

Connect Tech Carrier Boards and Jetson™ Modules

EMPOWERING

Embedded Computing

Edge AI Hardware and Software Solutions

Industry-leading end-to-end Edge AI
solutions from a single trusted partner
and a Global Leader for NVIDIA® Jetson Platforms

COTS - Prototyping - SWaP

2025

ABOUT US

THE JUNCTION is a distributor of professional data connectivity and IT infrastructure products and components. We provide reliable, high quality computer accessories that enable your devices. Our suppliers rank amongst the world's technology leaders in each of their fields.

We support for both legacy and standard PCs, PC/104 derivatives, Small Form Factor technologies, CompactPCI, OpenVPX, and others. The areas of deployment cover the entire gamut of commercial and industrial applications. These range from relatively straightforward serial I/O wired connections to complex industrial and maritime applications. These include PLC automation, alarm systems, medical journaling, industrial flow control, rail and road signalling, voice recording, PBX, sewerage, oil & gas, UAVs, AUVs, ROVs, ATC, Space Research, aeronautics, and more.

Our portfolio includes both standard commercial and industrial products designed for use in harsh conditions that demand a wide temperature range and, in certain cases, consideration for vibration.

Several of our engineering partners offer custom design facilities. Among such clients to whom we have delivered equipment in recent years are [SAAB](#) (devices for monitoring UAVs and other aircraft as part of the EADS MIDCAS project), [Kongsberg Maritime](#) and [Kapsch TrafficCom](#).

CONNECT TECH

Connect Tech is a hardware design and manufacturing company that specializes in rugged, small form factor solutions. They have a nimble engineering team ready to engage in Custom Design when “off-the-shelf” is not an option. Innovative design is not all they do – the company is driven by the belief that custom satisfaction is as important as a quality product. It is their goal to continue this tradition in the future development of innovative designs and to exceed the expectations of all customers with whom they come into contact.

As an industry-leading provider of NVIDIA® Jetson™ hardware, Connect Tech is constantly striving to develop adjacent technologies to meet the growing needs of the Edge Computing community. Their Carrier Boards and Embedded devices support the full line of Jetson modules, including the NVIDIA® Jetson™ Nano, TX2, TX2i, Xavier NX, AGX Xavier, AGX Orin. Orin NX, Orin Nano and AGX Thor.

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Custom NVIDIA® Jetson™ Solutions

If you're looking for a Jetson Carrier board designer with extensive experience, then Connect Tech is the perfect partner for your unique design needs!

Among the Jetson modules supported are the NVIDIA Jetson Thor™, NVIDIA AGX Orin™, Orin™ Nano, Orin™ NX Jetson Nano™, Jetson™ TX2/TX2i/TX1, Xavier NX, and Xavier™.

Connect Tech's team of Jetson specialists will work with your team to produce a custom solution that perfectly matches your criteria while assuring product performance and reliability, from minor adjustments to full custom design.

Their engineering design services team excels at producing unique solutions that meet both time-to-market and cost objectives.

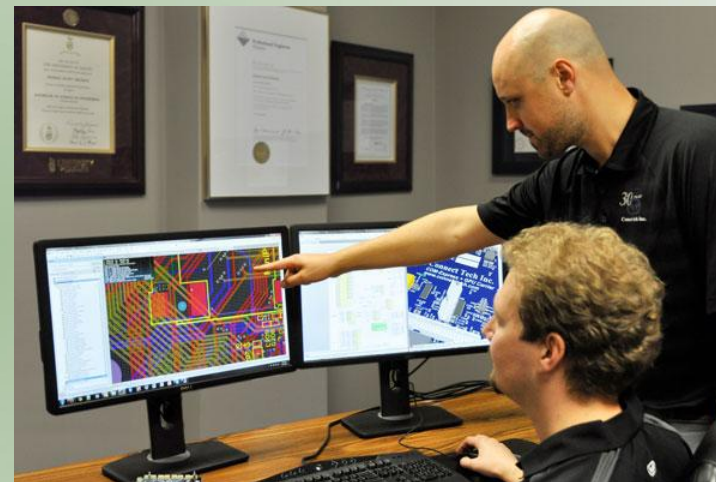
GLOBAL LEADER FOR NVIDIA® JETSON PLATFORMS

Partnering Together - Creating Excellence

Connect Tech is happy to support the new members of the Jetson family, NVIDIA Jetson Thor™, the AGX Orin™, Orin™ Nano and the Orin™ NX, with considerable expertise supporting the NVIDIA Jetson AGX Xavier™, Jetson™ TX2/TX2i/TX1, and Jetson Nano™ platforms.

To complement the Jetson Thor™ and Orin™, Connect Tech has released a series of Carrier boards, as well as thermal cooling solutions and adapters.

Connect Tech also provides custom design services for Thor™ and Orin™ users who require a unique feature set as well as a quick time to market strategy.





Product Spotlight

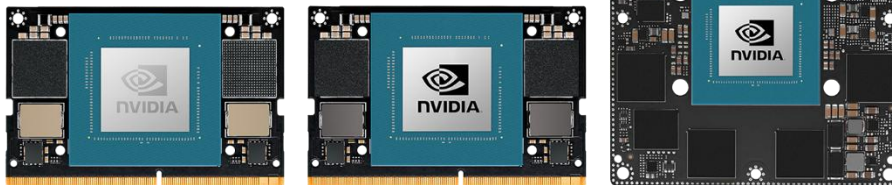
Jetson Orin Carriers

[AGX201 Forge & AGX202 Rogue](#)



Elite
Partner

Use the most advanced artificial intelligence computers available to create autonomous machines that are both low in energy consumption and environmentally friendly. High-speed interface support for multiple sensors, along with up to 275 Tflops of processing power and 8 times the capability of the previous generation for multiple concurrent AI inference pipelines, make NVIDIA® Jetson Orin™ modules the right choice for the next generation of robots.



What is Jetson Orin?

Check out our most recent NVIDIA AGX Orin and Orin NX offerings – see the [Table of Contents](#) or refer to the part number in the [Part Number Overview](#):

Want to learn more?

[Click here](#)



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CARRIER BOARDS FOR NVIDIA® JETSON

Astro - Jetson TX2i/TX2/TX2-4GB

Boson for FRAMOS Carrier

Cogswell - Jetson TX2/TX2i

Elroy - Jetson TX2i/TX2

Forge - Jetson AGX Orin™

Gauntlet Carrier for Jetson Thor™

Hadron Carrier for Jetson Orin™ NX

Hadron-DM Carrier for NVIDIA® Jetson Orin™ NX

Super Hadron-DM Carrier for Jetson Orin™ NX and Nano

Orbitty - Jetson TX2i/TX2 Carrier

- OrbittyBox

Photon - Jetson AI Camera Platform

Quark - Jetson Xavier™ NX & Nano

Quasar - Jetson TX2/TX2i

Rogue Carrier - Jetson AGX Xavier™

Rogue Carrier for Jetson AGX Orin™

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Spacely - Jetson TX2i/TX2

Sprocket Carrier for Jetson TX2/TX2i

CAMERA INTERFACE BOARDS

GMSL2 Camera Board

- e-con Systems | Intel® RealSense™ | Leopard Imaging

Allied Vision MIPI Camera Board

FPD-Link III Camera Board

NVIDIA® Jetson™ SDI Vision Platform

HEATSINKS AND THERMAL PLATES

EMBEDDED SYSTEMS

PART NUMBER OVERVIEW

PRODUCT CHANGE NOTIFICATIONS (PCN)

NVIDIA JETSON DEVELOPER KITS & MODULES



Part Number Overview

AGX111	ASG001	ASG008	ASG026	JCB003-01	NGX003	NGX020	V7G001
AGX201	ASG002	ASG009	ASG029	JCB005	NGX012	NGX021	
AGX202	ASG003	ASG012	CBG341	JCB006	NGX014	NGX022	
AGX203	ASG006	ASG016	D7G001	JCB010	NGX017	NGX024	
AGX301	ASG007	ASG021	JCB002	NGX002	NGX018	NGX027	

COM EXPRESS® TYPE 7 + GPU EMBEDDED SYSTEM



Click on the URL to join Connect Tech's BSP Mailing List:

<https://connecttech.com/resource-center/l4t-board-support-packages/>



Photon- Jetson AI Camera Platform

NGX002 NGX003

- PoE PD (NGX002) capable, power via separate input or over Ethernet (IEEE 802.3af-2003 and IEEE 802.3at2009 compatible)
- 1x GbE
- 1x NVMe (M.2 M-Key)
- 1x microSD
- 4x GPIO, I2C
- SB Console/UART
- USB OTG for programming
- DC barrel power input also available
- Dimensions: 145 x 64,5 mm

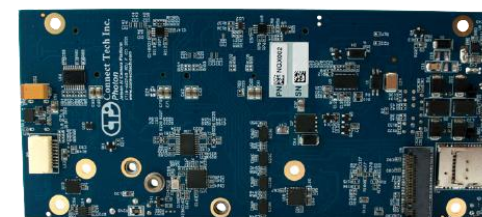
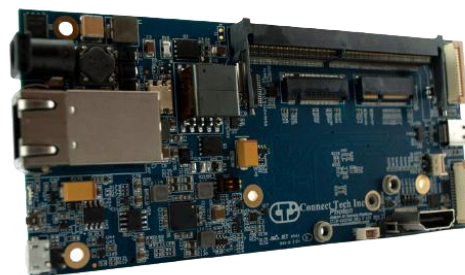


Connect Tech's Photon is a Jetson AI Camera Platform specifically designed to support smart camera applications. This Jetson platform provides PoE PD Gigabit Ethernet uplink for data and power and has various I/O connectors positioned for easy packaging into off the shelf camera housings. For applications that don't require PoE PD, ask for CTI's cost effective non-PoE PD options. Let Connect Tech take your Jetson Nano™ or Jetson Xavier™ NX solution to a commercially deployable platform today.

While Photon is compatible with NVIDIA Jetson Nano, TX2 NX, and Xavier NX SOMs, some I/O availability will change depending on the module. For a complete overview, see the [Photon Compatibility Overview](#).

Integrations with external storage and WiFi/Bluetooth via Intel are also available. Contact us for further information.

Note: Do not use the 19V power supply from the Jetson Xavier™ NX Dev Kit with the Photon.



