

# VPP6N0-S NX 5G

## 4K60 + 5G & Edge AI

YUAN  
Visualize Intelligent Planet

### Features

- Powered by NVIDIA® Jetson Orin™ NX up to 100 / 70 TOPS
- 5G & 4K60 with Low Latency Streaming ( ≤80ms )
- 3×M.2 M Key, Gen 4×4 / Gen 4×2 / Gen 4×1
- Fanless Design
- 4×USB3.2 Gen2
- RS232 / RS485 / I2C



### Specifications

System		
CPU	NVIDIA Jetson Orin™ NX 8GB 6-Core Arm® Cortex®-A78AE v8.2 64-Bit CPU 1.5MB L2 + 4MB L3	NVIDIA Jetson Orin™ NX 16GB 8-Core Arm® Cortex®-A78AE v8.2 64-Bit CPU 2MB L2 + 4MB L3
GPU	1024-Core NVIDIA Ampere Architecture GPU with 32 Tensor Cores	
AI Performance	NVIDIA Jetson Orin™ NX 8GB 70 TOPS	NVIDIA Jetson Orin™ NX 16GB 100 TOPS
System Memory	NVIDIA Jetson Orin™ NX 8GB 8GB LPDDR5	NVIDIA Jetson Orin™ NX 16GB 16GB LPDDR5
Interface		
Storage	Supports External NVMe	
Display Interface	2×HDMI2.0	
Ethernet	1×RJ45 for 10/100/1000 Mbps Ethernet DHCP Client	
Expansion Slot	M.2 1×M.2 2280/3080 M Key PCIe Gen4×4 Slot 1×M.2 2280 M Key PCIe Gen4×2 Slot 1×M.2 2280 M Key PCIe Gen4×1 Slot	
USB	4×USB3.2 Gen2 ( Type-A ) 1×USB3.2 Gen1 ( Pin Header, Without USB2.0)	
MIPI	8×MIPI CSI-2 Lanes ( D-PHY 2.1, 2×4   4×2   1×4+2×2 MIPI Lanes, Support MIPI Camera, Capture Card )	
Audio	1×Line In ( 3.5mm or Pin Header ) 1×Line Out ( 3.5mm or Pin Header )	
Perherial Communication	1×RS232 ( Phoenix Connector or Pin Header ) 1×RS485 ( Phoenix Connector or Pin Header ) 4×GPIO ( Pin Header ) 3×I2C ( Pin Header )	
Misc. Features	Firmware Upgradable AutoPower ( Pin Header )	

### Key Points

5G Mobility Network	
Mobility Module	5G / 4G / 3G SIM Module
5G Support	Sub-6 SA Non-SA
4G Support	LTE Cat20 LTE FDD LTE TDD
3G Support	HSPA+

## Add-On Cards / SDK / Software

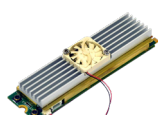
Video Feature				
	Model	Interface	Max. Resolution	Capture / Preview
Capture Card ( Optional )	SC750N1 M2 HDMI2.1	1xHDMI2.1	4096x2160p@60/50fps ( 4:4:4 / 10Bit )	4:2:2 10Bit P210 4:2:0 10Bit P010 4:4:4 8Bit YV24 4:4:4 8Bit RGB32 / 24 4:2:2 8Bit YUY2 4:2:0 8Bit YV12, NV12
	SC710N1 M2 HDMI2.0	1xHDMI2.0	4096x2160p@60/50fps	
	SC710N1 M2 12G-SDI	1x12G-SDI, 1xQuad-Link 3G-SDI	4096x2160p@60/50fps	
	SC400N4 M2 TVI / AHD	4xTVI / AHD	1920x1080p@30/25fps	
	SC400N4 M2 HDMI	4xHDMI	1920x1080p@60/50fps	
	SC400N4 M2 SDI	4x3G-SDI	1920x1080p@60/50fps	
	SC400N1 M2 HDV	1xDVI-I, 1xYPbPr, 1xVGA	1920x1080p@60/50fps	
Video Encode	AV1 ( UHP ) 1x4K60   3x4K30   6x1080p60   12x1080p30			
	H.265 ( UHP ) 1x4K60   3x4K30   6x1080p60   12x1080p30			
	H.264 ( UHP ) 1x4K60   2x4K30   5x1080p60   11x1080p30			
Video Decode	AV1 ( Main Profile ) 1x8K30   2x4K60   4x4K30   9x1080p60   20x1080p30			
	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			
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 <b>*Separate License Required</b>			
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			



