

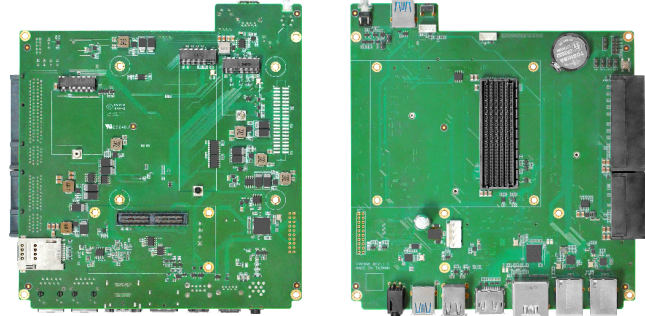
VPP6N0-MB AGX

Highly Integrated AI Server, Provide 275 TOPS and Expandability

YUAN
Visualize Intelligent Planet

Features

- Powered by NVIDIA® Jetson AGX Orin™ up to 275 TOPS
- 1×PCIe Gen3×8, 1×PCIe Gen3×4
- 1×M.2 M Key / 1×M.2 E Key / 1×M.2 B Key
- 2×USB3.2 Gen2
- CAN Bus / UART / I2C / SPI



Specifications

System		
CPU	NVIDIA Jetson AGX Orin™ 32GB 8-core Arm® Cortex®-A78AE v8.2 64-Bit CPU 2MB L2 + 4MB L3	NVIDIA Jetson AGX Orin™ 64GB 12-Core Arm® Cortex®-A78AE v8.2 64-Bit CPU 3MB L2 + 6MB L3
GPU	NVIDIA Jetson AGX Orin™ 32GB 1792-Core NVIDIA Ampere Architecture GPU with 56 Tensor Cores	NVIDIA Jetson AGX Orin™ 64GB 2048-Core NVIDIA Ampere Architecture GPU with 64 Tensor Cores
AI Performance	NVIDIA Jetson AGX Orin™ 32GB 200 TOPS	NVIDIA Jetson AGX Orin™ 64GB 275 TOPS
System Memory	NVIDIA Jetson AGX Orin™ 32GB 32GB LPDDR5	NVIDIA Jetson AGX Orin™ 64GB 64GB LPDDR5
Interface		
Storage	64GB eMMC 5.1 (On NVIDIA Jetson AGX Orin™ Module)	
Display Interface	2×HDMI2.0 1×DP *Select 2 Video Output Port at Same Time	
Ethernet	2×RJ45 for 10/100/1000Mbps Ethernet DHCP Client	
Expansion Slot	PCIe 1×PCIe Gen3×4 Slot 1×PCIe Gen3×8 Slot M.2 1×M.2 2230 E Key PCIe Gen3×1/USB2.0/SDIO Slot 1×M.2 2280 M Key PCIe Gen3×4 Slot 1×M.2 3042 B Key USB3.2 Gen2 (10G) Slot	
USB	2×USB3.2 Gen2 (Type-A) 1×USB3.2 Gen1 (Pin Header) 1×USB3.2 Gen1 (Pin Header, Without USB2.0) 2×USB2.0 (Type-A)	
MIPI	16×MIPI CSI-2 Lanes (D-PHY 2.1, 4×4 3×4+2×2 2×4+4×2 1×4+5×2 6×2 MIPI Lanes, Support MIPI Camera, Capture Card)	
Audio	1×3.5mm Line In 1×3.5mm Line Out	
Perherial Communication	1×UART (Pin Header) 3×GPIO (Pin Header) 2×CAN Bus (Pin Header) 2×I2C (Pin Header) 1×SPI (Pin Header)	
Misc. Features	Firmware Upgradable AutoPower (Pin Header)	

