

VPP6N0-S AGX PSE

Highly Integrated AI Server, Provide 275 TOPS and Expandability

YUAN
Visualize Intelligent Planet

Features

- Powered by NVIDIA® Jetson AGX Orin™ up to 275 TOPS
- 8×PSE
- 4×M.2 M Key / 1×M.2 E Key / 1×M.2 B Key
- Fanless Design
- 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	M.2 1×M.2 2230 E Key PCIe Gen4×1/USB2.0/SDIO Slot 1×M.2 2280 M Key PCIe Gen4×4 Slot 1×M.2 2280 M Key PCIe Gen3×4 Slot (On PSE Expansion Board) 1×M.2 3042 B Key USB3.2 Gen2 (10G) Slot	
USB	2×USB3.2 Gen2 (Type-A) 2×USB3.2 Gen1 (Pin Header) 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×I2S (Pin Header) 1×SPI (Pin Header) 3×PWM (Pin Header)	
Misc. Features	Firmware Upgradable AutoPower (Pin Header)	

Key Points

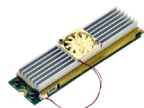
PSE Feature	
IP Camera	8×RJ45 for 10 / 100 / 1000Mbps Ethernet with IEEE802.3af Compliant
PSE Power Supply	8×15W (IEEE802.3af)

Add-On Cards / SDK / Software

Video Feature				
	M.2 Model	Interface	Max. Resolution	
	SC710N1 M2 HDMI2.0	1xHDMI2.0	4096x2160p@60/50fps	4:2:2 10Bit P210
	SC710N1 M2 12G-SDI	1x12G-SDI	4096x2160p@60/50fps	4:2:0 10Bit P010
	SC400N1 M2 HDV	1xDVI-I, 1xYPbPr, 1xVGA	1920x1080p@60/50fps	4:4:4 8Bit YV24
	SC400N8 M2 TVI	8xTVI / AHD	1920x1080p@30/25fps	4:4:4 8Bit RGB32 / 24
				4:2:2 8Bit YUY2
				4:2:0 8Bit YV12, NV12
Video Encode	NVIDIA Jetson AGX Orin™ 32GB AV1 (UHP) · 1x4K60 3x4K30 6x1080p60 12x1080p30 H.265 (UHP) · 1x4K60 3x4K30 6x1080p60 12x1080p30 H.264 (UHP) · 1x4K60 2x4K30 5x1080p60 11x1080p30		NVIDIA Jetson AGX Orin™ 64GB AV1 (UHP) · 2x4K60 4x4K30 8x1080p60 16x1080p30 H.265 (UHP) · 2x4K60 4x4K30 8x1080p60 16x1080p30 H.264 (UHP) · 1x4K60 3x4K30 7x1080p60 14x1080p30	
Video Decode	NVIDIA Jetson AGX Orin™ 32GB AV1 (Main Profile) · 1x8K30 2x4K60 4x4K30 7x1080p60 15x1080p30 H.265 (Main, Main10) · 1x8K30 2x4K60 4x4K30 9x1080p60 18x1080p30 H.264 (Baseline, Main, High) · 1x4K60 2x4K30 5x1080p60 11x1080p30 VP9 (Profile 0, Profile 2) · 1x4K60 3x4K30 7x1080p60 15x1080p30		NVIDIA Jetson AGX Orin™ 64GB AV1 (Main Profile) · 1x8K30 3x4K60 6x4K30 9x1080p60 18x1080p30 H.265 (Main, Main10) · 1x8K30 3x4K60 7x4K30 11x1080p60 22x1080p30 H.264 (Baseline, Main, High) · 1x4K60 3x4K30 6x1080p60 13x1080p30 VP9 (Profile 0, Profile 2) · 1x8K30 3x4K60 6x4K30 9x1080p60 18x1080p30	
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., Full NDI (*), NDI-HX (*), 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 Access Control Objects Detection Objects Segment Optical Character Recognition License Plate Recognition Customizable Video AI Functions Upon Request			



SC710N1 M2 HDMI2.0



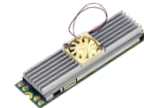
SC710N1 M2 12G-SDI



SC400N4 M2 TVI/AHD



SC400N4 M2 HDMI

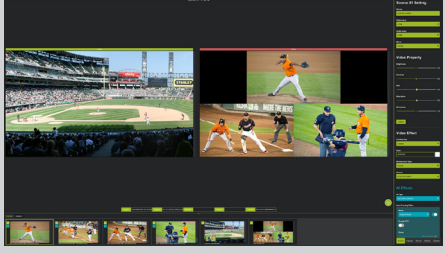
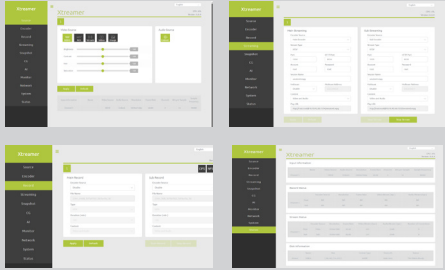