SC750N1 M2 HDMI2.1



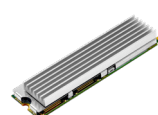
SC710N1 M2 HDMI2.0



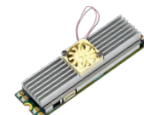
SC710N1 M2 12G-SDI



SC400N4 M2 TVI / AHD



SC400N4 M2 HDMI

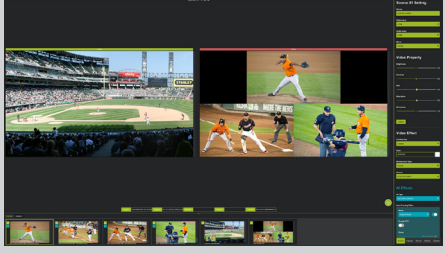
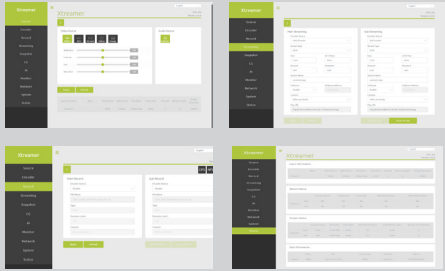


SC400N4 M2 SDI



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	
Xstreamer	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

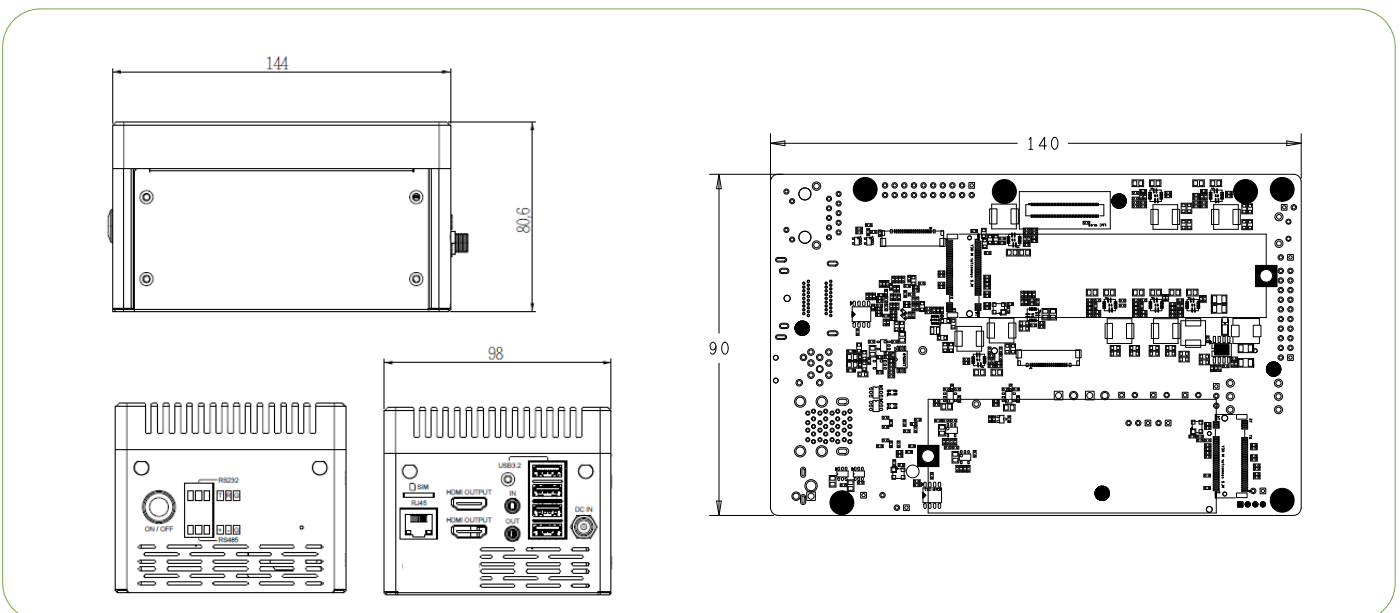
OS	Ubuntu: 20.04
Kernel	5.10.104-tegra or Higher
BSP	Linux for Tegra(L4T) R35.3.1 or Higher
SDK	JetPack 5.1.1 or Higher

