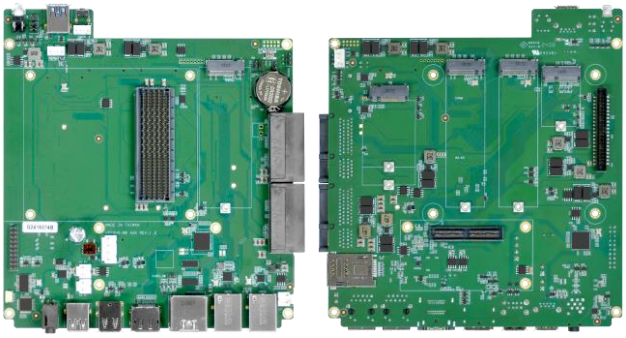
VPP6N0-MB AGX

Highly Integrated AI Server, Provide 275 TOPS and Expandability

YUAN
Visualize Intelligent Planet

Features

- Powered by NVIDIA® Jetson AGX Orin™ up to 275 TOPS
- 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



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
AU 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 3042 B Key USB3.2 Gen2 (10G) 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	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)	

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

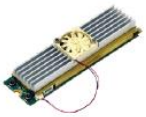

SC420N16 TVI / AHD


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

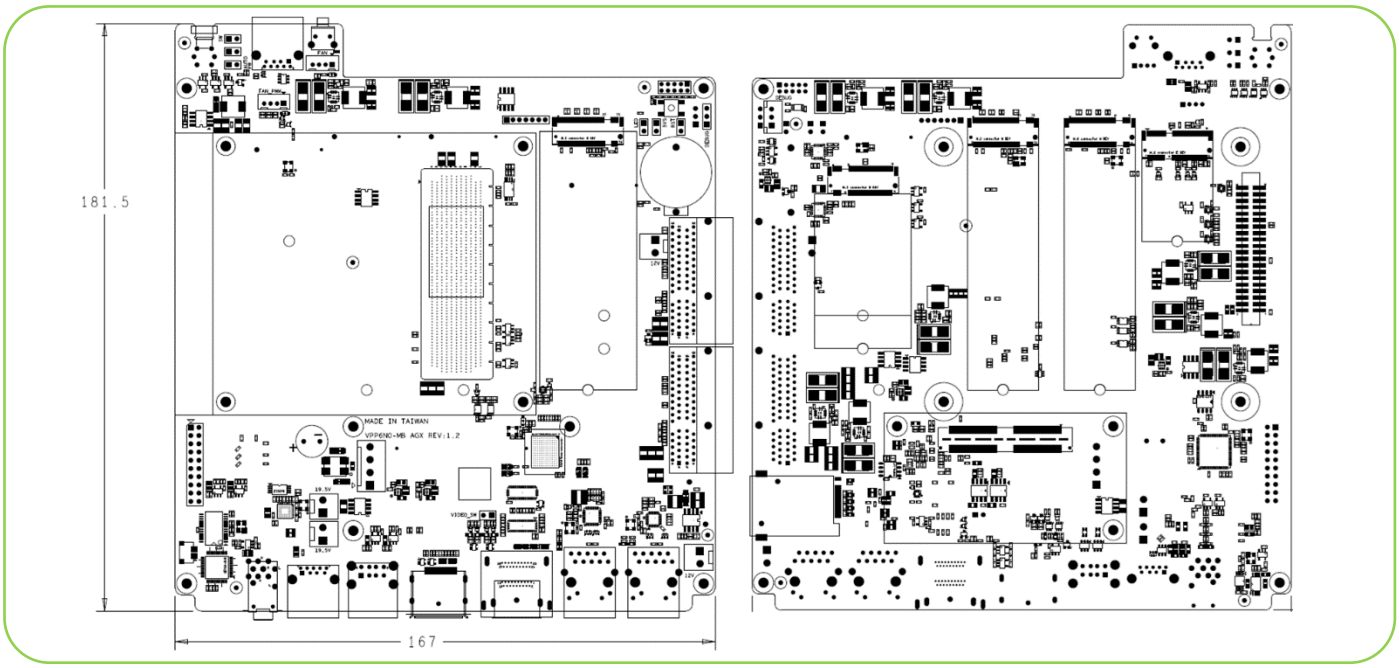
Software (Optional)		
Stream Catcher Pro	Capture Auto Signal Detection Deinterlace, OSD, Color Adjustment Image Snapshot Animation Transform Effect for PGM	
	Record AV1, H.26X MP4, TS Multi-Stream Recording Schedule Recording	
	Stream Multi-Streams Stream Server RTSP, RTMP, HLS, SRT, TS, WebRTC., Full 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 : 9~24V
Power Consumption	TBA
Operating Temperature	Standard Version: 0~60 ◦ C with Airflow
Storage Temperature	-20~80 ◦ C

Mechanical

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



I/O Layout

· Carrier Board