

# Seeed Studio Nvidia Series Catalog

Your trusted one-stop platform for Nvidia Jetson products



## About Seed

Seed Studio is one of the top 3 open-source hardware suppliers in the world and is committed to becoming the world's most trusted platform for hardware innovation. Our headquarter is located in Shenzhen, the city of hardware, with subsidiaries in the United States, Japan, and Europe.

Our professional hardware development team can provide users with carrier boards, mini-PC, developer kits, and peripheral accessories based on the full range of NVIDIA Jetson products. We endeavor to ensure you a one-stop-shop experience of the NVIDIA Jetson products and facilitate your project development.

At the same time, Seed can also provide customized services based on NVIDIA Jetson products to help you quickly satisfy industry needs.



# Contents of Catalog



## About Seed

1

---

### ADVANCED AI EMBEDDED SYSTEMS

3

Nvidia Jetson Module Series	4
Module Scenario	5
Module Specification	6

---

### MEET SEED NVIDIA CARRIER BOARDS

8

A206 carrier board	9
A203 carrier board	10
A203 V2 carrier board	11
A205 carrier board	12
EX1 carrier board	13
EX2-TX2 carrier board	14
EX1-dual ethernet ports carrier board	15
Jetson Mate	16
Carrier Board Spec/Comparison Table	17

---

### reComputer Jetson

21

Introduction	22
Product Overview	23
Specification – Compared with NVIDIA Jetson Dev Kits	24

---

### NVIDIA MODULE-EMBEDDED MINI PC FOR VARIOUS EDGE APPLICATIONS

25

Jetson SUB Mini PC-Blue	26
Jetson SUB Mini PC-Black	27
Jetson SUB Mini PC-Silver	28
Jetson EX1 Mini PC- Ubuntu	29
Jetson Mate Cluster	30
Mini PC Spec/Comparison Table	31

---

### NVIDIA COMPATIBLE ACCESSORIES

32

Accessory - Heatsink	33
Accessory – Case with Fan	34
Accessory – Case without Fan	35
Accessory – Camera	36
Accessory – RPLiDAR	
RPLiDAR – Laser Ranging Radar	37
RPLiDAR – ToF LiDAR	38

---

### CUSTOMIZATION SERVICE

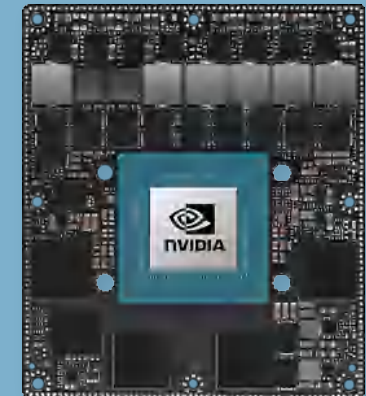
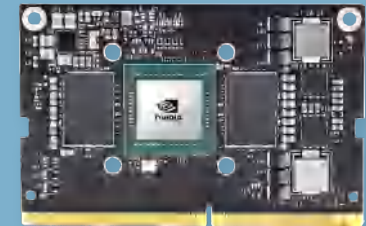
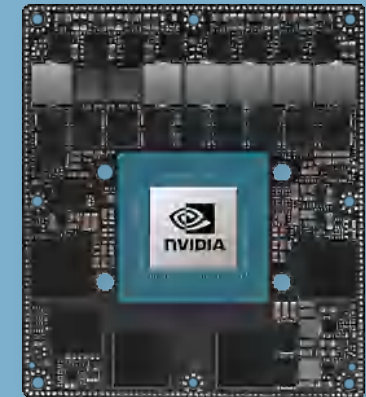
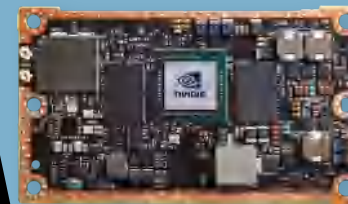
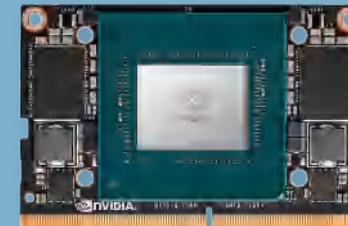
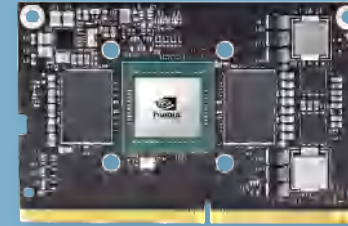
39

Service Range	40
Customization Process & Timeline	41



# ADVANCED AI EMBEDDED SYSTEMS

NVIDIA Jetson: The AI platform for autonomous machines.



# Module

Product Name Nvidia Jetson Module Series

**Introduction** The NVIDIA Jetson™ is a series of compact AI embedded computers which has powerful performance. They can handle multiple neural network in parallel and process data from several high-resolution sensors simultaneously. These make them perfect for the AI embedded system such as industrial robots, medical equipment and autonomous machines.



# Module Scenario



AI Camera for Retail & Factory



Autopilot Robots & Cars



Drones



Education & Training Tools



Medical & Biological Vision



Commercial Pos System

# Module Specification

	Jetson Nano	Jetson TX2 Series				Jetson Xavier NX Series		Jetson AGX Xavier Series			Jetson Orin NX	Jetson AGX Orin	
		TX2 NX	TX2 4GB	TX2	TX2I	Jetson Xavier NX 16GB	Jetson Xavier NX	Jetson AGX Xavier 64GB	Jetson AGX Xavier	Jetson AGX Xavier Industrial			
<b>AI Performance</b>	472 GFLOPS	1.33 TFLOPS			1.26 TFLOPS	21 TOPS		32 TOPS		30 TOPS	100 TOPS	200 TOPS	
<b>GPU</b>	128-core NVIDIA Maxwell™ GPU	256-core NVIDIA Pascal™ GPU				384-core NVIDIA Volta™ GPU with 48 Tensor Cores		512-core NVIDIA Volta GPU with 64 Tensor Cores			1024-core NVIDIA Ampere GPU with 32 Tensor Cores	2048-core NVIDIA Ampere GPU with 64 Tensor Cores	
<b>CPU</b>	Quad-core ARM® Cortex®-A57 MPCore processor	Dual-core Denver 2 64-bit CPU and quad-core Arm Cortex-A57 MPCore processor				6-core NVIDIA Carmel Arm® v8.2 64-bit CPU 6MB L2 + 4MB L3		8-core NVIDIA Carmel Arm® v8.2 64-bit CPU 8MB L2 + 4MB L3			8-core NVIDIA Arm® Cortex A78AE v8.2 64-bit CPU 2MB L2 + 6MB L3	12-core NVIDIA Arm® Cortex A78AE v8.2 64-bit CPU 3MB L2 + 6MB L3	
<b>DL Accelerator</b>	-	-				2x NVDLA		2x NVDLA			2x NVDLA v2	2x NVDLA v2	
<b>Vision Accelerator</b>	-	-				2x PVA		2x PVA			1 x PVA v2	1 x PVA v2	
<b>Safety Cluster Engine</b>	-	-				-		-			2x Arm Cortex-R5 in lockstep	-	
<b>Memory</b>	4GB 64-bit LPDDR4 25.6GB/s	4GB 128-bit LPDDR4 51.2GB/s		8GB 128-bit LPDDR4 59.7GB/s	8GB 128-bit LPDDR4 (ECC Support) 51.2GB/s	16GB 128-bit LPDDR4x 59.7GB/s	8GB 128-bit LPDDR4x 59.7GB/s	64GB 256-bit LPDDR4x 136.5GB/s	32GB 256-bit LPDDR4x 136.5GB/s	32GB 256-bit LPDDR4x (ECC support) 136.5GB/s	12GB 128-bit LPDDR5 102.4 GB/s	32GB 256-bit LPDDR5 204.8 GB/s	
<b>Storage</b>	16GB eMMC 5.1	16GB eMMC 5.1		32GB eMMC 5.1	32GB eMMC 5.1	16GB eMMC 5.1		32GB eMMC 5.1		64GB eMMC 5.1	- (Supports external NVMe)	64GB eMMC 5.1	
<b>Camera</b>	Up to 4 cameras 12 lanes MIPI CSI-2 D-PHY 1.1 (up to 18 Gbps)	Up to 5 cameras (12 via virtual channels) 12 lanes MIPI CSI-2 D-PHY 1.2 (up to 30 Gbps)		Up to 6 cameras (12 via virtual channels) 12 lanes MIPI CSI-2 D-PHY 1.2 (up to 30 Gbps)		Up to 6 cameras (24 via virtual channels) 14 lanes MIPI CSI-2 D-PHY 1.2 (up to 30 Gbps)		Up to 6 cameras (36 via virtual channels) 16 lanes MIPI CSI-2   8 lanes SLVS-EC D-PHY 1.2 (up to 40 Gbps) C-PHY 1.1 (up to 62 Gbps)			Up to 6 cameras (36 via virtual channels) 16 lanes MIPI CSI-2 D-PHY 1.2 (up to 40 Gbps) C-PHY 1.1 (up to 62 Gbps)	Up to 4 cameras (8 via virtual channels*) 8 lanes MIPI CSI-2 D-PHY 1.2 (up to 20Gbps)	Up to 6 cameras (16 via virtual channels*) 16 lanes MIPI CSI-2 D-PHY 1.2 (up to 40Gbps)   C-PHY 1.1 (up to 164Gbps)