NGX002 Photon Integrated Solutions

NGX002 - Photon - Jetson AI Camera Platform multi camera input, GbE, PoE uplink							
Part No.	Jetson module	Thermal Cooling options			WiFi5/BT	NVMe	LTE
		Thermal Plate	Passive	Active			
NGX002							
NGX002-21	Nano 8GB		X				EMEA
NGX002-50	Xavier NX 16GB	X			WiFi5		
NGX002-81	Xavier NX 16GB			X			
NGX002-82	Xavier NX 16GB			X	WiFi5		
NGX002-83	Xavier NX 16GB			X		X	
NGX002-TJ	Orin NX 16GB			X		1TB	
NGX002-VW	Orin Nano 8GB	X				1TB	
NGX003 - Photon - Jetson AI Camera Platform multi camera input, GbE, no PoE uplink							
NGX003							
NGX003-49	Xavier NX 16GB	X					
NGX003-SM	Orin NX 16GB		X		WiFi5	1TB	
NGX003-TJ	Orin NX 16GB			X		1TB	
NGX003-TK	Orin NX 16GB			X	WiFi5	1TB	

Recommended optional accessories	
Part No.	Description
<i>Thermal Solutions</i>	
XHG324	NVIDIA® Jetson Orin™ NX Passive Heat Sink
XHG325	NVIDIA® Jetson Orin™ NX Active Heat Sink
XHG323	NVIDIA® Jetson Orin™ NX Thermal Transfer Plate
<i>NVIDIA® Jetson Modules</i>	
900-83668-0000-000	Jetson Xavier NX 8GB
900-83668-0030-000	Jetson Xavier NX 16GB
900-13767-0000-001	Jetson Orin NX 16GB
900-13767-0010-000	Jetson Orin NX 8GB



Hadron Carrier for NVIDIA® Jetson Orin™ NX

NGX012

Not recommended for new designs. [Please see Hadron-DM Carrier Board.](#)



The Orin™ NX Hadron Carrier Board is an ultra-compact, rugged, and feature-rich carrier for AI Computing at the Edge.

Hadron, which is only slightly larger than the Jetson™ SODIMM module, is ideal for vision applications, inference, and unmanned payloads. Users can switch between modules based on their AI processing needs because the Hadron carrier board is compatible with the Jetson Orin™ NX, Orin™ Nano, Xavier™ NX, and TX2™ NX modules.

Hadron's design features a wide input voltage range, a robust I/O set, and locking IO connectors optimized for harsh environments.

- Compatible with Jetson Orin™ NX, Orin™ Nano
- Ideal for Vision Applications, Inference and unmanned payloads
- Rugged Latching connectors
- 1x 1000BASE-T Port
- 2x USB3.1
- 1x 4-Lane MIPI CSI2, 22-pin FPC Connector
- 1x 2242/2230 NVMe M.2
- Wide Power Input: +9V to +60V DC
- Display: None - Headless Operation only
- Operating Temp.: -25 to +85 C
- Weight: 49g
- Dimensions: 82,6 x 58,8 mm



Hadron Carrier for NVIDIA® Jetson Orin™ NX

NGX012 - Hadron Carrier for NVIDIA® Jetson Orin™ NX						
Part No.	Jetson module	Thermal Cooling options			WiFi5/BT	NVMe
		Thermal Plate	Passive	Active		
NGX012						
NGX012-07	Orin NX 8GB	X				1TB
NGX012-09	Orin NX 8GB			X		1TB
NGX012-10	Orin NX 8GB	X			WiFi5	1TB
NGX012-25	Orin NX 16GB	X				1TB
NGX012-26	Orin NX 16GB		X			1TB
NGX012-27	Orin NX 16GB			X		1TB
NGX012-28	Orin NX 16GB	X			WiFi5	1TB
NGX012-29	Orin NX 16GB		X		WiFi5	1TB
NGX012-30	Orin NX 16GB		X		WiFi5	1TB



NGX012 - Recommended optional accessories	
Part No.	Description
<i>Thermal Solutions</i>	
XHG311	Passive Finned Passive Heatsink for the NVIDIA® Jetson Xavier™ NX Module
XHG312	Active Thermal Passive Heatsink for the NVIDIA® Jetson Xavier™ NX Module
XHG313	Thermal plate for NVIDIA® Jetson Xavier™ NX Module
<i>Cabling</i>	
CBG112	Power Cable - 6-pin MiniTek w/ Latch, unterminated
CBG117	Ethernet Cable – 10-pin MiniTek w/ Latch, RJ-45 Panel Mount
CBG136	CR2032 RTC Battery w/ 3-pin Connector Cable Assembly 70 mm - Molex P/N 6032101013
CBG615	USB2.0 Cable - 20-pin Tiger-Eye to 2x USB 2.0 Type-A Female
CBG629	I/O cable - 40-pin Tiger-Eye to Unterminated Flying Leads - SFSD-20-28C-G-12.00-SR
CBG686	USB3.0 Cable - 20-pin Tiger-Eye to 2x USB 3.0 Type-A Female (200 mm)
<i>Breakout Board</i>	
XBG023	USB 3.0 Breakout Board - 20-pin Tiger-Eye to 2x USB 3.0 Type-A Female
<i>Power Adapter</i>	
MSG070	Astro/Photon PSU - AC/DC Wall Mount (Europe). 90-264VAC Input, 12VDC Output, 2A Max Output, 24W
<i>NVIDIA® Jetson Orin™ NX Modules</i>	
900-13767-0010-000	Jetson Orin NX 8GB
900-13767-0000-001	Jetson Orin NX 16GB



Quark Carrier for NVIDIA® Jetson Nano™

NGX014

- 1x USB 3.1, 2x GbE,
- 2x 2-lane MIPI CSI-2, 1x USB OTG
- 1x SD card slot, 3x 3.3V UART, 2 x I2C, 1x CAN 2.0b, and 1x SPI
- +5V DC Input
- Smaller than the Dev Kit: 82,6 x 58,8 mm

NGX004 -Quark Carrier for NVIDIA® Jetson Nano™				
Part No.	Jetson module	Thermal Cooling options		
		Thermal Plate	Passive	Active
NGX014				
NGX014-04	NX 16GB	X		



NGX014 - Recommended optional accessories	
Part No.	Description
<i>Thermal Solutions</i>	
XHG308	NVIDIA® Jetson Nano™ Passive Heat Sink
XHG309	NVIDIA® Jetson Nano™ Active Heat Sink
XHG310	NVIDIA® Jetson Nano™ Thermal Transfer Plate
<i>Cabling</i>	
CBG112	Power Cable - 6-pin MiniTek w/ Latch, unterminated
CBG117	Ethernet Cable – 10-pin MiniTek w/ Latch, RJ-45 Panel Mount
CBG125	I/O Cable – DF20A 40 Pin, unterminated
CBG136	CR2032 RTC Battery w/ 3-pin Connector Cable Assembly 70 mm - Molex P/N 6032101013
<i>Power Adapter</i>	
MSG070	Astro/Photon PSU - AC/DC Wall Mount (Europe). 90-264VAC Input, 12VDC Output, 2A Max Output, 24W
<i>NVIDIA® Jetson Orin™ Nano Modules</i>	
900-13767-0040-000	Jetson Orin Nano 4GB
900-13767-0030-000	Jetson Orin Nano 8GB

Connect Tech's Quark Carrier for Edge AI computing is feature-rich, compact, and affordable. It is somewhat larger than the Jetson SODIMM module and ideal for unmanned payloads, inference, and vision. They are interoperable with Jetson Nano, TX2 NX, and Xavier NX SoMs, so users can switch modules if their processing needs vary.

Positive-locking Quark offers 1x USB 3.1, 2x GbE, 2x 2-lane MIPI CSI-2, 1x USB OTG, 1x SD card slot, 3x 3.3V UART, 2x I2C, and 1x SPI, as well as tough-environment IO connectors.

Quark supports NVIDIA Jetson Nano, TX2 NX, and Xavier NX SoMs, but module I/O availability may vary.

For a detailed explanation, see the [Quark Compatibility Specifications](#).



** For additional information about NGX014, please refer to PCN #: CTIU-00045.

Note: Do not use the 19V power supply from the Jetson Xavier™ NX Dev Kit with the Quark Carrier.

Boson for FRAMOS Carrier Board for NVIDIA® Jetson Xavier™ NX

NGX017

- Integrate up to 4x 2-lane or 3x 4-lane MIPI FRAMOS Sensor Modules
- Dual Gigabit Ethernet and Dual USB
- NVMe and microSD card for additional storage
- WiFi and Bluetooth expansion options
- +9V to +36V wide input voltage range



AI vision powerhouse Boson for FRAMOS integrates up to four MIPI cameras in a tiny size. Boson optimizes sensor inputs and storage for high-end vision applications in the FRAMOS Sensor Ecosystem. This collaborative product offers a plug-and-play vision solution that speeds up application development. The Jetson Nano, TX2 NX, and Xavier NX SoMs allow customers to switch modules as their processing needs vary.

NGX017 - Boson for FRAMOS Carrier Board for NVIDIA® Jetson Xavier™ NX						
Part No.	Jetson module	Thermal Cooling options			WiFi5/BT	NVMe
		Thermal Plate	Passive	Active		
NGX017						
NGX017-11	Xavier NX 8GB		X			X
NGX017-36	Xavier NX 16GB		X			

Boson for FRAMOS's board support package includes software hooks that instantly connect various FRAMOS Sensor Module Ecosystem cameras to NVIDIA's JetPack SDK, eliminating your software team's development needs.

Boson contains four FRAMOS PixelMate connectors on the carrier board. These connectors let users easily connect 4x 2-lane or 3x 4-lane MIPI CSI-2 cameras from the FRAMOS Sensor Module Ecosystem.

Boson for FRAMOS supports NVIDIA Jetson Nano, TX2 NX, and Xavier NX SoMs, but I/O availability varies. See the Boson for FRAMOS Compatibility [Specification Table](#) for details.

For differences between the NGX007 and the NGX017, please refer to PCN (Product Change Notice) at this URL: <https://connecttech.com/ftp/pdf/CTIU-00046.pdf>
Assembly Instructions fro CBG136: https://connecttech.com/ftp/pdf/cables/CBG136_CTIC-00477.pdf



Boson for FRAMOS- Integrated Solutions

NGX017 - Recommended optional accessories	
Part No.	Description
<i>Thermal Solutions</i>	
XHG311	Passive Finned Passive Heatsink for the NVIDIA® Jetson Xavier™ NX Module
XHG312	Active Thermal Passive Heatsink for the NVIDIA® Jetson Xavier™ NX Module
XHG313	Thermal plate for NVIDIA® Jetson Xavier™ NX Module
<i>Cabling</i>	
CBG125	I/O Cable – DF20A 40 Pin, unterminated
CBG136	CR2032 RTC Battery w/ 3-pin Connector Cable Assembly 70 mm - Molex P/N 6032101013
CBG408	Power Input Cable
CBG509	Camera I/O Cable
<i>Power Adapter</i>	
MSG085	External Power Supply (Class 1) for Rogue/Rudi-AGX/Rudi-NX - 19V 120W AC/DC. Includes CBG315 Input Power Cable and CBG411 4-pin DIN to 4-Pin Mini-Fit Jr.
<i>NVIDIA® Jetson Xavier™ NX Modules</i>	
900-83668-0000-000	Jetson Xavier NX 8GB
900-83668-0030-000	Jetson Xavier NX 16GB



Hadron GMSL Carrier for NVIDIA® Jetson Orin™ NX

NGX018

- Compatible with Jetson Orin™ NX and Orin™ Nano
- Rugged Latching Connectors
- Tiny footprint: 82,7mm x 68,8mm
- 2x USB3.1, 1x GbE, 2x GMSL Coax Ports
- 1x NVMe M-Key, 1x M.2 E-Key (WiFi/BT)
- Wide Power Input: +9V to +60V DC



With two GMSL2 camera inputs, the Hadron GMSL Carrier Board for Orin™ NX and Orin™ Nano is a very sturdy, feature-rich, and ultra-compact solution. It guarantees dependable, fast data transmission, which is essential for independent applications. Hadron is a great option for AI computing at the Edge because it is just marginally bigger than the Jetson™ SODIMM module and is excellent for GMSL vision applications, inference processing, and unmanned payloads. Hadron's architecture has locking I/O connectors that are ideal for harsh settings, a complete I/O set, and the ability to take a wide input voltage range.

