

## Features

- Support NVIDIA® Jetson Xavier™ NX
- Specifically designed for high performance and low-power envelope AI computing
- Extended temperature range -40°C to 85°C (Only Motherboard)
  - \* Temperature range with NX module is -20°C to 70°C
- Suitable for general robotics, Drone, UAV, industrial inspection, medical imaging and deep learning

## Board Specification

### Dimension

- 120 x 120mm

### Weight

- 115g

### Support Module

- NVIDIA® Jetson Xavier™ NX (69.5 x 45mm)

### I/O Interface

- 1x HDMI Type A
- 1x RJ-45 for GbE
- 1x M.2 M Key 2280(PCIe x4 / SATA)
- 1x M.2 E Key 2230(USB2.0/PCIe x1)
- 1x M.2 B Key 3050(USB3.2 Gen2/USB2.0)
- 2x USB3.2 Gen1 Type A
  - \*Downgrade to USB2.0 when install M.2 B key
- 1x USB2.0 Micro AB(OTG Only)
- 1x Micro SD
- 1x Sim Slot
- 1x 120 Pin Board to board connector for MIPI CSI-II
- 1x Power button/ Reset Button
- 1x Front Panel
- 2 x UART / 3 x I2C / 5 x GPIO / 1x SPI / 1x CAN
- 1x DC-in 12~19V (6 Pin Micro Fit)

### Operating Temperature

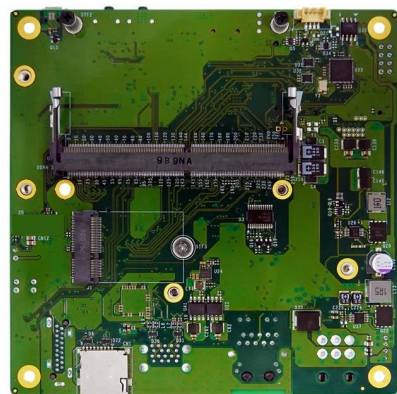
- -40°C ~ +85°C (Board Standard temperature)

### Operating Humidity

- 10% ~ 90%

### Storage Temperature

- -40°C ~ +85°C



# NVIDIA® Jetson Xavier™ NX

## Module Specification

### NX Processor

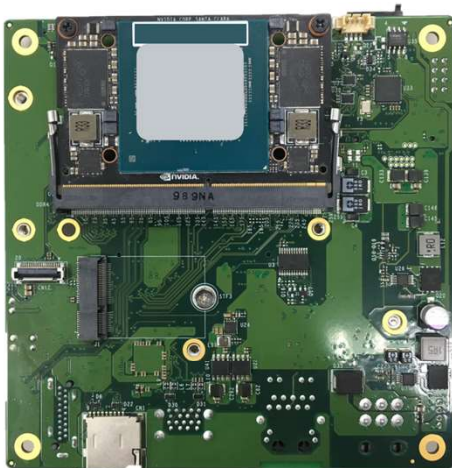
- NVIDIA® Jetson Xavier™ NX processing
- GPU: 384-core NVIDIA Volta™ GPU with 48 Tensor Cores
- CPU: 6-core NVIDIA Carmel ARM®v8.2 64-bit  
CPU 6MB L2 + 4MB L3
- Memory: 8 GB 128-bit LPDDR4
- Storage: 16GB eMMC 5.1
- Performance: 14 TOPS (INT8) at 10W  
21 TOPS (INT8) at 15W
- Dimension: 69.6 x 45mm(260-pin SO-DIMM connector)

