AIR6N0-C-MB NX 2×GIGE

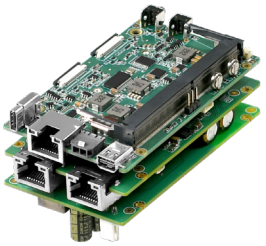
Card Size AI Edge with Multi AIoT Expansion

YUAN
Visualize Intelligent Planet

Features

- Powered by NVIDIATM 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

NVIDIA Partner



Specifications

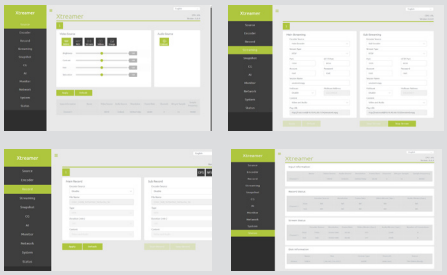
System		
CPU	NVIDIA Jetson Orin™ NX 8GB 6-Core Arm® Cortex®-A78AE v8.2 64-Bit CPU 1.5MB L2 + 4MB L3	NVIDIA Jetson Orin™ NX 16GB 8-Core Arm® Cortex®-A78AE v8.2 64-Bit CPU 2MB L2 + 4MB L3
GPU	1024-Core NVIDIA Ampere Architecture GPU with 32 Tensor Cores	
AU Performance	NVIDIA Jetson Orin™ NX 8GB 70 TOPS	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 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 (*) * Please select either 6 Pin Wafer UART or 3 Pin Header UART to use	
Misc. Features	Firmware Upgradable	

Key points

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

SDK/Software

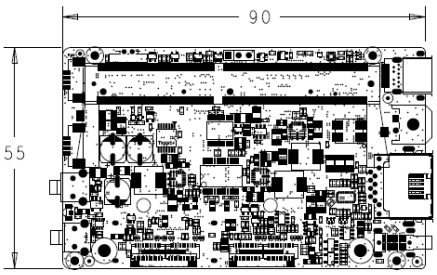
Video Feature	
Video Encode	AV1 (UHP) 1×4K60 | 3×4K30 | 6×1080p60 | 12×1080p30 H.265 (UHP) 1×4K60 | 3×4K30 | 6×1080p60 | 12×1080p30 H.264 (UHP) 1×4K60 | 2×4K30 | 5×1080p60 | 11×1080p30
Video Decode	AV1 (Main Profile) 1×8K30 | 2×4K60 | 4×4K30 | 9×1080p60 | 20×1080p30 H.265 (Main, Main10) 1×8K30 | 2×4K60 | 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)	
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
SCP	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



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

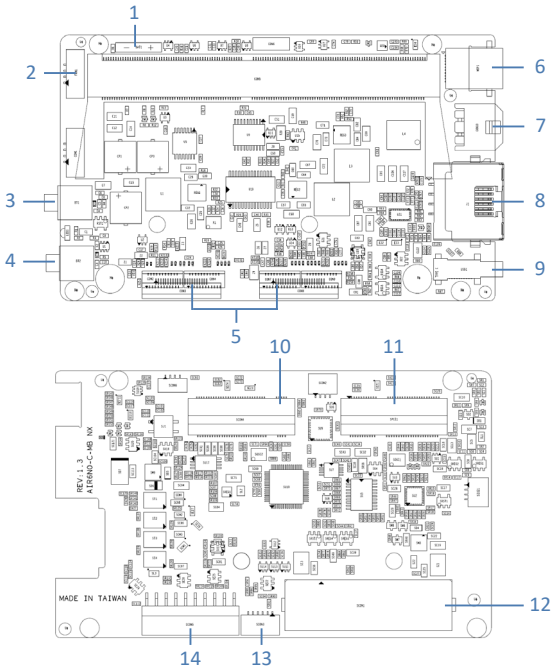
Mechanical



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

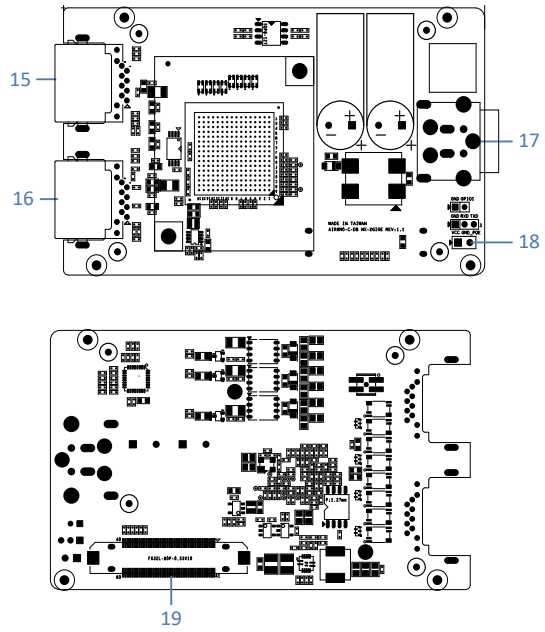
IO Layout

- Carrier Board

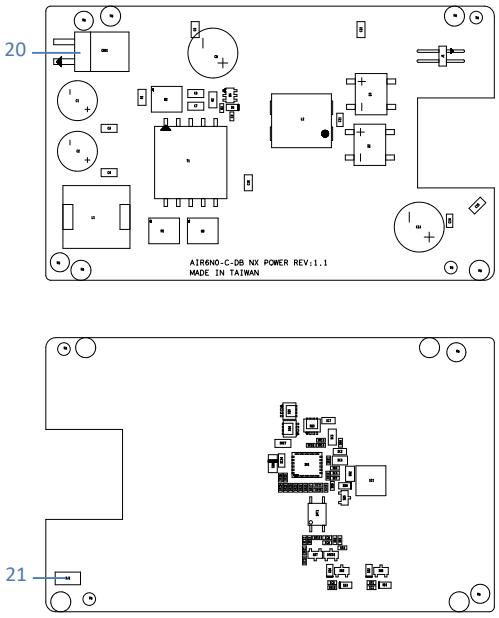


1. Battery
2. FAN
3. Recovery
4. Power
5. MIPI
6. Mini DisplayPort1.4
7. DC Pin Header (19V)
8. RJ45
9. USB3.2 Gen 2 Type-C
10. M.2 2230 M Key (PCIe Gen4×2)
11. M.2 2230 E Key (PCIe Gen4×1)
12. 80 Pin Header (Connect with Daughter Board)
13. 6 Pin Wafer
14. 10 Pin Header

• 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 Boared)
21. 2 Pin Header (Power In)