

ARC6N0 AGX

Highly Integrated AI Core, Provide 275 TOPS and Expandability

YUAN
Visualize Intelligent Planet

Features

- Powered by NVIDIA® Jetson AGX Orin™ up to 275 TOPS
- 3-Axis Digital Accelerometer, 3-Axis Digital Gyroscope and 3-Axis Magnetometer
- 1×M.2 E Key / 1×M.2 M Key
- 2×USB3.2 Gen2 Type-C + 2×USB3.2 Gen2 Type-A
- CAN Bus / I2C / SPI / GPIO / PWM
- Compact Design



Specifications

System		
CPU	NVIDIA Jetson AGX Orin™ 32GB 8-core Arm® Cortex®-A78AE v8.2 64-Bit CPU 2MB L2 + 4MB L3	NVIDIA Jetson AGX Orin™ 64GB 12-Core Arm® Cortex®-A78AE v8.2 64-Bit CPU 3MB L2 + 6MB L3
GPU	NVIDIA Jetson AGX Orin™ 32GB 1792-Core NVIDIA Ampere Architecture GPU with 56 Tensor Cores	NVIDIA Jetson AGX Orin™ 64GB 2048-Core NVIDIA Ampere Architecture GPU with 64 Tensor Cores
AU Performance	NVIDIA Jetson AGX Orin™ 32GB 200 TOPS	NVIDIA Jetson AGX Orin™ 64GB 275 TOPS
System Memory	NVIDIA Jetson AGX Orin™ 32GB 32GB LPDDR5	NVIDIA Jetson AGX Orin™ 64GB 64GB LPDDR5
Interface		
Storage	64GB eMMC 5.1 (On NVIDIA Jetson AGX Orin™ Module)	
Display Interface	1×HDMI2.0	
Ethernet	1×RJ45 for 10/100/1000Mbps Ethernet DHCP Client	
Expansion Slot	Main Board 1×M.2 2230 E Key PCIe Gen4*1/USB2.0/SDIO Slot 1×M.2 2230 M Key PCIe Gen4*4 Slot	
USB	Main Board 2×USB3.2 Gen2 (Type-C) Daughter Board 2×USB3.2 Gen2 (Type-A)	
MIPI	16×MIPI CSI-2 Lanes (D-PHY 2.1, 4×4 3×4+2×2 2×4+4×2 1×4+5×2 6×2 MIPI Lanes, Support MIPI Camera, Capture Card)	
Peripheral Communication	Main Board 6-Axis IMU (3-Axis Accelerometer + 3-Axis Gyroscope) 2×UART 1×I2C 1×SPI 2×PWM FAN 1×CAN Bus Daughter Board 3-Axis IMU (3-Axis Magnetometer)	
Misc. Features	Firmware Upgradable AutoPower (Pin Header)	

