

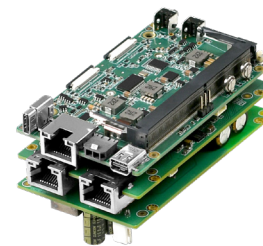
AIR6N0-C-MB NX 2×GIGE

YUAN
Visualize Intelligent Planet

Card Size AI Edge with Multi AIoT Expansion

Features

- Powered by NVIDIA Jetson Orin™ NX up to 100 / 70 TOPS
- Business Card Size
- 2×GIGE In, PSE Support
- 2×M.2, Gen 4×2 M Key / Gen 4×1 E Key
- 1×USB3.2 Gen2
- 1×Mini DisplayPort



Specifications

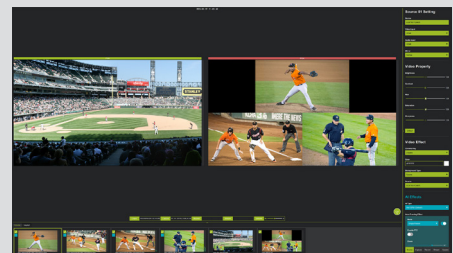
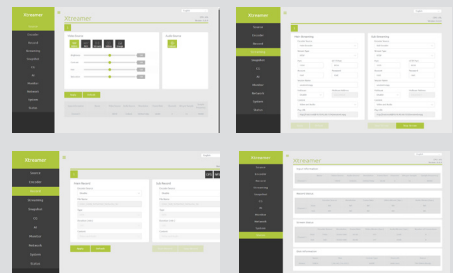
System			
CPU	<table border="1"> <tr> <td>NVIDIA Jetson Orin™ NX 8GB 6-Core Arm® Cortex®-A78AE v8.2 64-Bit CPU 1.5MB L2 + 4MB L3</td> <td>NVIDIA Jetson Orin™ NX 16GB 8-Core Arm® Cortex®-A78AE v8.2 64-Bit CPU 2MB L2 + 4MB L3</td> </tr> </table>	NVIDIA Jetson Orin™ NX 8GB 6-Core Arm® Cortex®-A78AE v8.2 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
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GPU	1024-Core NVIDIA Ampere Architecture GPU with 32 Tensor Cores		
AI Performance	<table border="1"> <tr> <td>NVIDIA Jetson Orin™ NX 8GB 70 TOPS</td> <td>NVIDIA Jetson Orin™ NX 16GB 100 TOPS</td> </tr> </table>	NVIDIA Jetson Orin™ NX 8GB 70 TOPS	NVIDIA Jetson Orin™ NX 16GB 100 TOPS
NVIDIA Jetson Orin™ NX 8GB 70 TOPS	NVIDIA Jetson Orin™ NX 16GB 100 TOPS		
System Memory	<table border="1"> <tr> <td>NVIDIA Jetson Orin™ NX 8GB 8GB LPDDR5</td> <td>NVIDIA Jetson Orin™ NX 16GB 16GB LPDDR5</td> </tr> </table>	NVIDIA Jetson Orin™ NX 8GB 8GB LPDDR5	NVIDIA Jetson Orin™ NX 16GB 16GB LPDDR5
NVIDIA Jetson Orin™ NX 8GB 8GB LPDDR5	NVIDIA Jetson Orin™ NX 16GB 16GB LPDDR5		
Interface			
Storage	Supports External NVMe 1×Micro SD Card Slot		
Display Interface	1×Mini DP1.4		
Ethernet	1×RJ45 for 10/100/1000Mbps Ethernet DHCP Client		
Expansion Slot	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	2×4MIPI CSI-2 Lanes (D-PHY 2.1, Support MIPI Camera, Capture Card)		
Peripheral Communication	10 Pin Header 1×USB2.0 4×GPIO 1×I2C		
	6 Pin Wafer 1×UART(*)		
	2 Pin Header 1×GPIO		
	3 Pin Header 1×UART (*)		
Misc. Features	* Please select either 6 Pin Wafer UART or 3 Pin Header UART to use Firmware Upgradable		

Key points

Video Interface	
Video Input	2×GIGE (PSE Support with Power Board)

