

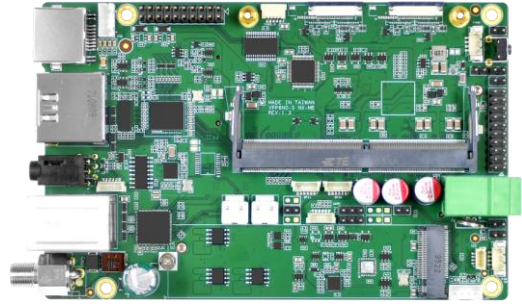
VPP6N0-S-MB NANO

YUAN
Visualize Intelligent Planet

Entry Edge AI

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
- 4×USB3.2 Gen2
- RS232 / RS485 / I2C



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 |
| AU 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) 2×USB3.2 Gen1 (Pin Header) | |
| MIPI | 2×4MIPI CSI-2 Lanes (D-PHY 2.1, Support MIPI Camera, Capture Card) | |
| Audio | 1×Line In (3.5mm or Pin Header) 1×Line Out (3.5mm or Pin Header) | |
| Peripheral 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-DB (Optional)

Supports 5G / 4G / 3G Module
5G: Sub-6, SA, Non-SA
4G: LTE Cat20, LTE FDD, LTE TDD
3G: HSPA+



PSE-DB (Optional)

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

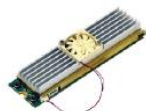


Add-On Cards / SDK / Software

| Video Feature | | | | |
|------------------------------|--|-------------------------|---------------------|--|
| Capture Card (Optional) | M.2 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 |
| | SC400N1 M2 HDMI | 1×HDMI | 1920×1080p@60/50fps | 4:4:4 8Bit YV24 |
| | SC400N1 M2 SDI | 1×3G-SDI | 1920×1080p@60/50fps | 4:4:4 8Bit RGB32 / 24 |
| | SC400N1 M2 HDV | 1×DVI-I, 1×YPbPr, 1×VGA | 1920×1080p@60/50fps | 4:2:2 8Bit YUY2 4:2:0 8Bit YV12, NV12 |
| 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 | | | |



SC710N1 M2 HDMI2.0



SC710N1 M2 12G-SDI



SC400N4 M2 TVI/AHD




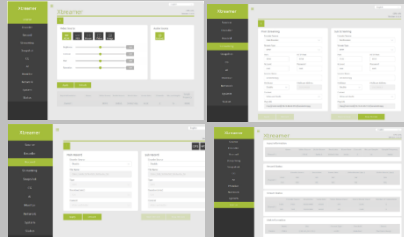
SC400N4 M2 HDMI



SC400N4 M2 SDI



SC400N1 M2 HDV

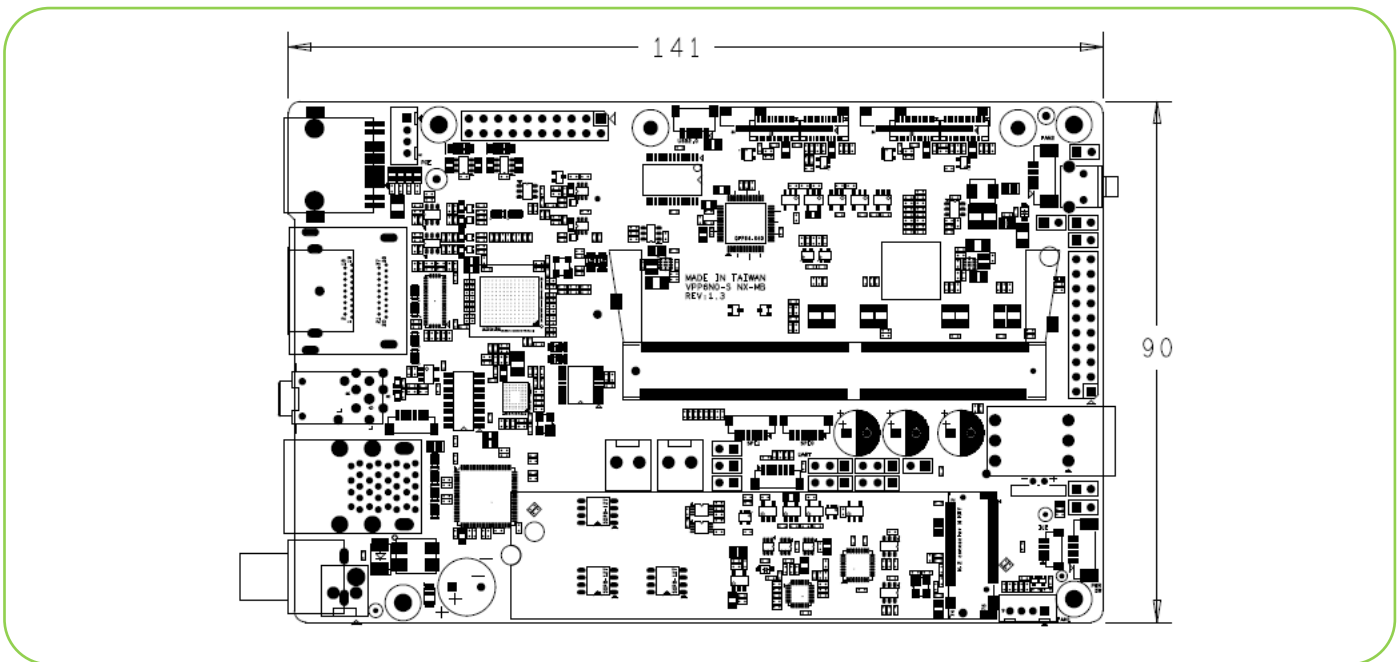
| Software (Optional) | | |
|---------------------|---|---|
| Stream Catcher Pro | Capture Auto Signal Detection Deinterlace, OSD, Color Adjustment Image Snapshot Animation Transform Effect for PGM |  |
| | Record AV1, H.26X MP4, TS Multi-Stream Recording Schedule Recording | |
| | Stream Multi-Streams Stream Server RTSP, RTMP, HLS, SRT, TS, WebRTC., NDI-HX (*), Dante AV-H (*) *Separate License Required | |
| 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) R35.3.1 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 |
| Storage Temperature | -20~80 ° C |