Add-On Cards / SDK / Software

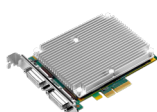
Video Feature				
Capture Card (Optional)	PCIe Model	Interface	Max. Resolution	Capture / Preview
	SC710N4T HDMI2.0	4×HDMI2.0	4096×2160p@60/50fps	
	SC710N4T 12G-SDI	4×12G-SDI	4096×2160p@60/50fps	
	SC420N16 TVI	16×TVI / AHD	1920×1080p@30/25fps	
	SC420N8 GMSL2	8×GMSL2	1920×1080p@60/45/30fps	
	SC410N4 HDMI	4×HDMI	4096×2160p@30/25fps	
	SC410N4 6G-SDI	4×6G-SDI	4096×2160p@30/25fps	
	M.2 Model	Interface	Max. Resolution	
	SC710N1 M2 HDMI2.0	1×HDMI2.0	4096×2160p@60/50fps	
	SC710N1 M2 12G-SDI	1×12G-SDI	4096×2160p@60/50fps	
SC400N1 M2 HDV	1×DVI-I, 1×YPbPr, 1×VGA	1920×1080p@60/50fps	4:2:2 10Bit P210	
				4:2:0 10Bit P010
				4:4:4 8Bit YV24
				4:4:4 8Bit RGB32 / 24
				4:2:2 8Bit YUY2
				4:2:0 8Bit YV12, NV12
Video Encode	NVIDIA Jetson AGX Orin™ 32GB		NVIDIA Jetson AGX Orin™ 64GB	
	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	AV1 (UHP) · 2×4K60 4×4K30 8×1080p60 16×1080p30 H.265 (UHP) · 2×4K60 4×4K30 8×1080p60 16×1080p30 H.264 (UHP) · 1×4K60 3×4K30 7×1080p60 14×1080p30		
Video Decode	NVIDIA Jetson AGX Orin™ 32GB		NVIDIA Jetson AGX Orin™ 64GB	
	AV1 (Main Profile) · 1×8K30 2×4K60 4×4K30 7×1080p60 15×1080p30 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) · 1×8K30 3×4K60 6×4K30 9×1080p60 18×1080p30 H.265 (Main, Main10) · 1×8K30 3×4K60 7×4K30 11×1080p60 22×1080p30 H.264 (Baseline, Main, High) · 1×4K60 3×4K30 6×1080p60 13×1080p30 VP9 (Profile 0, Profile 2) · 1×8K30 3×4K60 6×4K30 9×1080p60 18×1080p30		
SDK				
QCAP	Capture			
	High Performance Renderer			
	Image Snapshot			
	Deinterlace, Alpha Blending Engine			
QCAP	Auto Signal Detection			
	2D/3D Video, Audio and VANC Streams Capture			
	Record			
	Encrypt / Sync / Clone / Recording			
QCAP	Time-Shifting / Rewind / Pre-Event / Recording			
	Multi-Streams (3D) Recording			
	Animation Transition Effect			
	Video Cropping, Scaling and Alpha Blending Engine			
QCAP	Stream			
	2D/3D Universal Stream Client			
	2D/3D Multi-Streams Stream Server			
	RTSP, RTMP, HLS, SRT, TS, WebRTC. NDI-HX (*), Dante AV-H (*)			
QDEEP	Animation Transition Effect			
	Video Cropping, Scaling and Alpha Blending Engine			
	*Separate License Required			
	AI SDK Integrated Multiple Algorithms and Deep-Learning Models in Various Fields of Applications			
QDEEP	Access Control			
	Objects Detection			
	Objects Segment			
	Optical Character Recognition			
	License Plate Recognition			
	Customizable Video AI Functions Upon Request			



SC710N4T HDMI2.0



SC710N4T 12G-SDI



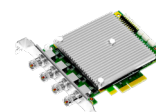
SC420N16 TVI / AHD



SC420N8 GMSL2



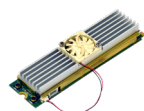
SC410N4 HDMI



SC410N4 6G-SDI



SC710N1 M2 HDMI2.0



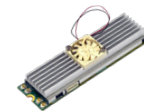
SC710N1 M2 12G-SDI



SC400N4 M2 TVI/AHD



SC400N4 M2 HDMI

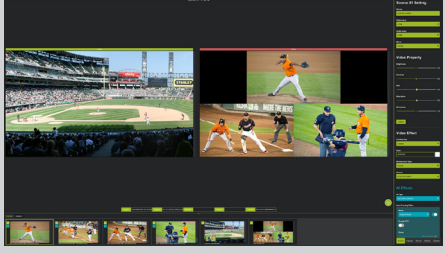
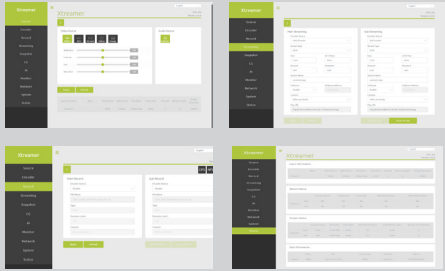


