VPP6N0-S 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
- 2×PCIe Gen3×4
- 3×M.2 M Key / 1×M.2 E Key / 1×M.2 B Key
- 2×USB3.2 Gen2
- CAN Bus / UART / I2C / SPI

NVIDIA Preferred Partner



Specification

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 Gen3×4 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 Gen4×4 Slot(*) 1×M.2 3080 M Key PCIe Gen4×4 Slot(**) 1×M.2 2242/3042/3052 B Key USB3.2 Gen1 Slot * Please select either 1×PCIe Gen3×4 Slot or 1×M.2 2280 M Key PCIe Gen4×4 Slot to use ** Please select either 1×PCIe Gen3×4 Slot or 1×M.2 3080 M Key PCIe Gen4×4 Slot to use	
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	
Peripheral Communication	40Pin Header 1×UART (Pin Header) 3×GPIO (Pin Header) 2×CAN Bus (Pin Header or Wafer) 2×I2C (Pin Header) 1×SPI (Pin Header) 3×PWM (Pin Header) 4×Fan Connector 1×RS232 Wafer 1×RS485 Wafer	
Misc. Features	Firmware Upgradable AutoPower (Pin Header)	

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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	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
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	

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
- 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


SC710N4T HDMI2.0


SC710N4T 12G-SDI

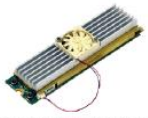

SC420N16 TVI / AHD


SC420N8 GMSL2


SC410N4 HDMI


SC410N4 6G-SDI


SC710N1 M2 HDMI2.0


SC710N1 M2 12G-SDI

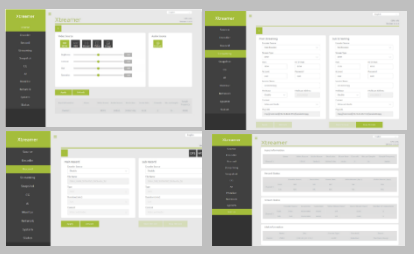

SC400N4 M2 TVI/AHD


SC400N4 M2 HDMI


SC400N4 M2 SDI


SC400N1 M2 HDV

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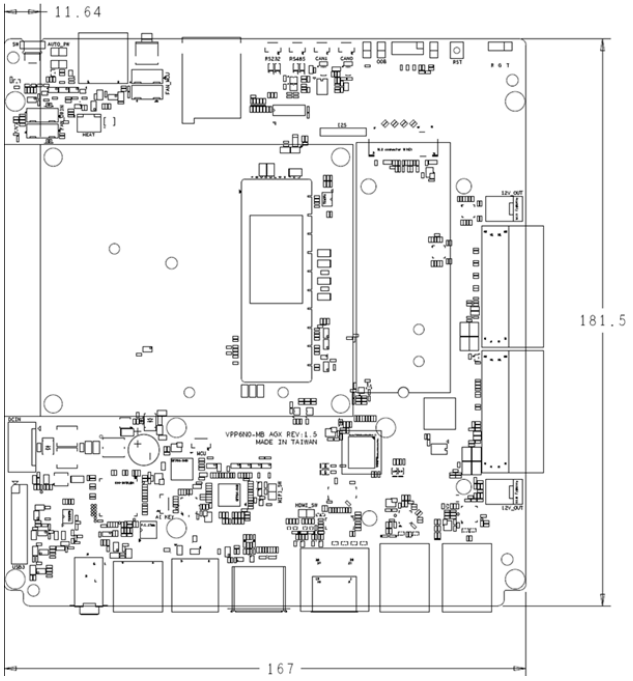
Software (Optional)		
Stream Catcher Pro	Capture Auto Signal Detection Deinterlace, OSD, Color Adjustment Image Snapshot Animation Transform Effect for PGM	
	Record AV1, H.26X MP4, TS Multi-Stream Recording Schedule Recording	
	Stream Multi-Streams Stream Server RTSP, RTMP, HLS, SRT, TS, WebRTC., Full 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	
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 : 19~24V
Power Consumption	TBA
Operating Temperature	Standard Version: 0~60 ◦ C with Airflow
Storage Temperature	-20~80 ◦ C
Certification	CE, FCC

