

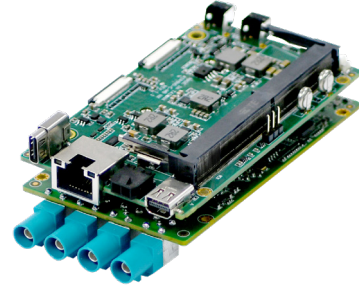
# AIR6N0-C-MB NX 4×GMSL2

## Card Size AI Edge with Multi AIoT Expansion

YUAN  
Visualize Intelligent Planet

### Features

- Powered by NVIDIA® Jetson Orin™ NX up to 100 / 70 TOPS
- Business Card Size ( 90mm×55mm )
- 4×GMSL2 In
- 1×CAN Bus
- 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 1×Micro SD Card Slot	
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-A ) 1×USB3.2 Gen2 ( Type-C )	
MIPI	Default: 2×4MIPI CSI-2 Lanes ( D-PHY 2.1, Support MIPI Camera, Capture Card )  Option: 4×2MIPI CSI-2 Lanes ( D-PHY 2.1, Support MIPI Camera, Capture Card )	
Peripheral Communication	14 Pin Header 1×USB2.0 4×GPIO 1×UART 1×I2C  3 Pin Header 1×UART  2×5 Pin Header 3×GPIO 1×I2C  8 Pin Phoenix Connector 1×RS232 1×I2C 1×GPIO	
Misc. Features	Firmware Upgradable	

## Key Points

Video Feature	
Video Input	4xGMSL2

## 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 (*), Full NDI (*), Dante AV-H (*) Animation Transition Effect Video Cropping, Scaling and Alpha Blending Engine <b>*Separate License Required</b>
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	<p>Capture</p> <ul style="list-style-type: none"> <li>Auto Signal Detection</li> <li>Deinterlace, OSD, Color Adjustment</li> <li>Image Snapshot</li> <li>Animation Transform Effect for PGM</li> </ul> <p>Record</p> <ul style="list-style-type: none"> <li>AV1, H.26X</li> <li>MP4, TS</li> <li>Multi-Stream Recording</li> <li>Schedule Recording</li> </ul> <p>Stream</p> <ul style="list-style-type: none"> <li>Multi-Streams Stream Server</li> <li>RTSP, RTMP, HLS, SRT, TS, WebRTC. NDI-HX (*), Full NDI (*), Dante AV-H (*)</li> </ul> <p><b>*Separate License Required</b></p>	
Xstreamer	<p>Web Based User Interface</p> <p>Encode / Decode</p> <ul style="list-style-type: none"> <li>AV1, H.26X</li> </ul> <p>Color Format Adjust</p> <ul style="list-style-type: none"> <li>444 / 422 / 420, 10Bit / 8Bit Select</li> </ul> <p>Record</p> <ul style="list-style-type: none"> <li>MP4, TS</li> </ul> <p>Stream / Network</p> <ul style="list-style-type: none"> <li>RTSP, RTMP, HLS, SRT, TS, WebRTC. NDI-HX (*), Full NDI (*), Dante AV-H (*)</li> </ul> <p><b>*Separate License Required</b></p>	

## Environment

### Development Environment

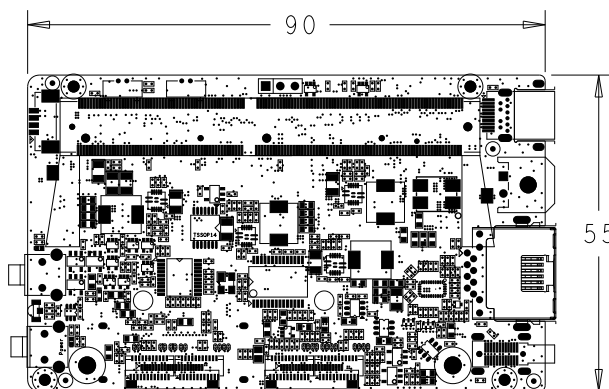
OS	Ubuntu: 20.04
Kernel	5.10.104-tegra or Higher
BSP	Linux for Tegra(L4T) R35.3.1 or Higher
SDK	JetPack 5.1.1 or Higher