SC400N4 M2 SDI



SC400N1 M2 HDV

Software (Optional)

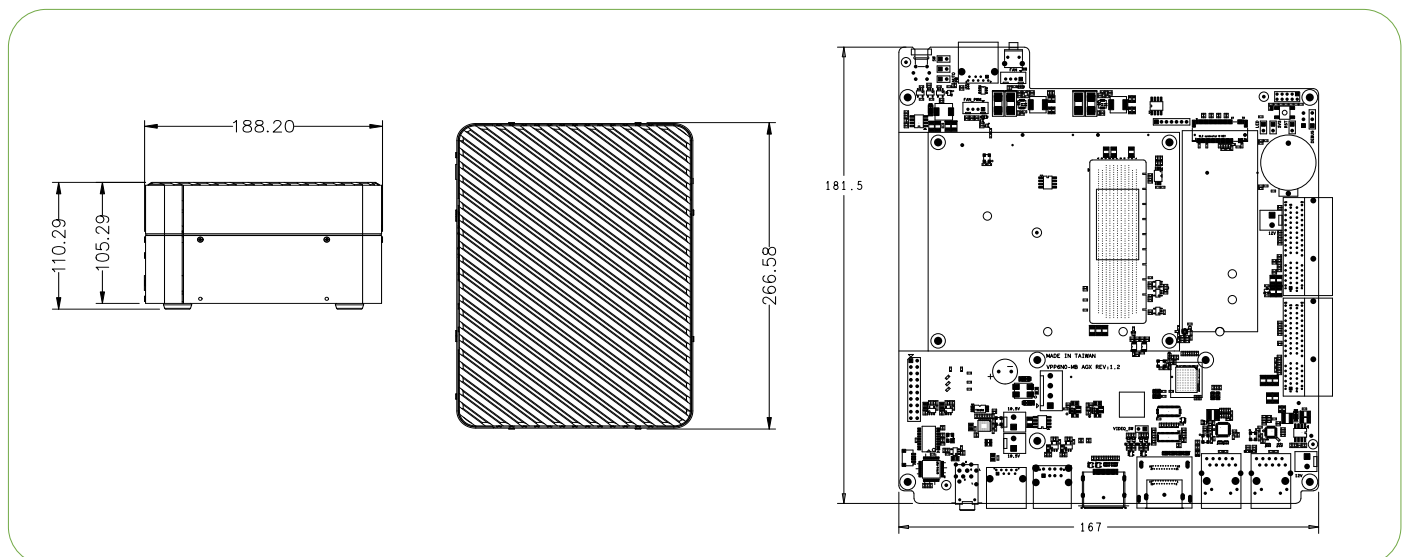
Stream Catcher Pro	<p>Capture</p> <ul style="list-style-type: none"> Auto Signal Detection Deinterlace, OSD, Color Adjustment Image Snapshot Animation Transform Effect for PGM <p>Record</p> <ul style="list-style-type: none"> AV1, H.26X MP4, TS Multi-Stream Recording Schedule Recording <p>Stream</p> <ul style="list-style-type: none"> Multi-Streams Stream Server RTSP, RTMP, HLS, SRT, TS, WebRTC., Full NDI (*), NDI-HX (*), 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., Full NDI (*), NDI-HX (*), 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) R35.1 or Higher
SDK	JetPack 5.0.2 or Higher
Environment	
Power Supply	DC input : 48V
Power Consumption	TBA
Operating Temperature	Standard Version: 0~60 ° C with Airflow
Storage Temperature	-20~80 ° C