\* The green highlight products are coming soon



# Module Specification

	Jetson Nano	Jetson TX2 Series				Jetson Xavier NX Series		Jetson AGX Xavier Series			Jetson Orin NX	Jetson AGX Orin
		TX2 NX	TX2 4GB	TX2	TX2i	Jetson Xavier NX 16GB	Jetson Xavier NX	Jetson AGX Xavier 64GB	Jetson AGX Xavier	Jetson AGX Xavier Industrial		
<b>Video Encode</b>	1x 4K30 (H.265) 2x 1080p60 (H.265)		1x 4K60 (H.265) 3x 4K30 (H.265) 4x 1080p60 (H.265)			2x 4K60 (H.265) 10x 1080p60 (H.265) 22x 1080p30 (H.265)		4x 4K60 (H.265) 16x 1080p60 (H.265) 32x 1080p30 (H.265)		2x 4K60 (H.265) 12x 1080p60 (H.265) 24x 1080p30 (H.265)	1x 4K60 (H.265) 2x 4K30 (H.265) 6x 1080p60 (H.265) 14x 1080p30 (H.265)	2x 4K60 (H.265) 4x 4K30 (H.265) 8x 1080p60 (H.265) 16x 1080p30 (H.265)
<b>Video Decode</b>	1x 4K60 (H.265) 4x 1080p60 (H.265)		2x 4K60 (H.265) 7x 1080p60 (H.265) 14x 1080p30 (H.265)			2x 8K30 (H.265) 6x 4K60 (H.265) 22x 1080p60 (H.265) 44x 1080p30 (H.265)		2x 8K30 (H.265) 6x 4K60 (H.265) 26x 1080p60 (H.265) 52x 1080p30 (H.265)		2x 8K30 (H.265) 4x 4K60 (H.265) 18x 1080p60 (H.265) 36x 1080p30 (H.265)	1x 8K30 (H.265) 2x 4K60 (H.265) 6x 4K30 (H.265) 12x 1080p60 (H.265) 24x 1080p30 (H.265)	1x 8K30 (H.265) 3x 4K60 (H.265) 6x 4K30 (H.265) 12x 1080p60 (H.265) 24x 1080p30 (H.265)
<b>PCIe</b>	1 x4 (PCIe Gen2)	1 x1 + 1 x2 (PCIe Gen2)	1 x1 + 1 x4 OR 1 x1 + 1 x1 + 1 x2 (PCIe Gen2)		1 x1 (PCIe Gen3) + 1 x4 (PCIe Gen4)	1 x8 + 1 x4 + 1 x2 + 2 x1 (PCIe Gen4, Root Port & Endpoint)			1 x4 + 3 x1 (PCIe Gen4, Root Port & Endpoint)	2 x8 (or 1x8 + 2x4) + 2 x4 + 2 x1 (PCIe Gen4, Root Port & Endpoint)		
<b>Networking</b>	10/100/1000 BASE-T Ethernet			10/100/1000 BASE-T Ethernet, WLAN	10/100/1000 BASE-T Ethernet						10/100/1000 BASE-T Ethernet 4x 10GbE XFI	
<b>Display</b>	2 multi-mode DP 1.2/eDP 1.4/HDMI 2.0 1 x2 DSI (1.5Gbps/lane)	2 multi-mode DP 1.2/eDP 1.4/HDMI 2.0 1 x2 DSI (1.5Gbps/lane)	2 multi-mode DP 1.2/eDP 1.4/HDMI 2.0 2 x4 DSI (1.5Gbps/lane)		2 multi-mode DP 1.4/eDP 1.4/HDMI 2.0 No DSI support	3 multi-mode DP 1.4/eDP 1.4/HDMI 2.0 No DSI support			1x 8K60 multi-mode DP 1.4a (+MSTI)/eDP 1.4a/HDMI 2.1	1x 8K60 multi-mode DP 1.4a (+MSTI)/eDP 1.4a/HDMI 2.1		
<b>Power</b>	5W   10W	7.5W   15W		10W   20W	10W   15W   20W	10W   15W   30W	20W   40W	10W   15W   25W	15W   30W   50W			
<b>Mechanical</b>	69.6mm x 45mm 260-pin SO-DIMM connector	69.6mm x 45mm 260-pin SO-DIMM connector	87mm x 50mm 400-pin connector Integrated Thermal Transfer Plate		69.6mm x 45mm 260-pin SO-DIMM connector	100mm x 87mm 699-pin connector Integrated Thermal Transfer Plate			69.6mm x 45mm 260-pin SO-DIMM connector	100mm x 87mm 699-pin connector Integrated Thermal Transfer Plate		

\* The green highlight products are coming soon





**seeed**studio  
The IoT Hardware Enabler

# MEET SEEED NVIDIA CARRIER BOARDS

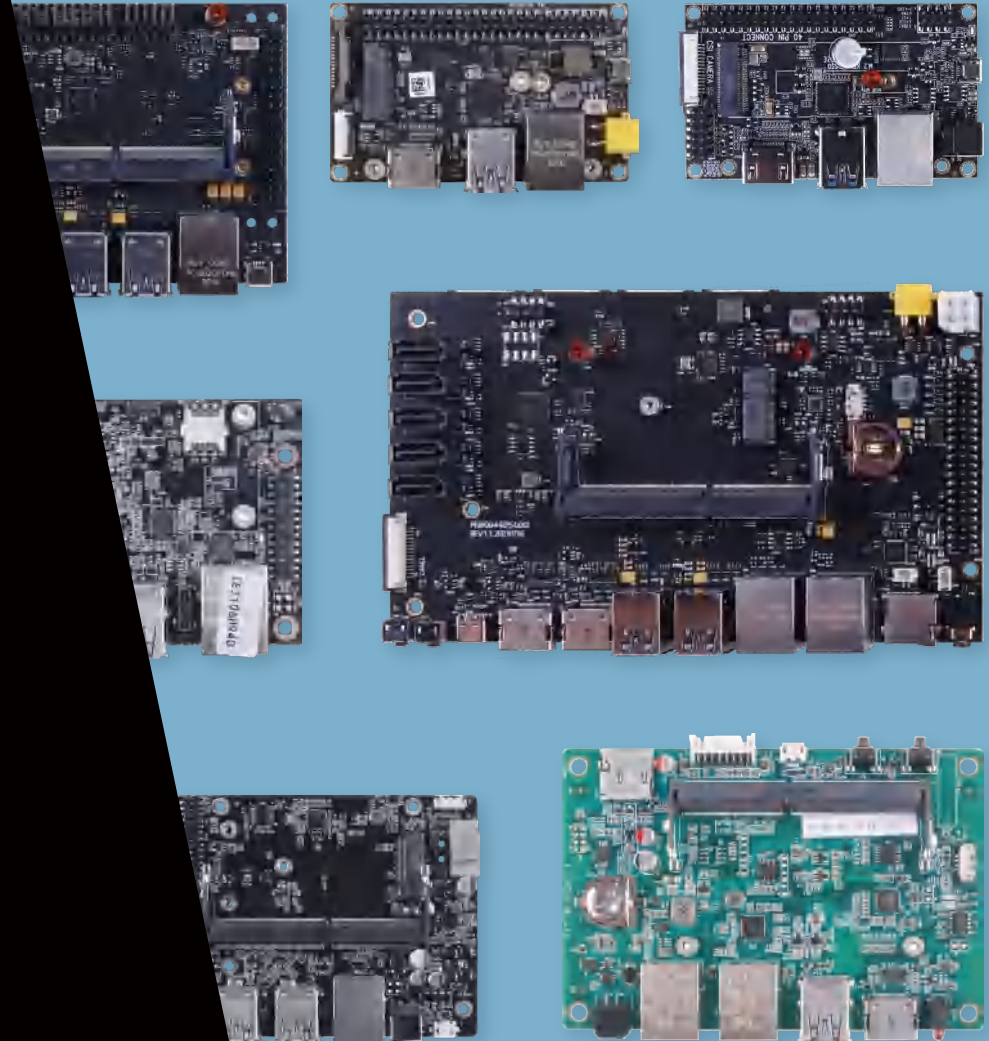
DESIGNED FOR ENDLESS EDGE AI  
DEPLOYMENTS

Various Size Option

AI

Rich Ports

Computer Vision



## Carrier Boards

**Product Name** A206 carrier board

**Dimension** 100mm\*80mm

**Module Compatibility**  
 - Jetson Nano  
 - Jetson Xavier NX  
 - Jetson TX2 NX

**SKU** 114110049

**Certification**   

**Introduction** The same size/design/function as the NVIDIA® Jetson Xavier™ NX carrier board.

It provides several connectors with industry standard pinouts to support additional functionality.

### Feature

4 USB Ports

HDMI + DP ports

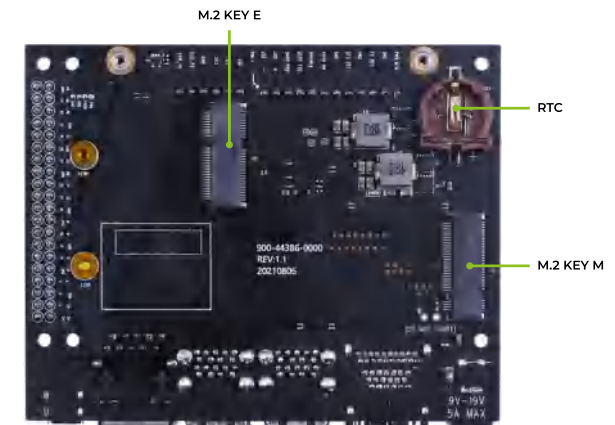
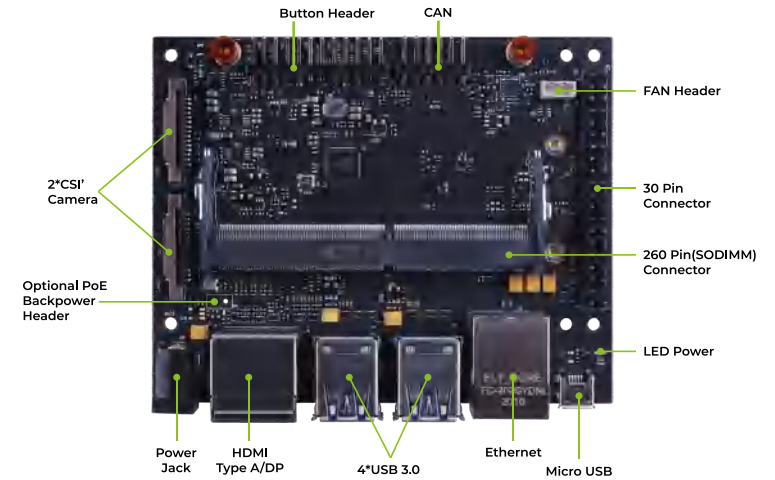
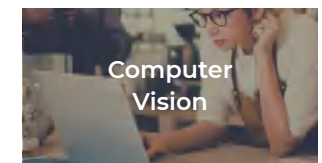
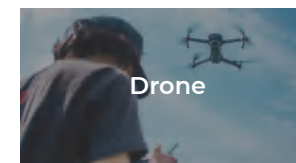
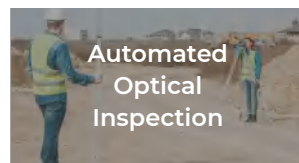
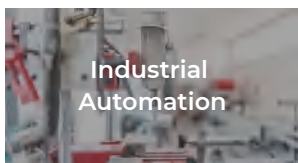
RTC

M.2 E key

M.2 M key

9V-19V

### Application



# Carrier Boards

Product Name	A203 carrier board
Dimension	87mm*52mm
Module Compatibility	- Jetson Nano - Jetson Xavier NX - Jetson TX2 NX
SKU	114110047
Certification	  

