

# VPP6N0-S NX PSE

4×PSE for IP Camera & Edge AI

YUAN  
Visualize Intelligent Planet

## Features

- 4×PSE for IP Camera ( 4×15W )
- Up to 100 TOPS AI Performance
- 2×M.2 M Key, Gen 4×4 / Gen 4×1
- Fanless Design
- 4×USB3.2 Gen2
- RS232 / RS485 / I2C



## Specifications

| System                  |                                                                                                                                             |                                                                                             |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| CPU                     | NVIDIA Jetson Orin™ NX 8GB<br>6-Core Arm® Cortex®-A78AE v8.2 64-Bit CPU<br>1.5MB L2 + 4MB L3                                                | NVIDIA Jetson Orin™ NX 16GB<br>8-Core Arm® Cortex®-A78AE v8.2 64-Bit CPU<br>2MB L2 + 4MB L3 |
| GPU                     | 1024-Core NVIDIA Ampere Architecture GPU with 32 Tensor Cores                                                                               |                                                                                             |
| AI Performance          | NVIDIA Jetson Orin™ NX 8GB<br>70 TOPS                                                                                                       | NVIDIA Jetson Orin™ NX 16GB<br>100 TOPS                                                     |
| System Memory           | NVIDIA Jetson Orin™ NX 8GB<br>8GB LPDDR5                                                                                                    | NVIDIA Jetson Orin™ NX 16GB<br>16GB LPDDR5                                                  |
| Interface               |                                                                                                                                             |                                                                                             |
| Storage                 | Supports External NVMe                                                                                                                      |                                                                                             |
| Display Interface       | 2×HDMI2.0                                                                                                                                   |                                                                                             |
| Ethernet                | 1×RJ45 for 10/100/1000Mbps Ethernet<br>DHCP Client                                                                                          |                                                                                             |
| Expansion Slot          | M.2<br>1×M.2 2280 M Key PCIe Gen4×4 Slot<br>1×M.2 2280 M Key PCIe Gen4×1 Slot                                                               |                                                                                             |
| USB                     | 4×USB3.2 Gen2 ( Type-A )<br>1×USB3.2 Gen1 ( Pin Header )<br>1×USB3.2 Gen1 ( Pin Header, Witout 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 )<br>1×Line Out ( 3.5mm or Pin Header )                                                                     |                                                                                             |
| Perherial Communication | 1×RS232 ( Phoenix Connector or Pin Header )<br>1×RS485 ( Phoenix Connector or Pin Header )<br>4×GPIO ( Pin Header )<br>3×I2C ( Pin Header ) |                                                                                             |
| Misc. Features          | Firmware Upgradable<br>AutoPower ( Pin Header )                                                                                             |                                                                                             |

## Key Points

| PSE Feature      |                                                                                    |
|------------------|------------------------------------------------------------------------------------|
| IP Camera        | 4×RJ45 for 10 / 100 / 1000Mbps Ethernet with IEEE802.3af and IEEE802.3at Compliant |
| PSE Power Supply | 4×15W ( IEEE802.3af ) or 4×30W ( IEEE802.3at )                                     |

