VPP6N0 IGX
700 TOPS of AI Computing by NVIDIA RTX A6000

YUAN
Visualize Intelligent Planet

Features

- Powered by NVIDIA IGX Orin™ and NVIDIA® RTX A6000
- NVIDIA IGX Orin™ Motherboard
- Up to 700 TOPS AI Performance
- 2×100Gb QSFP28 Port, 2×1Gb RJ45 Port
- 1×PCIe Gen5×8
- 8×USB3.2 Gen2

NVIDIA Partner

Specifications

System	
CPU	NVIDIA IGX Orin™ 12-core Arm® Cortex®-A78AE v8.2 64-Bit CPU 3MB L2 + 6MB L3
GPU	NVIDIA IGX Orin™ 2048-Core NVIDIA Ampere Architecture GPU with 64 Tensor Cores NVIDIA RTX A6000 48 GB GDDR6 Memory, 768 GB/s MemoryBandwidth 10752-Core NVIDIA Ampere Architecture GPU with 336 Tensor Cores
AI Performance	700 TOPS
System Memory	Memory: 64GB LPDDR6

Interface	
Storage	64GB eMMC 5.1 (On NVIDIA IGX Orin™ Module) 4×SATA
Display Interface	4×DP1.4a
Ethernet	2×100Gb QSFP28 Port 2×RJ45 for 10/100/1000Mbps Ethernet DHCP Client
Expansion Slot	PCIe 1×PCIe Gen5×16 Slot (With 8 PCIe Lanes) M.2 1×M.2 2230 E Key USB2.0/PCIe Gen2×1 Slot 1×M.2 2280 M Key PCIe Gen4×4 Slot
USB	4×USB3.2 Gen2 (Type-A) 4×USB3.2 Gen2 (Pin Header) 1×USB3.2 Gen2 (Type-C)
MIPI	16×MIPI CSI Lanes (Support MIPI Camera, Capture Card)
Audio	1×3.5mm Line Out 1×3.5mm MIC in
Perherial Communication	4×COM Port (Pin Header) 10×GPIO (Pin Header) CAN Bus (Pin Header)
Misc. Features	Firmware Upgradable

Key Points

GPU Support	
NVIDIA RTX A6000	V

Add-On Cards / SDK / Software

Video Feature

	PCIe Model	Interface	Max. Resolution	Capture / Preview
Capture Card (Optional)	SC750N1-L HDMI2.1	1×HDMI2.1	7680×4320p@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
	SC720N1-L DP1.4	1×DP1.4	7680×4320p@30/25fps	
	SC720N4 HDMI2.0	4×HDMI2.0	4096×2160p@60/50fps	
	SC720N4 12G-SDI	4×12G-SDI	4096×2160p@60/50fps	
	SC710N2-L HDMI2.0	2×HDMI2.0	4096×2160p@60/50fps	
	SC710N2 12G-SDI	2×12G-SDI, 8×3G-SDI	4096×2160p@60/50fps	
Video Encode	H.265 (HEVC) 1×8K30 | 3×4K60 | 7×4K30 | 14×1080p60 | 29×1080p30			
	H.264 3×4K60 | 7×4K30 | 14×1080p60 | 29×1080p30			
Video Decode	H.265 (HEVC) 2×8K60 | 5×8K30 | 11×4K60 | 23×4K30 | 47×1080p60 | 94×1080p30			
	H.264 6×4K60 | 12×4K30 | 24×1080p60 | 49×1080p30			

SDK

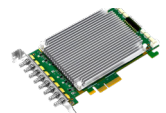|	

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 (*), 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