Add-On Cards / SDK / Software

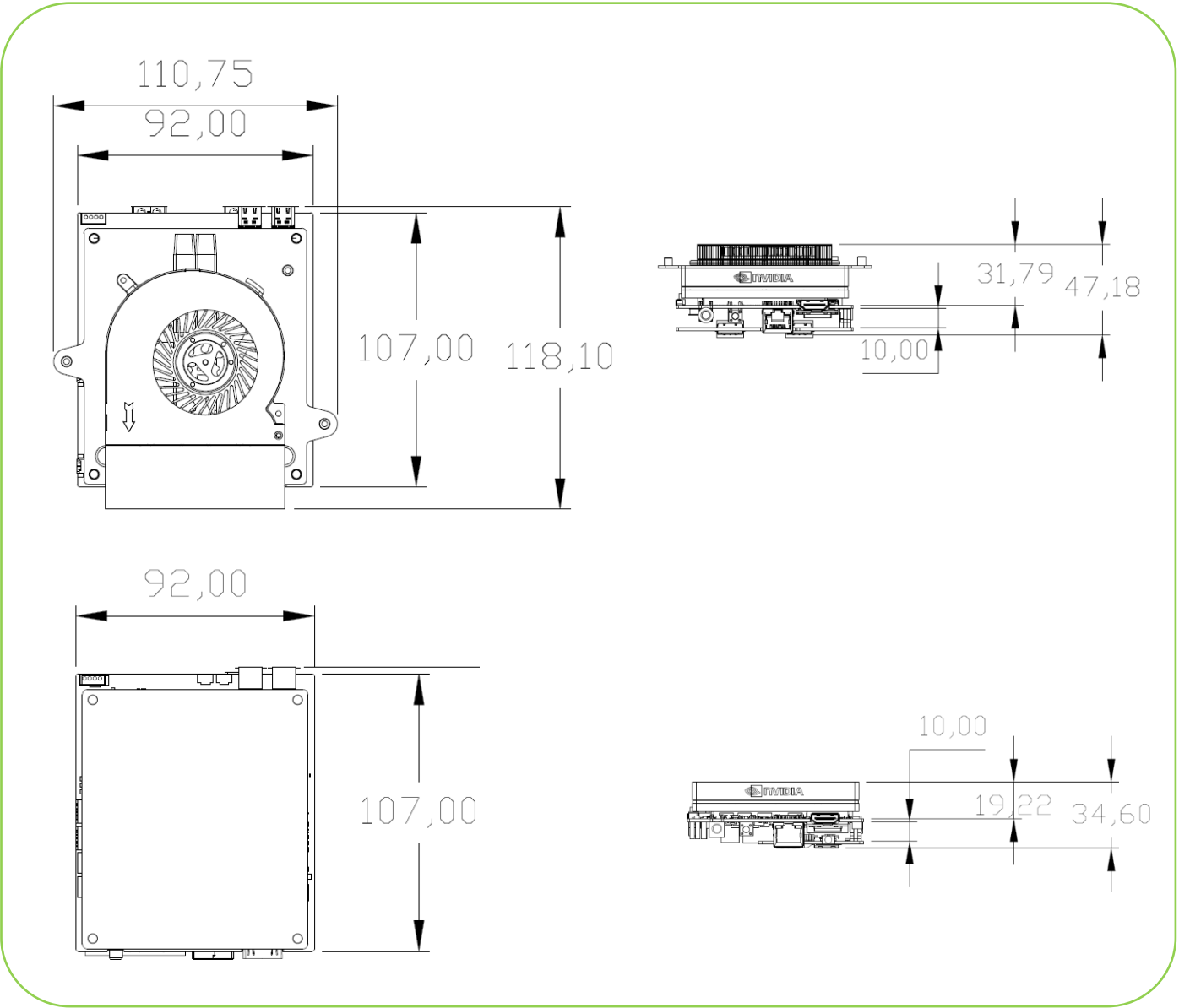
Video Feature		
Video Encode	NVIDIA Jetson AGX Orin™ 32GB AV1 (UHP) · 1×4K60 3×4K30 6×1080p60 12×1080p30 H.265 (UHP) · 1×4K60 3×4K30 6×1080p60 12×1080p30 H.264 (UHP) · 1×4K60 2×4K30 5×1080p60 11×1080p30	NVIDIA Jetson AGX Orin™ 64GB AV1 (UHP) · 2×4K60 4×4K30 8×1080p60 16×1080p30 H.265 (UHP) · 2×4K60 4×4K30 8×1080p60 16×1080p30 H.264 (UHP) · 1×4K60 3×4K30 7×1080p60 14×1080p30
Video Decode	NVIDIA Jetson AGX Orin™ 32GB AV1 (Main Profile) · 1×8K30 2×4K60 4×4K30 7×1080p60 15×1080p30 H.265 (Main, Main10) · 1×8K30 2×4K60 4×4K30 9×1080p60 18×1080p30 H.264 (Baseline, Main, High) · 1×4K60 2×4K30 5×1080p60 11×1080p30 VP9 (Profile 0, Profile 2) · 1×4K60 3×4K30 7×1080p60 15×1080p30	NVIDIA Jetson AGX Orin™ 64GB AV1 (Main Profile) · 1×8K30 3×4K60 6×4K30 9×1080p60 18×1080p30 H.265 (Main, Main10) · 1×8K30 3×4K60 7×4K30 11×1080p60 22×1080p30 H.264 (Baseline, Main, High) · 1×4K60 3×4K30 6×1080p60 13×1080p30 VP9 (Profile 0, Profile 2) · 1×8K30 3×4K60 6×4K30 9×1080p60 18×1080p30
SDK		
QCAP	Capture High Performance Renderer Image Snapshot Deinterlace, Alpha Blending Engine Auto Signal Detection 2D/3D Video, Audio and VANC Streams Capture Record Encrypt / Sync / Clone / Recording Time-Shifting / Rewind / Pre-Event / Recording Multi-Streams (3D) Recording Animation Transition Effect Video Cropping, Scaling and Alpha Blending Engine Stream 2D/3D Universal Stream Client 2D/3D Multi-Streams Stream Server RTSP, RTMP, HLS, SRT, TS, WebRTC. NDI-HX (*), Full NDI (*), Dante AV-H (*) Animation Transition Effect Video Cropping, Scaling and Alpha Blending Engine *Separate License Required	
QDEEP	AI SDK Integrated Multiple Algorithms and Deep-Learning Models in Various Fields of Applications Face Recognition Objects Detection Objects Segment Optical Character Recognition License Plate Recognition Customizable Video AI Functions Upon Request	
Software (Optional)		
Stream Catcher Pro	Capture Auto Signal Detection Deinterlace, OSD, Color Adjustment Image Snapshot Animation Transform Effect for PGM Record AV1, H.26X MP4, TS Multi-Stream Recording Schedule Recording Stream Multi-Streams Stream Server RTSP, RTMP, HLS, SRT, TS, WebRTC., Full NDI (*), NDI-HX (*), Dante AV-H (*) *Separate License Required	
Xtreamer	Web Based User Interface Encode / Decode AV1, H.26X Color Format Adjust 444 / 422 / 420, 10Bit / 8Bit Select Record MP4, TS Stream / Network RTSP, RTMP, HLS, SRT, TS, WebRTC. NDI-HX (*), Full NDI (*), Dante AV-H (*) *Separate License Required	