### Environment

Power Supply	DC input : 19V
Power Consumption	TBA
Operating Temperature	Standard Version: 0~60 ° C with Airflow Wide Temperature: 0~75 ° C with Airflow
Storage Temperature	-20~80 ° C

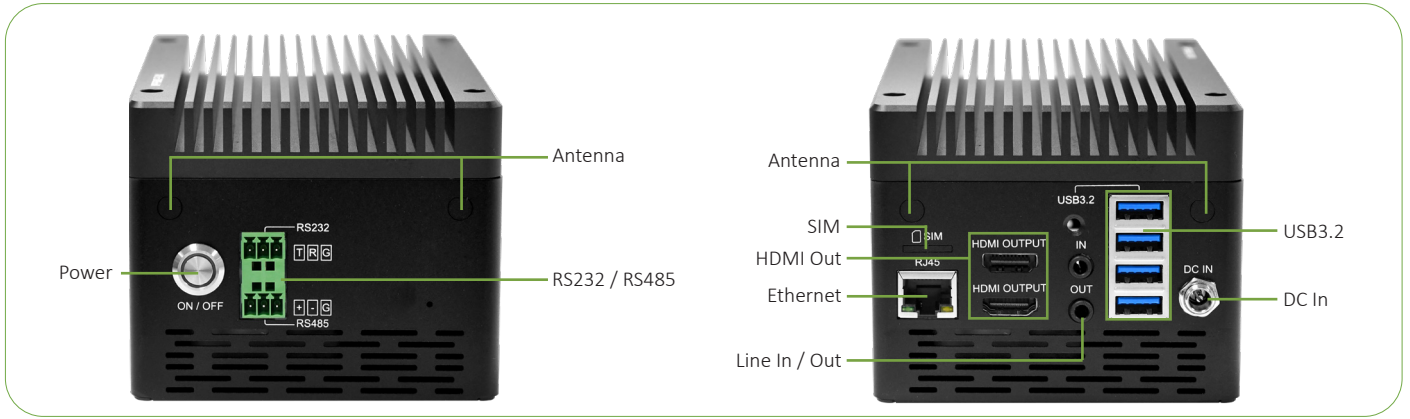
## Mechanical

- Dimension of case: 144mm×98mm×80.6mm
- Dimension of main Board: 140mm×90mm
- Weight: TBA