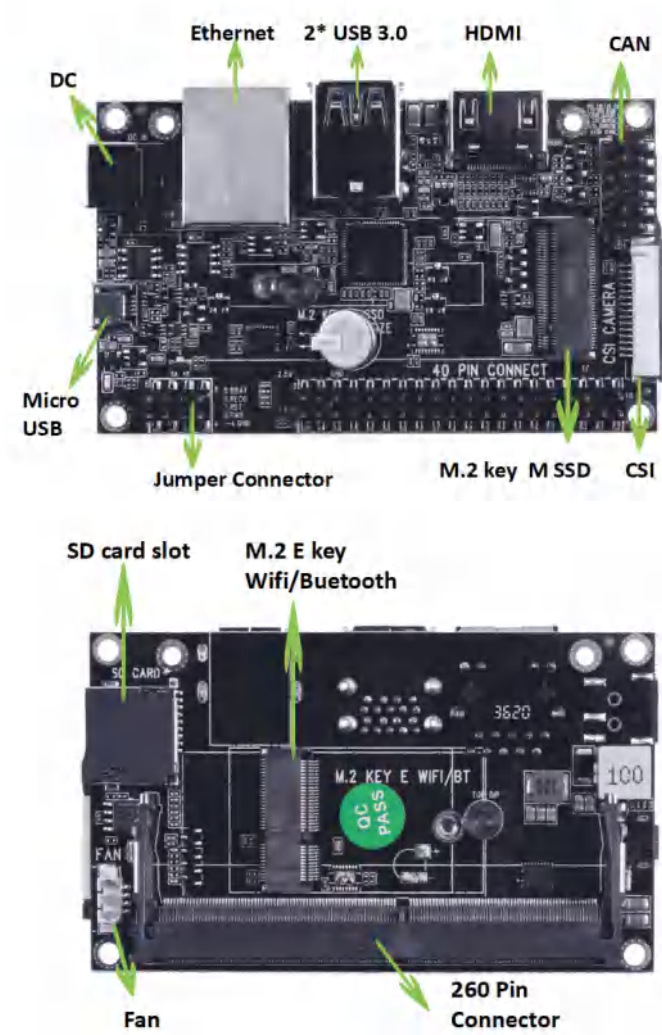
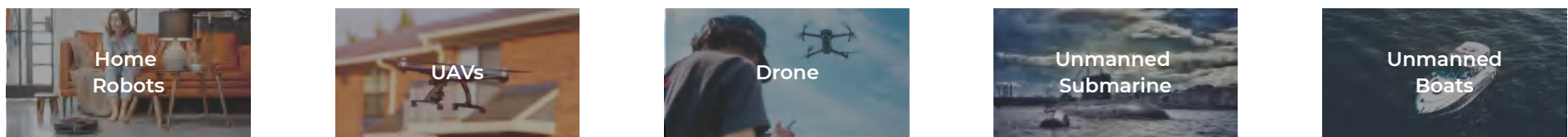
**Introduction** Smaller size compared with NVIDIA® Jetson Xavier™ NX carrier board.

The rich peripheral interfaces make it suitable for small size AI graphical applications such as home robots, drone, UAVs, unmanned boats and unmanned submarines which need lightweight, low power consumption, and small design.




## Feature

- Small and compact
- RTC
- 9V-19V
- M.2 E key
- SD card slot

## Application



# Carrier Boards

Product Name	A203 V2 carrier board
Dimension	87mm*52mm
Module Compatibility	- Jetson Nano - Jetson Xavier NX - Jetson TX2 NX
SKU	103110043
Certification	  

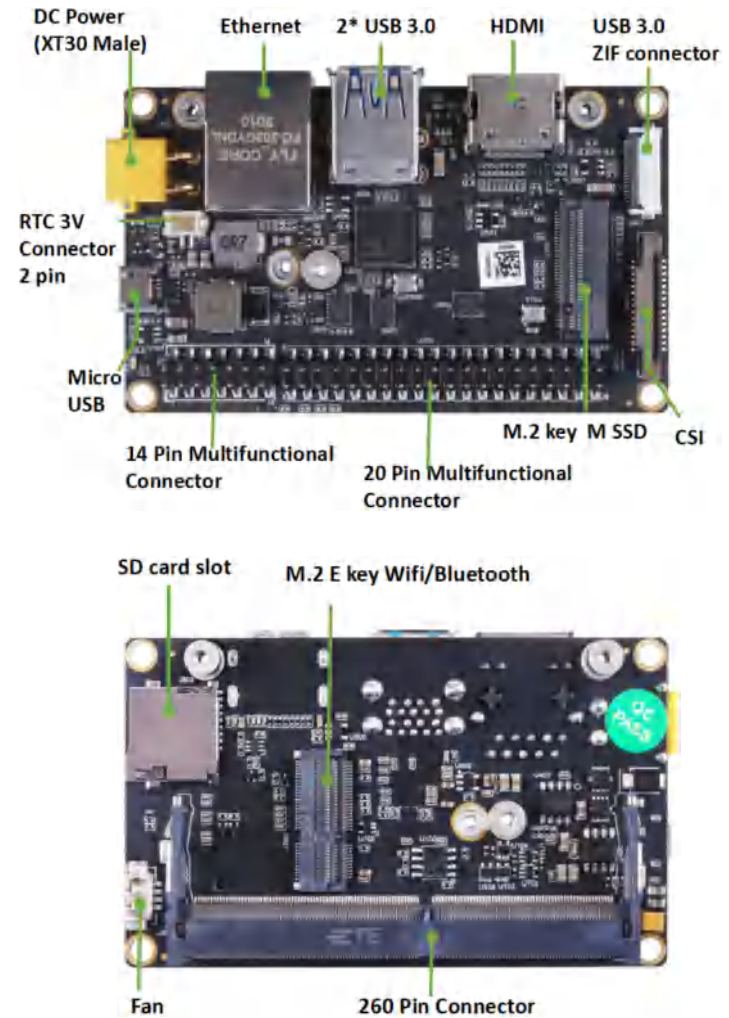
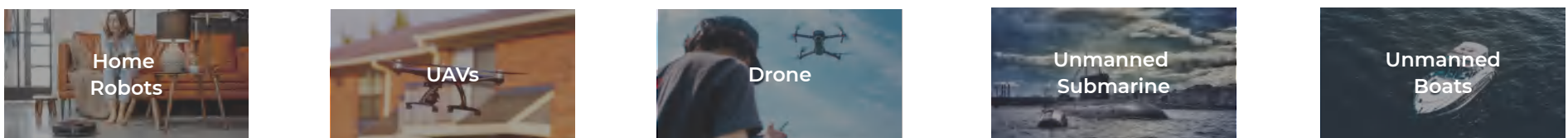
**Introduction** An upgraded version though same size as the original A203 carrier board.

The rich peripheral interfaces make it suitable for small size AI graphical applications such as home robots, drone, UAVs, unmanned boats and unmanned submarines which need lightweight, low power consumption, and small design.

## Feature

- Small and compact
- 9V-19V
- RTC
- M.2 E key
- SD card slot
- USB 3.0 ZIF connector

## Application





# Carrier Boards

Product Name	A205 carrier board
Dimension	170mm*100mm
Module Compatibility	- Jetson Nano - Jetson Xavier NX - Jetson TX2 NX
SKU	114110048
Certification	  

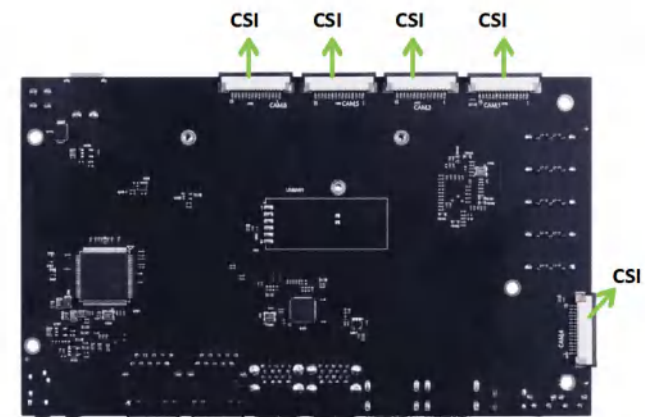
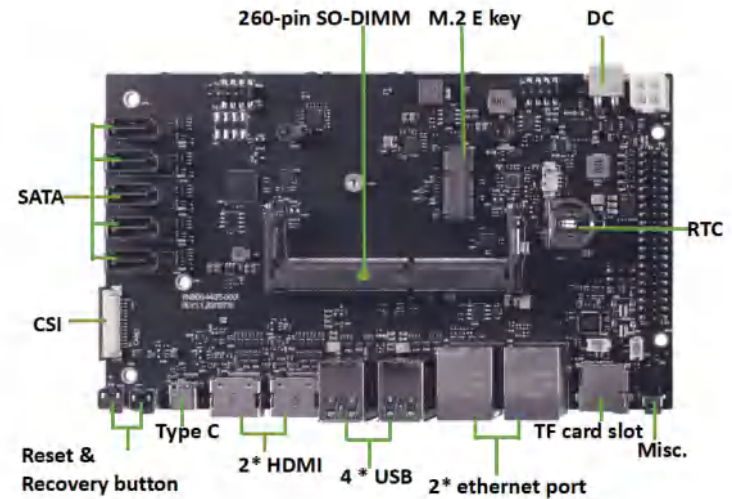
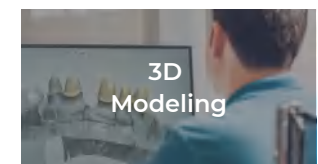
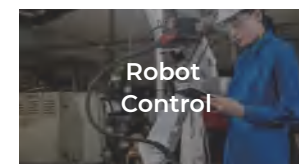
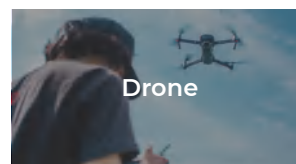
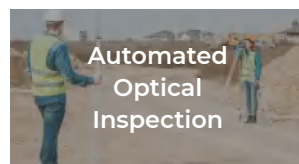
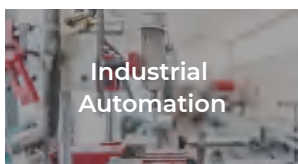
**Introduction** Bigger size compared with NVIDIA® Jetson Xavier™ NX carrier board.

Its rich SATA and CSI Camera interfaces make it suitable for demand at the edge such as smart retail or video analysis.

