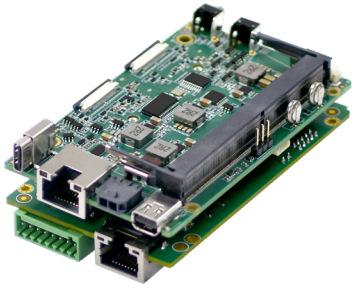
# AIR6N0-C-MB NX OOB

## Card Size AI Edge with OOB

YUAN
Visualize Intelligent Planet

### Features

- Powered by NVIDIA® Jetson Orin™ NX up to 100 / 70 TOPS
- OOB Connection via Wifi / 4G / RJ45
- Business Card Size ( 90mm×55mm )
- 2×M.2, 8×MIPI CSI-2 Lanes and RS232 / RS485 / GPIO
- 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 | Default:<br>2×4MIPI CSI-2 Lanes ( D-PHY 2.1, Support MIPI Camera, Capture Card )<br><br>Option:<br>4×2MIPI CSI-2 Lanes ( D-PHY 2.1, Support MIPI Camera, Capture Card ) | |
| Peripheral Communication | 14 Pin Header<br>1×USB2.0<br>4×GPIO<br>1×UART<br>1×I2C<br><br>3 Pin Header<br>1×UART<br><br>2×5 Pin Header<br>3×GPIO<br>1×I2C<br><br>8 Pin Phoenix Connector ( CON6 )<br>1×GPIO<br>1×UART<br>1×I2C | |
| Misc. Features | Firmware Upgradable | |

## OOB Specifications

| Out-Of-Band Management Functions | |
|---|---|
| Allxon swiftDR for Power Cycling | Edge Device Force Shutdown<br>Edge Device Power Switch ON/OFF<br>Edge Device Power ON/OFF Detection<br>Edge Device Reset |
| Extension I/O | 1×I2C<br>1×UART<br>1×GPIO |
| **Out-Of-Band Management Network Interface** | |
| Ethernet | 1-port 10/100 Mbps RJ45 Port |
| Wireless | Support 4G LTE Module with SIM Card Slot & Wi-Fi USB Dongle |

Remote Management Enrollment

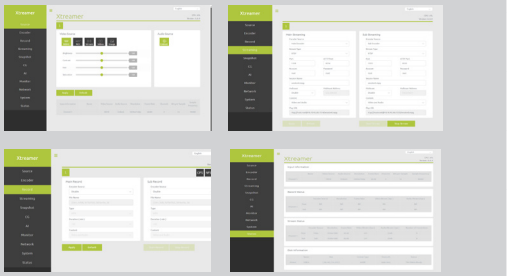
VPP6N0-S NX OOB MK.2 supports Allxon's remote edge AI device management solutions to assist users in overcoming the challenges encountered during the AI/IoT projects. To get started with Allxon's various solutions, follow the instructions with the web page below to activate different Allxon services according to your needs.

OOB Management Introduction

Getting Start with Remote Management

## SDK / Software

| Video Feature | |
|---|---|
| Video Encode | AV1 ( UHP )<br>1×4K60 \| 3×4K30 \| 6×1080p60 \| 12×1080p30 |
| | H.265 ( UHP )<br>1×4K60 \| 3×4K30 \| 6×1080p60 \| 12×1080p30 |
| | H.264 ( UHP )<br>1×4K60 \| 2×4K30 \| 5×1080p60 \| 11×1080p30 |
| Video Decode | AV1 ( Main Profile )<br>1×8K30 \| 2×4K60 \| 4×4K30 \| 9×1080p60 \| 20×1080p30 |
| | H.265 ( Main, Main10 )<br>1×8K30 \| 2×4K60 \| 4×4K30 \| 9×1080p60 \| 18×1080p30 |
| | H.264 ( Baseline, Main, High )<br>1×4K60 \| 2×4K30 \| 5×1080p60 \| 11×1080p30 |
| | VP9 ( Profile 0, Profile 2 )<br>1×4K60 \| 3×4K30 \| 7×1080p60 \| 15×1080p30 |
| **SDK** | |
| QCAP | Capture<br>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<br>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<br>2D/3D Universal Stream Client<br>2D/3D Multi-Streams Stream Server<br>RTSP, RTMP, HLS, SRT, TS, WebRTC. NDI-HX (*), Full NDI (*), Dante AV-H (*)<br>Animation Transition Effect<br>Video Cropping, Scaling and Alpha Blending Engine<br>*Separate License Required |
| QDEEP | AI SDK Integrated Multiple Algorithms and Deep-Learning Models in Various Fields of Applications<br>Face Recognition<br>Objects Detection<br>Objects Segment<br>Optical Character Recognition<br>License Plate Recognition<br>Customizable Video AI Functions Upon Request |