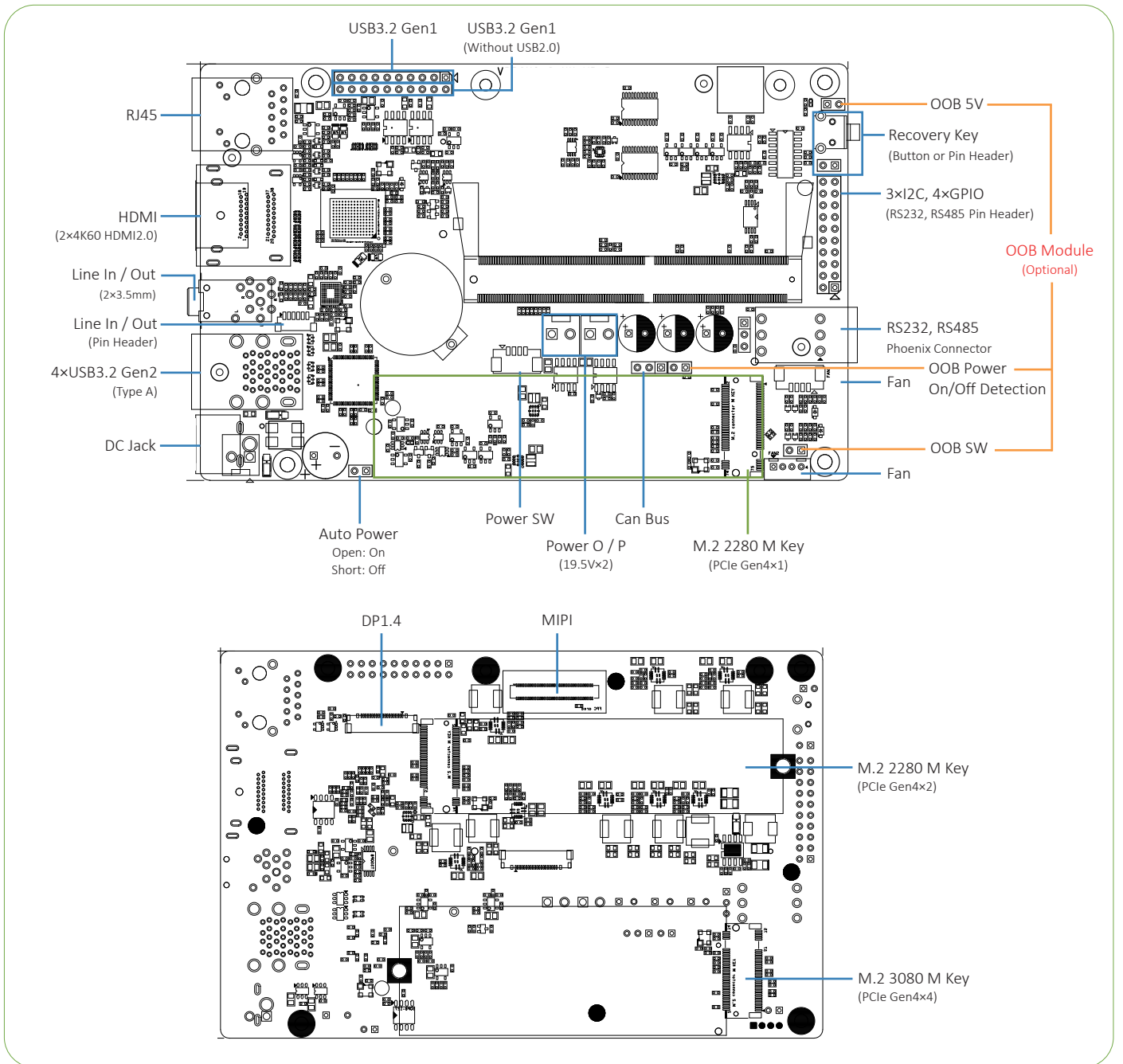


# I/O Layout

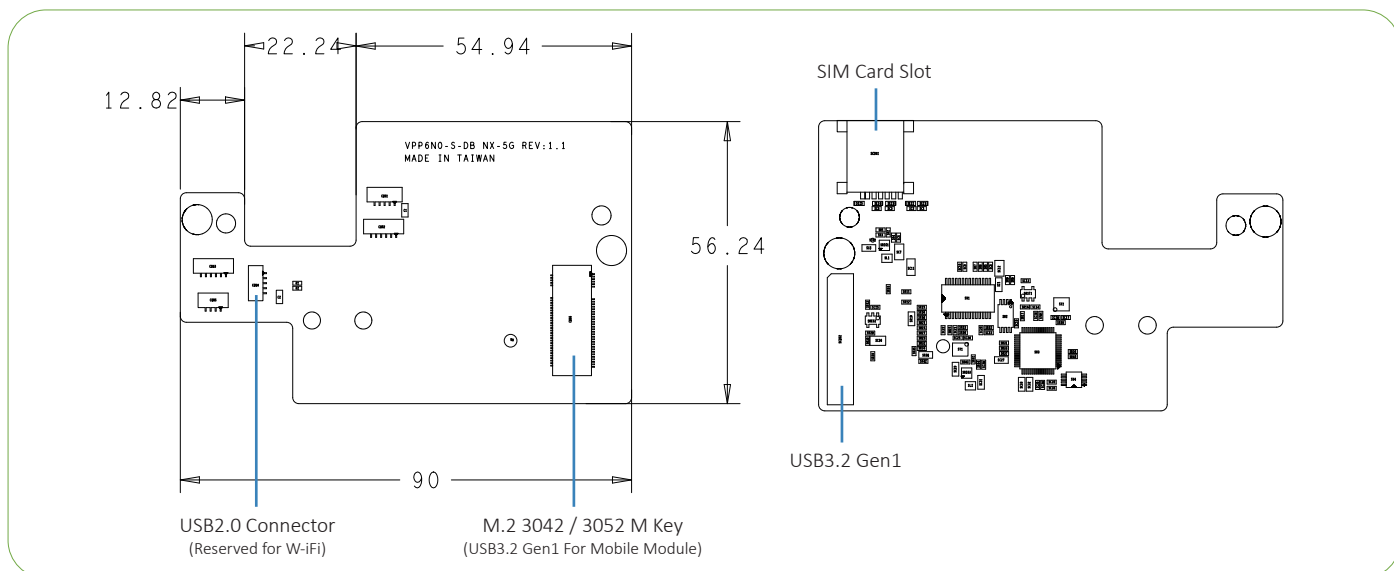
## • Case



## • Carrier Board



• 5G Daughter Board



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