## Feature

- 5 SATA
- 6 CSI
- SD card slot
- 2 HDMI
- 2 Ethernet Ports

## Application



# Carrier Boards

Product Name	EX1 carrier board
Dimension	100mm*80mm
Module Compatibility	- Jetson Nano - Jetson Xavier NX - Jetson TX2 NX
SKU	103110022

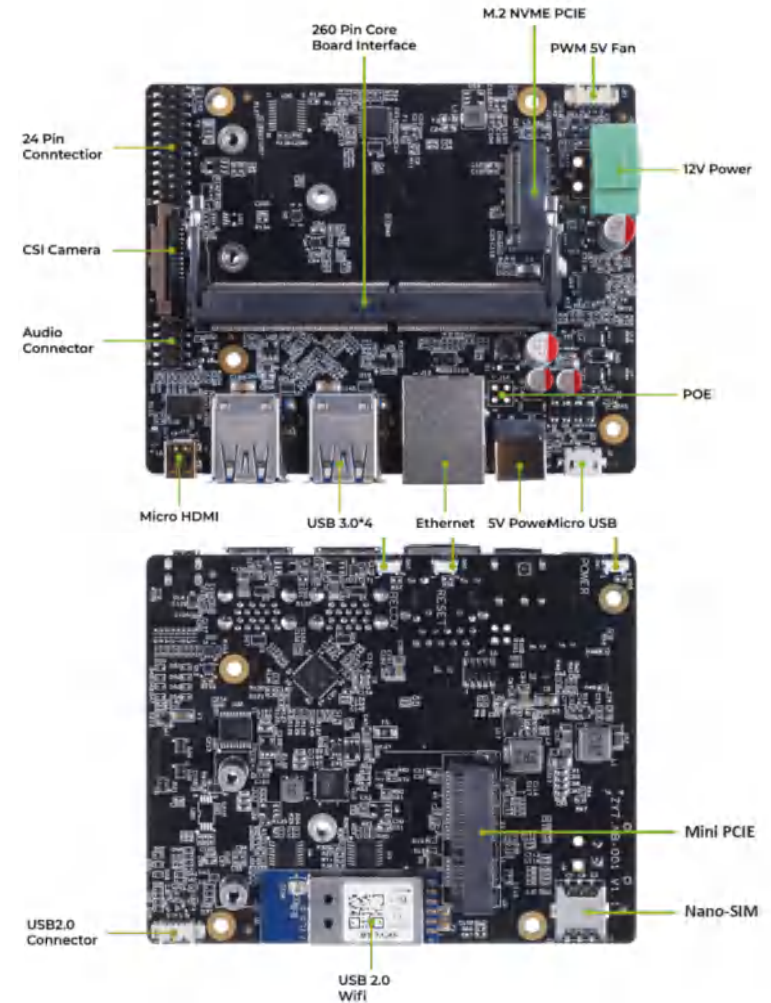
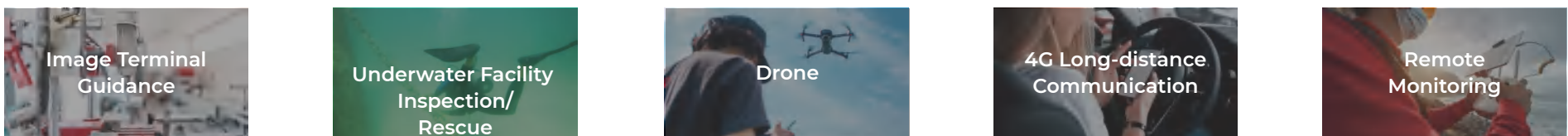
**Introduction** The same size as the NVIDIA® Jetson Xavier™ NX carrier board.

Owing to its 4G interface and nano SIM card slot, EX1 is a good fit for outdoor projects that require long-distance communication.

## Feature

- mPCIe
- M.2 Key
- Two power selection
- 5V, 12V
- SIM Card Slot
- 4G

## Application





# Carrier Boards

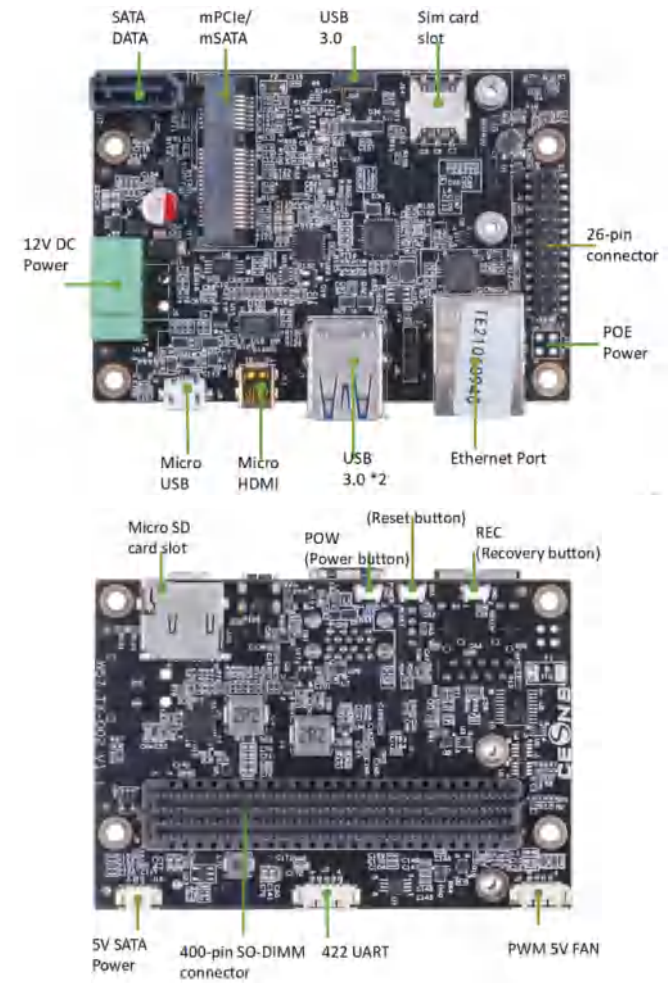
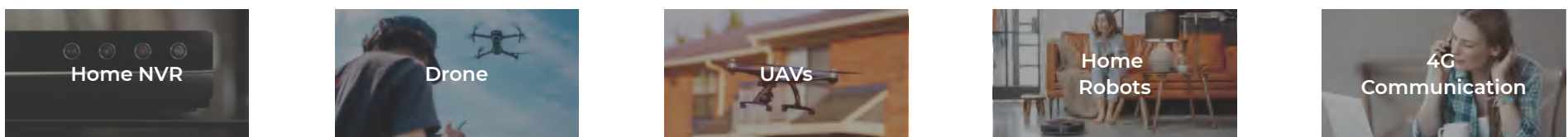
Product Name	EX2-TX2 carrier board
Dimension	86mm*60mm
Module Compatibility	Jetson TX Series (TX1/TX2-4GB/TX2-8GB/TX2i )
SKU	102110643

**Introduction** EX2-TX2 is a NVIDIA Jetson TX series compatible carrier board, providing HDMI 2.0, Gigabit Ethernet, USB3.0, USB 2.0, micro USB (OTG function), mPCIe/mSATA, SATA solid-state drive, CSI camera, 422, SD card, CAN, PIO, I2C, I2S fans and other rich peripheral interfaces.

## Feature

- TX2 Series
- SATA
- SD Card Slot
- 422 UART
- mPCIe
- SIM Card Slot
- 4G

## Application



# Carrier Boards

Product Name	EX1-dual ethernet ports carrier board
Dimension	119mm*80mm
Module Compatibility	- Jetson Nano - Jetson Xavier NX - Jetson TX2 NX
SKU	102110645

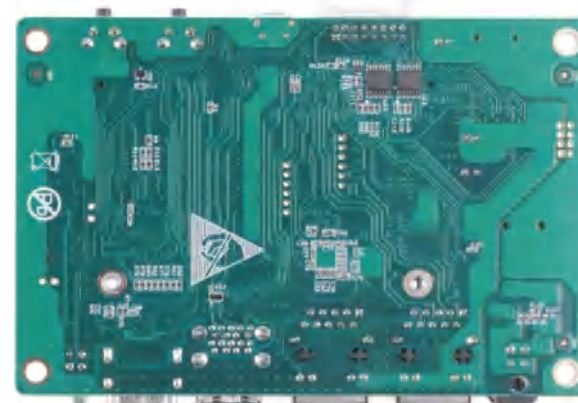
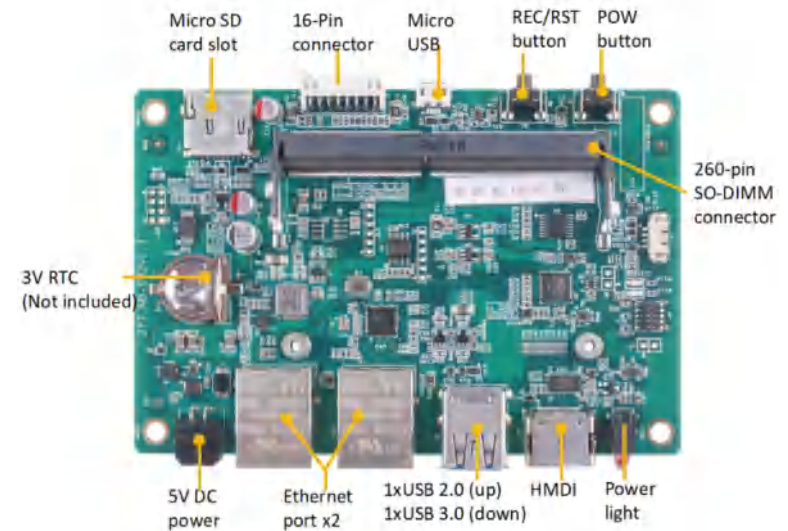
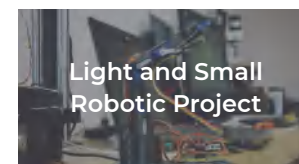
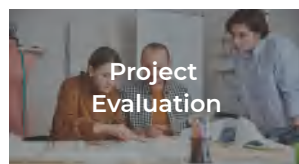
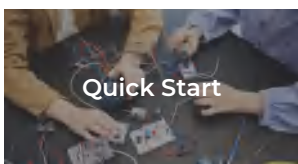
**Introduction** Bigger size compared with NVIDIA® Jetson Xavier™ NX carrier board.

It's lightweight and cost-effective but still has powerful characteristics that make it suitable for the good start and quick evaluation of a new project.

## Feature

- Cost-effective
- Quick evaluation
- 2 Ethernet ports
- SD Card Slot
- RTC
- USB 2.0 WiFi

## Application



# Carrier Boards

---

Product Name	Jetson Mate
--------------	-------------

---

Dimension	110mm*110mm
-----------	-------------

---

Module Compatibility	- Jetson Nano - Jetson Xavier NX
----------------------	-------------------------------------

---

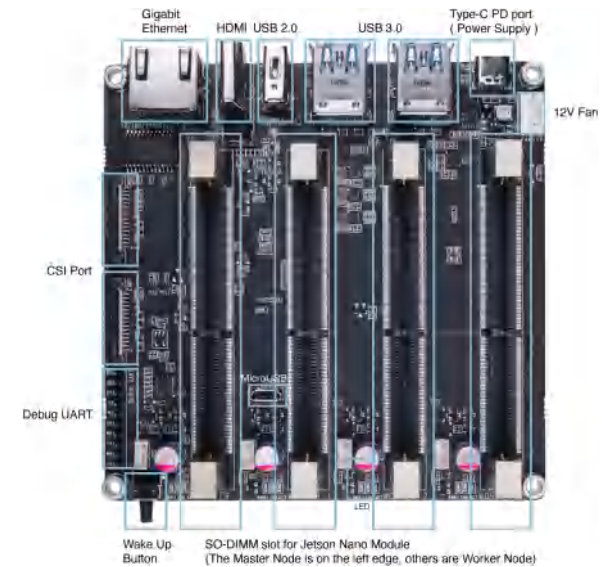
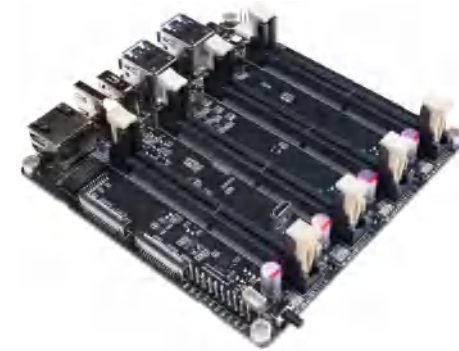
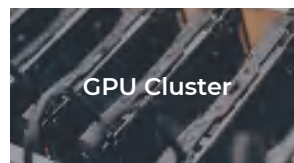
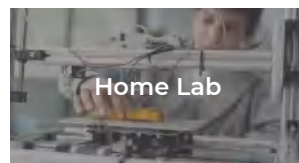
SKU	114992562
-----	-----------

