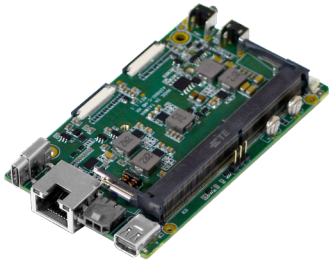


# AIR6N0-C-MB NX

## Business Card Size AI Edge Motherboard

### 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



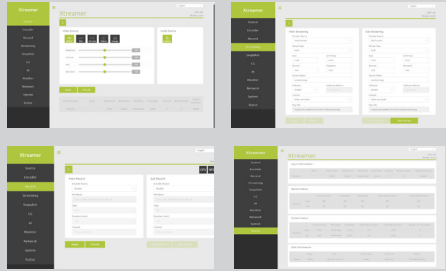
### Specifications

| System                   |                                                                                                                                                            |                                                                                             |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| CPU                      | NVIDIA Jetson Orin™ NX 8GB<br>6-Core Arm® Cortex®-A78AE v8.2 64-Bit CPU<br>1.5MB L2 + 4MB L3                                                               | NVIDIA Jetson Orin™ NX 16GB<br>8-Core Arm® Cortex®-A78AE v8.2 64-Bit CPU<br>2MB L2 + 4MB L3 |
| GPU                      | 1024-Core NVIDIA Ampere Architecture GPU with 32 Tensor Cores                                                                                              |                                                                                             |
| AI Performance           | NVIDIA Jetson Orin™ NX 8GB<br>70 TOPS                                                                                                                      | NVIDIA Jetson Orin™ NX 16GB<br>100 TOPS                                                     |
| System Memory            | NVIDIA Jetson Orin™ NX 8GB<br>8GB LPDDR5                                                                                                                   | NVIDIA Jetson Orin™ NX 16GB<br>16GB LPDDR5                                                  |
| Interface                |                                                                                                                                                            |                                                                                             |
| Storage                  | Supports External NVMe                                                                                                                                     |                                                                                             |
| Display Interface        | 1×Mini DP1.4                                                                                                                                               |                                                                                             |
| Ethernet                 | 1×RJ45 for 10/100/1000Mbps Ethernet<br>DHCP Client                                                                                                         |                                                                                             |
| Expansion Slot           | M.2<br>1×M.2 2230 M Key PCIe Gen4×2 Slot<br>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<br>2×USB3.2 Gen2<br>1×PCIe Gen4×4<br>4×GPIO<br>2×UART<br>3×I2C<br>1×CAN Bus<br><br>14 Pin Header<br>1×USB2.0<br>4×GPIO<br>1×UART<br>1×I2C |                                                                                             |
| Misc. Features           | Firmware Upgradable<br>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<br>4×GPIO<br>2×I2C<br>1×RS232<br>1×RS485 |

## Add-On Cards / SDK / Software

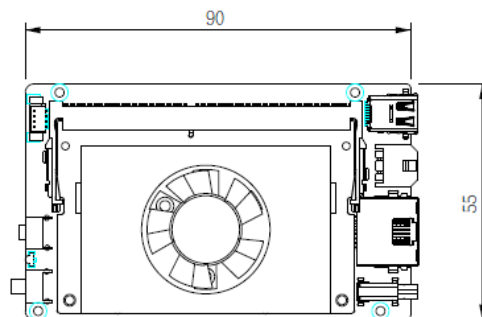
| Video Feature         |                                                                                                   |                                                                                                                                                                                                                                                             |
|-----------------------|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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<br>Image Snapshot<br>Deinterlace, Alpha Blending Engine<br>Auto Signal Detection<br>2D/3D Video, Audio and VANC Streams Capture                                                                                                   |
|                       | Record                                                                                            | Encrypt / Sync / Clone / Recording<br>Time-Shifting / Rewind / Pre-Event / Recording<br>Multi-Streams ( 3D ) Recording<br>Animation Transition Effect<br>Video Cropping, Scaling and Alpha Blending Engine                                                  |
|                       | Stream                                                                                            | 2D/3D Universal Stream Client<br>2D/3D Multi-Streams Stream Server<br>RTSP, RTMP, HLS, SRT, TS, WebRTC. NDI-HX (*), Dante AV-H (*)<br>Animation Transition Effect<br>Video Cropping, Scaling and Alpha Blending Engine<br><b>*Separate License Required</b> |
|                       |                                                                                                   |                                                                                                                                                                                                                                                             |
| QDEEP                 | AI SDK Integrated Multiple Algorithms and Deep-Learning Models in Various Fields of Applications  | Face Recognition<br>Objects Detection<br>Objects Segment<br>Optical Character Recognition<br>License Plate Recognition<br>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 (*), Dante AV-H (*)<br><b>*Separate License Required</b> |                                                                                                                                                                                                                                                             |

## 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