## Add-On Cards / SDK / Software

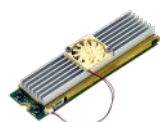
| Video Feature                                                               |                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                            |                                       |                                                                                                                              |  |
|-----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------|--|
| Capture Card ( Optional )                                                   | Model                                                                                                                                                                                                                                                          | Interface                                                                                                                                                                                                                                                                  | Max. Resolution                       | Capture / Preview                                                                                                            |  |
|                                                                             | SC750N1 M2 HDMI2.1                                                                                                                                                                                                                                             | 1×HDMI2.1                                                                                                                                                                                                                                                                  | 4096×2160p@60/50fps ( 4:4:4 / 10Bit ) | 4:2:2 10Bit P210<br>4:2:0 10Bit P010<br>4:4:4 8Bit YV24<br>4:4:4 8Bit RGB32 / 24<br>4:2:2 8Bit YUY2<br>4:2:0 8Bit YV12, NV12 |  |
|                                                                             | SC710N1 M2 HDMI2.0                                                                                                                                                                                                                                             | 1×HDMI2.0                                                                                                                                                                                                                                                                  | 4096×2160p@60/50fps                   |                                                                                                                              |  |
|                                                                             | SC710N1 M2 12G-SDI                                                                                                                                                                                                                                             | 1×12G-SDI, 1×Quad-Link 3G-SDI                                                                                                                                                                                                                                              | 4096×2160p@60/50fps                   |                                                                                                                              |  |
|                                                                             | SC400N4 M2 TVI / AHD                                                                                                                                                                                                                                           | 4×TVI / AHD                                                                                                                                                                                                                                                                | 1920×1080p@30/25fps                   |                                                                                                                              |  |
|                                                                             | SC400N4 M2 HDMI                                                                                                                                                                                                                                                | 4×HDMI                                                                                                                                                                                                                                                                     | 1920×1080p@60/50fps                   |                                                                                                                              |  |
|                                                                             | SC400N4 M2 SDI                                                                                                                                                                                                                                                 | 4×3G-SDI                                                                                                                                                                                                                                                                   | 1920×1080p@60/50fps                   |                                                                                                                              |  |
|                                                                             | SC400N1 M2 HDV                                                                                                                                                                                                                                                 | 1×DVI-I, 1×YPbPr, 1×VGA                                                                                                                                                                                                                                                    | 1920×1080p@60/50fps                   |                                                                                                                              |  |
| Video Encode                                                                | AV1 ( UHP )<br>1×4K60   3×4K30   6×1080p60   12×1080p30                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                            |                                       |                                                                                                                              |  |
|                                                                             | H.265 ( UHP )<br>1×4K60   3×4K30   6×1080p60   12×1080p30                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                            |                                       |                                                                                                                              |  |
|                                                                             | H.264 ( UHP )<br>1×4K60   2×4K30   5×1080p60   11×1080p30                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                            |                                       |                                                                                                                              |  |
|                                                                             | Video Decode                                                                                                                                                                                                                                                   | AV1 ( Main Profile )<br>1×8K30   2×4K60   4×4K30   9×1080p60   20×1080p30                                                                                                                                                                                                  |                                       |                                                                                                                              |  |
| H.265 ( Main, Main10 )<br>1×8K30   2×4K60   4×4K30   9×1080p60   18×1080p30 |                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                            |                                       |                                                                                                                              |  |
| H.264 ( Baseline, Main, High )<br>1×4K60   2×4K30   5×1080p60   11×1080p30  |                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                            |                                       |                                                                                                                              |  |
| VP9 ( Profile 0, Profile 2 )<br>1×4K60   3×4K30   7×1080p60   15×1080p30    |                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                            |                                       |                                                                                                                              |  |
| SDK                                                                         |                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                            |                                       |                                                                                                                              |  |
| QCAP                                                                        |                                                                                                                                                                                                                                                                | Capture<br>High Performance Renderer<br>Image Snapshot<br>Deinterlace, Alpha Blending Engine<br>Auto Signal Detection<br>2D/3D Video, Audio and VANC Streams Capture                                                                                                       |                                       |                                                                                                                              |  |
|                                                                             | Record<br>Encrypt / Sync / Clone / Recording<br>Time-Shifting / Rewind / Pre-Event / Recording<br>Multi-Streams ( 3D ) Recording<br>Animation Transition Effect<br>Video Cropping, Scaling and Alpha Blending Engine                                           |                                                                                                                                                                                                                                                                            |                                       |                                                                                                                              |  |
|                                                                             | Stream<br>2D/3D Universal Stream Client<br>2D/3D Multi-Streams Stream Server<br>RTSP, RTMP, HLS, SRT, TS, WebRTC. NDI-HX (*), Dante AV-H (*)<br>Animation Transition Effect<br>Video Cropping, Scaling and Alpha Blending Engine<br>*Separate License Required |                                                                                                                                                                                                                                                                            |                                       |                                                                                                                              |  |
|                                                                             | QDEEP                                                                                                                                                                                                                                                          | AI SDK Integrated Multiple Algorithms and Deep-Learning Models in Various Fields of Applications<br>Face Recognition<br>Objects Detection<br>Objects Segment<br>Optical Character Recognition<br>License Plate Recognition<br>Customizable Video AI Functions Upon Request |                                       |                                                                                                                              |  |