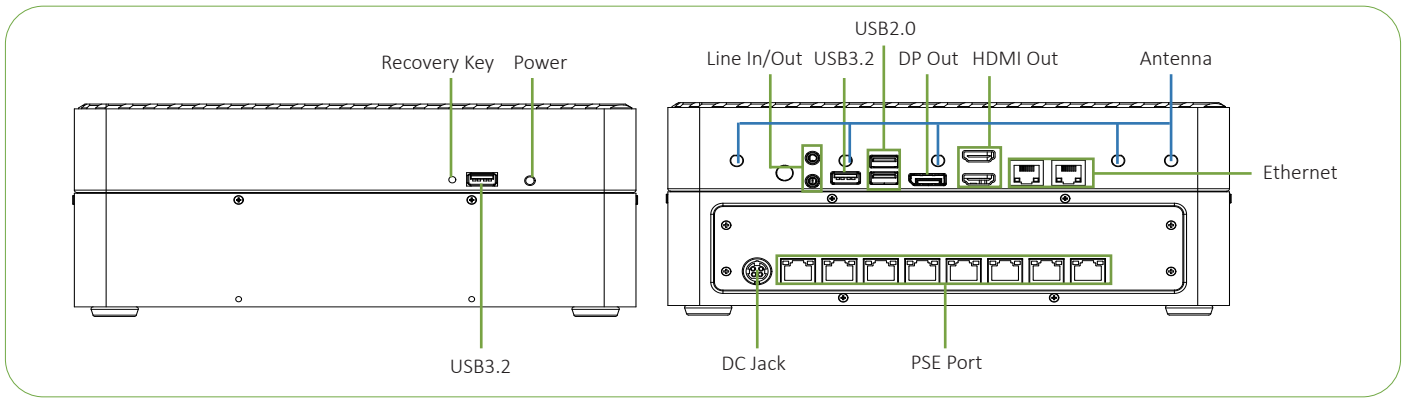
Mechanical

- Dimension of case: 266.58mm×188.20mm×105.29mm
- Dimension of main Board: 181.5mm×167mm
- Weight: TBA