---

**Introduction** Jetson Mate is a carrier board in which you can install up to 4 NVIDIA Jetson Nano/NX SoMs.

- Feature**
- Easy to build a GPU cluster with easy-to-follow guides provided
  - Can install up to 4 NVIDIA Jetson Nano/NX SoMs
  - Onboard 5-port Gigabit switch for the SoMs to communicate with each other
  - One master node with 3 worker nodes with the ability to power on/off the worker nodes separately

## Application



# Carrier Board Spec/Comparison Table

Module Compatibility	Nvidia Xavier NX carrier board in dev kit	A206	A203	A203 V2	A205	EX1	EX2-TX2	EX1-Dual ethernet ports	Jetson Mate
Jetson Nano		✓	✓	✓	✓	✓		✓	✓
Jetson Xavier NX	✓	✓	✓	✓	✓	✓		✓	✓
Jetson TX2 NX		✓	✓	✓	✓	✓		✓	
Jetson TX Series (T1/TX2-4GB/ TX2-8GB/ TX2i )							✓		

# Carrier Board Spec/Comparison Table

Specification	Nvidia Xavier NX carrier board in dev kit	A206	A203	A203 V2	A205	EX1	EX2-TX2	EX1-Dual ethernet ports	Jetson Mate
PCB Size (mm*mm)	103*90.5	100*80	87*52		170*100	100*80	86*60	119*80	110*110
Display	1x HDMI	2x HDMI	1x HDMI		2x HDMI	1x Micro HDMI		1x HDMI	1x HDMI
CSI Camera	2x CSI	2x CSI	1x CSI		6x CSI	1x CSI	\		2x CSI
Ethernet	1x Gigabit Ethernet (RJ45 connector with PoE and LEDs)	1x Gigabit Ethernet (10 \100 \1000M)			2x Gigabit Ethernet (10 \100 \1000M)	1x Gigabit Ethernet (10 \100 \1000M)		2x Gigabit Ethernet (10 \100 \1000M)	1x Gigabit Ethernet (10 \100 \1000M)
M.2 Key M	1x M.2 Key M	1x M.2 Key M			\	1x M.2 Key M	\		
M.2 Key E	1x M.2 Key E	1x M.2 Key E				\			

# Carrier Board Spec/Comparison Table

Specification	Nvidia Xavier NX carrier board in dev kit	A206	A203	A203 V2	A205	EX1	EX2-TX2	EX1-Dual ethernet ports	Jetson Mate
USB	\	\		1x USB 3.0 0.5mm pitch 20Pin ZIF	\	4x USB 3.0 Type A (Integrated USB 2.0)	\	1x USB 3.0 Type A (Integrated USB 2.0)	4x USB 3.0
	1x USB 3.1 (Gen2) Hub to 4x Type A (host only)	4x USB 3.0 Type-A (Integrated USB 2.0)	2x USB 3.0 Type-A (Integrated USB 2.0)		4x USB 3.0 Type-A (Integrated USB 2.0)	1x USB 2.0 (4 Pin connector)	2x USB 3.0 Type-A (Integrated USB 2.0)	1x USB 2.0	1x USB 2.0
	1x USB 2.0 Micro B (device only)	1x USB Micro B(Not support power input)			1x USB 2.0 Type C (Support OTG)	1x USB Micro B			1x USB Type C
SATA	\	\			5x SATA	\	1x SATA	\	
TF_Card	\	\	1x TF_Card			\	1x TF_Card		\
Multifunctional Port	1x 40-Pin	1x 40-Pin				1x 24-Pin	1x 26-Pin	1x 16-Pin	1x 10-Pin (Debug UART)



# Carrier Board Spec/Comparison Table

Specification	Nvidia Xavier NX carrier board in dev kit	A206	A203	A203 V2	A205	EX1	EX2-TX2	EX1-Dual ethernet ports	Jetson Mate
FAN	1x FAN(5V PWM)	1x FAN(5V PWM)						1x FAN (12V)	
	\	\			2x Fan (12V/5V)	\			
RTC	\	Battery not included	Battery included	Battery not included		\		Battery not included	\
So-DIMM	260 Pin	260 Pin				400 Pin	260 Pin	4x 260 Pin	
mPCLe	\	\			1x mPCLe		\		
SIM	\	\			1x SIM card slot		\		
Power Requirement	DC 9-20V	DC 19V				DC 12V/5V	DC 12V	DC 5V	DC 20V 4.5A



# reComputer Jetson

All-in-one Starter Kit for Jetson  
Developers

Jetson Nano

Jetson Xavier NX

The Most Cost-effective



## Introduction

reComputer Jetson is used by professionals to develop and test software for products based on Jetson modules, and by students and enthusiasts for project development and learning.

## Module Embedded

Jetson Nano, Jetson Xavier NX

## Dimension

130mm\*120mm\*50mm

## Features

- Perfect for NVIDIA Jetson learners, developers, and project engineers
- Up to 21 TOPS AI performance meets most project requirement of Computer Visions, Edge AI projects ,etc
- Rich peripherals including Gigabit Ethernet ports, 4
- USB 3.1 Type-A ports, HDMI port and DP port
- Removable acrylic cover with ease of access to the internal components
- Bottom with mounting holes design



## Certification



# Product Overview

## Three versions available:

### reComputer Jetson -Nano A01 kit

- 1 x NVIDIA® Jetson Nano™
- 1 x Sseed oddsey carrier board
- 1 x Passive aluminum heatsink
- 1 x Aluminum case

**Release Plan: April 2022**

---

### reComputer Jetson -Nano H01 kit

- 1 x NVIDIA® Jetson Nano™
- 1 x Sseed reference carrier board
- 1 x Passive aluminum heatsink
- 1 x Aluminum case
- 1 x 12V Power adapter

**Release Plan: February 2022**

---

### reComputer Jetson -Xavier NX H01 kit

- 1 x NVIDIA® Jetson Xavier NX
- 1 x Sseed reference carrier board
- 1 x Aluminum heatsink with fan
- 1 x Aluminum case
- 1 x 12V Power adapter

**Release Plan: February 2022**

## Optional accessories:

- 1 x VME SSD 256GB (M.2 M Key)

- 1 x VME SSD 512GB (M.2 M Key)

- 1 x Wi-Fi module (M.2 E Key)

# Specification – Compared with NVIDIA Jetson Dev Kits

Product	NVIDIA® Jetson Nano™ 2GB Developer Kit	reCompter Jetson Nano A01 kit	NVIDIA Jetson Nano Developer Kit-B01	reCompter Jetson Nano H01 kit	NVIDIA Jetson Xavier NX Developer Kit	reCompter Jetson Xavier H01 kit
<b>Module</b>	Nano (not production version)	Nano (production version)	Nano (not production version)	Nano (production version)	Xavier NX (not production version)	Xavier NX (production version)
<b>AI Perf</b>		472 GFLOPS		472 GFLOPS		21 TOPS
<b>GPU</b>		128-core NVIDIA Maxwell™		128-core NVIDIA Maxwell™		384-core NVIDIA Volta™ GPU
<b>CPU</b>		Quad-core ARM A57 @ 1.43 GHz		Quad-core ARM A57 @ 1.43 GHz		6-core NVIDIA Carmel ARM®v8.2 64-bit CPU 6 MB L2 + 4 MB L3
<b>Memory</b>		4GB 64-bit LPDDR4 25.6GB/s		4GB 64-bit LPDDR4 25.6GB/s		8 GB 128-bit LPDDR4x 59.7GB/s
<b>Storage</b>	2 GB eMMC	16 GB eMMC	microSD (Card not included)	16 GB eMMC	microSD (Card not included)	16 GB eMMC
<b>VIDEO ENCODER</b>		4Kp30   4x 1080p30   9x 720p30 (H.264/H.265)		4Kp30   4x 1080p30   9x 720p30 (H.264/H.265)		2x 4K60   4x 4K30   10x 1080p60   22x 1080p30 (H.265)   2x 4K60   4x 4K30   10x 1080p60   20x 1080p30 (H.264)
<b>VIDEO DECODER</b>		4Kp60   2x 4Kp30   8x 1080p30   18x 720p30 (H.264/H.265)		4Kp60   2x 4Kp30   8x 1080p30   18x 720p30 (H.264/H.265)		2x 8K30   6x 4K60   12x 4K30   22x 1080p60   44x 1080p30 (H.265)   2x 4K60   6x 4K30   10x 1080p60   22x 1080p30 (H.264)
<b>Gigabit Ethernet</b>		1*RJ45 Gigabit Ethernet Connector (10/100/1000)		1*RJ45 Gigabit Ethernet Connector (10/100/1000)		1*RJ45 Gigabit Ethernet Connector (10/100/1000)
<b>USB</b>		1 * USB 3.0 Type A Connector; 2 * USB 2.0 Type A Connector;		4 * USB 3.0 Type A Connector; 1 * Micro-USB		4 * USB 3.1 Type A Connector; 1*Micro-USB
<b>CSI Camera Connect</b>	1*CSI Camera (15 pos, 1mm pitch, MIPI CSI-2)	2*CSI Camera (15 pos, 1mm pitch, MIPI CSI-2)		2*CSI Camera (15 pos, 1mm pitch, MIPI CSI-2)		2*CSI Camera (15 pos, 1mm pitch, MIPI CSI-2)
<b>Display</b>		1*HDMI Type A		1*HDMI Type A; 1*DP		HDMI Type A and DP
<b>FAN</b>	-	1* FAN(5V PWM)	-	1* FAN(5V PWM)		1* FAN(5V PWM)
<b>M.2 KEY E</b>	-	1*M.2 Key E		1*M.2 Key E	1*M.2 Key E(WiFi/BT included)	1*M.2 Key E
<b>M.2 KEY M</b>	-	-	-	1*M.2 Key M	1*M.2 Key M	1*M.2 Key M
<b>Additional Storage</b>	-	1* TF card slot	-	-	-	-
<b>RTC</b>	-	1*RTC Socket	-	1*RTC socket	-	1*RTC Socket
<b>Multifunctional port</b>		1* 40-Pin header		1* 40-Pin header		1* 40-Pin header
<b>Power Requirements</b>	USB-Type C 5V/ 3A; Micro-USB 5V 2A	USB-Type C 5V/ 3A; Micro-USB (Not support power)	DC Jack 5V 4A; Micro-USB 5V 2A	DC Jack 12V	DC Jack(9V-19V)	DC Jack 12V
<b>Mechanical</b>	100 mm x 80 mm x 29 mm	100 mm x 80 mm x 29 mm	100 mm x 80 mm x 29 mm	130mm x120mm x 50mm	103 mm x 90.5 mm x 31 mm	130mm x120mm x 50mm



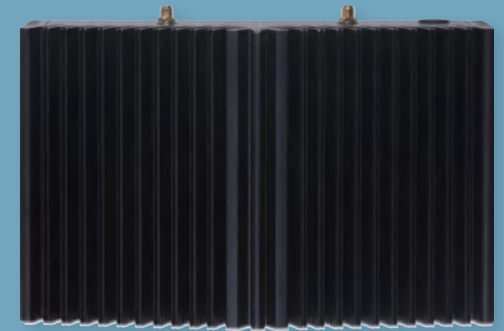
# NVIDIA MODULE EMBEDDED MINI PC FOR VARIOUS EDGE APPLICATIONS

Xavier NX Module

AIoT

IIoT

NVIDIA Jetpack software 4.6





# Jetson SUB Mini PC

Product Name Jetson SUB Mini PC-Blue

Module Embedded Jetson Xavier NX

Dimension 130mm x 120mm x 50mm

SKU 102110637

**Introduction** Consists of a NVIDIA® Jetson Xavier™ NX Module, a carrier board, a cooling fan, and a removable acrylic cover.

