ASSURED SYSTEMS

AIR6N0-C NX   YUAN

Business Card Size AI Edge Motherboard

Features

· Powered by NVIDIA® Jetson Orin™ NX Super up to 157 / 117 TOPS
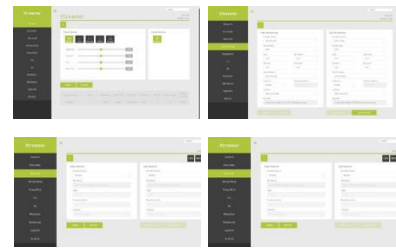· 2×M.2 Gen 4×2 M Key / Gen 4×1 E Key
· 1×USB3.2 Gen2
· 1×Mini DisplayPort

NVIDIA Partner

Specifications

System				
SOM	NVIDIA Jetson Orin™ NX 16GB Super	NVIDIA Jetson Orin™ NX 8GB Super	NVIDIA Jetson Orin™ Nano 8GB Super	NVIDIA Jetson Orin™ Nano 4GB Super
CPU	8-Core Arm® Cortex®-A78AE v8.2 64-Bit CPU 2MB L2 + 4MB L3	6-Core Arm® Cortex®-A78AE v8.2 64-Bit CPU 1.5MB L2 + 4MB L3	6-Core Arm® Cortex®-A78AE v8.2 64-Bit CPU 1.5MB L2 + 4MB L3	
GPU	1024-Core NVIDIA Ampere Architecture GPU with 32 Tensor Cores		1024-core NVIDIA Ampere Architecture GPU with 32 Tensor Cores	512-core NVIDIA Ampere Architecture GPU with 16 Tensor Cores
AI Performance	157 TOPS	117 TOPS	67 TOPS	34 TOPS
System Memory	16GB 128-bit LPDDR5 102.4GB/s	8GB 128-bit LPDDR5 102.4GB/s	8GB 128-bit LPDDR5 102 GB/s	4GB 64-bit LPDDR5 51 GB/s
Interface				
Storage	Supports External NVMe			
Display Interface	1×Mini DP1.4			
Ethernet	1×RJ45 for 10/100/1000Mbps Ethernet (DHCP Client)			
Expansion Slot	1×M.2 2230 M Key PCIe Gen4×2 Slot (Nano: Gen3×2) 1×M.2 2230 E Key PCIe Gen4×1 Slot (Nano: Gen3×1)			
USB	1×USB3.2 Gen2 (Type-C)			
MIPI	8 MIPI CSI-2 Lanes (D-PHY 2.1, Support MIPI Camera, Capture Card)			
Misc. Features	Firmware Upgradable			
Development Environment				
JetPack	6.2 or Higher			
Environment				
Power Supply	DC input : 12~36V			
Power Consumption	TBA			
Operating Temperature	0~60°C with Airflow			
Storage Temperature	-20~80°C			
Certification	CE, FCC			