### Weight

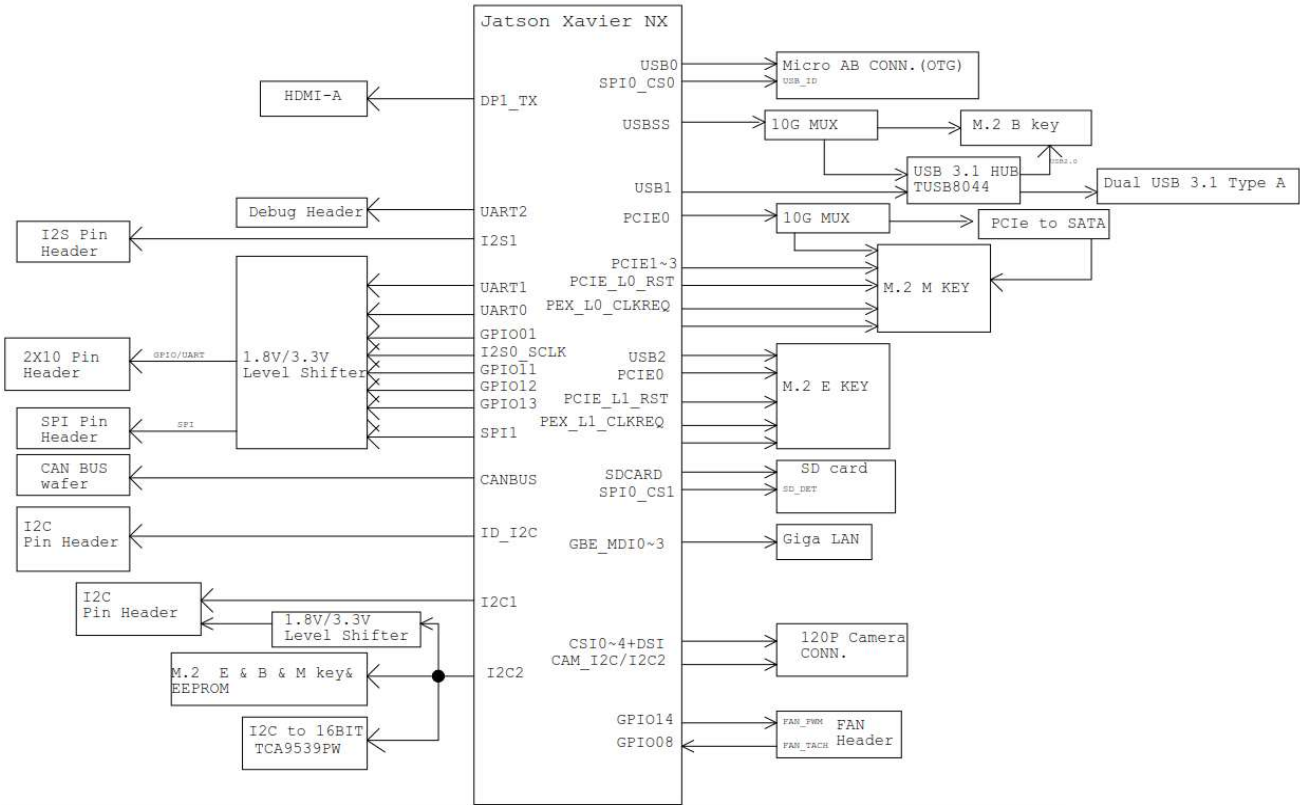
- NX module: 25g
- AN810 + NX module: 140g
- AN810 + NX module + FAN: 190g



