VPP6N0-S-MB NANO

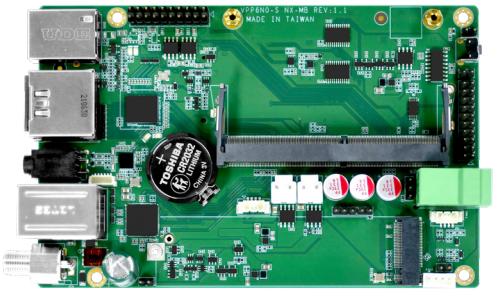
Entry Edge AI

YUAN
Visualize Intelligent Planet

Features

- Powered by NVIDIA® Jetson Orin™ Nano up to 40/20 TOPS
- 3×M.2 M Key, Gen 3×4 / Gen 3×2 / Gen 3×1
- USB3.2 Gen2
- RS232 / RS485 / I2C

NVIDIA Partner



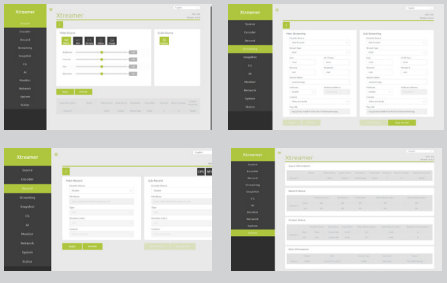
Specifications

System		
CPU	NVIDIA Jetson Orin™ Nano 6-core Arm® Cortex®-A78AE v8.2 64-bit CPU 1.5MB L2 + 4MB L3	
GPU	NVIDIA Jetson Orin™ Nano 4GB 512-core NVIDIA Ampere Architecture GPU with 16 Tensor Cores	NVIDIA Jetson Orin™ Nano 8GB 1024-core NVIDIA Ampere Architecture GPU with 32 Tensor Cores
AI Performance	NVIDIA Jetson Orin™ Nano 4GB 20 TOPS	NVIDIA Jetson Orin™ Nano 8GB 40 TOPS
System Memory	NVIDIA Jetson Orin™ Nano 4GB 4GB LPDDR5	NVIDIA Jetson Orin™ Nano 8GB 8GB LPDDR5
Interface		
Storage	Supports External NVMe	
Display Interface	2×HDMI (1×4K30 | 2×1080P60)	
Ethernet	1×RJ45 for 10/100/1000Mbps Ethernet DHCP Client	
Expansion Slot	M.2 1×M.2 2280/3080 M Key PCIe Gen3×4 Slot 1×M.2 2280 M Key PCIe Gen3×2 Slot 1×M.2 2280 M Key PCIe Gen3×1 Slot	
USB	4×USB3.2 Gen2 (Type-A) 1×USB3.2 Gen1 (Pin Header) 1×USB3.2 Gen1 (Pin Header, Contains USB3.0 Signal Only)	
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)	

Add-On Cards / SDK / Software

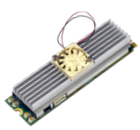
Video Feature				
Capture Card (Optional)	Model	Interface	Max. Resolution	Capture / Preview
	SC400N1 M2 AIO	1×HDMI, 1×3G-SDI	1920×1080p@30/25fps	4:2:2 10Bit P210 4:2:0 10Bit P010 4:4:4 8Bit YV24 4:4:4 8Bit RGB32 / 24 4:2:2 8Bit YUY2 4:2:0 8Bit YV12, NV12
	SC400N1 M2 HDMI	1×HDMI	1920×1080p@60/50fps	
	SC400N1 M2 SDI	1×3G-SDI	1920×1080p@60/50fps	
	SC400N1 M2 HDV	1×DVI-I, 1×YPbPr, 1×VGA	1920×1080p@60/50fps	
Video Encode	1080p30 supported by 1-2 CPU cores			
Video Decode	AV1 (Main Profile) 1×4K60 | 2×4K30 | 5×1080p60 | 10×1080p30			
	H.265 (Main, Main10) 1×4K60 | 2×4K30 | 5×1080p60 | 11×1080p30			
	H.264 (Baseline, Main, High) 1×4K30 | 3×1080p60 | 7×1080p30			
	VP9 (Profile 0, Profile 2) 1×4K60 | 2×4K30 | 5×1080p60 | 11×1080p30			

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 Face Recognition Objects Detection Objects Segment Optical Character Recognition License Plate Recognition Customizable Video AI Functions Upon Request

