

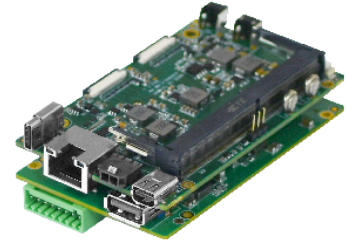
AIR6N0-C-MB NX I/O

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)
- 3×M.2, 8×MIPI CSI-2 Lanes and RS232 / RS485 / GPIO
- 2×USB3.2 Gen2
- 1×Mini DisplayPort



Specifications

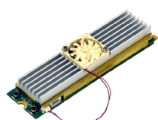
System		
CPU	NVIDIA Jetson Orin™ NX 8GB 6-Core Arm® Cortex®-A78AE v8.2 64-Bit CPU 1.5MB L2 + 4MB L3	NVIDIA Jetson Orin™ NX 16GB 8-Core Arm® Cortex®-A78AE v8.2 64-Bit CPU 2MB L2 + 4MB L3
GPU	1024-Core NVIDIA Ampere Architecture GPU with 32 Tensor Cores	
AI Performance	NVIDIA Jetson Orin™ NX 8GB 70 TOPS	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 2280 M Key PCIe Gen4×4 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) 1×USB3.2 Gen1 (Type-A)	
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 8 Pin Phoenix Connector (CON1) 1×GPIO 2×I2C 8 Pin Phoenix Connector (CON6) 1×GPIO 1×RS232 1×RS485 2 Pin Header (CON3) 1×GPIO 2 Pin Header (CON4) 1×GPIO	
Misc. Features	Firmware Upgradable	

Add-On Cards / SDK / Software

Video Feature				
	Model	Interface	Max. Resolution	Capture / Preview
Capture Card (Optional)	SC710N1 M2 HDMI2.0	1×HDMI2.0	4096×2160p@60/50fps	4:2:2 10Bit P210
	SC710N1 M2 12G-SDI	1×12G-SDI	4096×2160p@60/50fps	4:2:0 10Bit P010
	SC400N4 M2 TVI / AHD	4×TVI / AHD	1920×1080p@30/25fps	4:4:4 8Bit YV24
	SC400N4 M2 HDMI	4×HDMI	1920×1080p@60/50fps	4:4:4 8Bit RGB32 / 24
	SC400N4 M2 SDI	4×3G-SDI	1920×1080p@60/50fps	4:2:2 8Bit YUY2
	SC400N1 M2 HDV	1×DVI-I, 1×YPbPr, 1×VGA	1920×1080p@60/50fps	4:2:0 8Bit YV12, NV12
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			



SC710N1 M2 HDMI2.0



SC710N1 M2 12G-SDI



SC400N4 M2 TVI / AHD



SC400N4 M2 HDMI

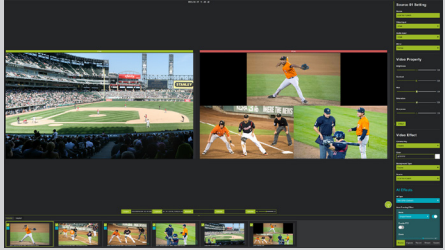
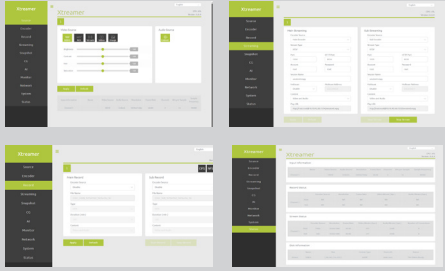


SC400N4 M2 SDI



SC400N1 M2 HDV

Software (Optional)

