ARC6N0 NX

Highly Integrated AI Core, Provide 157 TOPS and Expandability

YUAN
Visualize Intelligent Planet

Features

- Powered by NVIDIA® Jetson Orin™ NX Super up to 157 TOPS
- 3-Axis Digital Accelerometer, 3-Axis Digital Gyroscope and 3-Axis Magnetometer
- 1×M.2 E Key / 2×M.2 M Key / 1×M.2 B Key
- 2×USB3.2 Gen2 Type-C
- I2C / GPIO / CAN BUS
- Compact Design

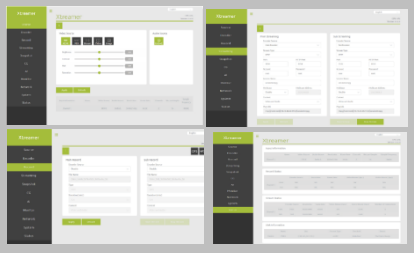
NVIDIA Preferred Partner

Specifications

System		
CPU	NVIDIA Jetson Orin™ NX 8GB Super 6-Core Arm® Cortex®-A78AE v8.2 64-Bit CPU 1.5MB L2 + 4MB L3	NVIDIA Jetson Orin™ NX 16GB Super 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 Super 117 TOPS	NVIDIA Jetson Orin™ NX 16GB Super 157 TOPS
System Memory	NVIDIA Jetson Orin™ NX 8GB Super 8GB LPDDR5	NVIDIA Jetson Orin™ NX 16GB Super 16GB LPDDR5
Interface		
Storage	Supports External NVMe	
Display Interface	1×Mini HDMI2.0	
Ethernet	1×RJ45 for 10/100/1000Mbps Ethernet DHCP Client	
Expansion Slot	Main Board 1×M.2 2230 E Key PCIe Gen4*1/USB2.0 Slot 1×M.2 2230 M Key PCIe Gen4*2 Slot Daughter Board 1×M.2 2230 M Key PCIe Gen4*4 Slot 1×M.2 3042/3052 B Key USB3.0 Slot	
USB	Main Board 3×USB2.0 (Wafer) 2×USB3.2 Gen2 (Type-C) Daughter Board 1×USB2.0 (Wafer)	
MIPI	8 MIPI CSI-2 Lanes (D-PHY 2.1, Support MIPI Camera, Capture Card)	
Peripheral Communication	Main Board 3-Axis Digital Accelerometer 3-Axis Digital Gyroscope 1×UART (Shared with Daughter Board) 4×GPIO 1×I2C (Shared with Daughter Board) 2×PWM FAN 1×CAN Bus Daughter Board 3-Axis Magnetometer 2×UART (UART0 Shared with Main Board) 1×I2C (I2C1 Shared with Main Board) 1×Line In 1×Speaker Left & Right 1×SPI 2×CAN Bus 1×Nano SIM Card Slot	
Misc. Features	Firmware Upgradable	

Add-On Cards / SDK / Software

Video Feature	
Video Encode	NVIDIA Jetson Orin™ NX Super: 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	NVIDIA Jetson Orin™ NX Super: AV1 (Main Profile) 1×8K30 | 2×4K60 | 4×4K30 | 10×1080p60 | 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