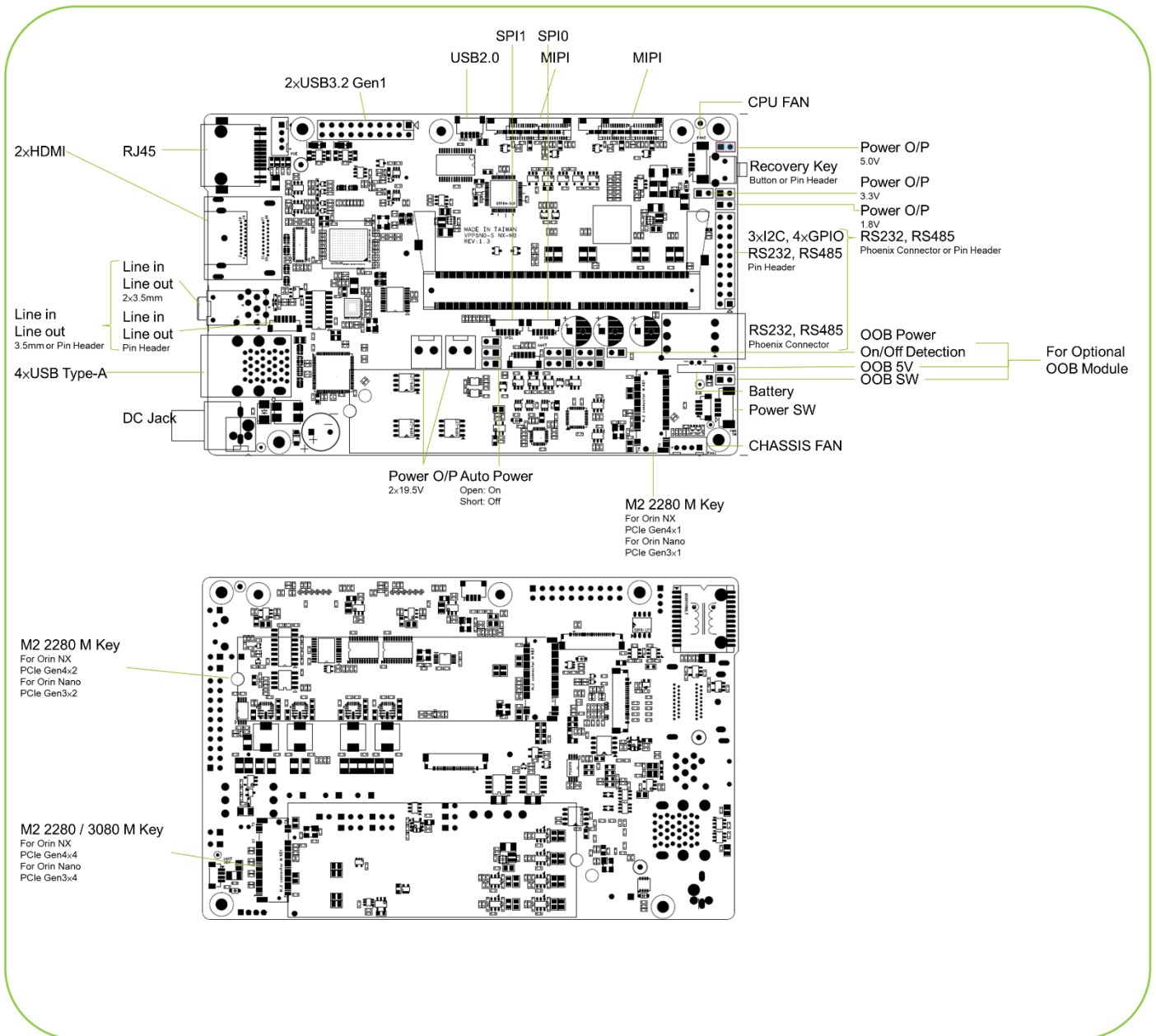
Mechanical

- Dimension of main Case: 140mm×90mm
- Weight: TBA



I/O Layout

Carrier Board



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