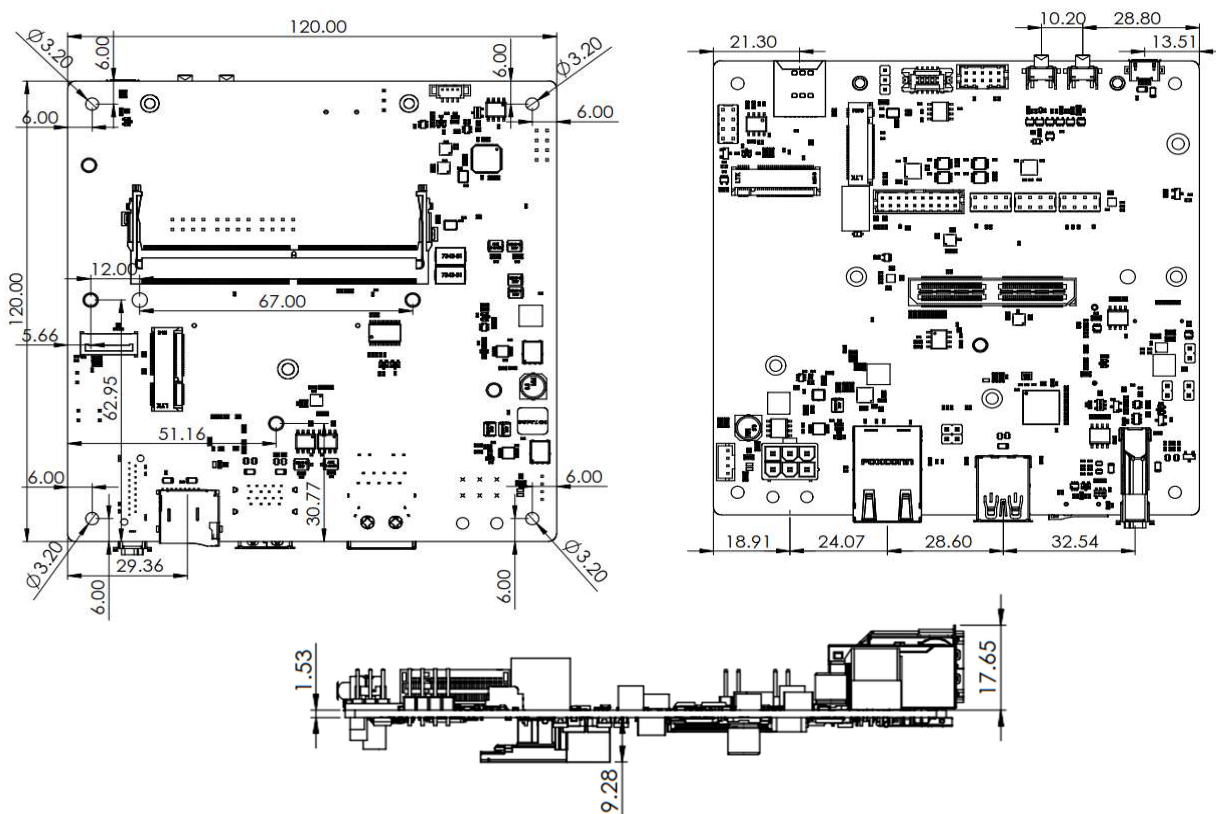
## Assembly



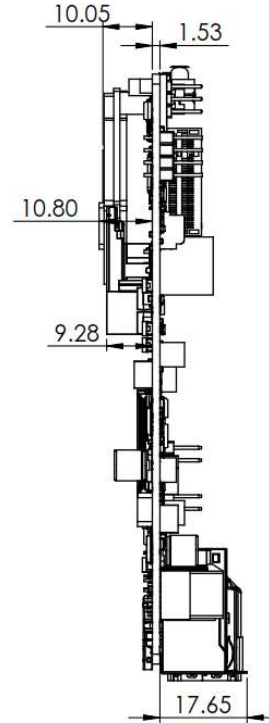
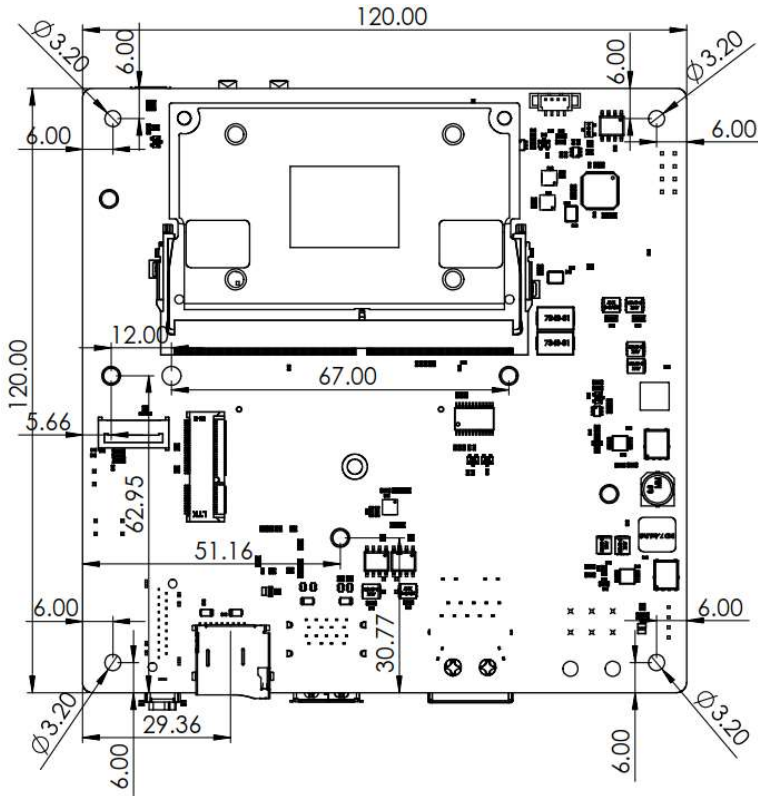
## Block Diagram