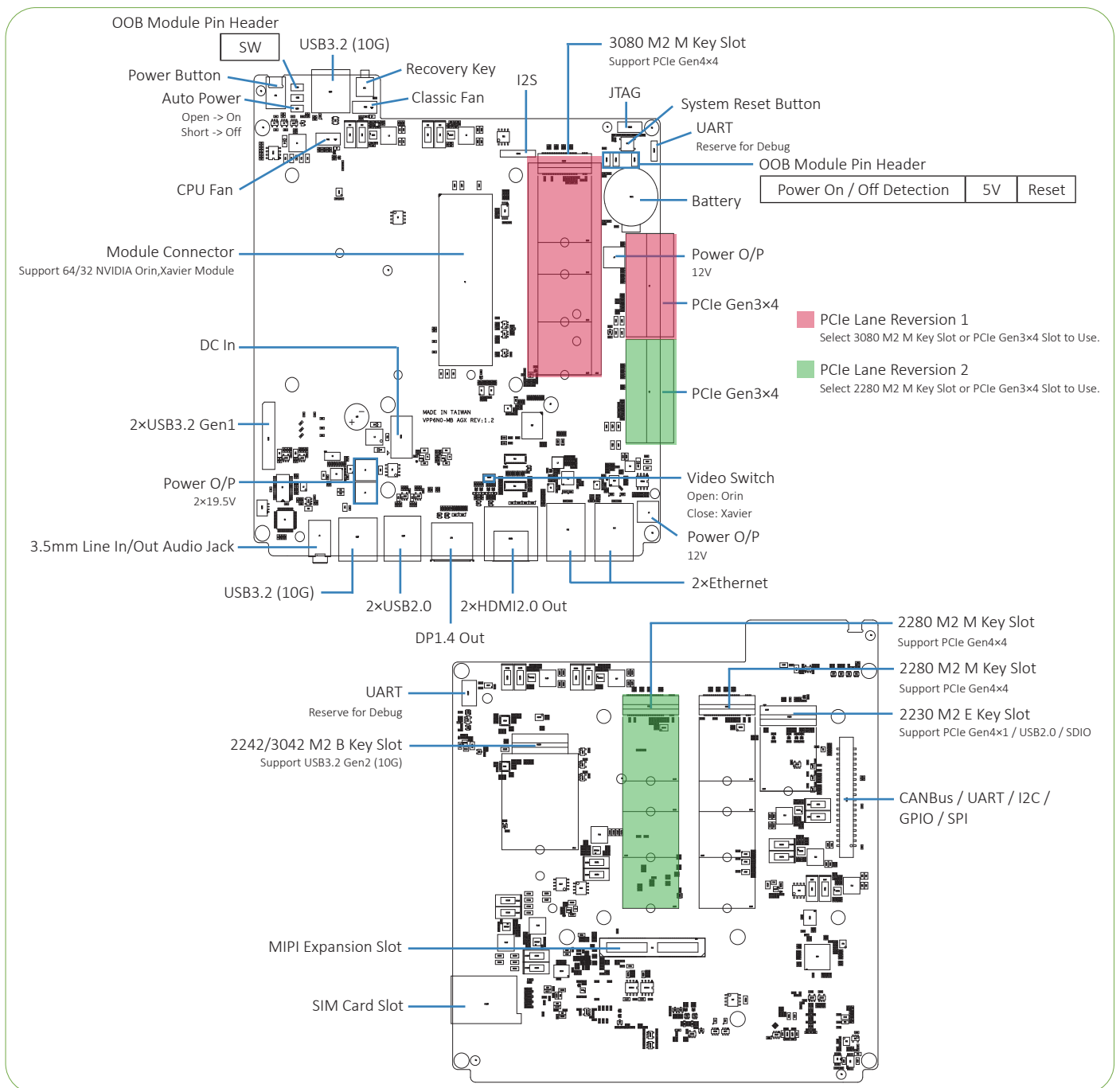


I/O Layout

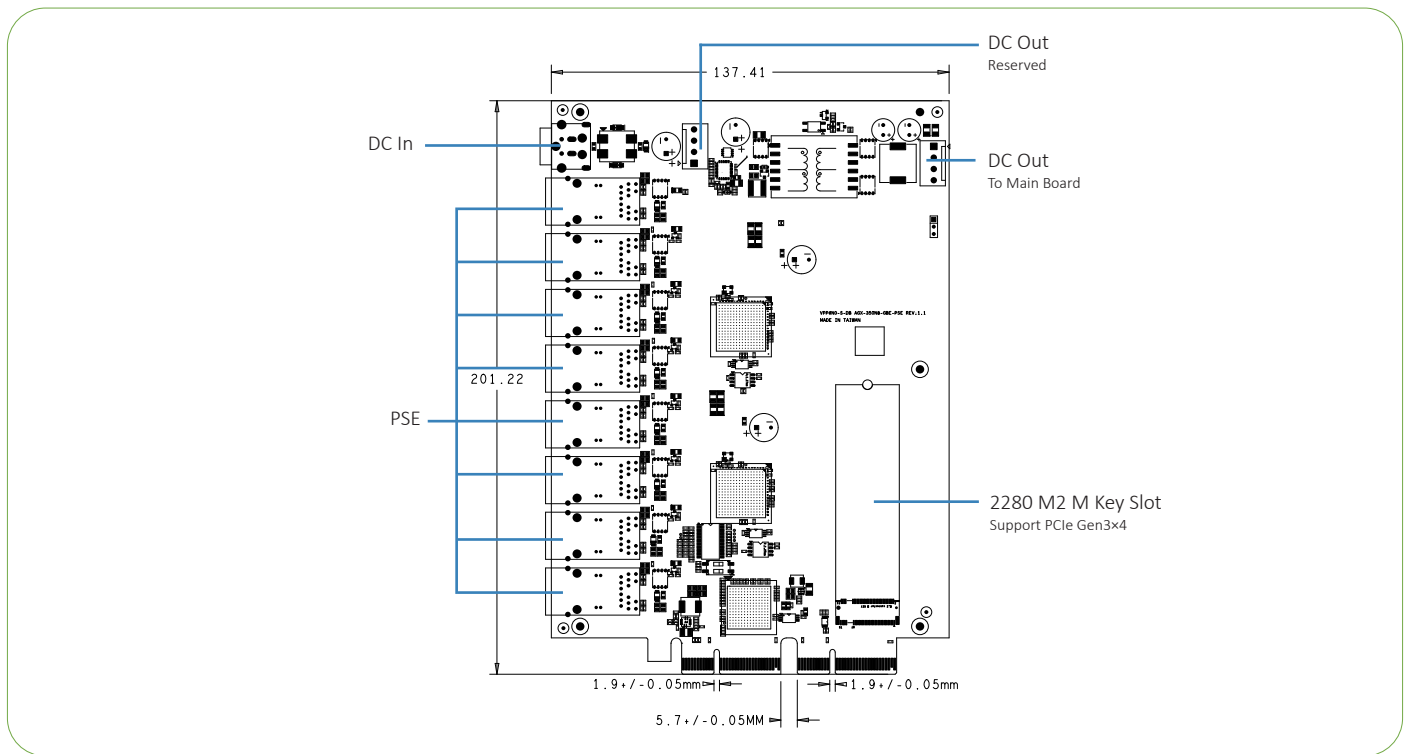
• Case



• Carrier Board



- PSE Board



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