

AI Computer



Discover Generative AI at the Edge

PANDORA

Features

- NVIDIA Jetson Orin™ Nano 8GB Super up to 67 TOPS
- Compact Size : 145mm x 123mm x 66mm
- 4xM.2, 8 Lanes MIPI CSI-2, and I2C / UART / GPIO / CAN Bus
- 2xUSB3.2 Gen2, 2 x USB2.0, 1 x Nano SIM Card Slot
- 1xHDMI 1.4
- Built-in RTC rechargeable lithium battery

Powered by

NVIDIA Jetson Orin™ Nano Super Developer kit



Specification

| | |
|----------------|--|
| CPU | 6-Core Arm® Cortex®-A78AE v8.2 64-Bit CPU 1.5MB L2 + 4MB L3 |
| GPU | 1024-Core NVIDIA Ampere Architecture GPU with 32 Tensor Cores |
| AI Performance | 67 TOPS |
| System Memory | 8GB 128-bit LPDDR5, total 102 GB/s |
| Part Number | A003FV1P1 |

Interface

| | | |
|--------------------------|---|---|
| Storage | Supports External NVMe | |
| Display Interface | 1xHDMI1.4 | |
| Ethernet | 2xRJ45 for 10/100/1000Mbps Ethernet DHCP Client | |
| USB | 2xUSB3.2 Gen2 (Type-A) 1xUSB3.2 Gen2 (Type-C) (OTG) 2xUSB2.0 (Type-A) | |
| Expansion Slot | 1xM.2 2280 M Key PCIe Gen4x2 Slot (with Pre-Installed 128GB SSD) 1xM.2 2280/3080 M Key PCIe Gen4x4 Slot, Support SSD or Video Capture Cards 1xM.2 2230 E Key PCIe Gen4x1+USB2.0 Slot, Support Wi-Fi Module 1xM.2 3042/3052 B Key USB3.2 Gen1 Slot, Support 5G/4G Wireless Module | |
| MIPI | 8-Lane MIPI CSI-2 (D-PHY 2.1, Support MIPI Camera, Capture Card) | |
| Audio | 1xLine In (3.5mm Phone Jack) 1xLine Out (3.5mm Phone Jack) | |
| Peripheral Communication | 40 Pin Header 1xI2S 2xI2C 2xSPI 1xUART 3xGPIO | 14 Pin Header 1xCAN Bus 1xUART with CTS/RTS 1xUART for Debug |
| Misc. Features | Firmware Upgradable | |

Video Encode/Decode

| | |
|--------------|---|
| Video Encode | NVIDIA Jetson Orin™ Nano Super: 1080p30 supported by 1-2 CPU cores |
| | NVIDIA Jetson Orin™ Nano Super: AV1 (Main Profile) 1x4K60 2x4K30 5x1080p60 10x1080p30 H.265 (Main, Main10) 1x4K60 2x4K30 5x1080p60 11x1080p30 H.264 (Baseline, Main, High) 1x4K30 3x1080p60 7x1080p30 VP9 (Profile 0, Profile 2) 1x4K60 2x4K30 5x1080p60 11x1080p30 |

Environment

| | |
|-----------------------|---------------------------------------|
| Power Supply | DC input : 9~36V |
| Power Consumption | Max: 43.5W |
| Operating Temperature | Standard Version: 0~60°C with Airflow |
| Storage Temperature | -20~80°C |

For detailed instructions, check the QR code.

www.palit.com/pandora



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Mechanical

| | |
|-------------------------|----------------------|
| Dimension of Main Board | 115mm × 115mm |
| Dimension of System | 145mm × 123mm × 66mm |
| Weight | 470g |



NVIDIA® Jetson Orin™ Nano Super Module

2 x USB 3.0 Type-A
USB 3.0 Type-C (OTG)

