

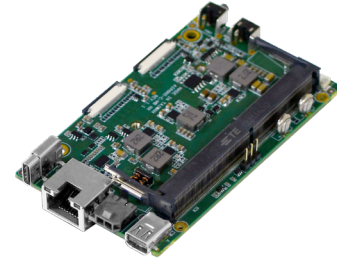
AIR6N0-C-MB NX

Business Card Size AI Edge Motherboard

YUAN
Visualize Intelligent Planet

Features

- Powered by NVIDIA® Jetson Orin™ NX up to 100 / 70 TOPS
- Business Card Size (90mm×55mm)
- 2×M.2, Gen 4×2 M Key / Gen 4×1 E Key
- 1×USB3.2 Gen2
- 1×Mini DisplayPort



Specifications

System		
CPU	NVIDIA Jetson Orin™ NX 8GB 6-Core Arm® Cortex®-A78AE v8.2 64-Bit CPU 1.5MB L2 + 4MB L3	NVIDIA Jetson Orin™ NX 16GB 8-Core Arm® Cortex®-A78AE v8.2 64-Bit CPU 2MB L2 + 4MB L3
GPU	1024-Core NVIDIA Ampere Architecture GPU with 32 Tensor Cores	
AI Performance	NVIDIA Jetson Orin™ NX 8GB 70 TOPS	NVIDIA Jetson Orin™ NX 16GB 100 TOPS
System Memory	NVIDIA Jetson Orin™ NX 8GB 8GB LPDDR5	NVIDIA Jetson Orin™ NX 16GB 16GB LPDDR5
Interface		
Storage	Supports External NVMe	
Display Interface	1×Mini DP1.4	
Ethernet	1×RJ45 for 10/100/1000Mbps Ethernet DHCP Client	
Expansion Slot	M.2 1×M.2 2230 M Key PCIe Gen4×2 Slot 1×M.2 2230 E Key PCIe Gen4×1 Slot	
USB	1×USB3.2 Gen2 (Type-C)	
MIPI	8×MIPI CSI-2 Lanes (D-PHY 2.1, 2×4 MIPI Lanes, Support MIPI Camera, Capture Card)	
Peripheral Communication	Custom Connector 2×USB3.2 Gen2 1×PCIe Gen4×4 4×GPIO 2×UART 3×I2C 1×CAN Bus	
	14 Pin Header 1×USB2.0 4×GPIO 1×UART 1×I2C	
Misc. Features	Firmware Upgradable 1×Custom Connector (For Additional Add-On Board)	

Key Points

Additional Expansion Board (Optional)	
Expansion Slot	1×M.2 2280 M Key PCIe Gen4×4 Slot
USB	1×USB3.2
Peripheral Communication	1×Micro SD Card Slot
	4×GPIO
	2×I2C
	1×RS232 1×RS485

Add-On Cards / SDK / Software

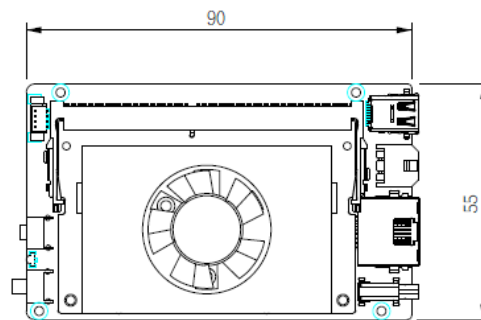
Video Feature		
Video Encode	AV1 (UHP) 1×4K60 3×4K30 6×1080p60 12×1080p30	
	H.265 (UHP) 1×4K60 3×4K30 6×1080p60 12×1080p30	
	H.264 (UHP) 1×4K60 2×4K30 5×1080p60 11×1080p30	
Video Decode	AV1 (Main Profile) 1×8K30 2×4K60 4×4K30 9×1080p60 20×1080p30	
	H.265 (Main, Main10) 1×8K30 2×4K60 4×4K30 9×1080p60 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	
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 (*), 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)		
Xtremer	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 (*), 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 : 24V
Power Consumption	TBA
Operating Temperature	Standard Version: 0~60 ° C with Airflow
Storage Temperature	-20~80 ° C