Mechanical

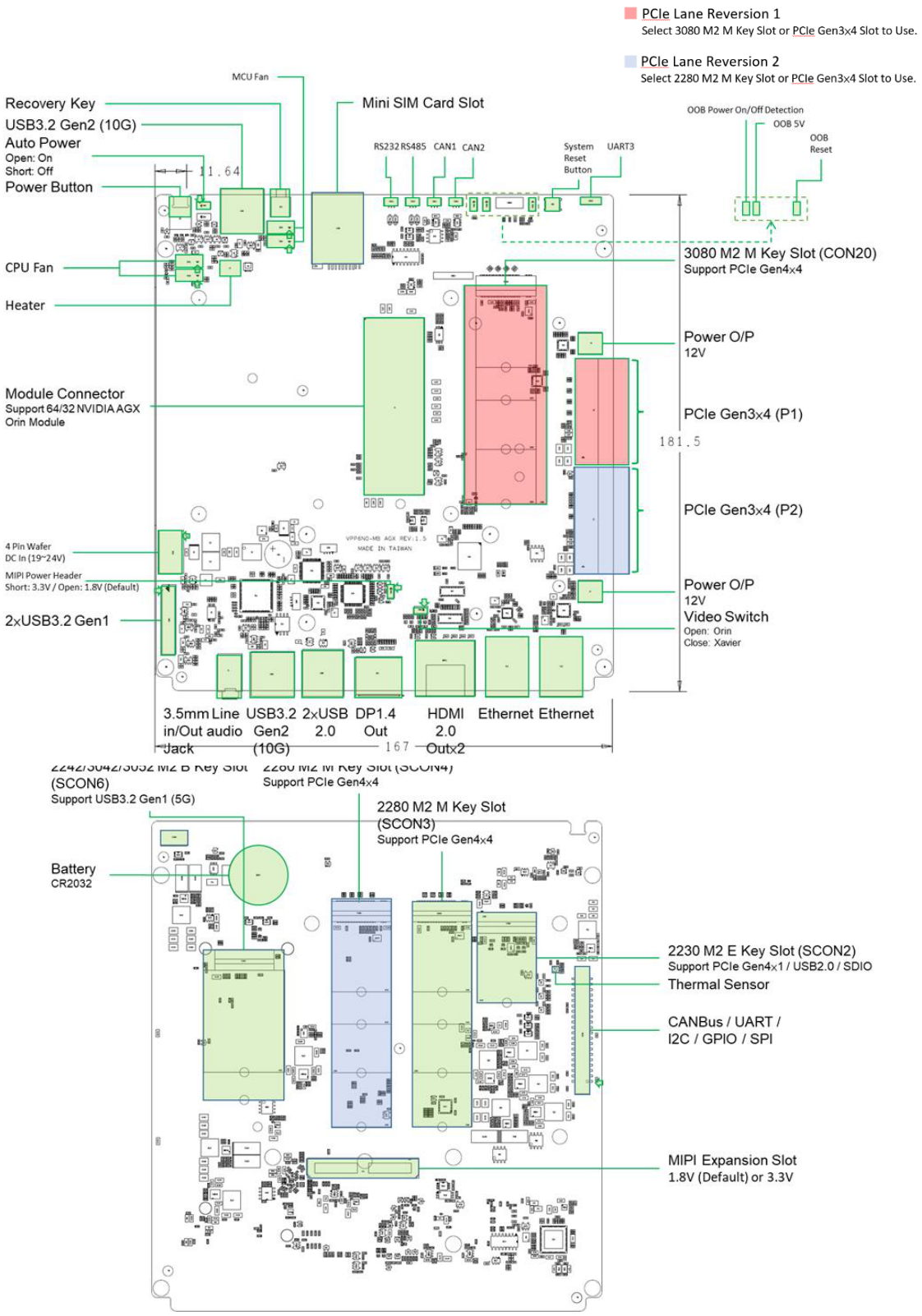
- Dimension of main Case: 181.5mm×167mm
- Weight: TBA



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I/O Layout

· Carrier Board



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