SC400N4 M2 SDI



SC400N1 M2 HDV

Software (Optional)

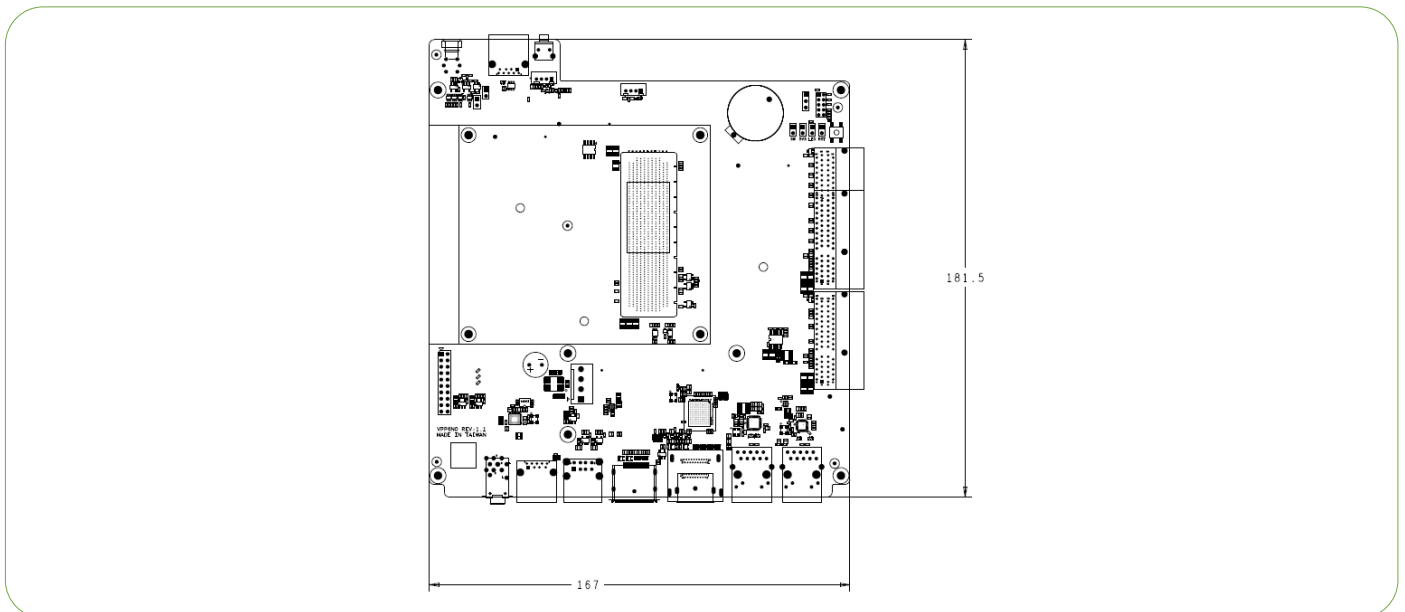
Stream Catcher Pro	Capture Auto Signal Detection Deinterlace, OSD, Color Adjustment Image Snapshot Animation Transform Effect for PGM	
	Record AV1, H.26X MP4, TS Multi-Stream Recording Schedule Recording	
	Stream Multi-Streams Stream Server RTSP, RTMP, HLS, SRT, TS, WebRTC. NDI-HX (*), Dante AV-H (*)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

Environment

Development Environment	
OS	Ubuntu: 20.04
Kernel	5.10.104-tegra or Higher
BSP	Linux for Tegra(L4T) R35.1 or Higher
SDK	JetPack 5.0.2 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

