

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	14 Pin Header
	1xI2S 2xI2C 2xSPI 1xUART 3xGPIO	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
Video Decode	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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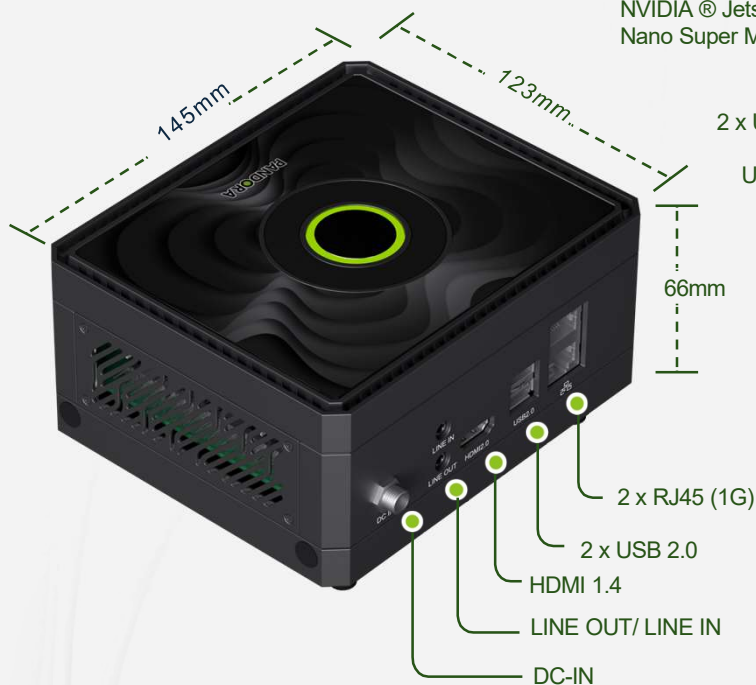
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Mechanical

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



NVIDIA® Jetson Orin™
Nano Super Module

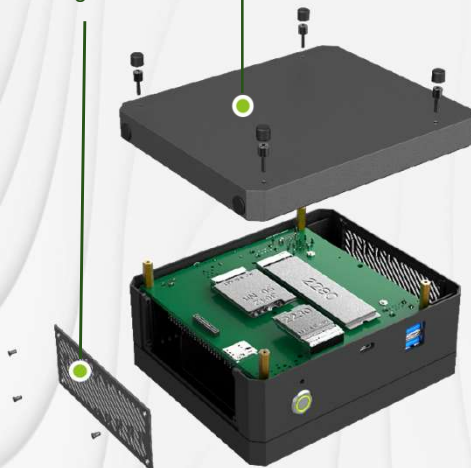
2 x USB 3.0 Type-A

USB 3.0 Type-C (OTG)

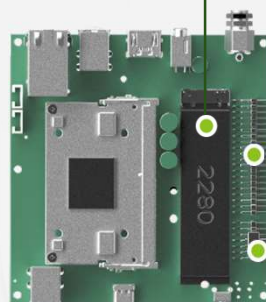
Power



FlexiShell DIY for
3D Printing Machine



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



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

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

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

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



Nano Sim Card

MIPI

2 x 4 Lane

4 x 2 Lane

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

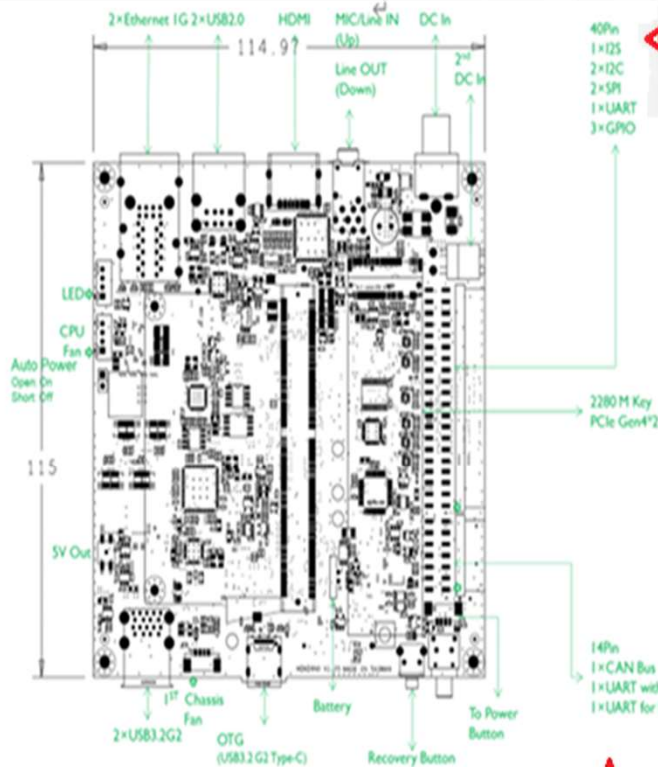
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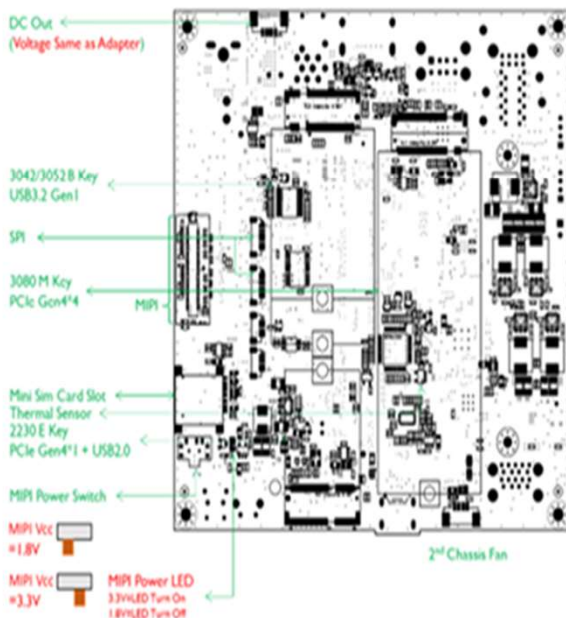
I/O Layout

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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