Software (Optional)		
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	

SC400N1 M2 AIO

SC400N1 M2 HDMI



SC400N1 M2 SDI

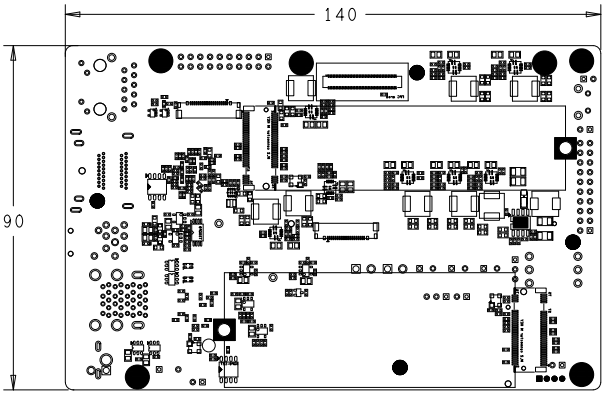
SC400N1 M2 HDV

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

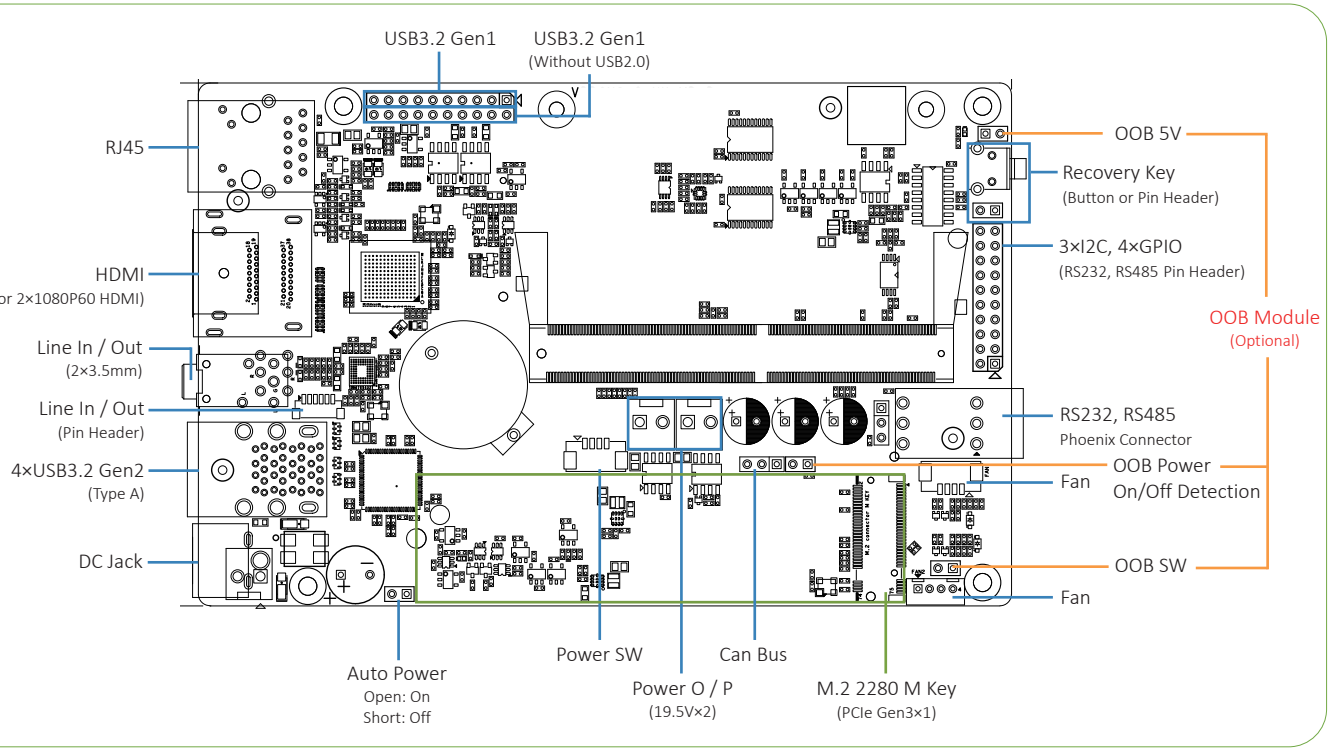
Mechanical

- Dimension of main Board: 139.98mm×90mm
- Weight: TBA



I/O Layout

- Carrier Board (Front)



• Carrier Board (Rear)