SDK/Software

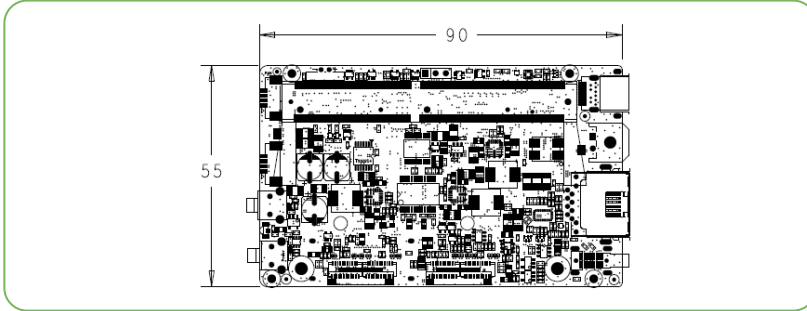
Video Feature	
Video Encode	AV1 (UHP) 1×4K60 3×4K30 6×1080p60 12×1080p30
	H.265 (UHP) 1×4K60 3×4K30 6×1080p60 12×1080p30
	H.264 (UHP) 1×4K60 2×4K30 5×1080p60 11×1080p30
Video Decode	AV1 (Main Profile) 1×8K30 2×4K60 4×4K30 9×1080p60 20×1080p30
	H.265 (Main, Main10) 1×8K30 2×4K60 4×4K30 9×1080p60 18×1080p30
	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 (*), 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)	
Xtremer	Web Based User Interface
	Encode / Decode AV1, H.26X
	Color Format Adjust 444 / 422 / 420, 10Bit / 8Bit Select
SCP	Record MP4, TS
	Stream / Network RTSP, RTMP, HLS, SRT, TS, WebRTC. NDI-HX (*), Full NDI (*) Dante AV-H (*) *Separate License Required
	Stream Multi-Streams Stream Server RTSP, RTMP, HLS, SRT, TS, WebRTC, Full NDI (*), 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 : 48V
Power Consumption	TBA
Operating Temperature	Standard Version: 0~60 ° C with Airflow
Storage Temperature	-20~80 ° C

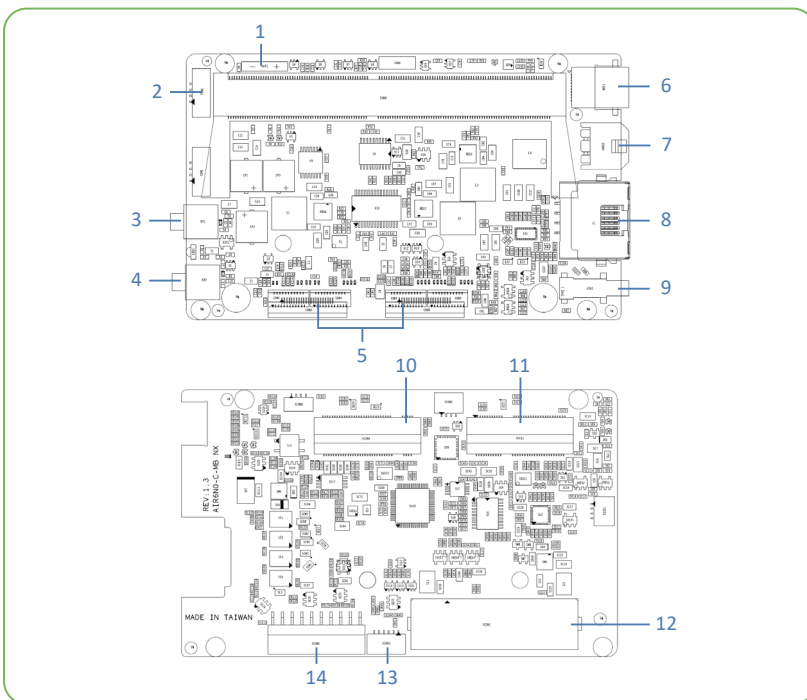
Mechanical



- Dimension of main Board: 90mm×55mm
- Weight: 220g (Including SOM, Fan and Daughter Board)