SC750N1-L HDMI2.1   **SC720N1-L DP1.4a**   **SC720N4 HDMI2.0**   **SC720N4 12G-SDI**   **SC710N2-L HDMI2.0**   **SC710N2 12G-SDI**
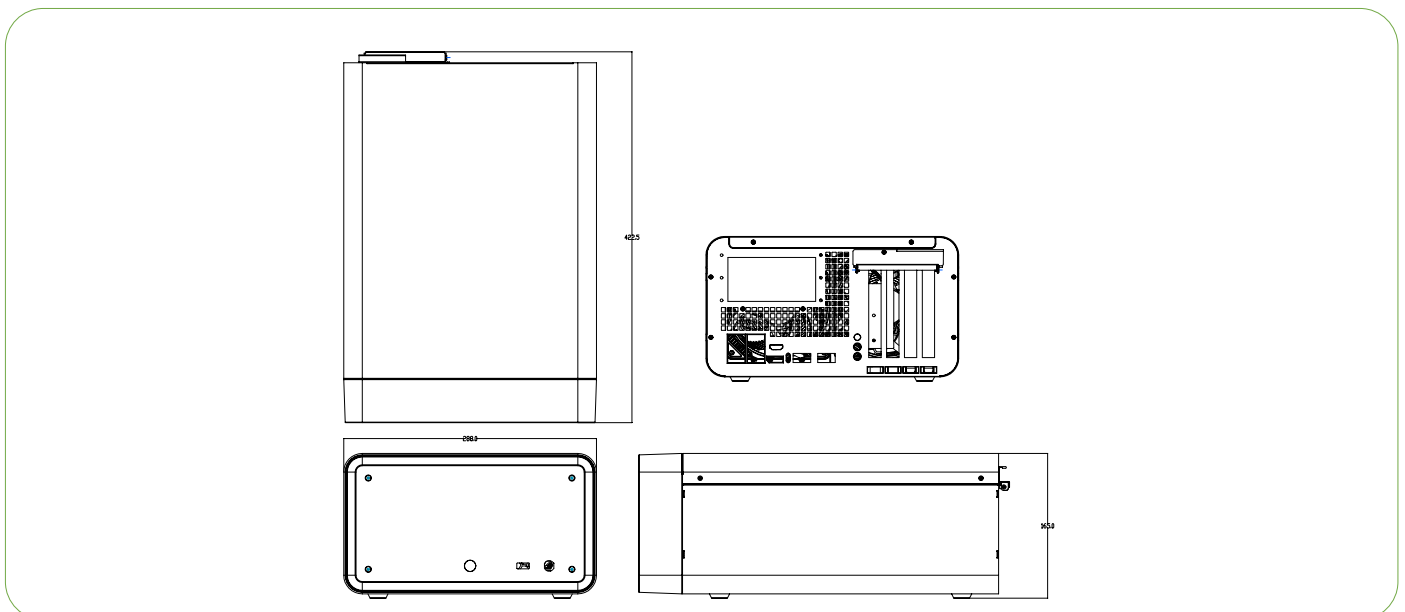
Software (Optional)		
Stream Catcher Pro	**Capture** Auto Signal Detection Deinterlace, OSD, Color Adjustment Image Snapshot Animation Transform Effect for PGM	
	Record AV1, H.26X MP4, TS Multi-Stream Recording Schedule Recording	
	Stream Multi-Streams Stream Server RTSP, RTMP, HLS, SRT, TS, WebRTC. 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) R35.4.0 or Higher
SDK	TBA
Environment	
Power Supply	100-240V
Power Consumption	850W
Operating Temperature	Standard Version: 5~45 ˚C with Airflow
Storage Temperature	-20~85 ˚C

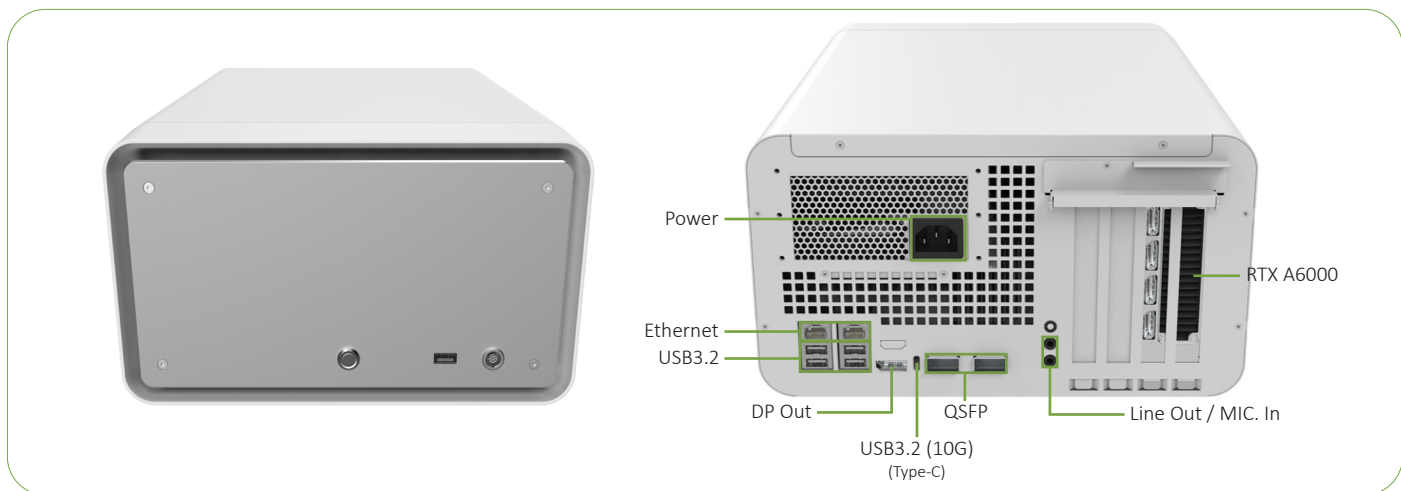## Mechanical

- Dimension of case: 288mm×380mm×160mm
- Dimension of main Board: 238.84mm×198.98mm
- Weight: 6.8Kg

I/O Layout

• Case

Power

RTX A6000

Ethernet

USB3.2

DP Out

USB3.2 (10G)
(Type-C)

QSFP

Line Out / MIC. In