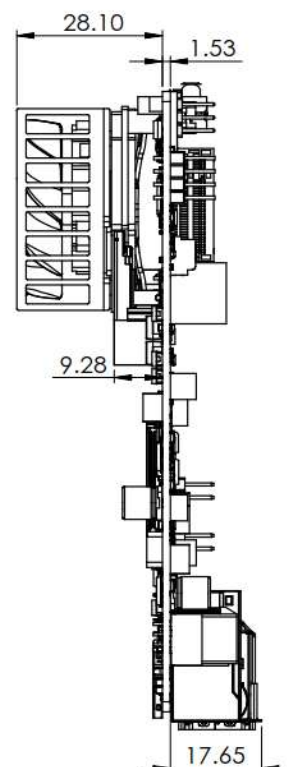
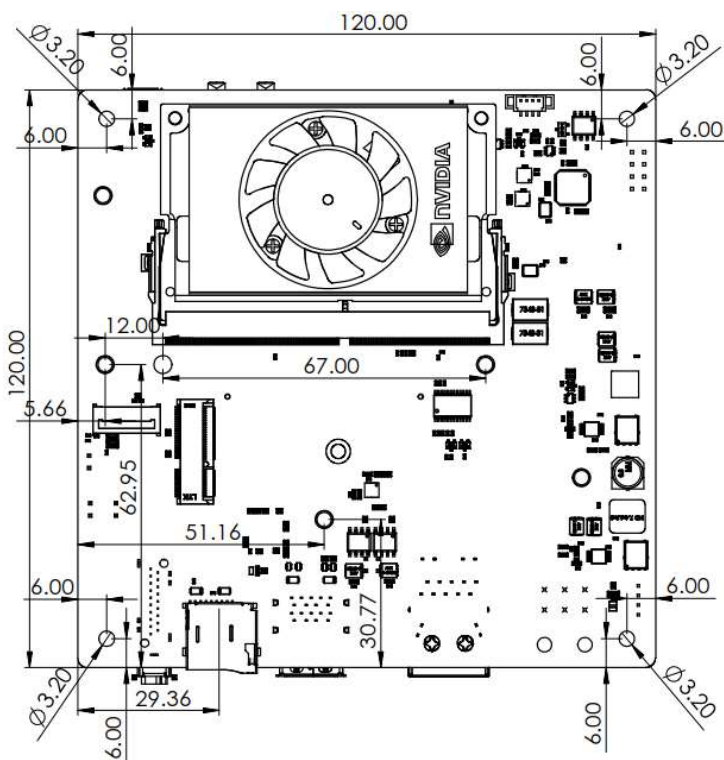
## Mechanical (Board)