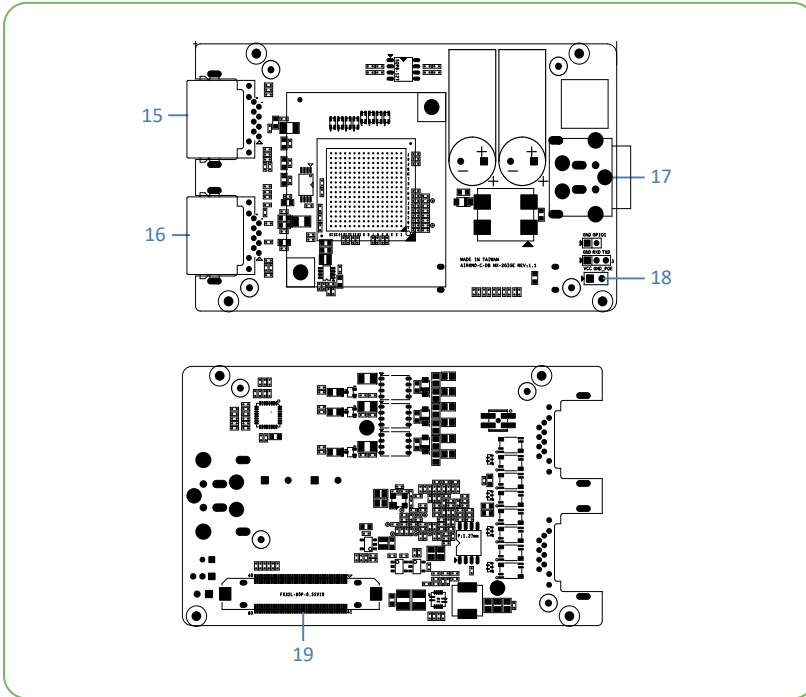
IO Layout

- Carrier Board

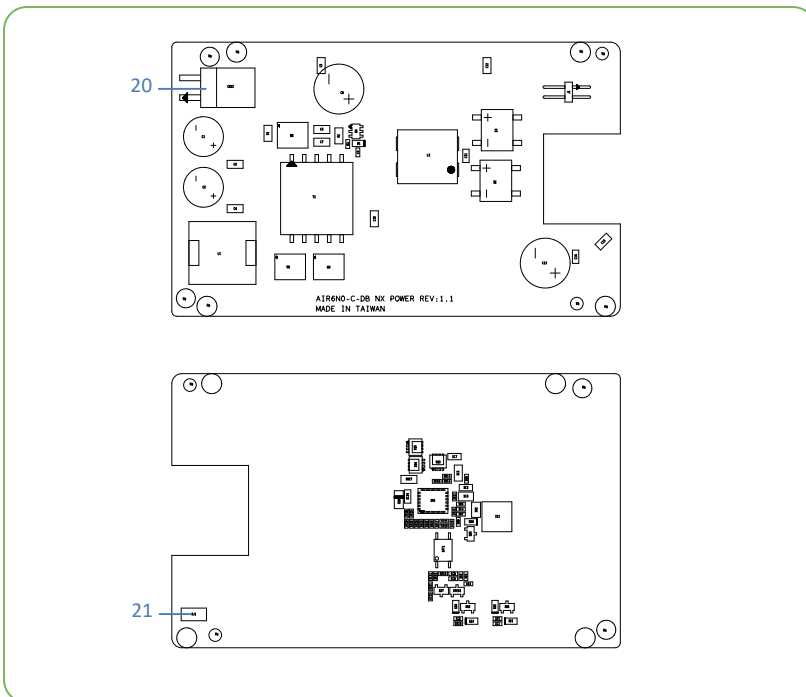


1. Battery
2. FAN
3. Recovery
4. Power
5. MIPI
6. Mini DisplayPort1.4
7. DC Pin Header (19V)
8. RJ45
9. USB3.2 Gen 2 Type-C
10. M.2 2230 M Key (PCIe Gen4×2)
11. M.2 2230 E Key (PCIe Gen4×1)
12. 80 Pin Header (Connect with Daughter Board)
13. 6 Pin Wafer
14. 10 Pin Header

• Daughter Board



- 15. GIGE CH1 In
- 16. GIGE CH2 In
- 17. 4 Pin DC Jack
- 18. 2 Pin Header (Power)
- 19. 80 Pin Header (Connect with Carrier Board)



- 20. 2 Pin Wafer (Power Out to Carrier Board)
- 21. 2 Pin Header (Power In)

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