NGX018 - Hadron GMSL Carrier for NVIDIA® Jetson Orin™ NX						
Part No.	Jetson module	Thermal Cooling options			WiFi5/BT	NVMe
		Thermal Plate	Passive	Active		
NGX018						
NGX018-25	Orin NX 16GB	X				1TB
NGX018-26	Orin NX 16GB		X		WiFi5	1TB
NGX018-27	Orin NX 16GB			X	WiFi5	1TB
NGX018-30	Orin NX 16GB			X	WiFi5	1TB
NGX018-61	Orin Nano 8GB	X			WiFi5	1TB

[Hadron Carrier Comparison Chart](#)



Hadron GMSL Carrier for NVIDIA® Jetson Orin™ NX

NGX018 - Recommended optional accessories	
Part No.	Description
<i>Thermal Solutions</i>	
XHG323	Orin NX / Nano - Thermal Transfer Plate
XHG324	Orin NX / Nano - Passive Heatsink
XHG325	Orin NX / Nano - Active Heatsink
<i>Cabling</i>	
CBG117	Ethernet Cable – 10-pin MiniTek w/ Latch, RJ-45 Panel Mount
CBG136	CR2032 RTC Battery w/ 3-pin Connector Cable Assembly 70 mm - Molex P/N 6032101013
CBG615	USB2.0 Cable - 20-pin Tiger-Eye to 2x USB 2.0 Type-A Female
CBG619	GMSL Coax Cable - Samtec MMCX Plug to FAKRA Plug Z-Type IP67
CBG629	I/O cable - 40-pin Tiger-Eye to Unterminated Flying Leads - SFSD-20-28C-G-12.00-SR
CBG686	USB3.0 Cable - 20-pin Tiger-Eye to 2x USB 3.0 Type-A Female (200 mm)
CBG705	Force Recovery and Reset - Molex 2 Position PicoBlade Connector to Panel Mount Pushbutton
CBG706	Power Cable - Molex Nano-Fit 2x2 Off-the-Shelf Cable Assembly Molex Part Number: 451300410
<i>Breakout Board</i>	
XBG023	USB 3.0 Breakout Board - 20-pin Tiger-Eye to 2x USB 3.0 Type-A Female
<i>Power Adapter</i>	
MSG113	Power Supply GMSL & Dual MIPI: NGX018, NGX024, NGX025
<i>NVIDIA® Jetson Orin™ NX Modules</i>	
900-13767-0010-000	Jetson Orin NX 8GB
900-13767-0000-001	Jetson Orin NX 16GB



Boson Carrier Board for NVIDIA® Jetson Orin™ NX & Orin™ Nano

NGX020

- Compatible with NVIDIA® Jetson Orin™ Nano, and Orin™ NX.
- Integrate up to 3x 2-lane or 2x 4-lane MIPI FRAMOS Sensor Modules
- Dual Gigabit Ethernet and Dual USB
- NVMe for additional storage
- WiFi and Bluetooth expansion options
- +9V to +36V wide input voltage range



NGX020 - Boson (FRAMOS) Carrier Board for NVIDIA® Jetson Orin™ NX & Orin™ Nano						
Part No.	Jetson module	Thermal Cooling options			WiFi5/BT	NVMe
		Thermal Plate	Passive	Active		
NGX020						
NGX020-01	Orin Nano 8GB	X				1TB
NGX020-06	Orin NX 8GB			X	WiFi5	1TB
NGX020-10	Orin NX 16GB	X				1TB
NGX020-12	Orin NX 16GB			X		1TB



Boson Carrier Board for NVIDIA® Jetson Orin™ NX & Orin™ Nano

The AI vision powerhouse Boson can fit up to four MIPI cameras into its remarkably compact design. With Boson, high-end vision applications can make the most of their sensor inputs and storage solutions. This carrier board shortens the time it takes to develop applications by giving consumers a vision solution that is plug-and-play. If your processing demands change, you may easily switch between modules on your NVIDIA® Jetson Orin™ Nano and Orin™ NX.

The carrier board of the Boson contains four FRAMOS PixelMate connectors. Users are able to directly connect a maximum of two 4-lane or four 2-lane MIPI CSI-2 cameras with these connectors.

Alternatives for Boson Integration

A lower total hardware stack height is achieved by directly integrating the camera to the carrier board, rather than using an adapter board. If a customer wants a complete stack solution, they can link Boson to their preferred NVIDIA module, any accessible heat sinks, and more.

NGX020 - Recommended optional accessories	
Part No.	Description
<i>Thermal Solutions</i>	
XHG323	Orin NX / Nano - Thermal Transfer Plate
XHG324	Orin NX / Nano - Passive Heatsink
XHG325	Orin NX / Nano - Active Heatsink
<i>Cabling</i>	
CBG125	I/O Cable – DF20A 40 Pin, unterminated
CBG408	Power Input Cable
CBG509	Camera I/O Cable
<i>Power Adapter</i>	
MSG085	External Power Supply (Class 1) for Rogue/Rudi-AGX/Rudi-NX - 19V 120W AC/DC. Includes CBG315 Input Power Cable and CBG411 4-pin DIN to 4-Pin Mini-Fit Jr.
<i>NVIDIA® Jetson Orin™ NX & Orin™ Nano Modules</i>	
900-13767-0010-000	Jetson Orin NX 8GB
900-13767-0000-001	Jetson Orin NX 16GB
900-13767-0040-000	Jetson Orin Nano 4GB
900-13767-0030-000	Jetson Orin Nano 8GB



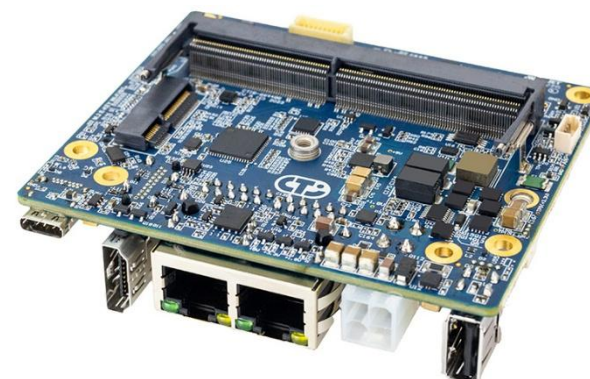
Boson 22 Carrier Board for NVIDIA® Jetson Orin™ NX

NGX021

- MiPi Camera Inputs:
 - 2x 4-lane MiPi Modules or
 - 4x 2-lane MiPi Modules or
 - 2 x 4-lane and 2x 2-lane MiPi Modules
 Dual Gigabit Ethernet, USB-C, USB 3.0 NVMe for additional storage; WiFi and Bluetooth expansion options
- +9V to +36V wide input voltage range
- 22pin MiPi CS12 connectors for additional camera compatibility



NGX021 - Boson-22 Carrier Board for NVIDIA® Jetson Orin™ NX & Orin™ Nano						
Part No.	Jetson module	Thermal Cooling options			WiFi5/BT	NVMe
		Thermal Plate	Passive	Active		
NGX021						
NGX021-10	Orin NX 16GB	X				1TB
NGX021-11	Orin NX 16GB		X			1TB
NGX021-12	Orin NX 16GB			X		1TB
NGX021-13	Orin NX 16GB	X			WiFi5	1TB
NGX021-15	Orin NX 16GB			X	WiFi5	1TB



An AI vision powerhouse, Boson-22 for Jetson Orin™ NX integrates up to four MIPI cameras into an incredibly compact design.

Optimizing sensor inputs and storage solutions for high-end vision applications is the goal of Boson-22 for Jetson Orin™ NX. Development of apps desiring to employ several cameras on the Jetson platform will be accelerated by Boson-22, which is compatible with numerous sensor modules and equipped with PC style interfaces.



Boson 22 Carrier Board for NVIDIA® Jetson Orin™ NX

Boson-22: How to Integrate It

A lower total hardware stack height is achieved by directly integrating the camera to the carrier board, rather than using an adapter board. If a customer wants a complete stack solution, they can link Boson to their preferred NVIDIA module, any accessible heat sinks, and more

NGX021 - Recommended optional accessories	
Part No.	Description
<i>Thermal Solutions</i>	
XHG323	Orin NX / Nano - Thermal Transfer Plate
XHG324	Orin NX / Nano - Passive Heatsink
XHG325	Orin NX / Nano - Active Heatsink
<i>Cabling</i>	
CBG125	I/O Cable – DF20A 40 Pin, unterminated
CBG408	Power Input Cable
CBG509	Camera I/O Cable
<i>Power Adapter</i>	
MSG085	External Power Supply (Class 1) for Rogue/Rudi-AGX/Rudi-NX - 19V 120W AC/DC. Includes CBG315 Input Power Cable and CBG411 4-pin DIN to 4-Pin Mini-Fit Jr.
<i>NVIDIA® Jetson Orin™ NX & Orin™ Nano Modules</i>	
900-13767-0010-000	Jetson Orin NX 8GB
900-13767-0000-001	Jetson Orin NX 16GB
900-13767-0040-000	Jetson Orin Nano 4GB
900-13767-0030-000	Jetson Orin Nano 8GB



Lepton FPD-Link III

NGX022

- 4x FPD Link III, ISB 3.0, USB 2.0, CAN 2.0b, USB OTG, RS-485, I2C, GPIO, SPI, PWM
- 1x NVMe (PCIe x4, 2280)
- Operating Temp.: -20 to +80C
- WiFi/BT expansion options
- Passive, Active and Thermal Transfer Plate cooling options



Specifically designed for the NVIDIA® Jetson Orin™ NX and Jetson Orin™ Nano modules, this Lepton FPD-Link III Carrier Board was created with the explicit intention of ensuring smooth integration and providing additional capabilities. Lepton is outfitted with a total of four USB 3.0 connectors and two GbE connections, each of which offers a substantial amount of USB connectivity. As a result of its four FPD-Link III camera inputs, NVMe storage expansion connectivity, and flexible M.2 slots architecture, Lepton offers versatility that may be utilized for a wide variety of applications.