### Environment

Power Supply	DC input : 24V
Power Consumption	TBA
Operating Temperature	Standard Version: 0~60 ° C with Airflow
Storage Temperature	-20~80 ° C

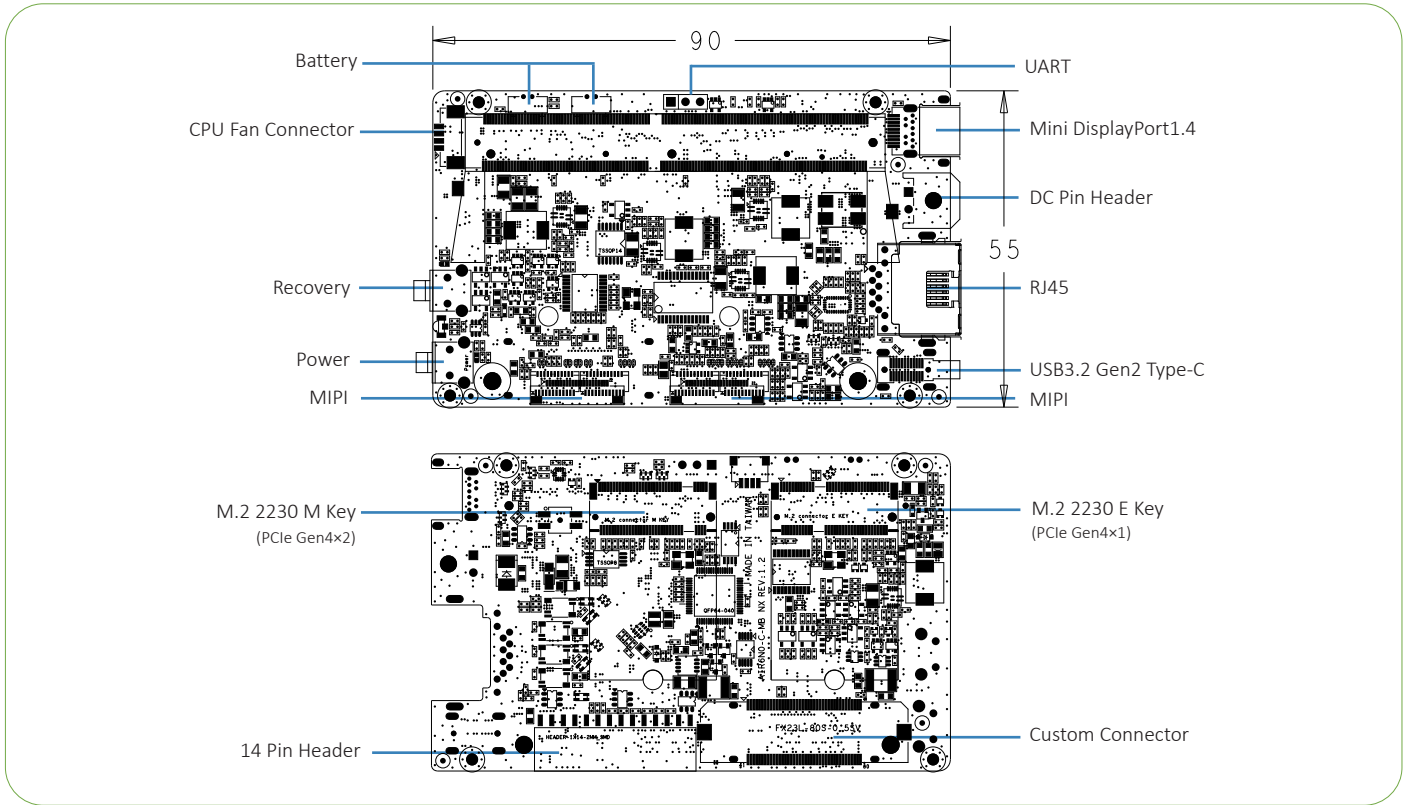