Ideal for high-performance compute and AI in embedded and edge systems.

## Feature

Xavier NX Module

4 USB 3.1

Mounting hole design

HDMI port + DP port

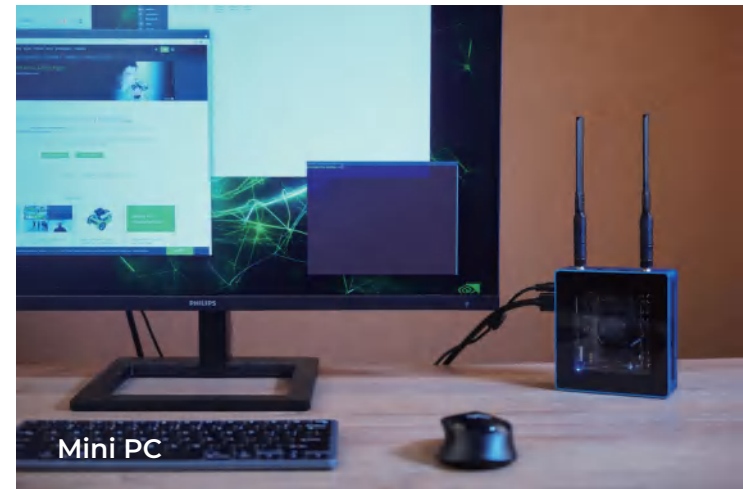
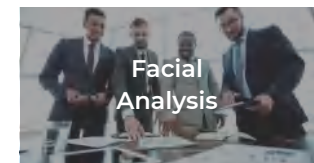
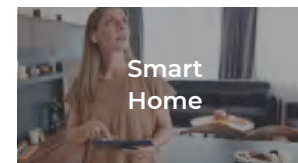
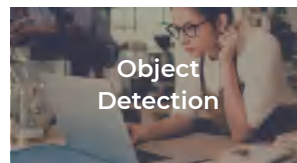
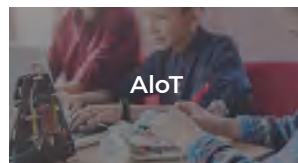
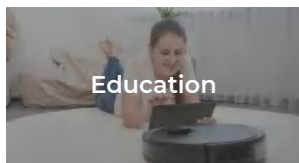
Wi-Fi module and antenna

128GB (M.2 key M) SSD

Removable acrylic cover

NVIDIA JetPack software 4.6

## Application



# Jetson SUB Mini PC

**Product Name** Jetson SUB Mini PC-Black

**Module Embedded** Jetson Xavier NX

**Dimension** 205mm x 130mm x 65mm

**SKU** 102110641

**Introduction** Consists of a NVIDIA® Jetson Xavier™ NX Module, a carrier board, and a fully sealing cover with pre-installed OLED.

Ideal for high-performance compute and AI in embedded and edge systems, especially in harsh environments.

## Feature

Xavier NX Module

2 HDMI ports

256 GB (2.5-inch SATA) SSD

4 USB 3.1 Type-A ports

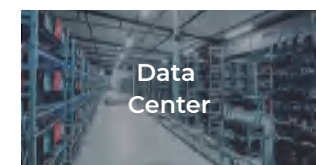
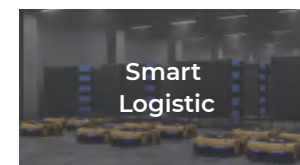
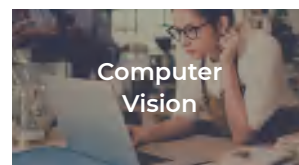
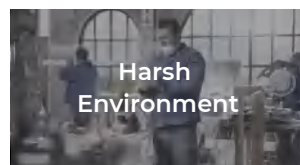
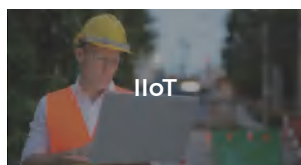
Wi-Fi module and antenna

OLED screen

Big passive heat dissipation

NVIDIA JetPack software 4.6

## Application



# Jetson SUB Mini PC

**Product Name** Jetson SUB Mini PC-Silver

**Module Embedded** Jetson Xavier NX

**Dimension** 130mm x 90mm x 60mm

**SKU** 102110642

**Introduction** Consists of a NVIDIA® Jetson Xavier™ NX Module, a carrier board, a quiet cooling fan, and a whole oval aluminum enclosure.

Tiny and portable, ideal for high-performance compute and AI in embedded and edge systems in office/home or outdoor.

## Feature

Xavier NX Module

Wi-Fi module and antenna

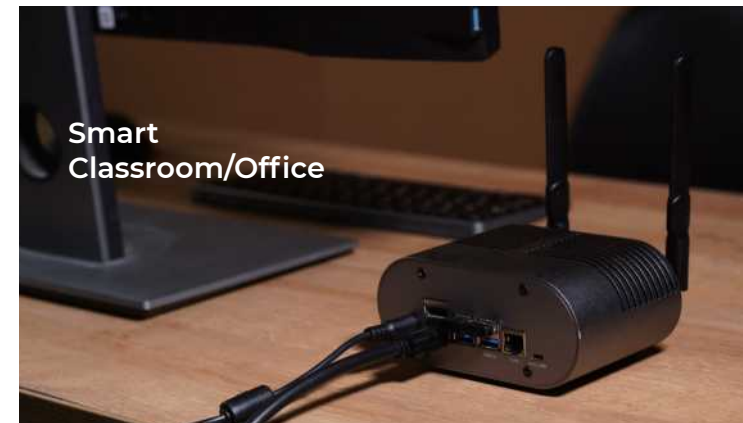
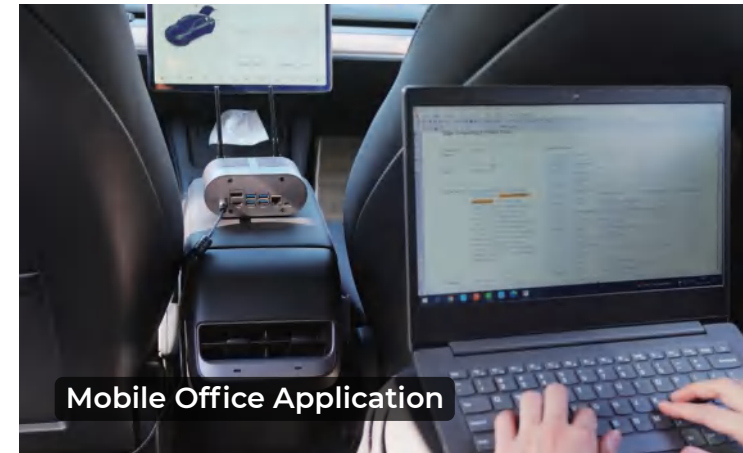
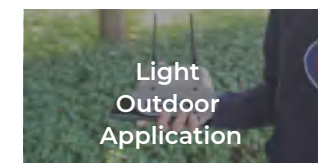
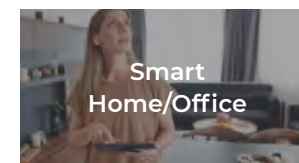
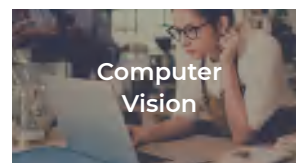
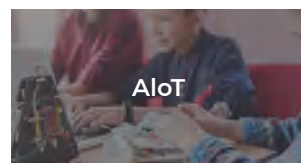
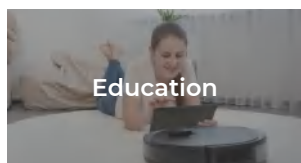
4 USB 3.1 Type-A ports

HDMI port + DP port

NVIDIA JetPack software 4.6

128GB (M.2 key M) SSD

## Application



# Jetson SUB Mini PC

Product Name Jetson EX1 Mini PC- Ubuntu

Module Embedded Jetson Xavier NX

Dimension 134mm x 135mm x 46mm

SKU 102110644

**Introduction** Consists of a NVIDIA® Jetson Xavier™ NX Module, a carrier board, a cooling fan, and an aluminum black rectangular enclosure with side dustproof design.

Ideal for high-performance compute and AI in embedded and edge systems and placed on any surface.

## Feature

Xavier NX Module

2 Ethernet ports

2 USB

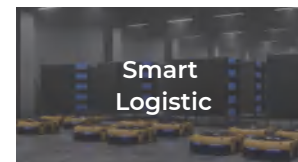
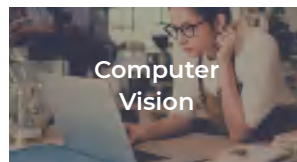
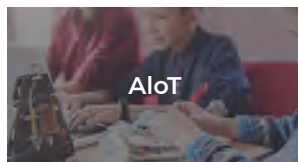
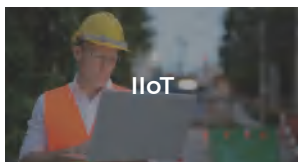
HDMI port

256 GB (2.5-inch SATA) SSD

Side dustproof design

Ubuntu system 18.04 with Jetpack 4.6

## Application





# Jetson Mate Cluster

Product Name	Jetson Mate Cluster Standard Jetson Mate Cluster Advanced
Module Embedded	Jetson Xavier NX and/or Jetson Nano
Dimension	156mm*146mm*115mm
SKU	110110092 110110091

**Introduction** Jetson Mate Cluster Standard/Advanced respectively is an all-in-one solution for your GPU cluster and server applications.

Both of them consist of a Jetson Mate carrier board, a case, a cooling fan, and several Jetson Xavier™ NX and/or Jetson Nano™.