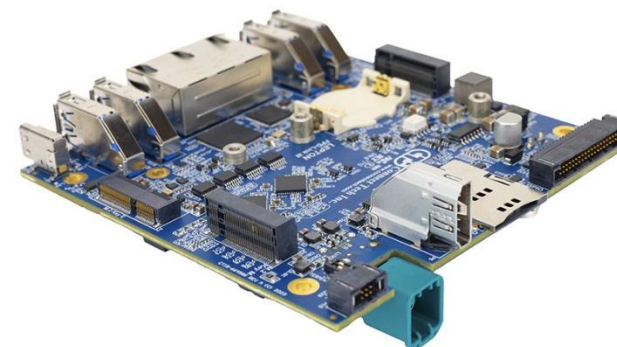
NGX022 - Lepton Carrier for NVIDIA® Jetson Orin™ NX & Orin™ Nano						
Part No.	Jetson module	Thermal Cooling options			WiFi5/BT	NVMe
		Thermal Plate	Passive	Active		
NGX022						
NGX022-01	Orin NX 8GB	X				1TB



Lepton FPD-Link III

NGX022 - Recommended optional accessories

Part No.	Description
<i>Thermal Solutions</i>	
XHG323	Orin NX / Nano - Thermal Transfer Plate
XHG324	Orin NX / Nano - Passive Heatsink
XHG325	Orin NX / Nano - Active Heatsink
<i>Cabling</i>	
CBG408	Power Input Cable
CBG341	Quad FAKRA GMSL Cable length 1m
CBG629	I/O cable - 40-pin Tiger-Eye to Unterminated Flying Leads - SFSD-20-28C-G-12.00-SR
CBG814	CAN Cable - SFSD-03-28C-G-12.00-SR
<i>Power Adapter</i>	
MSG085	External Power Supply (Class 1) for Rogue/Rudi-AGX/Rudi-NX - 19V 120W AC/DC. Includes CBG315 Input Power Cable and CBG411 4-pin DIN to 4-Pin Mini-Fit Jr.
<i>NVIDIA® Jetson Orin™ NX & Orin™ Nano Modules</i>	
900-13767-0010-000	Jetson Orin NX 8GB
900-13767-0000-001	Jetson Orin NX 16GB
900-13767-0040-000	Jetson Orin Nano 4GB
900-13767-0030-000	Jetson Orin Nano 8GB



Hadron-DM Carrier for NVIDIA® Jetson Orin™ NX

NGX024

- Compatible with NVIDIA® Jetson Orin™ Nano, and Orin™ NX.
- Ideal for Vision Applications, Inference and unmanned payloads
- Rugged Latching connectors
- 2x 4-Lane MIPI CSI2, 22-pin FPC Connector
- 2 x USB 3.1. 1x GbE, 1 x 2242/2230 NVMe, 1x M.2 E.Key (WiFi/BT)
- GPIO, PWM, i2C, RS-232, 3,3V UART, SPI
- Tiny footprint: 82,7mm x 68,8mm
- +9V to +36V wide input voltage range



The Hadron-DM Carrier Board for Jetson Orin™ NX is a compact, durable, and feature-rich carrier for AI computing at the edge. Hadron, slightly larger than the Jetson™ SODIMM module, is suitable for vision applications, inference, and unmanned payloads. Hadron-DM has dual MIPI CSI-2 connectors for increased adaptability. The Hadron-DM carrier board is compatible with the Jetson Orin™ NX and Jetson Orin™ Nano modules, allowing users to switch between modules based on their AI processing needs.

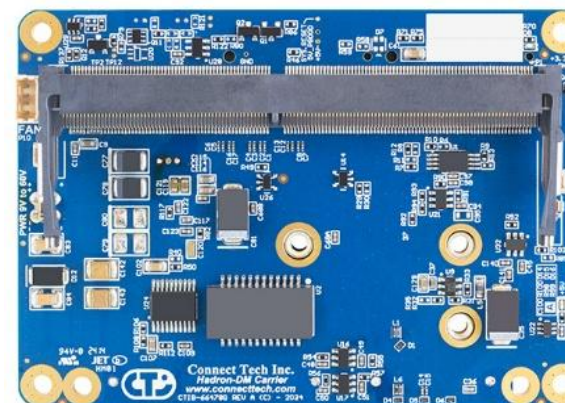
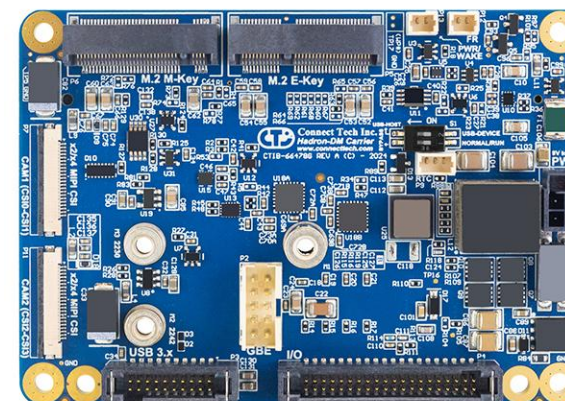
[Hadron Carrier Comparison Chart](#)

NGX024 - Hadron-DM Carrier for NVIDIA® Jetson Orin™ NX & Orin™ Nano						
Part No.	Jetson module	Thermal Cooling options			WiFi5/BT	NVMe
		Thermal Plate	Passive	Active		
NGX024						
NGX024-07	Orin NX 8GB	X				1TB
NGX024-09	Orin NX 8GB		X			1TB
NGX024-19	Orin NX 16GB	X				0,5TB
NGX024-25	Orin NX 16GB	X				1TB
NGX024-26	Orin NX 16GB		X			1TB
NGX024-27	Orin NX 16GB			X		1TB
NGX024-30	Orin NX 16GB			X	WiFi5	1TB



Hadron-DM Carrier for NVIDIA® Jetson Orin™ NX

NGX024 - Recommended optional accessories	
Part No.	Description
<i>Thermal Solutions</i>	
XHG323	Orin NX / Nano - Thermal Transfer Plate
XHG324	Orin NX / Nano - Passive Heatsink
XHG325	Orin NX / Nano - Active Heatsink
<i>Cabling</i>	
CBG112	Power Cable - 6-pin MiniTek w/ Latch, unterminated
CBG117	Ethernet Cable – 10-pin MiniTek w/ Latch, RJ-45 Panel Mount
CBG136	CR2032 RTC Battery w/ 3-pin Connector Cable Assembly 70 mm - Molex P/N 6032101013
CBG615	USB2.0 Cable - 20-pin Tiger-Eye to 2x USB 2.0 Type-A Female
CBG629	I/O cable - 40-pin Tiger-Eye to Unterminated Flying Leads - SFSD-20-28C-G-12.00-SR
CBG686	USB3.0 Cable - 20-pin Tiger-Eye to 2x USB 3.0 Type-A Female (200 mm)
CBG706	Power Cable - Molex Nano-Fit 2x2 Off-the-Shelf Cable Assembly Molex Part Number: 451300410
CBG732	Power Cable - Nano-Fit 2x2 to DC Jack
<i>Breakout Board</i>	
XBG023	USB 3.0 Breakout Board - 20-pin Tiger-Eye to 2x USB 3.0 Type-A Female
<i>Power Adapter</i>	
MSG113	Power Supply GMSL & Dual MIPI: NGX018, NGX024, NGX025
<i>NVIDIA® Jetson Orin™ NX Modules</i>	
900-13767-0010-000	Jetson Orin NX 8GB
900-13767-0000-001	Jetson Orin NX 16GB
900-13767-0040-000	Jetson Orin Nano 4GB
900-13767-0030-000	Jetson Orin Nano 8GB



Super Hadron-DM Carrier for NVIDIA® Jetson Orin™ Nano

NGX027

The Super Hadron-DM Carrier Board for Jetson Orin™ Nano is a compact, durable, and feature-rich carrier for AI computing at the edge. It is slightly larger than the Jetson™ SODIMM module, and is suitable for vision applications, inference, and unmanned payloads. The Super Hadron-DM has Dual MIPI CSI-2 connectors for increased adaptability.

The Jetson Orin™ NX and Jetson Orin™ Nano modules provide Super Mode, allowing users to switch between modules based on AI processing needs.



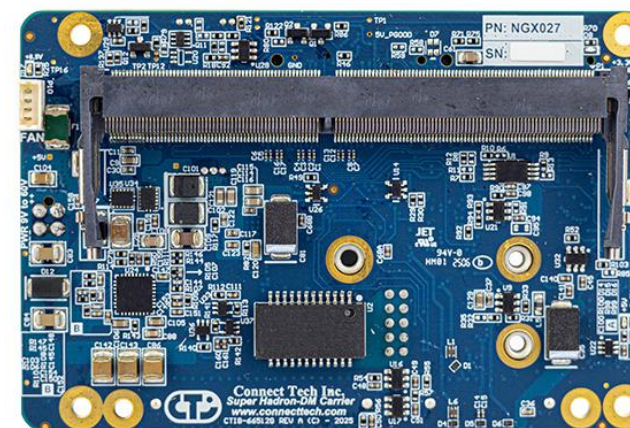
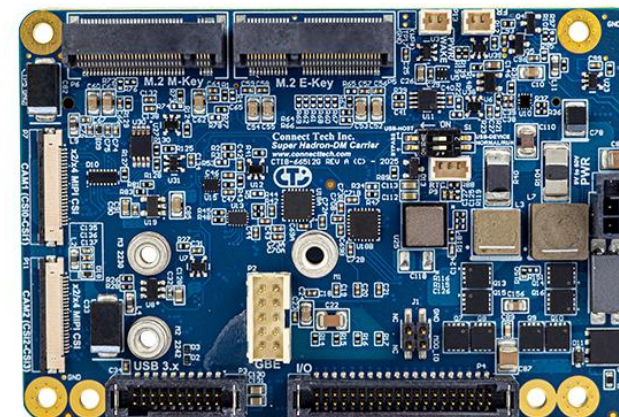
[Hadron Carrier Comparison Chart](#)