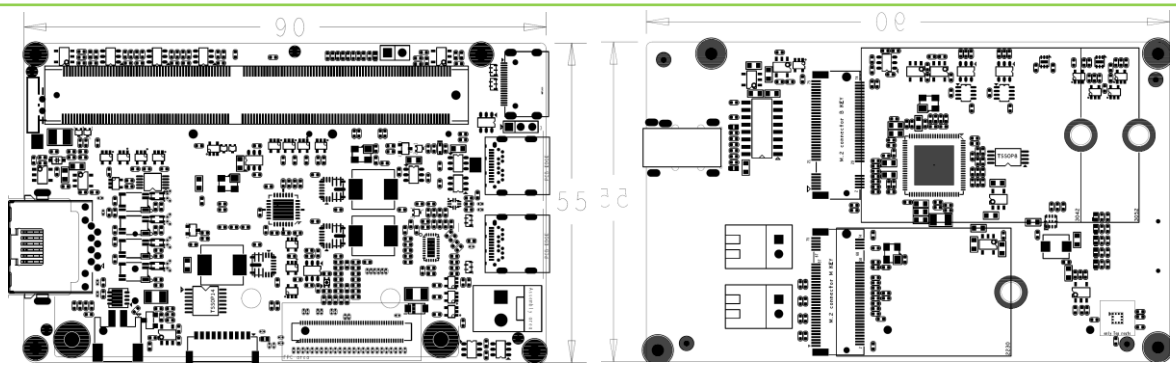
Software (Optional)		
Stream Catcher Pro	Capture Auto Signal Detection Deinterlace, OSD, Color Adjustment Image Snapshot Animation Transform Effect for PGM	
	Record AV1, H.26X MP4, TS Multi-Stream Recording Schedule Recording	
	Stream Multi-Streams Stream Server RTSP, RTMP, HLS, SRT, TS, WebRTC., Full NDI (*), NDI-HX (*), Dante AV-H (*) *Separate License Required	
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	

Environment

Development Environment	
JetPack	6.2 or Higher
Environment	
Power Supply	DC input : 12~36V
Power Consumption	TBA
Operating Temperature	Standard Version: 0~60 ◦ C with Airflow
Storage Temperature	-20~80 ◦ C

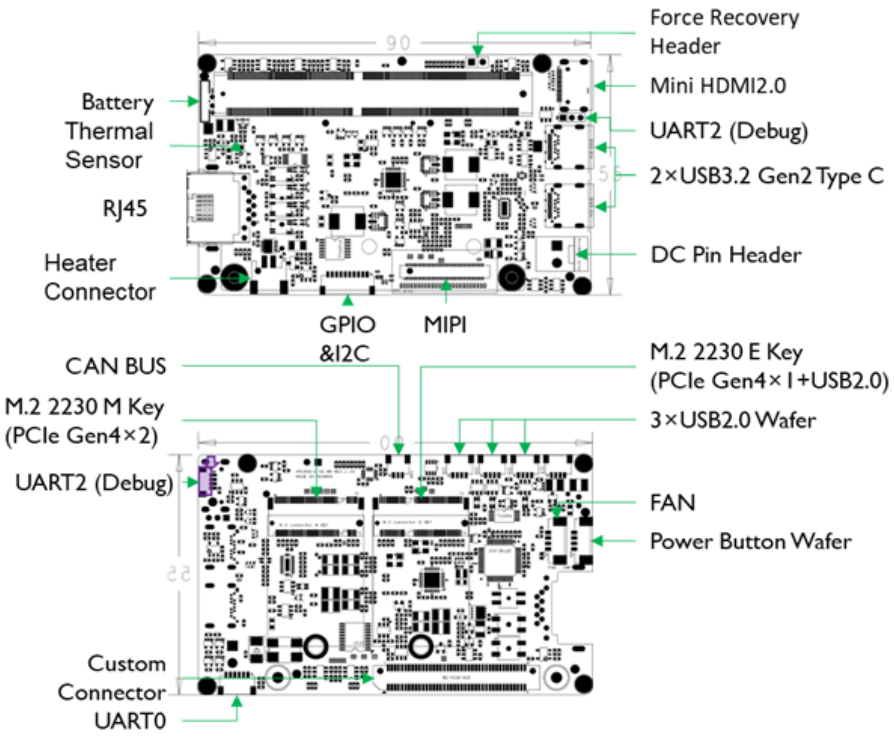
Mechanical

- Dimension of main Board: 90mm×55mm
- Dimension of daughter Board: 90mm×55mm



I/O Layout

- Carrier Board (Main Board)



- Carrier Board (Daughter Board)