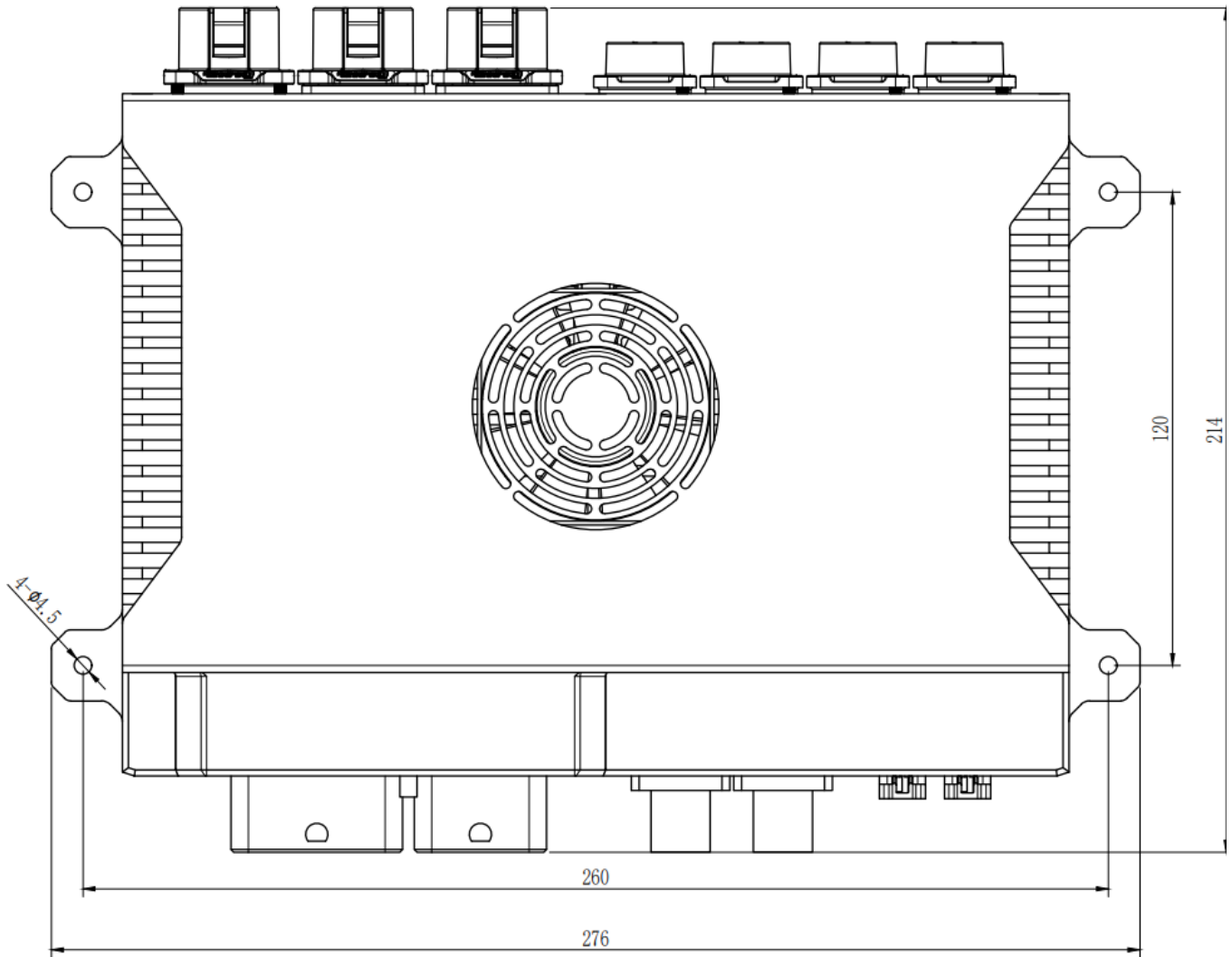
1. ApexAD10接口的接头选型均为IP65级别。若对整体产品有高防水要求则需要购买时联系米文动力要求进行产品防水预处理。