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

Environment

Development Environment

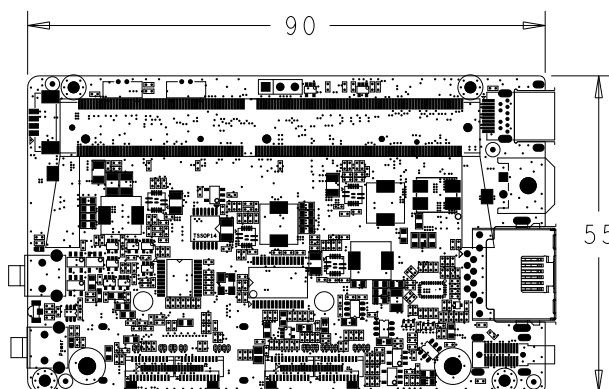
OS	Ubuntu: 20.04
Kernel	5.10.104-tegra or Higher
BSP	Linux for Tegra(L4T) R35.3.1 or Higher
SDK	JetPack 5.1.1 or Higher

Environment

Power Supply	DC input : 9~24V
Power Consumption	TBA
Operating Temperature	Standard Version: 0~60 ° C with Airflow
Storage Temperature	-20~80 ° C

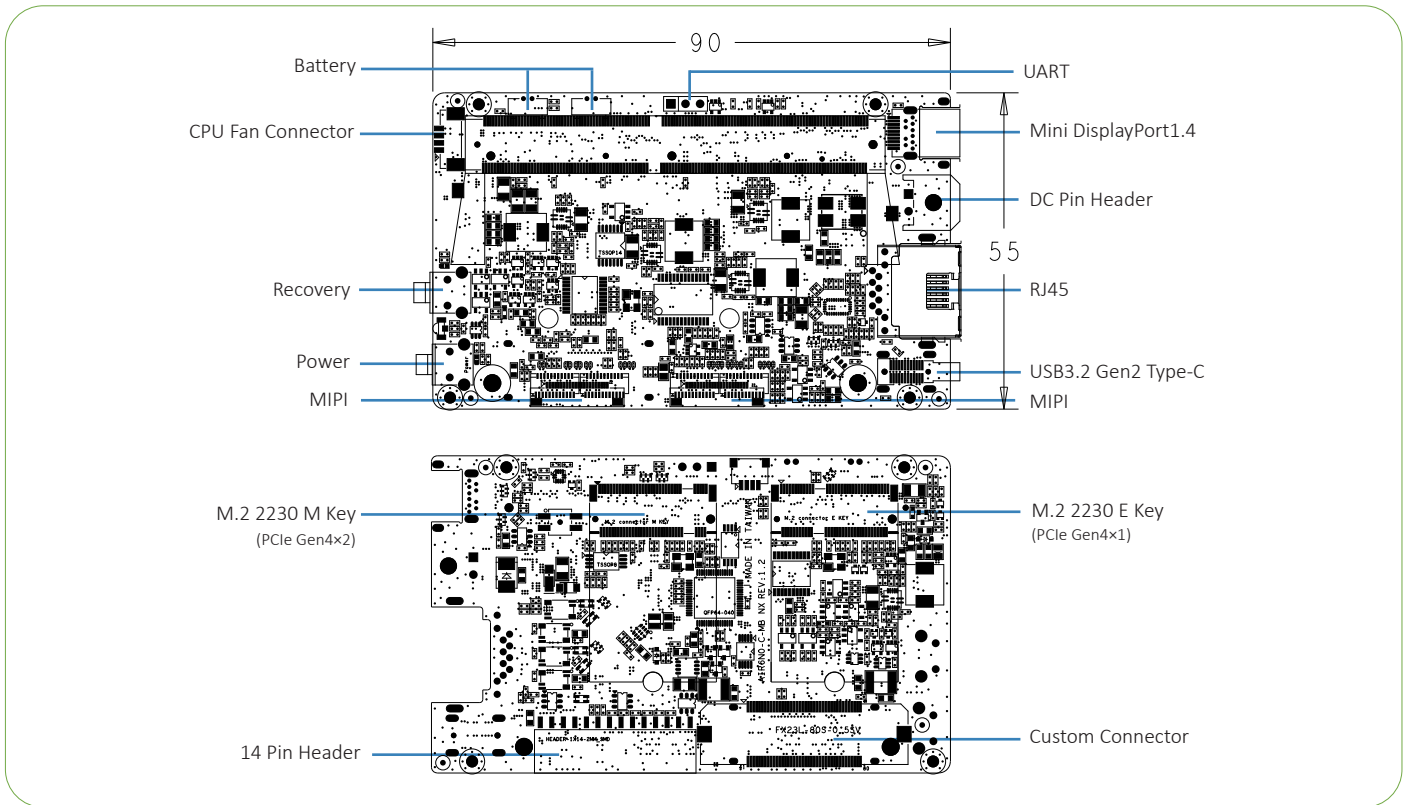
Mechanical

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

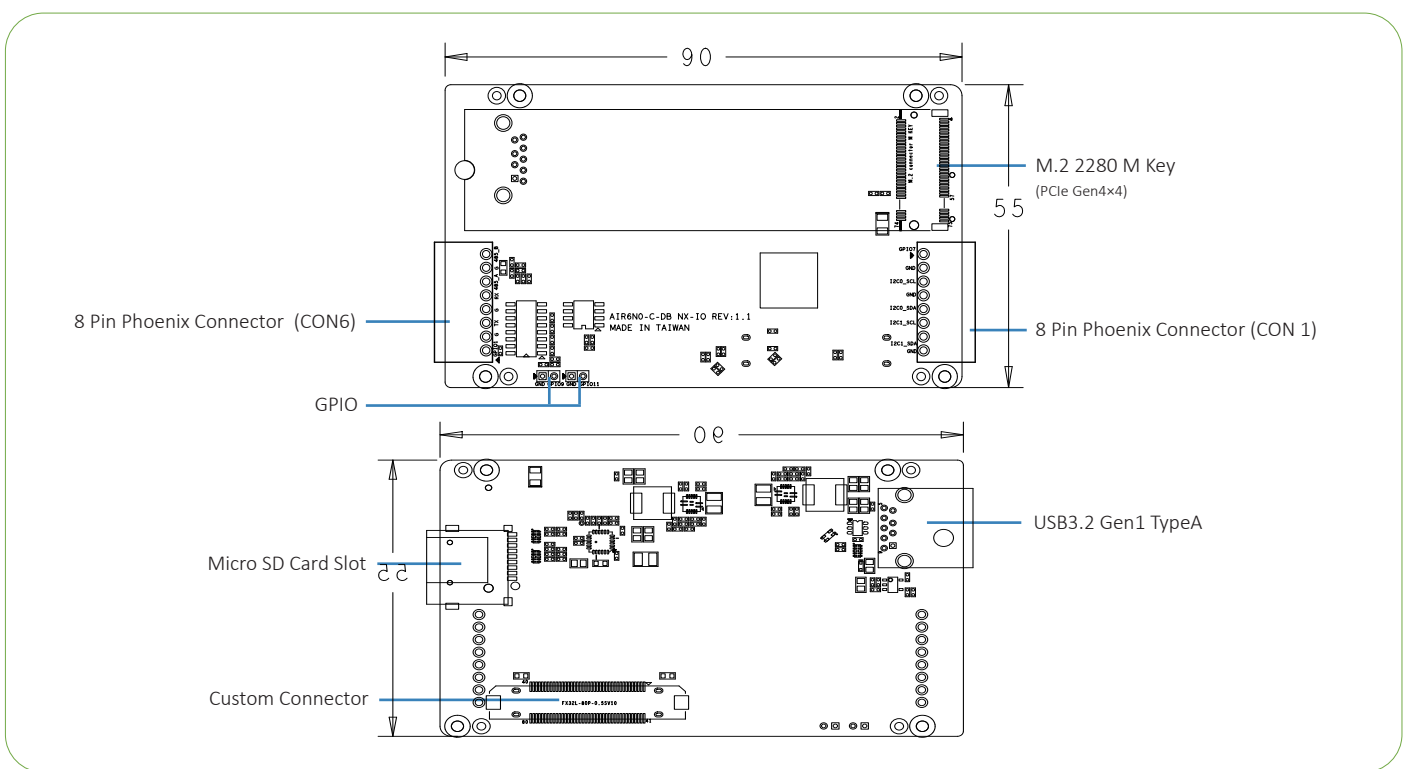


I/O Layout

Carrier Board



I/O Board



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