## Mechanical

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

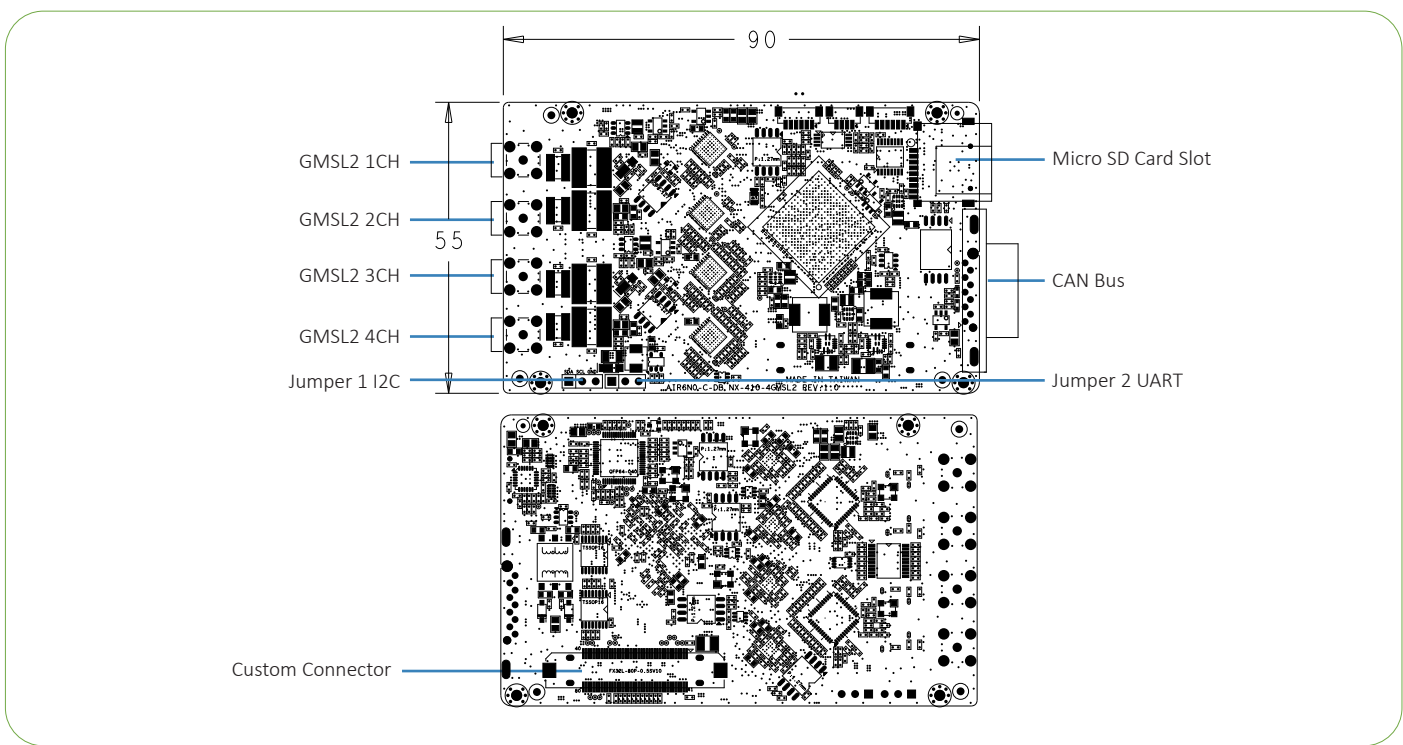


# I/O Layout

## Carrier Board



## I/O Board



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