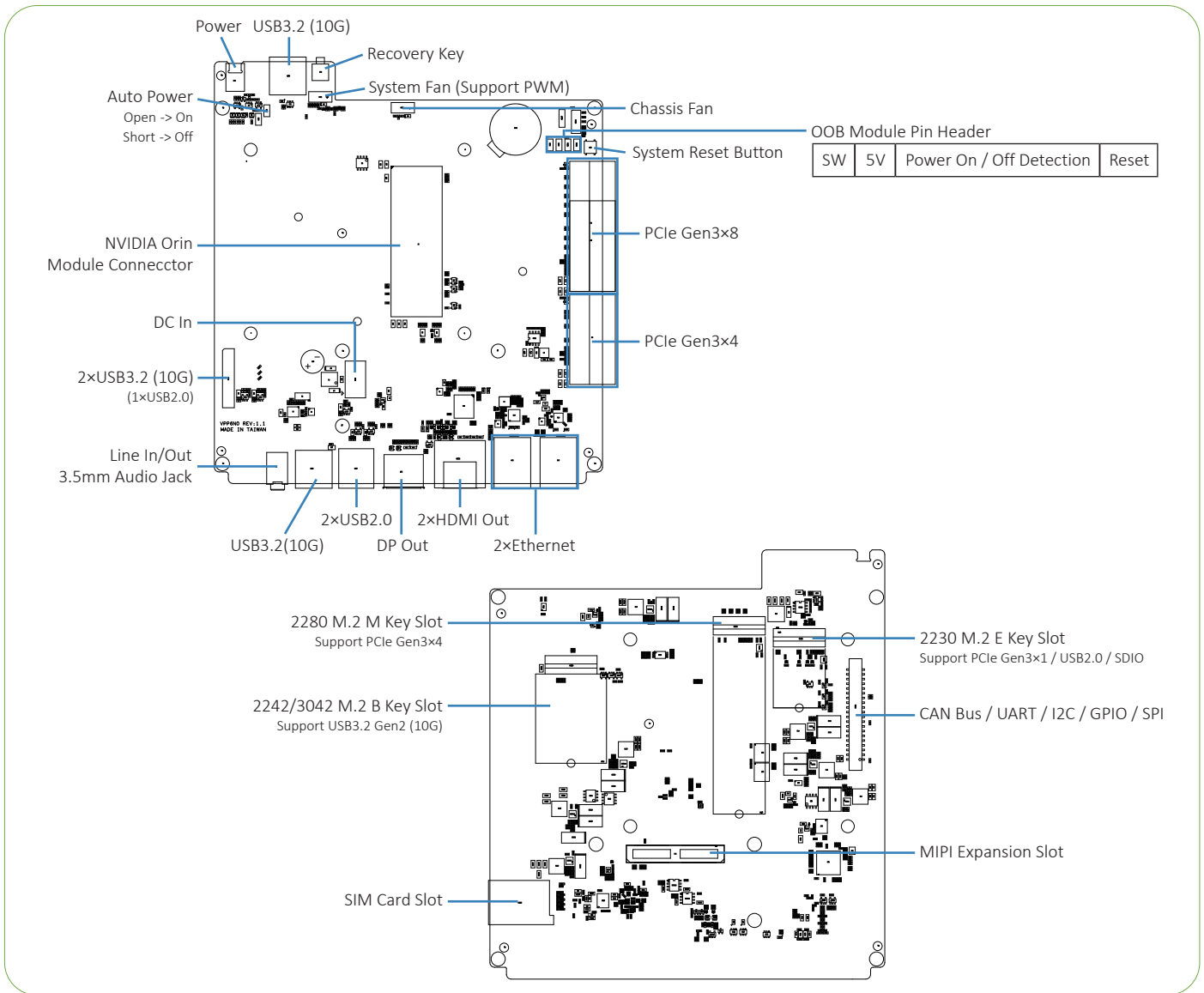
Mechanical

- Dimension of main Board: 181.5mm×167mm
- Weight: TBA



I/O Layout

Carrier Board



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