SC750N1 M2 HDMI2.1



SC710N1 M2 HDMI2.0



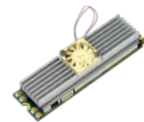
SC710N1 M2 12G-SDI



SC400N4 M2 TVI / AHD



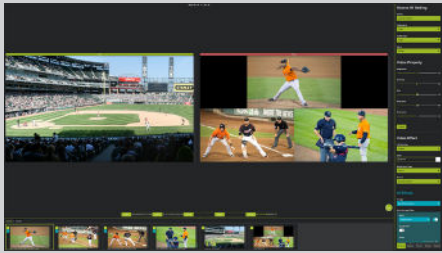
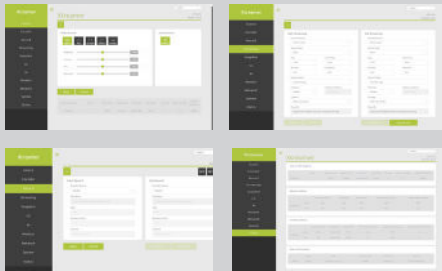
SC400N4 M2 HDMI



SC400N4 M2 SDI



SC400N1 M2 HDV

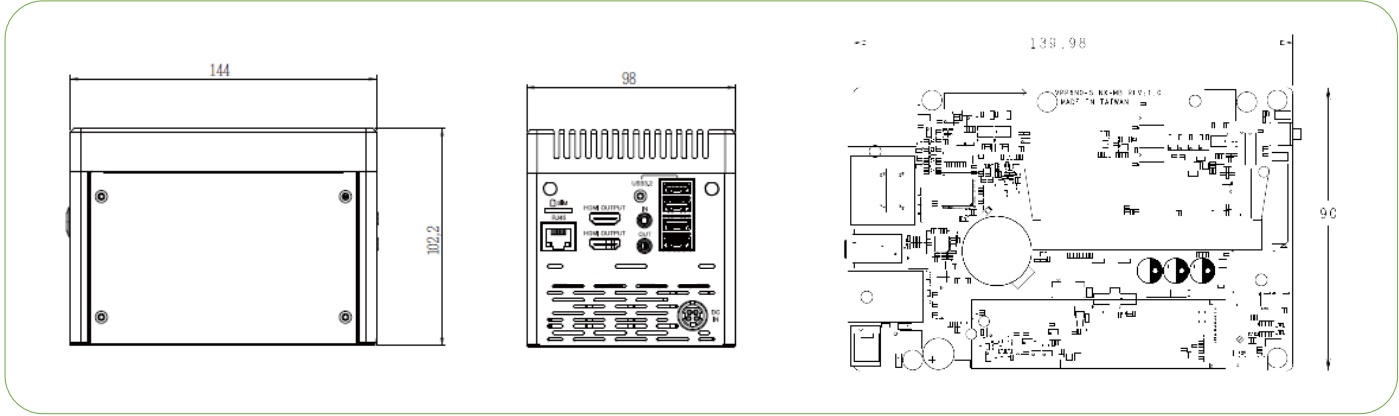
| Software ( Optional ) |                                                                                                                                            |                                                                                    |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Stream Catcher Pro    | Capture<br>Auto Signal Detection<br>Deinterlace, OSD, Color Adjustment<br>Image Snapshot<br>Animation Transform Effect for PGM             |  |
|                       | Record<br>AV1, H.26X<br>MP4, TS<br>Multi-Stream Recording<br>Schedule Recording                                                            |                                                                                    |
|                       | Stream<br>Multi-Streams Stream Server<br>RTSP, RTMP, HLS, SRT, TS, WebRTC. NDI-HX (*), Dante AV-H (*)<br><b>*Separate License Required</b> |                                                                                    |
| Xtreamer              | Web Based User Interface                                                                                                                   |  |
|                       | Encode / Decode<br>AV1, H.26X                                                                                                              |                                                                                    |
|                       | Color Format Adjust<br>444 / 422 / 420, 10Bit / 8Bit Select                                                                                |                                                                                    |
|                       | Record<br>MP4, TS                                                                                                                          |                                                                                    |
|                       | Stream / Network<br>RTSP, RTMP, HLS, SRT, TS, WebRTC. NDI-HX (*), Dante AV-H (*)<br><b>*Separate License Required</b>                      |                                                                                    |