NGX027 - Super Hadron-DM Carrier for NVIDIA® Jetson Orin™ NX & Orin™ Nano						
Part No.	Jetson module	Thermal Cooling options			WiFi5/BT	NVMe
		Thermal Plate	Passive	Active		
NGX027						
NGX027-01	Orin NX 8GB	X				0,5TB
NGX027-02	Orin NX 8GB		X			0,5TB
NGX027-03	Orin NX 8GB			X		0,5TB
NGX027-04	Orin NX 8GB	X				0,5TB
NGX027-05	Orin NX 8GB		X			0,5TB
NGX027-06	Orin NX 8GB			X		0,5TB
NGX027-25	Orin NX 16GB	X				1TB
NGX027-26	Orin NX 16GB		X			1TB
NGX027-27	Orin NX 16GB			X		1TB
NGX027-28	Orin NX 16GB	X				1TB
NGX027-29	Orin NX 16GB		X			1TB
NGX027-30	Orin NX 16GB			X		1TB



Super Hadron-DM Carrier for NVIDIA® Jetson Orin™ Nano

NGX027 - Recommended optional accessories	
Part No.	Description
<i>Thermal Solutions</i>	
XHG323	Orin NX / Nano - Thermal Transfer Plate
XHG324	Orin NX / Nano - Passive Heatsink
XHG325	Orin NX / Nano - Active Heatsink
<i>Cabling</i>	
CBG112	Power Cable - 6-pin MiniTek w/ Latch, unterminated
CBG117	Ethernet Cable – 10-pin MiniTek w/ Latch, RJ-45 Panel Mount
CBG136	CR2032 RTC Battery w/ 3-pin Connector Cable Assembly 70 mm - Molex P/N 6032101013
CBG615	USB2.0 Cable - 20-pin Tiger-Eye to 2x USB 2.0 Type-A Female
CBG629	I/O cable - 40-pin Tiger-Eye to Unterminated Flying Leads - SFSD-20-28C-G-12.00-SR
CBG686	USB3.0 Cable - 20-pin Tiger-Eye to 2x USB 3.0 Type-A Female (200 mm)
CBG706	Power Cable - Molex Nano-Fit 2x2 Off-the-Shelf Cable Assembly Molex Part Number: 451300410
CBG732	Power Cable - Nano-Fit 2x2 to DC Jack
<i>Breakout Board</i>	
XBG023	USB 3.0 Breakout Board - 20-pin Tiger-Eye to 2x USB 3.0 Type-A Female
<i>Power Adapter</i>	
MSG113	Power Supply GMSL & Dual MIPI: NGX018, NGX024, NGX025
<i>NVIDIA® Jetson Orin™ NX Modules</i>	
900-13767-0010-000	Jetson Orin NX 8GB
900-13767-0000-001	Jetson Orin NX 16GB
900-13767-0040-000	Jetson Orin Nano 4GB
900-13767-0030-000	Jetson Orin Nano 8GB



Rogue- Carrier for NVIDIA® Jetson AGX Xavier™

AGX111

- 6x 2-lane or 4x 4-lane MIPI CSI Camera Inputs
- 2x NVMe M.2 Key M Slots, 3x USB 3.1, 2x GbE
- Wide input power range 9-19V DC
- Commercially deployable NVIDIA® Jetson AGX Xavier™ platform
- Dimensions: 92 x 105 mm



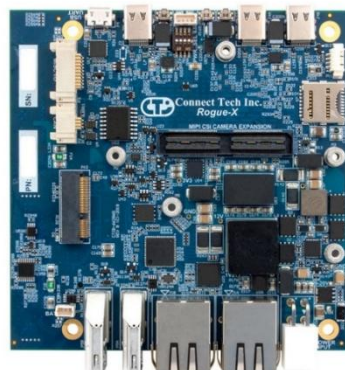
Connect Tech's Rogue is specifically designed for commercially deployable platforms. It is a full featured Carrier Board for the NVIDIA® Jetson AGX Xavier™ module with an extremely small footprint of 92 x 105 mm.

The Rogue adds 3x USB 3.1, 2x GbE, 2x HDMI, and a locking Mini-Fit Jr. power input connector to an amazing range of latest generation interfaces on the Jetson AGX Xavier.

A selection of Rugged camera add-on expansion boards is available for use with the Rogue to link directly with the Jetson AGX Xavier high density MIPI CSI ports. Integrations with external storage and WiFi/Bluetooth via Intel 8265 are also available, contact sales@connecttech.com for more details.

To understand the differences between the AGX101 and the AGX111, please consult the PCN to be found at this address:

<https://connecttech.com/resource-center/pcn-ctiu-00040-nvidia-jetson-agx-xavier-products/>



AGX111 Rogue for AGX Xavier

AGX111 - Rogue Carrier Board for NVIDIA® Jetson AGX Xavier™								
Part No.	Jetson module	Thermal Cooling options			WiFi5/BT	NVMe	LTE	Camera Board
		Stock Heatspreader	Passive	Active				
AGX111								
AGX111-01	AGX Xavier 32GB	X						
AGX111-07	AGX Xavier 32GB			X				
AGX111-08	AGX Xavier 32GB			X		1TB		
AGX111-12	AGX Xavier 32GB			X	WiFi5	2TB		
AGX111-13	AGX Xavier 32GB		X					
AGX111-14	AGX Xavier 32GB		X			1TB		
AGX111-17	AGX Xavier 32GB		X		WiFi5	1TB		
AGX111-25	AGX Xavier 32GB	X						
AGX111-31	AGX Xavier 32GB			X				
AGX111-37	AGX Xavier 32GB		X					
AGX111-61	AGX Xavier 32GB	X						JCB002
AGX111-62	AGX Xavier 32GB	X				1TB		JCB002
AGX111-69	AGX Xavier 32GB			X		2TB		JCB002
AGX111-77	AGX Xavier 32GB		X		WiFi5	1TB		JCB002
AGX111-83	AGX Xavier 32GB			X		1TB		JCB005
AGX111-M5	AGX Xavier 64GB	X						
AGX111-N1	AGX Xavier 64GB			X				
AGX111-N2	AGX Xavier 64GB			X		1TB		

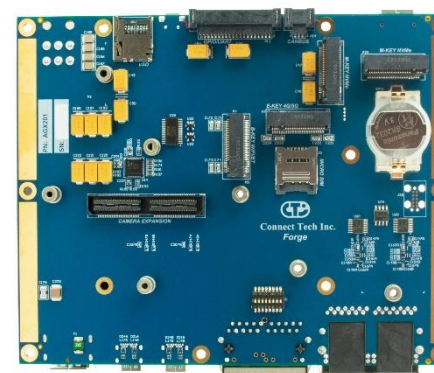
[Recommended Optional Components](#)



Forge Carrier for NVIDIA® Jetson AGX Orin™

AGX201

- Commercially deployable NVIDIA® Jetson AGX Orin™ platform
- 1x 16-lane MIPI Expansion Connector
- 2x NVMe M.2 Key M Slots, 2x USB 3.2, 2x GbE
- Wide input power range 10-36V DC
- 1792-core NVIDIA Ampere architecture GPU with 56 Tensor Cores
- 8-core Arm® Cortex®-A78AE v8.2 64-bit CPU 2MB L2 + 4MB L3
- 32GB 256-bit LPDDR5 204,8 GB/s
- 64GB eMMC 5.1
- Dimensions: 155 x 125 mm



Connect Forge is a full-featured Carrier Board for the NVIDIA® Jetson AGX Orin™ module, specifically designed for commercially deployable platforms. On the Jetson AGX Orin, Forge provides access to an impressive list of latest generation interfaces while also adding 3x USB 3.2, 2x GbE, Display Port, and a locking 6-pin Mini-Fit Jr. power input connector. It also supports rugged camera add-on expansion boards that interface directly with high density MIPI CSI interfaces. External storage and WiFi/Bluetooth via Intel 8265 integrations are also available; please contact us for more information.



Forge Carrier for NVIDIA® Jetson AGX Orin™

AGX201 - Forge Carrier Board for NVIDIA® Jetson AGX Orin™

[Recommended Optional Components](#)

Part No.	Jetson module	Thermal Cooling options			WiFi5/BT	NVMe	LTE	Camera Board
		Stock Heatspreader	Passive	Active				
AGX201								
AGX201-001	AGX Orin 32GB	X						
AGX201-004	AGX Orin 32GB	X				2TB		
AGX201-09D	AGX Orin 32GB			X		2TB		
AGX201-0CD	AGX Orin 64GB	X						
AGX201-0CE	AGX Orin 64GB	X				1TB		
AGX201-0MN	AGX Orin 64GB			X				
AGX201-0MP	AGX Orin 64GB			X		1TB		
AGX201-0MQ	AGX Orin 64GB			X		2 X 1TB		
AGX201-0MR	AGX Orin 64GB			X		2TB		
AGX201-0MS	AGX Orin 64GB			X		2 X 2TB		
AGX201-0MT	AGX Orin 64GB			X	WiFi5			
AGX201-0MW	AGX Orin 64GB			X	WiFi5	2TB		
AGX201-0NS	AGX Orin 64GB			X	WiFi5	2TB	EMEA	
AGX201-133	AGX Orin 64GB	X						JCB002
AGX201-1CD	AGX Orin 64GB			X		1TB		JCB002
AGX201-1QT	AGX Orin 32GB			X		2TB		JCB005
AGX201-232	AGX Orin 64GB			X				JCB005
AGX201-2TS	AGX Orin 64GB			X				JCB003
AGX201-367	AGX Orin 32GB			X		2TB		JCB003
AGX201-397	AGX Orin 64GB	X						JCB003
AGX201-398	AGX Orin 64GB	X				1TB		JCB003
AGX201-3FD	AGX Orin 64GB		X					JCB003
AGX201-3JG	AGX Orin 64GB			X				JCB003



What distinguishes AGX Xavier from AGX Orin?