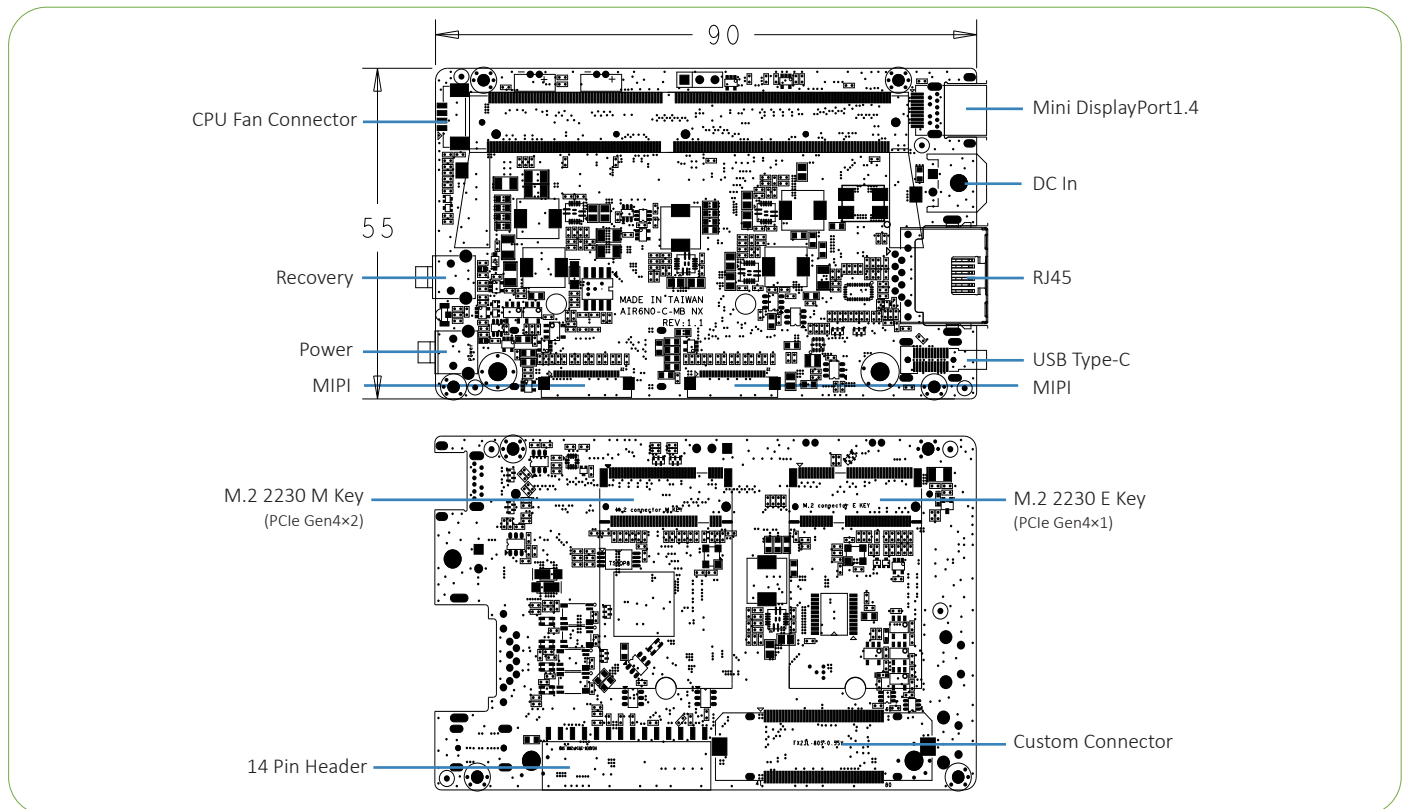
Mechanical

- Dimension of main Board: 90mm×55mm
- Weight: TBA



I/O Layout

- Carrier Board



* All registered trademarks are the property of their owners. The photo is for reference only.

* Technology License Patent Royalty. Supplier (YUAN Technology Ltd.) as an OEM vendor is not responsible for any royalties applied to the Models and collected by any patent or trade mark holders or his exclusive, non-exclusive.

Licensees or representatives such as MPEGLA, Dolby, Thomson, Sixel, H.264, MPEG4 and any other natural or legal person. All concerning royalties of patents and trade marks will be paid or negotiated with the above mentioned owner by you. In case of any patent or trademark infringement you are responsible for all necessary processes and costs. You accept and acknowledge that all prices of Models offered by supplier are exclusive of any royalties, charges or license fees for any patents in any countries or areas.