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 : 48V ( For PSE Feature, IEEE802.3af Requires 120W Adapter, IEEE802.3at Requires 160W Adapter. ) |
| Power Consumption       | TBA                                                                                                       |
| Operating Temperature   | Standard Version: 0~60 °C with Airflow<br>Wide Temperature: 0~75 °C with Airflow                          |
| Storage Temperature     | -20~80                                                                                                    |

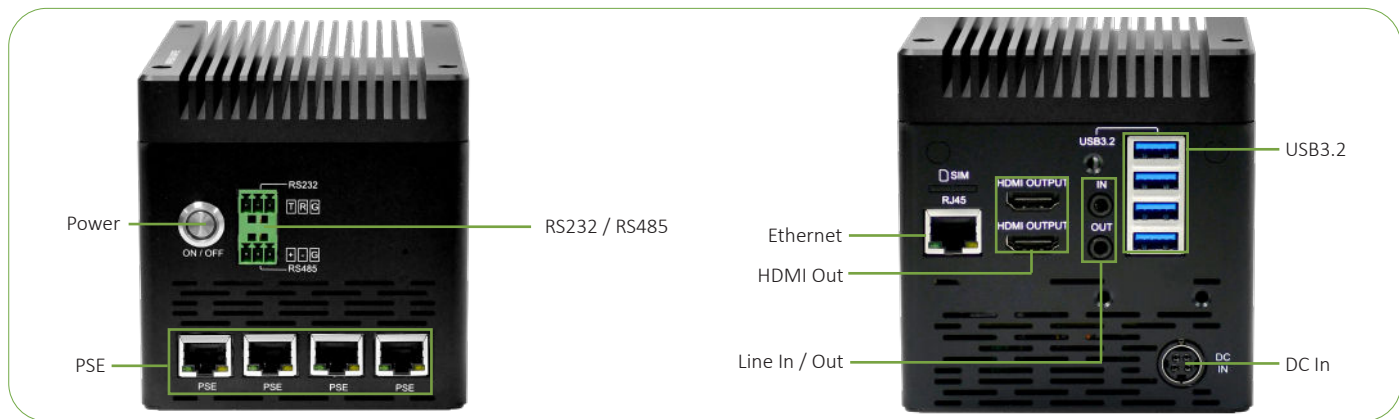
Mechanical

- Dimension of case: 144mm×98mm×80.6mm
- Dimension of main Board: 139.98mm×90mm
- Weight: TBA