Comparison Chart

Feature	Jetson™ AGX Xavier	Jetson™ AGX Orin 32GB	Jetson™ AGX Orin 64GB
AI Performance	32 TOPS	200 TOPS	275 TOPS
GPU	512 Core Volta, with 64 Tensor Cores	1792 Core Ampere, with 56 Tensor Cores	2048 Core Ampere, with 64 Tensor Cores
DL Accelerator	(2x) NVDLA	(2x) NVDLA V2.0	(2x) NVDLA V2.0
Vision Accelerator	(2x) 7-way VLIW Processor	(2x) 7-way VLIW Processor	(2x) 7-way VLIW Processor
CPU	8 core Carmel ARM CPU 2MB L2 + 4MB L3	12 core Arm Cortex-A78AE 3MB L2 + 6MB L3	12 core Arm Cortex-A78AE 3MB L2 + 6MB L3
Memory	16GB 256-bit LPDDR4x @ 2133MHz	32GB 256-bit LPDDR5 @ 2133MHz	64GB 256-bit LPDDR5 @ 2133MHz
	137 GB/s	205 GB/s	205 GB/s
Storage	32GB/64GB eMMC	64GB eMMC	64GB eMMC
Video Encode	2x8K @30 6x4K @60 12x4K @30 26x1080p @60 52x1080p @30 (HEVC) 30x1080p @30 (H.264)	1x 4K60 3x 4K30 6x 1080p60 12x 1080p30 (H.265) H.264, AV1	2x 4K60 4x 4K30 8x 1080p60 16x 1080p30 (H.265) H.264, AV1
Video Decode	(2x) 8Kp30 / (6x) 4Kp60	1x 8K30 2x 4K60 4x 4K30 9x 1080p60 18x 1080p30 (H.265) H.264, VP9, AV1	1x 8K30 3x 4K60 7x 4K30 11x 1080p60 22x 1080p30 (H.265) H.264, VP9, AV1
Camera	16 lanes MIPI CSI-2 8 lanes SLVS-EC D-PHY 40Gbps / C-PHY 109Gbps	16 lane MIPI CSI-2 connector	16 lane MIPI CSI-2 connector
PCI Express	16 lanes PCIe Gen 4	x16 PCIe slot (x8 PCIe Gen4)	x16 PCIe slot (x8 PCIe Gen4)
	1x8 + 1x4 + 1x2 + 2x1		
Mechanical	100 x 87 mm	100 x 87 mm	100 x 87 mm
	699 pin connector	699 pin connector	699 pin connector
Power	10W / 15W / 30W	15W / 40W	15W / 60W



Rogue Carrier for NVIDIA Jetson AGX Orin™

AGX202

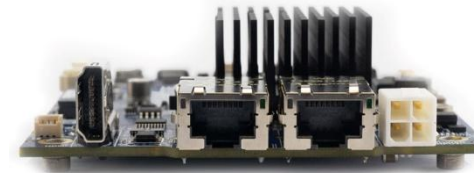
Rogue Carrier for Jetson AGX Orin™ is a full-featured carrier board designed specifically for commercially deployable platforms.

Rogue for Jetson AGX Orin™ gives you access to the Jetson AGX Orin's impressive list of latest generation interfaces while also adding 2x 10GbE, 3x USB 3.1, HDMI, and a locking Mini-Fit Jr. power input connector.

Integrations with external storage and WiFi/Bluetooth via Intel 8265 are also available; contact Sales@TheJunction.eu.

Features include:

- Compatible with NVIDIA Jetson AGX Orin
- Dual 10GBASE-T (10G Ethernet)
- Camera inputs: All connected via high-density camera connector breakout. Same Pinout as development kit. Application specific camera add-on boards can be used in conjunction with this interface (Up to 6x MIPI I-PEX, SerDes Inputs: GMSL or FPD-Link III, HDMI Inputs)
- Operating Temp.: -40 to +85 C
- Dimensions: 92 x 107 mm



Rogue Carrier for NVIDIA Jetson AGX Orin™

AGX202 - Rogue Carrier Board for NVIDIA® Jetson AGX Orin™

Part No.	Jetson module	Thermal Cooling options			WiFi5/BT	NVMe	LTE	Camera Board
		Stock Heatspreader	Passive	Active				
AGX202								
AGX202-001	AGX Orin 32GB	X						
AGX202-007	AGX Orin 32GB	X			WiFi5	1TB		
AGX202-09A	AGX Orin 64GB			X				
AGX202-0CD	AGX Orin 64GB	X						
AGX202-0CE	AGX Orin 64GB	X				1TB		
AGX202-0CH	AGX Orin 64GB	X				2 X 2TB		
AGX202-0JL	AGX Orin 64GB		X			1TB		
AGX202-0JN	AGX Orin 64GB		X			2TB		
AGX202-0MN	AGX Orin 64GB			X				
AGX202-0MP	AGX Orin 64GB			X		1TB		
AGX202-0MR	AGX Orin 64GB			X		2TB		
AGX202-0MT	AGX Orin 64GB			X	WiFi5			
AGX202-0MU	AGX Orin 64GB			X	WiFi5	1TB		
AGX202-133	AGX Orin 64GB	X						JCB002
AGX202-134	AGX Orin 64GB	X				1TB		JCB002
AGX202-1CD	AGX Orin 32GB			X		1TB		JCB002
AGX202-1CJ	AGX Orin 64GB			X	WiFi5	1TB		JCB002
AGX202-1TU	AGX Orin 64GB	X				1TB		JCB005
AGX202-232	AGX Orin 64GB			X				JCB005
AGX202-23B	AGX Orin 64GB			X	WiFi5	2 x 2TB		JCB005
AGX202-2TT	AGX Orin 64GB			X		1TB		JCB006
AGX202-3JH	AGX Orin 64GB			X		1TB		JCB003
AGX202-3MQ	AGX Orin Ind. 64GB	X			WiFi5			
AGX202-3TS	AGX Orin Ind. 64GB		X			1TB		
AGX202-3WV	AGX Orin Ind. 64GB			X		1TB		
AGX202-3ZX	AGX Orin Ind. 64GB	X						JCB002
AGX202-4MK	AGX Orin Ind. 64GB			X		1TB		JCB003

Note: * For the Passive Heatsink external airflow required

[Recommended Optional Components](#)



Rogue-RX Carrier Board for NVIDIA® Jetson AGX Orin™

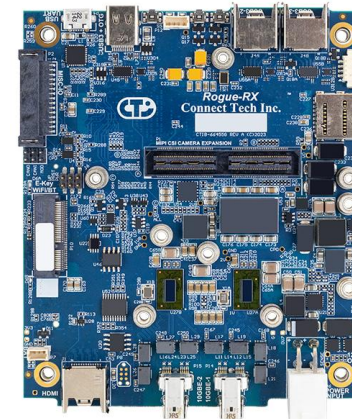
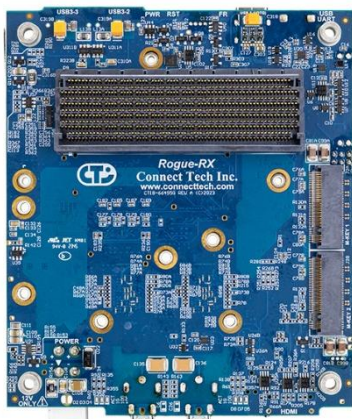
AGX203

- Commercially deployable NVIDIA® Jetson AGX Orin™ and AGX Orin™ Industrial platforms
- 2x 10GBASE-T w/Rugged Positive Locking Connectors
- 2x NVMe PCIe Gen4 M.2 Key-M 2280 Slots
- Dimensions: 92mm x 108.2mm



The fully functional Rogue-RX Carrier for Jetson AGX Orin™ was designed especially for hardy and unforgiving conditions. The Rogue-RX Carrier for Jetson AGX Orin™ offers a distinct wire/pin header with positive locking for UART, I2C, SPI, CAN, and GPIO in addition to robust positive locking high-speed connections for 10GBASE-T, USB 3.2 Gen2, and HDMI.

Please email sales@connecttech.com for more information about the WiFi/Bluetooth and external storage integrations that are also available using the Intel 8265.



Rogue-RX Carrier Board for NVIDIA® Jetson AGX Orin™

AGX203 - Rogue-RX Carrier Board for NVIDIA® Jetson AGX Orin™

Part No.	Jetson module	Thermal Cooling options			WiFi5/BT	NVMe	LTE	Camera Board
		Stock Heatspreader	Passive	Active				
AGX203								
AGX203-0CE	AGX Orin 64GB	X				1TB		
AGX203-0JR	AGX Orin 64GB		X		WiFi5	1TB		
AGX203-0MN	AGX Orin 64GB			X				
AGX203-3MK	AGX Orin 64GB Ind.	X						
AGX203-3WU	AGX Orin 64GB Ind.			X				
AGX203-3WV	AGX Orin 64GB Ind.			X		1TB		
AGX203-400	AGX Orin 64GB Ind.	X				2TB		JCB002
AGX203-498	AGX Orin 64GB Ind.			X		2TB		JCB002
AGX203-4JG	AGX Orin 64GB Ind.	X				1TB		JCB003

Note: * For the Passive Heatsink external airflow required

[Recommended Optional Components](#)



Gauntlet Carrier Board for NVIDIA® Jetson Thor™

AGX301



Specifications	
Compatibility	NVIDIA® Jetson Thor™
Networking	2x 10GBASE-T (10G Ethernet) 2x 1000BASE-T (1G Ethernet)
Display	1x DisplayPort
Camera Inputs	1x 16-Lane MIPI Expansion Connector Interface directly to a range of GMSL3, GMSL2, FPD-Link III, SDI, and MIPI CSI-2 image sensors
USB	1x USB 3.2 Ports (Type-C – OTG Capable), 1x USB 3.2 Ports (Type-C)
Storage	2x M.2 Key M 2280 NVMe (1x 4 Lane PCIe Gen3, 1x 2 Lane PCIe Gen 3)
I2C/SPI	2x I2C Channel @ 3.3V IO 2x SPI Channel @ 3.3V IO
UART	2x RS232/422/485 2x @3.3V levels UART
CAN	4x CAN 2.0b Non-Isolated Ports
GPIO	4x 3.3V GPI Inputs 6x 3.3V GPO Outputs (2x PWM Capable) 1x 3.3V Power Pin at 1A
User Expansion	1x M.2 Key E 2230 WiFi/BT (PCIe/USB2) 1x M.2 Key B 3042/3052 (LTE/5G – USB3) with Nano SIM
Input Power	+30V to +60V DC Wide Input Power (6-Pin Mini-Fit Jr. Connector)
Dimensions	155mm x 126mm
Operating Temp.	-40C to +85C



Connect Tech's Gauntlet Carrier Board, designed for the NVIDIA® Jetson Thor™ Series Modules, offers industrial-grade performance, ultra-fast networking, and advanced sensor integration. It accelerates the next generation of physical AI, robotics, autonomy, and edge AI.

Gauntlet maximises the performance of NVIDIA's Blackwell GPU by providing a broad set of interfaces and expansion options.

Gauntlet is fully interoperable with Connect Tech's vision-ready platforms, allowing developers to rapidly create full-stack AI systems with a variety of imaging needs.

Compact. Rugged. Deployable. Gauntlet reflects the future of robots.



The NVIDIA® Jetson Thor™ Series Modules are the ultimate platform for physical AI and robotics, delivering up to 2070 FP4/1035 FP8 TFLOPs with Blackwell GPU and 128GB RAM. With a 14-core Neoverse ARM CPU and 4X25 GbE networking for real-time multi-sensor processing, it elevates your projects and integrates generative AI. Combine with Connect Tech solutions to fully utilise the Jetson Thor™ SoM's processing power and sensor interface capabilities for edge AI applications.