- Feature**
- Pre-installed SoMs on Jetson Mate carrier board makes it very convenient to get started
  - All-in-one solution with a case, cooling fan, and SoMs in a compact form factor
  - Easy to build a GPU cluster with easy-to-follow guides provided
  - Onboard 5-port Gigabit switch for the SoMs to communicate with each other
  - One master node with three worker nodes with the ability to power on/off the worker nodes separately

## Jetson Mate Cluster Standard

SKU 110110092

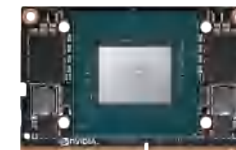
Jetson Mate Cluster Mini\*1 + Jetson Nano \*1 + Jetson Xavier NX\*3



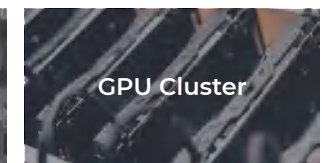
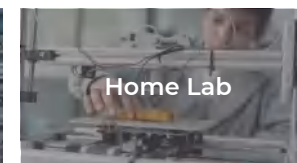
## Jetson Mate Cluster Advanced

SKU 110110091

Jetson Mate Cluster Mini\*1 + Jetson Xavier NX\*4



## Application



# Mini PC Spec/Comparison Table

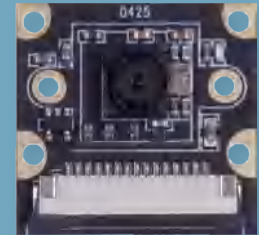
Specification	Jetson SUB Mini PC-Blue	Jetson SUB Mini PC-Black	Jetson SUB Mini PC-Silver	Jetson EX1 Mini PC-Ubuntu	Jetson Mate Cluster Standard	Jetson Mate Cluster Advanced
<b>Size (mm*mm*mm)</b>	130*120*50	205*130*65	130*90*60	134*135*46	156*146*115	
<b>Module Embedded</b>	Jetson Xavier NX				1x Jetson Nano+ 3x Jetson Xavier NX	4x Jetson Xavier NX
<b>AI Performance</b>	21 TOPs(INT8)				Each Nano:472 GFLOPs Each NX: 21 TOPs	Each NX: 21 TOPs
<b>OS</b>	JetPack 4.6			Ubuntu 18.04	\	
<b>CPU</b>	6-core 64-bit CPU, NVIDIA Carmel ARMv8.2				Each Nano: Quad-core ARM Cortex-A57 MPCore processor Each NX: 6-core NVIDIA Carmel ARM@v8.2	Each NX:6-core NVIDIA Carmel ARM@v8.2
<b>GPU</b>	384-core NVIDIA Volta GPU				Each Nano:128 NVIDIA Volta GPU Each NX: 384 NVIDIA Volta GPU	Each NX: 384 NVIDIA Volta GPU
<b>Memory</b>	8 GB 128-bit LPDDR4x 51.2GB/s				Each Nano: 4 GB 64-bit LPDDR4, 1600MHz 25.6 GB/s Each NX: 8 GB 128-bit LPDDR4x 51.2GB/s	Each NX: 8 GB 128-bit LPDDR4x 51.2GB/s
<b>Module Storage</b>	16 GB eMMC 5.1				Each Nano/NX: 16 GB eMMC 5.1	Each Nano/NX: 16 GB eMMC 5.1
<b>Carrier Board Storage</b>	128GB M.2 NVME SSD	256GB SATA	128GB M.2 NVME SSD	256GB M.2 NVME SSD	\	
<b>Wi-Fi</b>	Pre-installed M.2 E Wi-Fi	Pre-installed USB 2.0 Wi-Fi	Pre-installed M.2 E Wi-Fi	\		
<b>Power Requirement</b>	19V DC			12V DC	65W PD(20V 3.25A)	90W PD(20V 4.5A)
<b>Display</b>	2x HDMI				1x HDMI	
<b>USB</b>	4x USB3.0(USB 2.0 Integrated)			1x USB3.0 (USB 2.0 Integrated)	1x USB Type C	
	1x Micro USB	1x USB Type C	1x Micro USB		4x USB 3.0	
	1x USB2.0	\				1x USB 2.0
<b>Network</b>	1x Gigabit Lan	2x Gigabit Lan	1x Gigabit Lan	2x Gigabit Lan	1x Gigabit Lan	
<b>Key Feature</b>	Mounting hole design	Whole black aluminum frame with OLED screen	Whole silver aluminum Frame	Whole black aluminum Frame	up to 4 NVIDIA Jetson Nano/NX SoMs	
	Blue aluminum and removable Case	Big passive dissipation	Portable oval size	Multiple software supported	GPU cluster	





# NVIDIA COMPATIBLE ACCESSORIES

Heatsink, Case, Camera, and RPLiDAR



# Accessory - Heatsink

---

**Product Name** Nvidia module compatible aluminum heatsink

---

**Introduction** If you're designing any kind of computing application with the NVIDIA Jetson modules, you seriously can't do without a heatsink if you want to avoid overheating problems.

Seeed's aluminum heatsinks for NVIDIA Jetson Modules are an essential piece of equipment for keeping modules cool, improving both computing performance and reliability under heavy workloads to realize their true potential. Some of them consist of a fan to ensure cooling effect.



Aluminum Heatsink for Jetson Nano Module

SKU 114992686



Aluminum Heatsink with Fan for Jetson TX2 NX Module

SKU 114992731



Aluminum Heatsink with Fan for Jetson Xavier NX Module

SKU 114992687



Aluminum Heatsink with bigger Fan for Jetson Xavier NX Module with Long Cable

SKU 114992746

# Accessory – Case with Fan

**Product Name** Case with fan for Nvidia modules

**Introduction** Case/enclosure can provide ultimate protection to your Jetson modules. For those listed here they all have an internal cooling fan to ensure better heat dissipation when your Jetson modules are working on multiple demanding tasks.

Some cases/enclosures with fans even has additional external antennas, camera holders, and multi-functional buttons to improve user experience.



Acrylic Case for Jetson Nano B01 with Cooling Fan, Dual Antenna Mounts, Power/FR/RESET Buttons

SKU 114992370



Iron Case for Jetson Nano B01 with Cooling Fan, Dual Antenna Mounts, Power/FR/RESET Buttons

SKU 114992374



Rack Tower for Raspberry Pi & Jetson Nano - 4-layer acrylic case with RGB fan for cluster and NAS

SKU 114992328



Jetson Nano Metal Case/Enclosure - with Cooling Fan and Camera Holder

SKU 110991384



DeskPi Nano for Jetson NanoB01 with PWM cooling fan

SKU 114992730



Jetson Nano Metal Armour - Case with PWM Adjustment Fan

SKU 110061132



Aluminum Case for Nvidia Jetson Nano

SKU 114992052



Jetson Mate Cluster Mini

SKU 110991411

# Accessory – Case without Fan

---

Product Name

Case without fan for Nvidia modules

---

## Introduction

Case/enclosure can provide ultimate protection to your Jetson modules.

Our cases are compatible with all popular SBCs (including ODYSSEY - X86J4105, Raspberry Pi, BeagleBone and Jetson Nano/Xavier NX).

They are with a removable acrylic cover on the top and with a stackable structure to extend endless possibilities.



re\_computer case

SKU 114992152



re\_computer case silver version

SKU 110991405



re\_computer case(Silver Metal Edition)

SKU 110991484

# Accessory – Camera

**Product Name** Nvidia module compatible camera

**Introduction** We would like to give you more freedom in choosing the camera that will be most suitable for your project. Explore the cameras below to make a better decision.  
By using one of these cameras, combined with a Jetson Nano/ Xavier NX Development Kits, you can simply realize machine vision projects. Also, you can experience better quality video capture from these cameras and build more demanding projects. Some of them also has two IR LEDs to enable night vision capabilities.



**High Quality Camera for Raspberry Pi CM3/ CM3 Lite/ CM3+/ CM3+ Lite & Jetson Nano with 12.3MP IMX477 Sensor**

SKU 114992442



**IMX219-200 8MP Camera with 200° FOV**

SKU 114992265



**IMX219-77IR 8MP IR Night Vision Camera with 77° FOV**

SKU 114992261



**IMX219-77 8MP Camera with 77° FOV**

SKU 114992260



**IMX219-160 8MP Camera with 160° FOV**

SKU 114992263



**IMX219-130 8MP Camera with 130° FOV**

SKU 114992262



**IMX219-83 8MP 3D Stereo Camera Module**

SKU 114992270



**IMX219-160IR 8MP Camera with 160° FOV**

SKU 114992264

All cameras except for SKU 114992442 are compatible with Nvidia Jetson Nano/Xavier NX

# Accessory – RPLiDAR

Product Name

RPLiDAR – Laser Ranging Radar

## Introduction

A low-cost two-dimensional laser ranging radar (LiDAR) can perform a 360-degree omni-directional laser ranging scan within certain radius of a two-dimensional plane, and thus can generate a flat point cloud map of the space in which it is located information.

These cloud map information can be used in practical applications such as mapping, robot positioning and navigation, and object/environment modeling.



RPLiDAR A1M8-R6 360 Degree Laser Scanner Kit - 12M Range

SKU 114992561



Slamtec Mapper M1M1 ToF Laser Scanner Kit - 20M Range

SKU 114991984



RPLiDAR A2M8 360 Degree Laser Scanner Kit - 12M Range

SKU 110991066



RPLiDAR A2M6 360 Degree Laser Scanner Kit - 18M Range

SKU 110991067



RPLiDAR A3M1 360 Degree Laser Scanner Kit - 25M Range

SKU 110991068



RPLiDAR S2 Low Cost 360 Degree Laser Range Scanner - 30M Range

SKU 114992738



RPLiDAR S1 Portable ToF Laser Scanner Kit - 40M Range

SKU 114090021



Slamtec Mapper M2M1 Pro - LiDAR Mapping Sensor(Industrial Grade) - 40M Range

SKU 101990641



# Accessory – RPLiDAR

---

Product Name

RPLiDAR – ToF LiDAR

---

## Introduction

These sensors adopt ToF method to measure distance. Some of them when combined with a modulated light source, are capable of measuring distance and reflectivity with VGA resolution.