尺寸及安装 Install Dimension

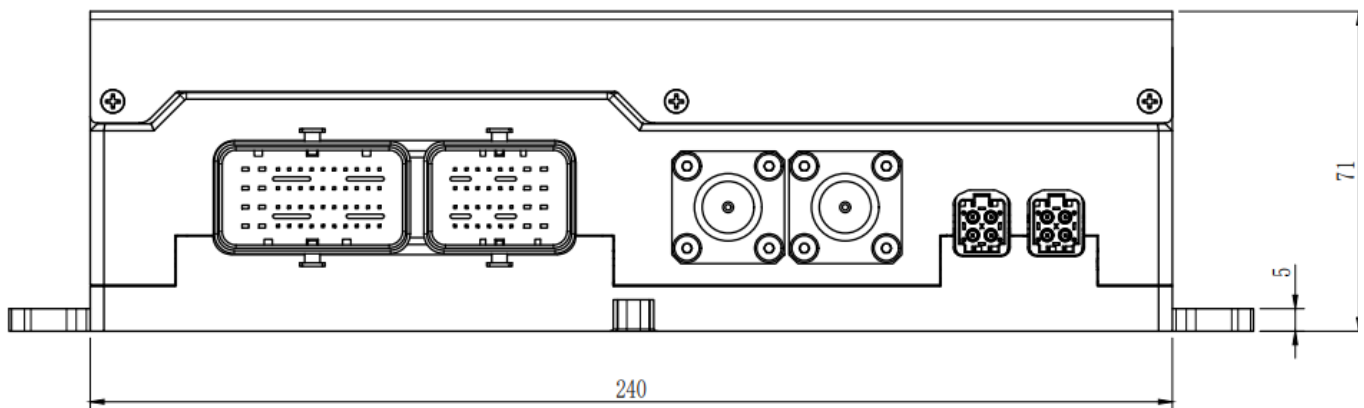
Apex AD10 主体尺寸及安装孔位尺寸如图:

Dimensions and mounting hole position as below:

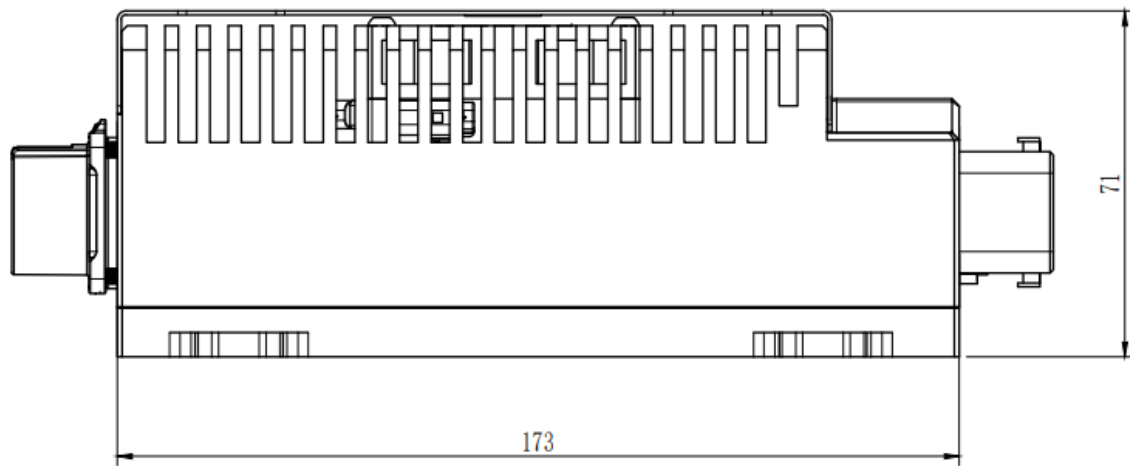
俯视图 Up view(Unit:mm)



主视图 Front view(Unit:mm)



左视图 Left view(Unit:mm)



安装孔位图 Mounting Hole(Unit:mm)