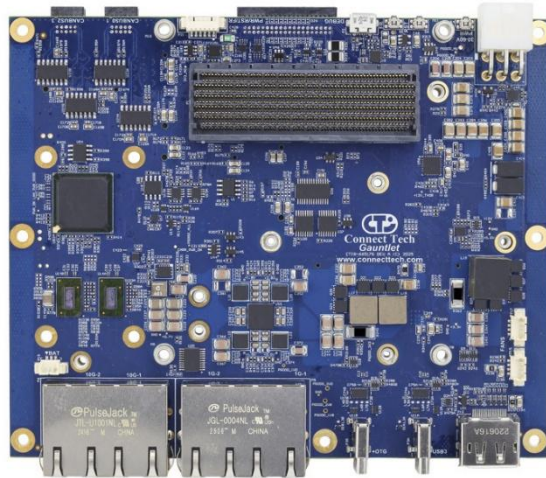


Figure 1 AGX301 Gauntlet - Bottom view

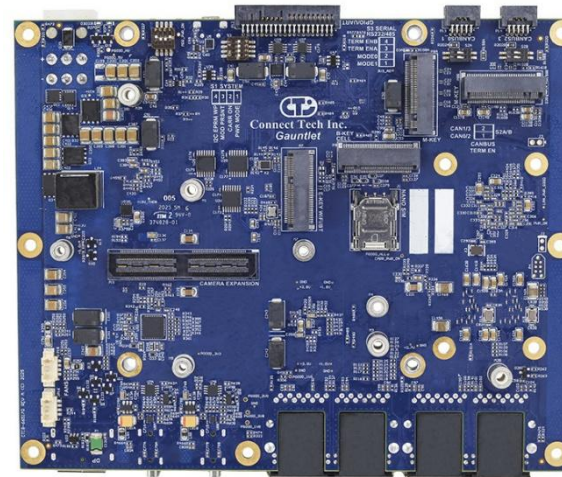


Figure 2 AGX301 Gauntlet - Top view



GMSL Camera Platform

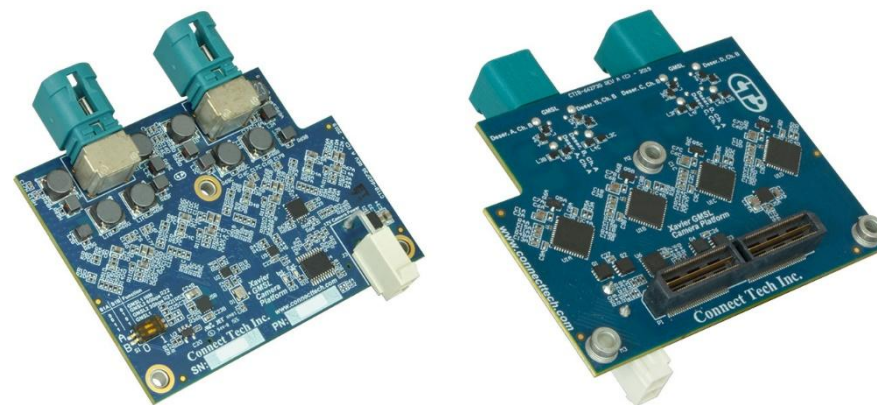
JCB002

Connect Tech's GMSL camera platform is an expansion board that allows up to 8 cameras to be connected to the Jetson AGX Xavier module. Since many different types of GMSL cameras are available, the JCB002 has user selectable options to interface with either GMSL1 or GMSL2 protocols at different operating frequencies. Power to the cameras is provided by PoC (Power over Coax) so all the data, control signals, and power are sent through a single 50 Ohm Coaxial cable. This allows for flexibility in cable routing and ease of installation in automotive applications.

The main power for the board comes from the Camera Expansion Header. The 12V power for the cameras is also available from the same header on the Rogue carrier. NVIDIA's development kit does not provide voltage here, so a hot pluggable external 12V connector is available on the JCB002. The circuit will always take the external voltage if both are connected.



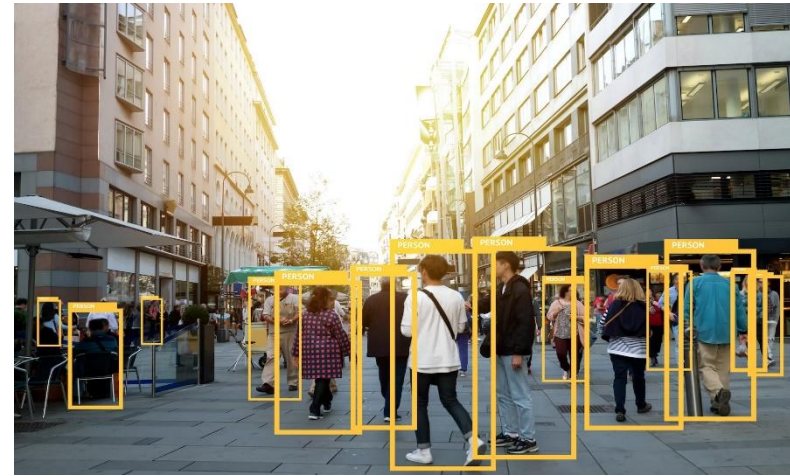
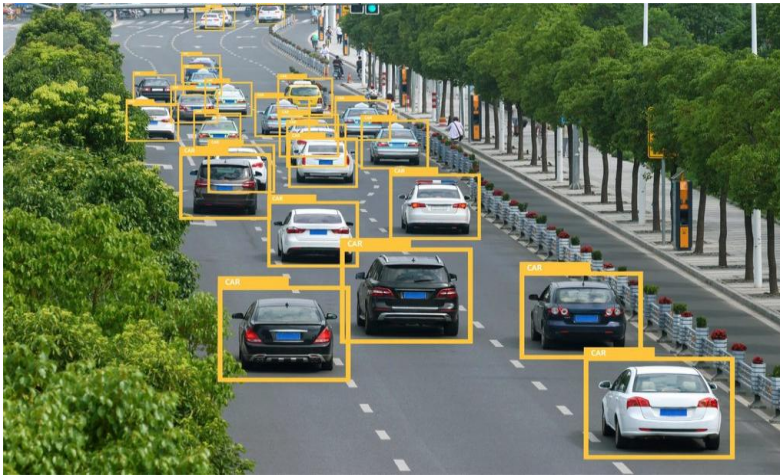
- Compact size: 75 x 57 mm
- GMSL1 or GMSL2 protocols
- Internal or External Camera power
- Power over Coax
- 4x mini coax connector
- 4%input voltage protection
- Software power cycle



GMSL camera platform is an expansion board that allows up to 8 cameras to be connected to the Jetson AGX Xavier module. Many different types of GMSL cameras are available; the JCB002 has user selectable options to interface with either GMSL1 or GMSL2 protocols at different operating frequencies.

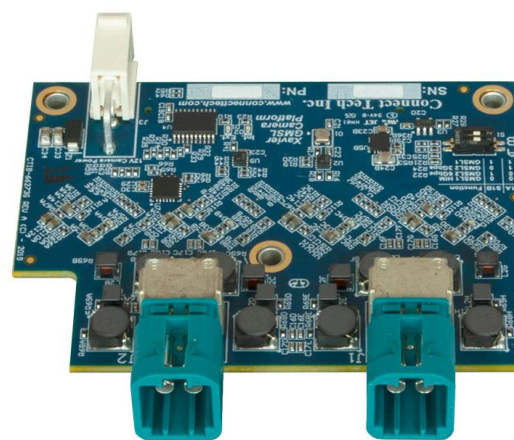
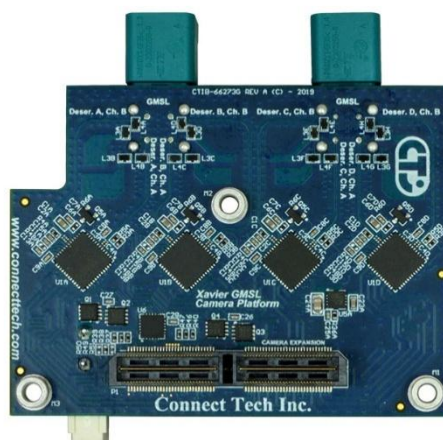


Typical Applications



SPECIFICATIONS

NVIDIA Xavier Connection (Uplink)	1x High Density Connector Camera Board will mate to the NVIDIA Jetson “Camera Expansion Header”
(GMSL) Camera Inputs	8x Total (GMSL2/GMSL1)
De-serializer	Maxim MAX9296A
MIPI Output	A single 4-lane MIPI CSI-2 v1.3 output from each De-serializer (16-lanes total)
Camera Input Connectors	2x MATE-AX Quad Coax Connectors Breakout cables to FAKRA available
Board Dimension:	75 x 57 mm
PoC (Power-Over-COAX)	All 8 cameras will be sourced Power-Over-COAX from JCB002
Power	JCB002 can be directly powered from Camera Expansion Header or External +12V Input
Operating Temperature	-40 C to +85 C
Weight	50g
Warranty and Support	1 Year Warranty and Free Support



Vision Solutions

[Currently supported cameras](#)

As Edge AI Vision's capabilities expand, discovering ways to readily combine sensors with embedded hardware enables rapid product development and field deployment. As NVIDIA's largest Jetson hardware partner, we've collaborated with industry-leading vision camera and sensor manufacturers to create pre-integrated and validated solutions. Customers can reduce total application development time by using reliable hardware that includes the appropriate camera and sensor software.



NVIDIA® Jetson™ SDI Vision Platform JCB003-01

Please keep in mind that the Jetson SDI Vision Platform is only supported on Connect Tech's Rogue carrier boards for NVIDIA® Jetson AGX Xavier™, as well as the Rogue and Forge Carrier Boards for NVIDIA® Jetson AGX Orin™.



- 2x 3G-SDI/HD-SDI/SDI (via 2x HD-BNC Connectors) SDI Video Inputs
- 1x 3G-SDI/HD-SDI/SDI (via 1x HD-BNC Connector) SDI Video Outputs
- PCBA Dimensions: 67mm x 75mm PCBA, Height with Integrated passive heatsink: 17mm
- 53 grams
- SDI Video Inputs 2x 3G-SDI/HD-SDI/SDI (via 2x HD-BNC Connectors)
- Video Input Path to Jetson SDI-to-MIPI (via Samtec QTH Connector)
- SDI Video Output 1x 3G-SDI/HD-SDI/SDI (via 1x HD-BNC Connector)
- Video Output Path from Jetson HDMI-to-SDI (via HDMI Type-A Connector)
- SDI Supported Formats SMPTE 259M: SD-SDI
- SMPTE 292M: HD-SDI
- SMPTE 424M: 3G-SDI
- MIPI CSI-2 Details Each SDI Input channel will be converted to a 4-lane MIPI CSI-2 v1.3 output per SDI Input (8-lanes total)
- Power +12V Provided via Camera Expansion Connector
- Mechanical PCBA Dimensions: 67mm x 75mm PCBA Height with Integrated passive heatsink: 17mm
- Thermal Design Power 6W
- Operating Temperature -40°C to +85°C
- Weight 53g
- Warranty and Support 1 Year Warranty and Free Support

The NVIDIA® JETSON™ SDI VISION PLATFORM allows for ultra-low hardware latency SDI-to-MIPI CSI-2 conversion, providing a direct ISP ingest path to GPU compute on the NVIDIA® Jetson™ platform without the overhead from other methods such as frame grabbers, USB, or Ethernet packetizing.