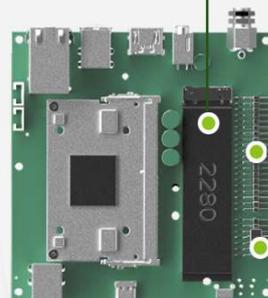
Power



FlexiShell DIY for 3D Printing Machine



2280 M Key
PCIeGen4 x 2 for SSD
(System Disk)



14 Pin Header
1xCAN Bus
1xUART with CTS/RTS
1xUART for Debug

40 Pin Header
1xI2S
2xI2C
2xSPI
1xUART
3xGPIO

2280 / 3080 M Key
PCIeGen4 x 4 for 2nd
SSD / Video Capture



3042 / 3052 B Key
USB3.2 Gen2 for 5G / 4G

2230 E Key
PCIeGen4 x 1 + USB2.0
for BT / Wifi

Nano Sim Card

MIPI
2 x 4 Lane
4 x 2 Lane

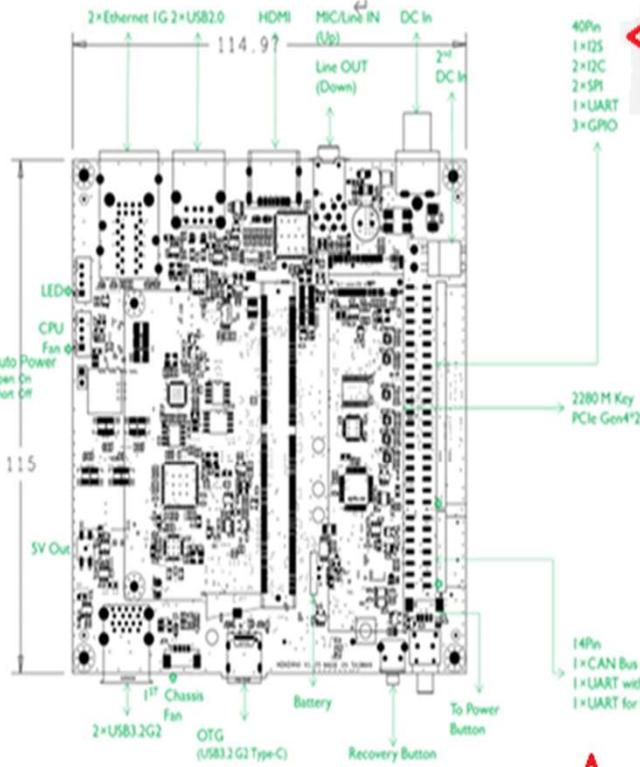
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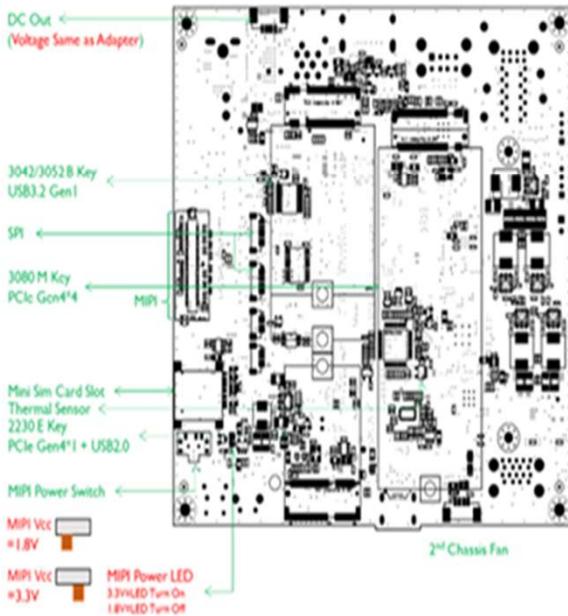
I/O Layout

Carrier Board

115mm × 115mm



| Pin | Define | Pin | Define |
|-----|-----------------------|-----|--------------------------|
| 1 | 3.3V | 2 | 5.0V |
| 3 | I2C1 DATA I2C8_DAT | 4 | 5.0V |
| 5 | I2C1 Clock I2C8_CLK | 6 | GND |
| 7 | GPIO9 GPIO3_PAC.06 | 8 | UART1 TX UA3_TXD |
| 9 | GND | 10 | UART1 RX UA3_RXD |
| 11 | UART1 RTS GPIO3_PR.04 | 12 | I2S0 SCLK GPIO3_PH.07 |
| 13 | SPI1 SCK GPIO3_PY.00 | 14 | GND |
| 15 | GPIO12 GPIO3_PN.01 | 16 | SPI1 CS1 GPIO3_PY.04 |
| 17 | 3.3V | 18 | SPI1 CS0 GPIO3_PY.03 |
| 19 | SPI0 MOSI GPIO3_PZ.05 | 20 | GND |
| 21 | SPI0 MISO GPIO3_PZ.04 | 22 | SPI1 MISO GPIO3_PY.01 |
| 23 | SPI0 SCK GPIO3_PZ.03 | 24 | SPI0 CS0 GPIO3_PZ.06 |
| 25 | GND | 26 | SPI0 CS1 GPIO3_PZ.07 |
| 27 | I2C0 SDA I2C2_DAT | 28 | I2C0 SCL I2C2_CLK |
| 29 | GPIO1 GPIO3_PQ.05 | 30 | GND |
| 31 | GPIO11 GPIO3_PQ.06 | 32 | GPIO7 NV_THERM_FAN_TACH0 |
| 33 | GPIO13 GPIO3_PH.00 | 34 | GND |
| 35 | I2S0 FS GPIO3_PI.02 | 36 | UART1 CTS GPIO3_PR.05 |
| 37 | SPI1 MOSI GPIO3_PY.02 | 38 | I2S0 DIN GPIO3_PI.01 |
| 39 | GND | 40 | I2S0 DOUT GPIO3_PI.00 |



| Pin | Define | Pin | Define |
|-----|------------------|-----|------------------------|
| 1 | | 2 | CAN Tx CAN0_DOUT |
| 3 | RTS UB3_RTS | 4 | CAN Rx CAN0_DIN |
| 5 | UART0 Rx UB3_RXD | 6 | GND |
| 7 | UART0 Tx UB3_TXD | 8 | 3.3V |
| 9 | Vcc (3.3V) | 10 | UART Rx (3.3V) UC3_RXD |
| 11 | CTS UB3_CTS | 12 | GND |
| 13 | GND | 14 | UART Tx (3.3V) UC3_TXD |

**** All GPIO's Block voltage is 3.3Vdc ****

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