## Mechanical (with Module)



## Mechanical (with Module and FAN)

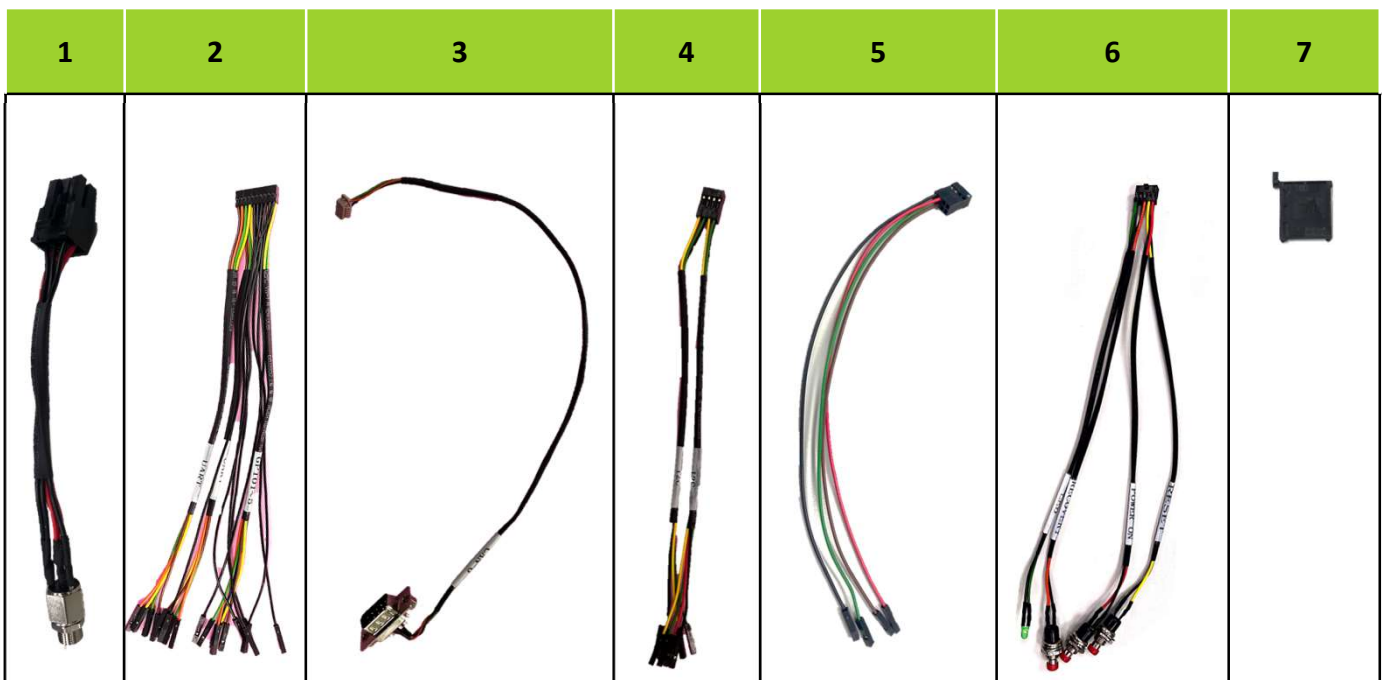


## Ordering Information

Product name	Description
AN810-STD-AN00	AN810 Carrier including I/O Cables, Standard temp -40°C to +85°C
AN810-XNX-BN01	AN810 Carrier + NX Module including I/O Cables, Standard temp -20°C to +70°C
AN810-XNX-BN02	AN810 + NX Module + FANSink + I/O Cables + Power Adapter + US Power Cord -20°C to +70°C
AN810-XNX-BN03	AN810 + NX Module + FANSink + I/O Cables + Power Adapter + EU Power Cord -20°C to +70°C

## Accessory (Standard)

	Item	Description
1	6pin connector to DC Jack CABLE	2.5mm DC JACK CABLE to 2x3P 4.2mm Housing 100mm BLACK
2	I/O CABLE	20P 2.0 mm HOUSING GPIO+2Port UART UL1007#26 200mm
3	CAN BUS CABLE	1.25mm 2*5P HOUSING DB9 Male TYPE UL1571#28 300mm
4	I2C CABLE	8P 2.54mm HOUSING 2Port UL1007#26 200mm
5	I2C CABLE	8P 2.54 mm HOUSING 200mm UL1007#26
6	FRONT PANEL CABLE	10P 2.0 mm HOUSING to PUSH BUTTON 200mm UL1007 #26
7	SIM TRACY	SIM CARD TRACY



## Accessory (Optional)

Item	Description
7W8000000040	US Power Cord SVT 18AWG Cable 1800mm Black 105 °C
7W8000000050	EU Power Cord H05VV-F 0.75mm <sup>2</sup> /3G SL-6+SL-3 Cable 1800mm Black
9Z3BC0000020	Adapter 100-240V 60W 12V 5A
9Z1354328010	FANsink 5V 5500rpm 57.8*39*18mm

Power Cord	Adapter	FANsink
		

## AVL List

Expansion Device				
Vendor	Product Number	Function	Form factor	Description
Intel	8265NGW	WiFi/BT(802.11 ac)	M.2 E Key	Dual Band Wireless-AC M.2 2230 Device
Intel	AX200.NGWG.NV	WiFi/BT(802.11 ax)	M.2 E Key	Dual Band Wireless-AX M.2 2230 Device <i>(*Only wifi function ok)</i>
Telit	FN980m	5G/LTE	M.2 B Key	M.2 (NGFF) data-card, support of 5G Sub-6 FDD and TDD and mmWave, support of SA & NSA operations, 5G core network Opt. 3a/3x and Option 2
Telit	LN960	LTE CAT 18	M.2 B Key	M.2 (NGFF) data-card, up to 1.0Gbps, 5xCA ,4x4 MIMO,
Innodisk	InnoAGE™ M.2 S80 3T17	OOB Storage	M.2 M Key	SSD with Azure Sphere. Can provide out of band management.