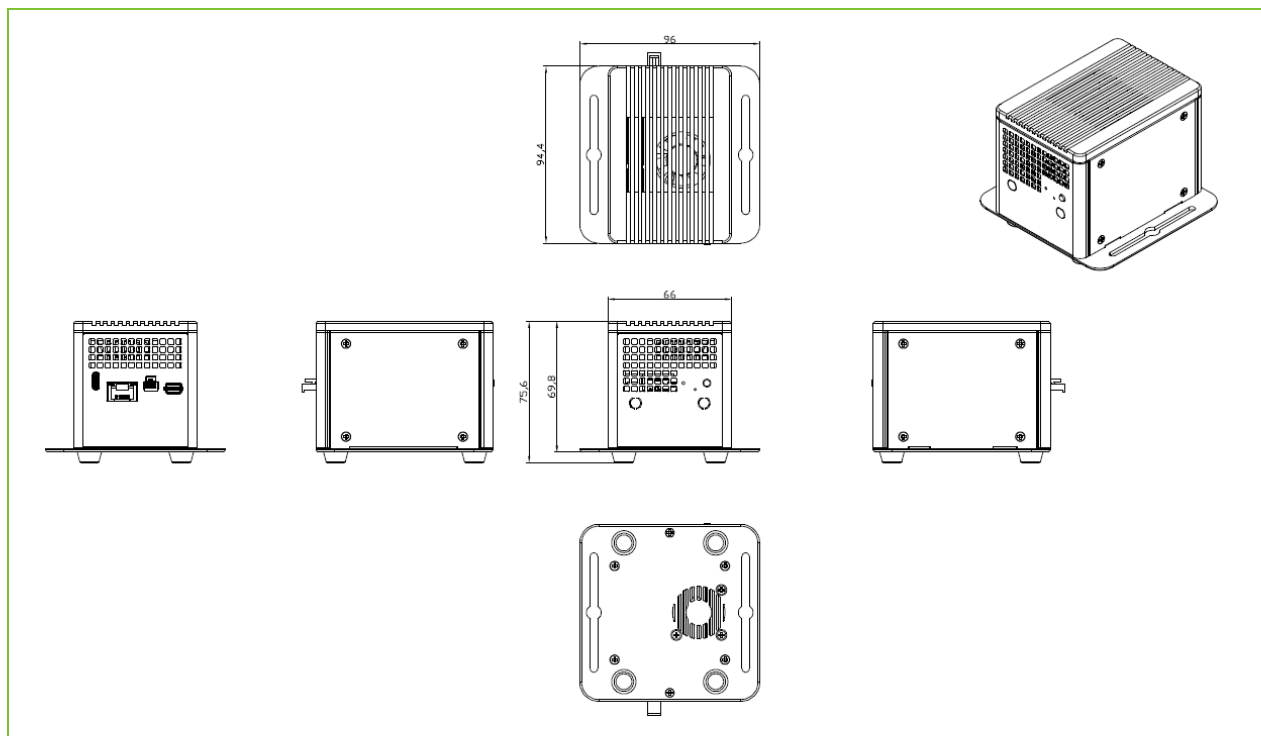## SDK / Software

Video Feature				
SOM	NVIDIA Jetson Orin™ NX 16GB Super	NVIDIA Jetson Orin™ NX 8GB Super	NVIDIA Jetson Orin™ Nano 8GB Super	NVIDIA Jetson Orin™ Nano 4GB Super
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		1080p30 supported by 1-2 CPU cores	
Video Decode	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		AV1 (Main Profile) 1×4K60 | 2×4K30 | 5×1080p60 | 10×1080p30 H.265 (Main, Main10) 1×4K60 | 2×4K30 | 5×1080p60 | 11×1080p30 H.264 (Baseline, Main, High) 1×4K30 | 3×1080p60 | 7×1080p30 VP9 (Profile 0, Profile 2) 1×4K60 | 2×4K30 | 5×1080p60 | 10×1080p30	

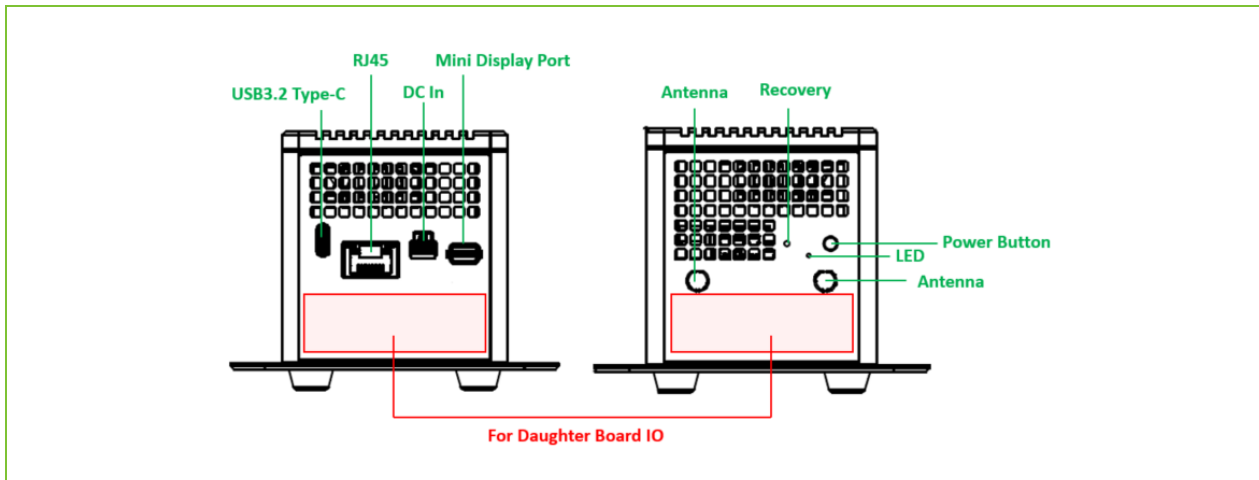| SDK		
QCAP	Capture 　　High Performance Renderer 　　Image Snapshot 　　De-interlace, Alpha Blending Engine 　　Auto Signal Detection 　　2D/3D Video, Audio and VANC Streams Capture	
	Record 　　Encrypt / Sync / Clone / Recording 　　Time-Shifting / Rewind / Pre-Event / Recording 　　Multi-Streams (3D) Recording 　　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 (*) 　　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)		
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 (*) 　　*Separate License Required	

Mechanical

· Dimension: 94.4 mm × 66 mm × 69.8mm
· Weight: 398g

I/O Layout

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