TFmini S LiDAR module - Short- Range ToF LIDAR Range Finder

SKU 101990620



DepthEye S2 -H67°x V51° VGA Camera with Sony IMX556PLR DepthSense

SKU 101990866



DepthEye Wide - H100° x V75° VGA ToF Camera with Sony IMX556PLR DepthSense™

SKU 114992563



DepthEye Turbo - VGA ToF with Sony IMX556PLR DepthSense

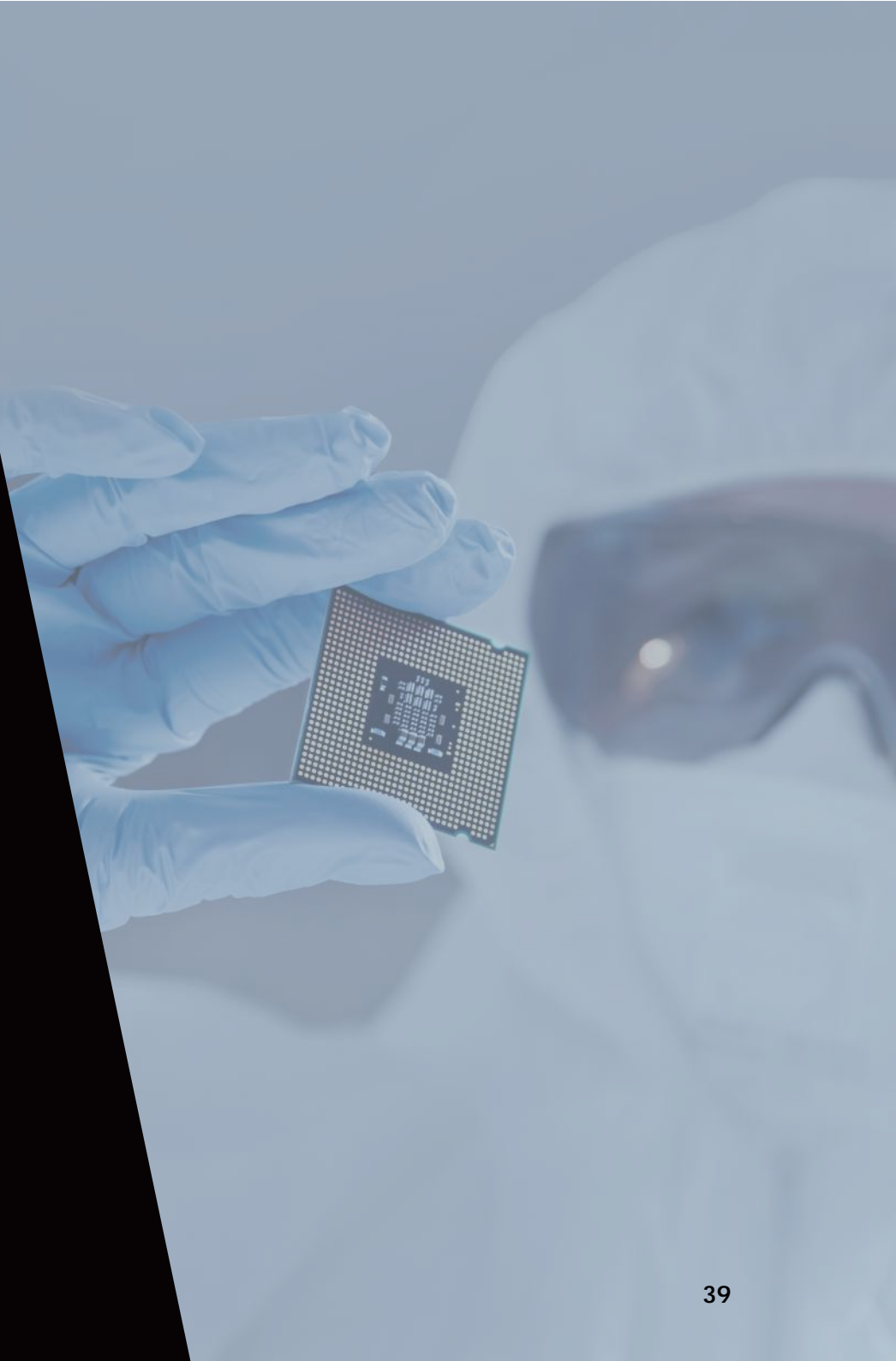
SKU 114991967

## CUSTOMIZATION SERVICE

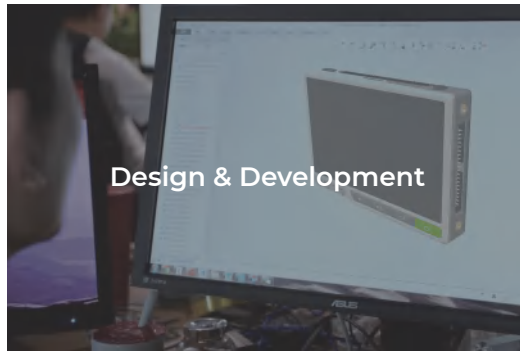
Seeed offers standard and customized Nvidia Jetson edge computing solutions, ranging from customized extended I/Os, chassis, carrier board, to small form factor rugged enclosure, for various industrial applications such as industrial automation, self-driving, and robotics.

If you could not find the off-on-shelf hardware solution for your needs, Seeed's in-house R&D engineer team with over a decade of experience in SBCs and industrial computing can design from scratch for your specific application demands.

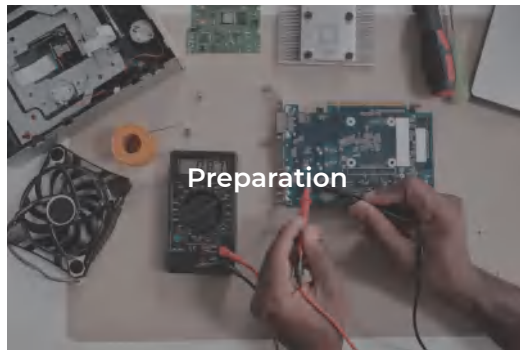
You can contact our service team at [produce@seeed.cc](mailto:produce@seeed.cc) if interested. Our account manager will reach you soon and help to outline your tailored requirements.



# Service Range



<ul style="list-style-type: none"> <li>Minor changes (E.g. silkscreen or label)</li> </ul>	<ul style="list-style-type: none"> <li>Extended I/Os</li> </ul>	<ul style="list-style-type: none"> <li>Board functionality</li> </ul>	<ul style="list-style-type: none"> <li>Memory unit</li> </ul>
<ul style="list-style-type: none"> <li>Sensors, Actuator and Connector integration</li> </ul>	<ul style="list-style-type: none"> <li>Schematic design</li> </ul>	<ul style="list-style-type: none"> <li>PCB layout</li> </ul>	<ul style="list-style-type: none"> <li>Creating BOM &amp; Sourcing</li> </ul>
<ul style="list-style-type: none"> <li>Expansion carrier board</li> </ul>	<ul style="list-style-type: none"> <li>Enclosures</li> </ul>	<ul style="list-style-type: none"> <li>Packaging</li> </ul>	



Prototyping,  
Validation & Testing,  
Molding

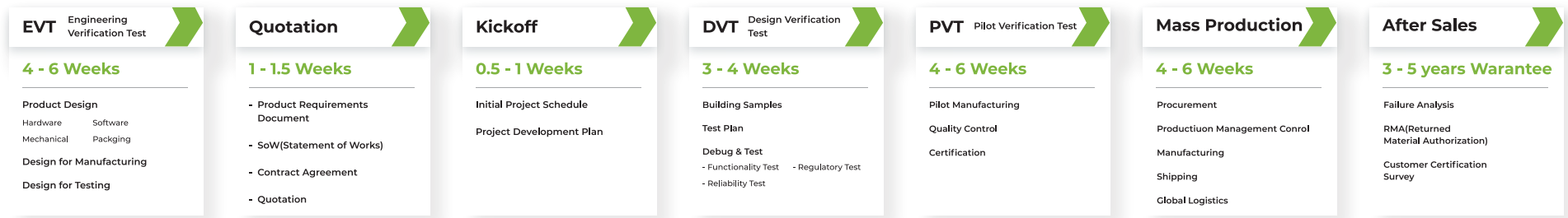


Pilot Run,  
Mass Production

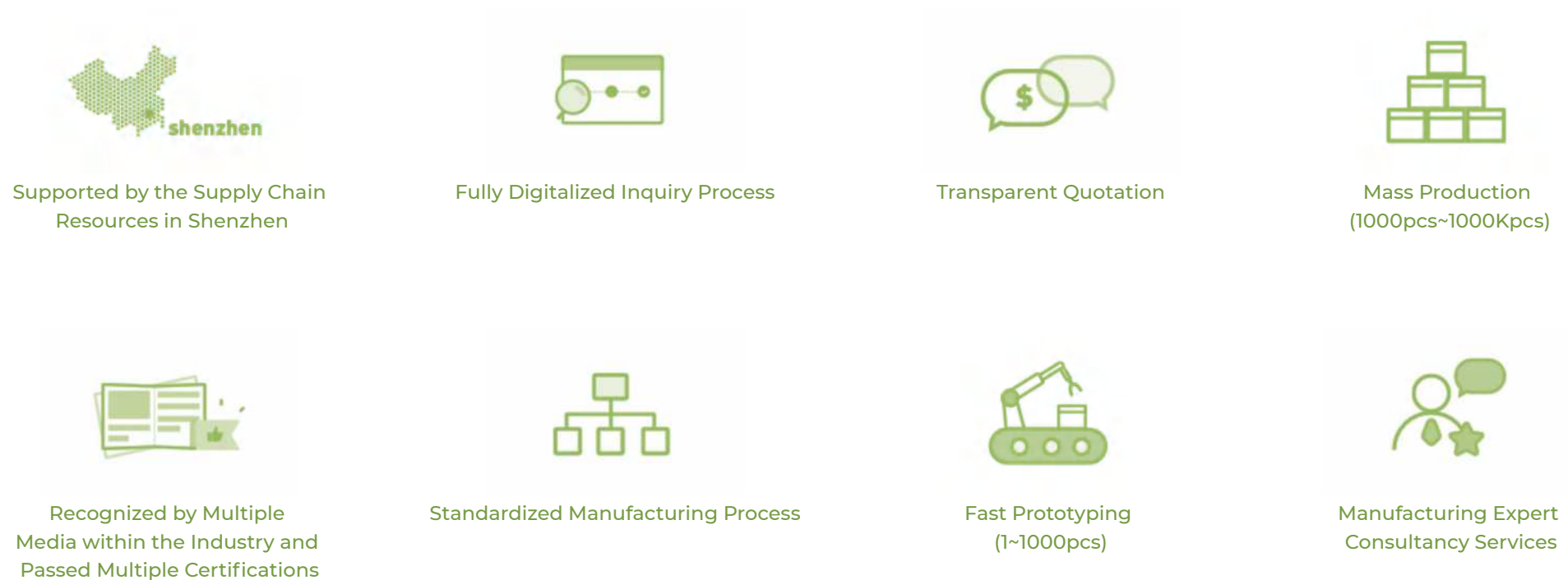


CE,  
FCC,  
TELEC,  
RoHS,  
REACH...

# Customization Process & Timeline



## Why choose Seed?



Seeed Studio Nvidia  
Series Catalog V1.1  
Jan 2022

---

## CONTACT US



### HEADQUARTERS

9F, Building G3, TCL International E City, Zhongshanyuan Road, Nanshan, 518055, Shenzhen, PRC

### X.FACTORY

x.factory, B608, Design Commune, Vanke Cloud City, Dashi 2nd Road, 518055, Shenzhen, PRC

### Japan Office

2 Chome-9-18 Noritake, Nakamura-ku, Nagoya-shi, Aichi-ken 453-0014, Japan