Environment

Development Environment	
OS	Ubuntu: 20.04
Kernel	5.10.104-tegra or Higher
BSP	Linux for Tegra(L4T) R35.3.1 or Higher
SDK	JetPack 5.1.1 or Higher
Environment	
Power Supply	DC input : 19~24V
Power Consumption	TBA
Operating Temperature	Standard Version: 0~60 ° C with Airflow
Storage Temperature	-20~80 ° C

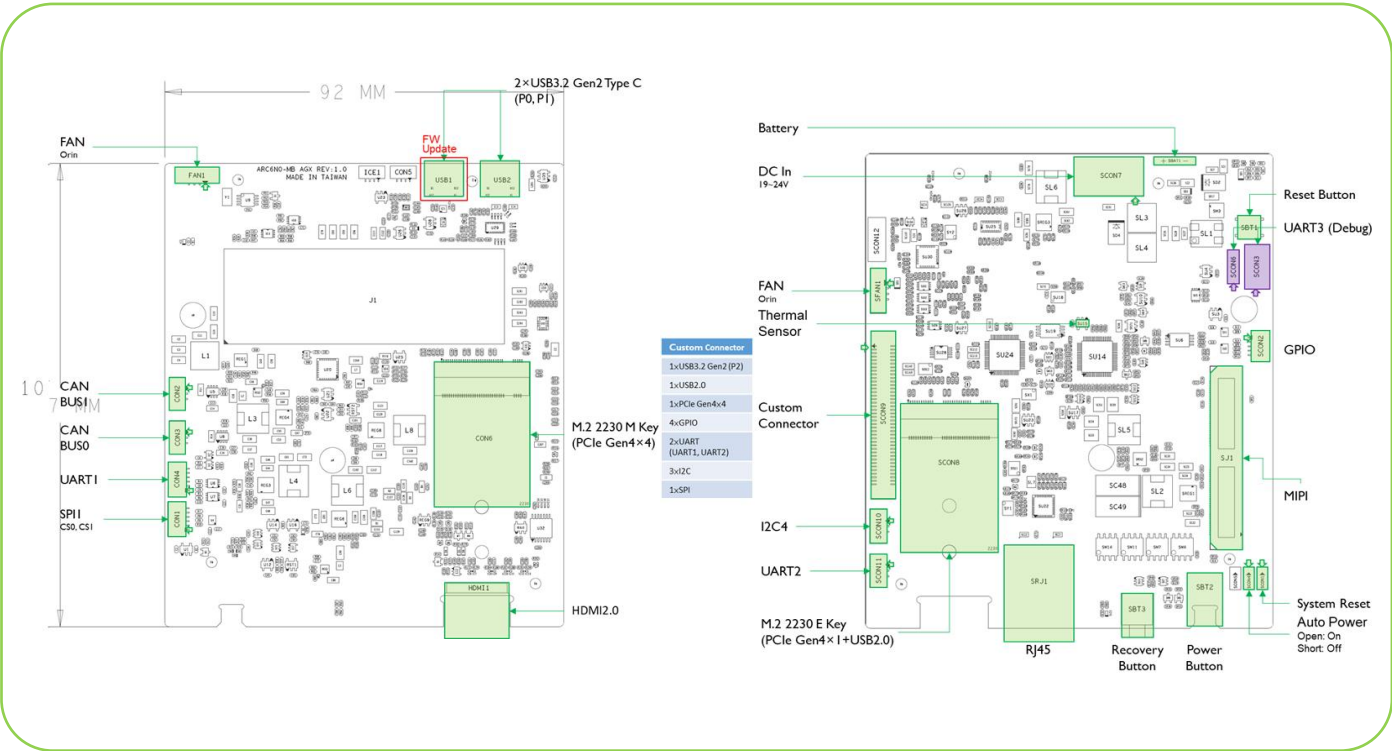
Mechanical

- Dimension of main Board, Daughter Board and Heatsink: 107mm×92mm×47.18mm
- Dimension of main Board: 107mm×92mm

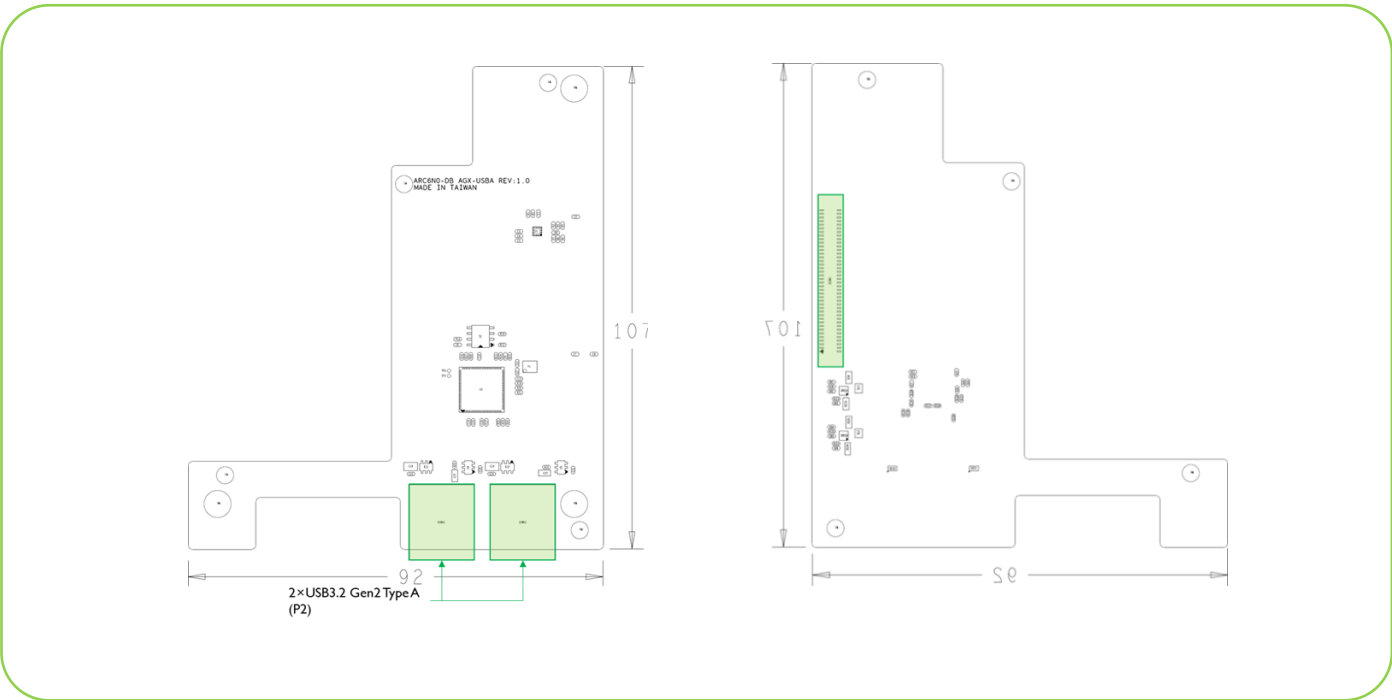


I/O Layout

Carrier Board (Main Board)



Carrier Board (Daughter Board)



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