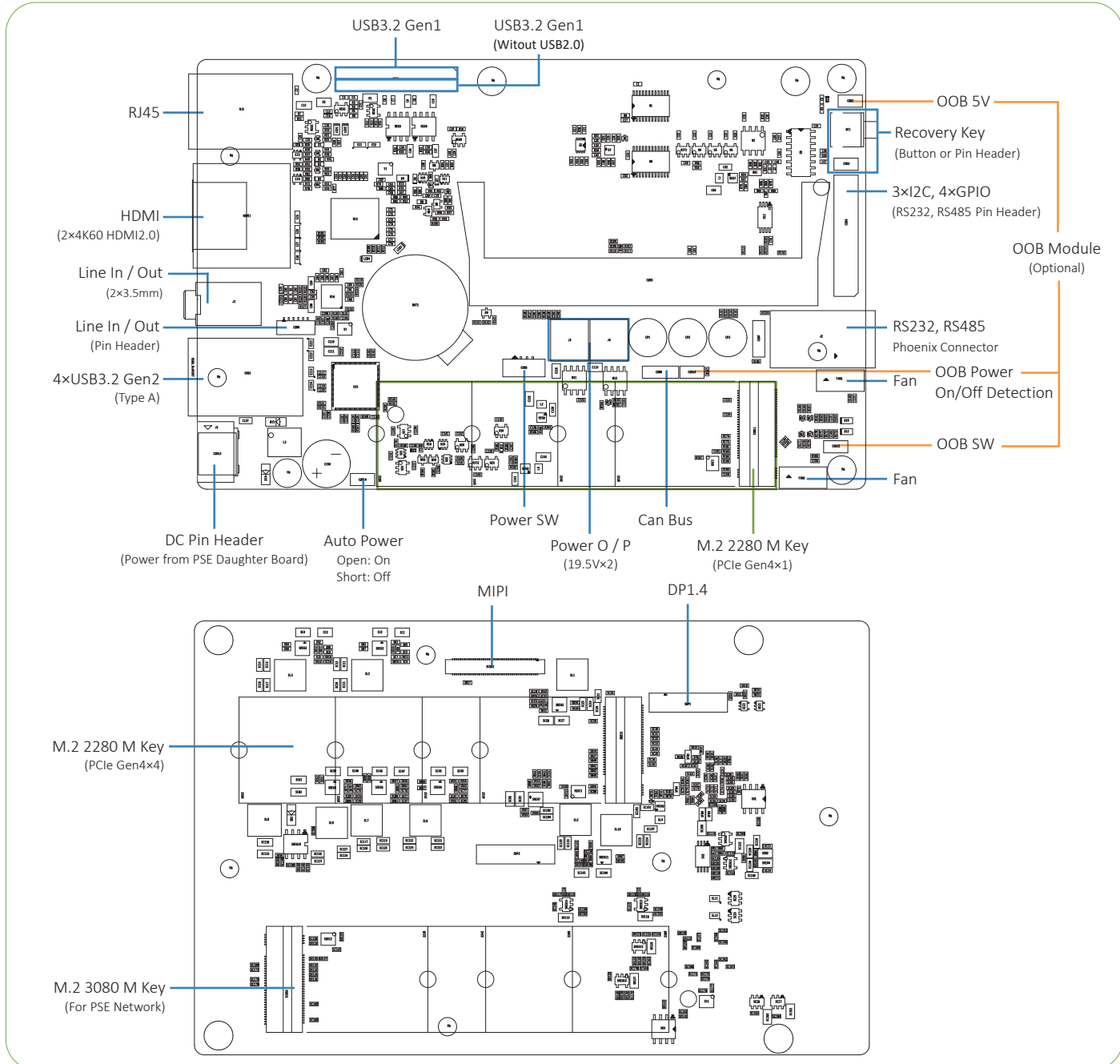


## I/O Layout

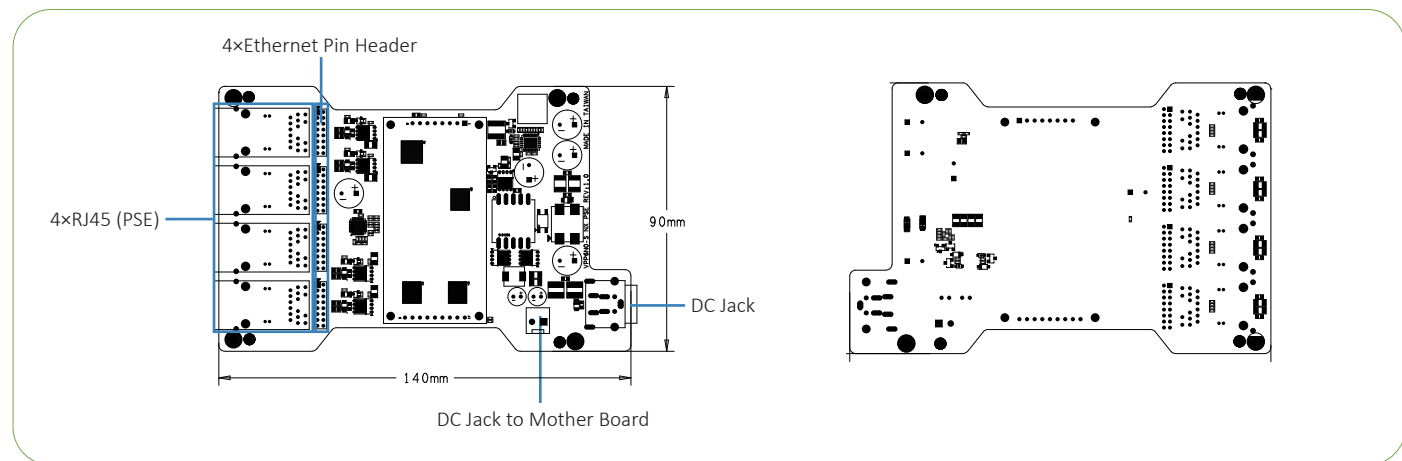
### • Case



### • Carrier Board



- PSE Daughter Board



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