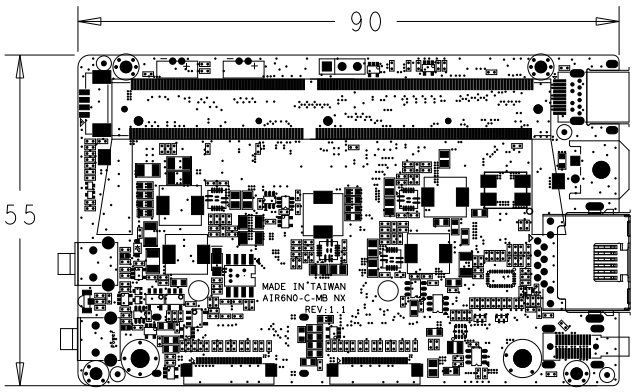
| Software ( Optional ) | | |
|---|---|---|
| Xtreamer | Web Based User Interface |  |
| | Encode / Decode<br>AV1, H.26X | |
| | Color Format Adjust<br>444 / 422 / 420, 10Bit / 8Bit Select | |
| | Record<br>MP4, TS | |
| | Stream / Network<br>RTSP, RTMP, HLS, SRT, TS, WebRTC. NDI-HX (*), Full NDI (*), Dante AV-H (*)<br>*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 : 19V |
| Power Consumption | TBA |
| Operating Temperature | Standard Version: 0~60 ° C with Airflow |
| Storage Temperature | -20~80 ° C |

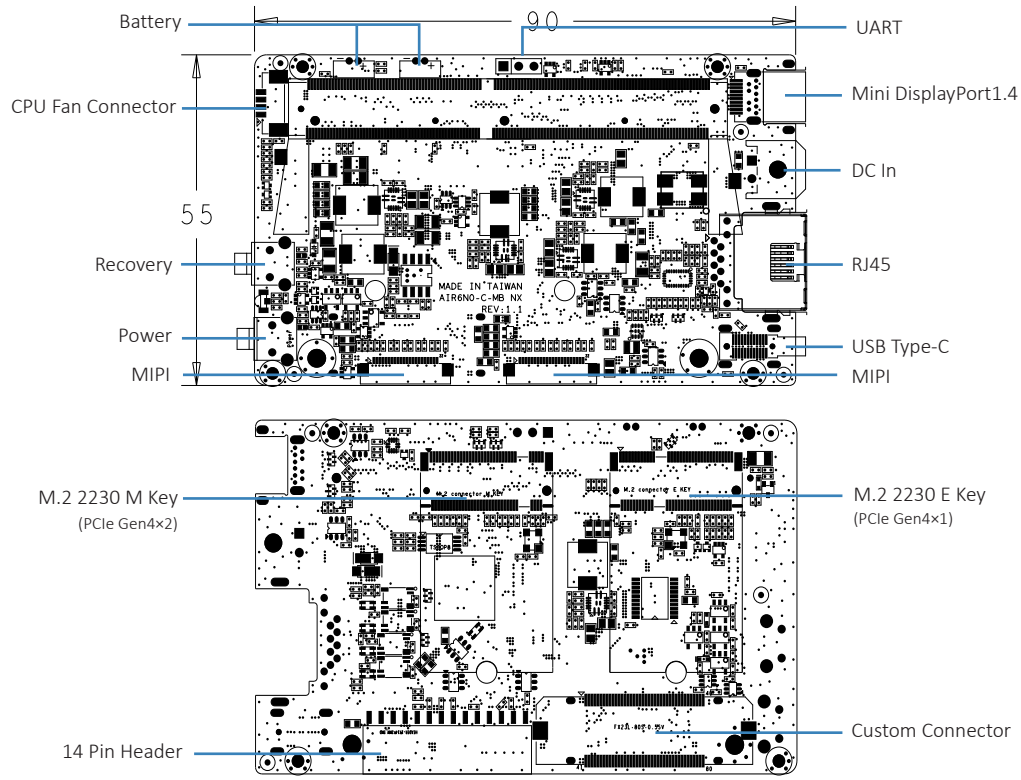
## Mechanical

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



# I/O Layout

## • Carrier Board




## • OOB Daughter Board