Ideal for Edge AI applications in robotics, industrial and public sector, supporting multi-sensor, multi-spectral, electro-optic and infrared (EO/IR) surveillance and targeting systems for ISR and Inference applications across the air, land and maritime domains.



Allied Vision MIPI Camera Board JCB005

- Simple integration of Allied Vision MIPI CSI-2 sensors to the Jetson AGX Xavier platform
- Supports Allied Vision Alvium 1500 C and 1800 C sensors
- Connect up to 6x 2-lane or 4x 4-lane MIPI Cameras
- Seamless integration to the Rogue and Rogue-X Carrier Boards
- Dimensions: 75 x 40,2 mm

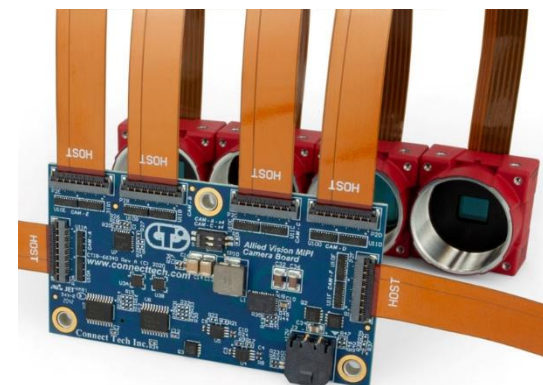
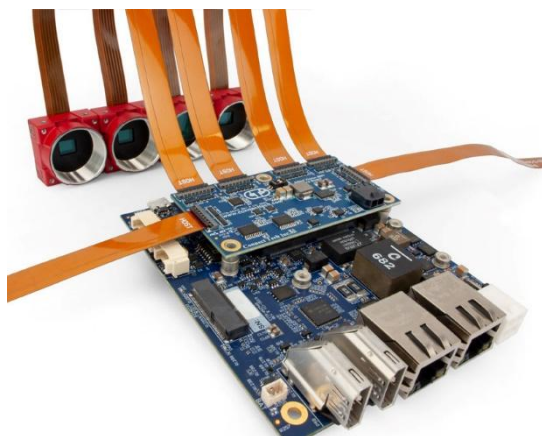
Please note Allied Vision MIPI Camera Board is only supported on our Rogue carrier boards for NVIDIA® AGX Xavier™ and Forge carrier boards for NVIDIA® AGX Orin™



Developers of Jetson AGX Xavier projects can finally rest easy knowing that the Allied Vision MIPI Camera Board provides the vision solution they've been hoping for. This Camera Board enables the easy attachment of up to six MIPI sensors with no additional hardware, allowing for the speedy incorporation of your preferred cameras.

This Camera Board is preconfigured with the device-tree software needed to incorporate up to six Allied Vision Alvium 1500 C and 1800 C sensors into your application, sparing you the hassle of writing custom code. By integrating with the Connect Tech Rogue and Rogue-X Carrier Boards, users can go straight from prototyping to mass production with no need for new software. Allied Vision's Alvium 1500 C and 1800 C camera series both offer MIPI CSI-2 options, with users able to choose between integrating 6x 2-lane or 4x 4-lane cameras.

Not for use with NVIDIA Xavier Dev Kit.

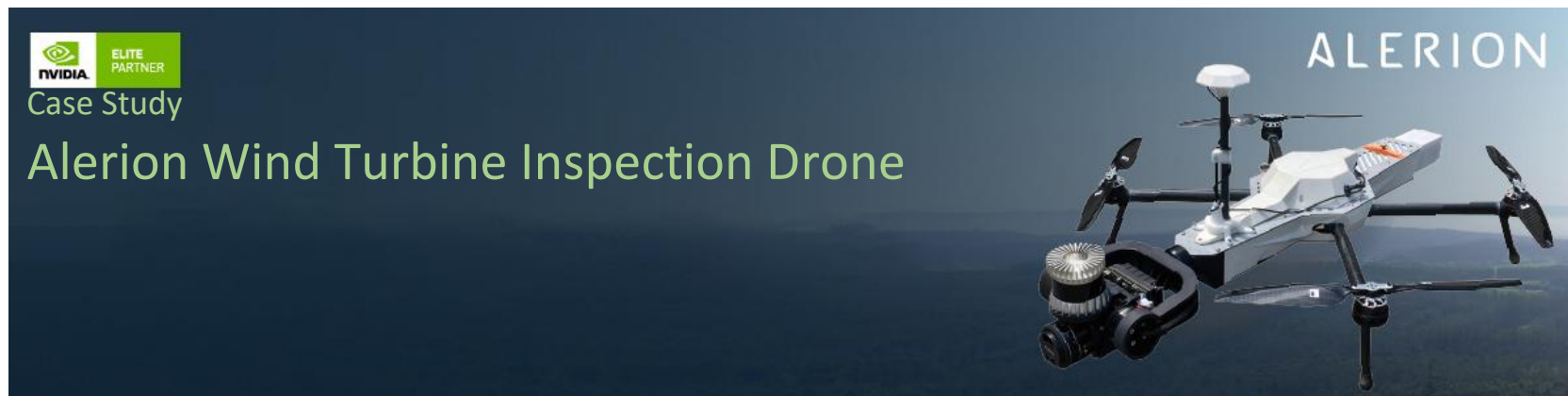


Browse Allied Vision Alvium 1500 C Camera Series – [Click Here](#)

Browse Allied Vision Alvium 1800 C Camera Series – [Click Here](#)

Additional Board Features

- The extended temperature range of -40 to +85 degrees Celsius makes it ideal for use in industrial settings.
- Capable of drawing +12V power from the Rogue and Rogue-X Carrier's Camera Expansion header



FPD-Link III Camera Board JCB006

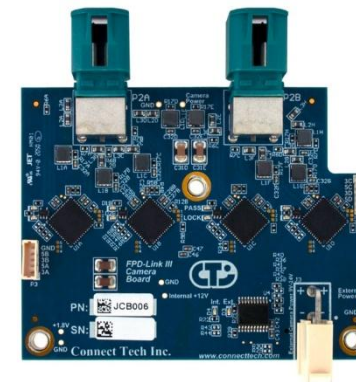
- 8x FPD-Link III camera inputs, 2x per deserializer
- Internal or External Camera power
- Power over Coax
- Input voltage protection
- Dimensions: 75 x 57 mm

Please note FPD-Link III Camera Board is only supported on our Rogue carrier boards for NVIDIA® AGX Xavier™ and Forge carrier boards for NVIDIA® AGX Orin™



The JCB006 camera expansion board enables the connection of FPD-Link III Deserializers to Rogue or Rogue-X carriers.

PoC (Power over Coax) provides power to the cameras, so all data, control signals, and power are transmitted over a single 50 Ohm Coaxial cable. This allows for greater cable routing flexibility and ease of installation in automotive applications. The Camera Expansion Header provides the board with its primary power.



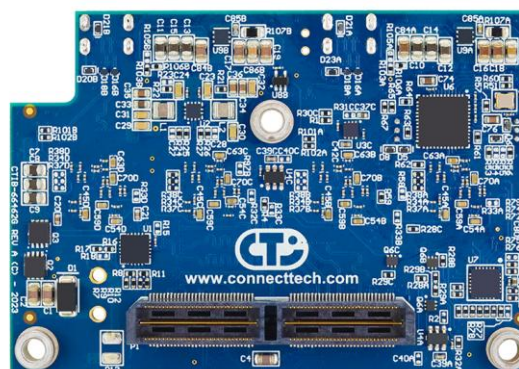
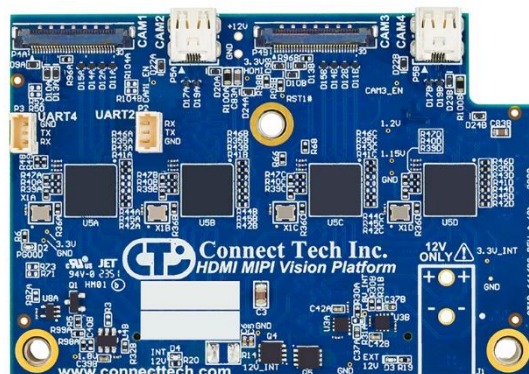
HDMI Vision Platform

JCB010

- Compatible with Forge, Rogue
- Support for up to 4 Ultra HDMI inputs converting each HDMI input to two lanes MiPi CS12
- HDMI to CSI2 conversion for vision processing
- Compatible and tested with the Sony FCB line of block cameras
- Inputs: 2x 30pin coax (Sony FCB compliant), 2x Micro HDMI
- 12V via High Density Connector or external power connector
- Dimensions: 75 mm 52 mm
- Temp. Range: -30 C to +70 C



 [Request Manual](#)

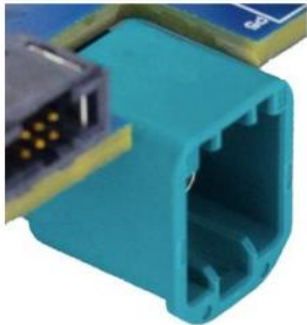
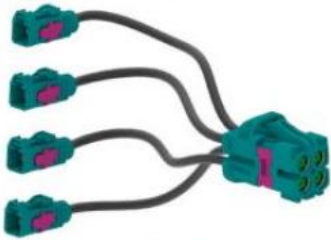
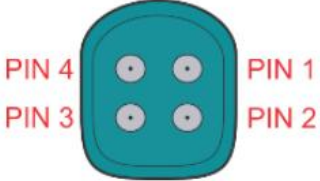


An HDMI signal can be entered directly into the Connect Tech HDMI Camera platform, which then converts it to MIPI CSI2 so it can be used with the NVIDIA Jetson. With its two KEL USL00-30L connectors and two micro HDMI ports, this HDMI receiver is compatible with a broad range of HDMI cameras and other devices.



FAKRA Cable

CBG341

Function		Description	
Location		Rear	
Type		Camera Coax Connector	
Mating Cable		Quad Fakra Cable 4 Position MATE-AX to 4 x FAKRA Z-code 50Ω RG174 Cable CTI P/N: CBG341 (1 meter)	
Pin	MIPI-Lanes	Description	
1	CSI 2/3	Camera Connector	
2	CSI 2/3	Camera Connector	
3	CSI 0/1	Camera Connector	
4	CSI 0/1	Camera Connector	



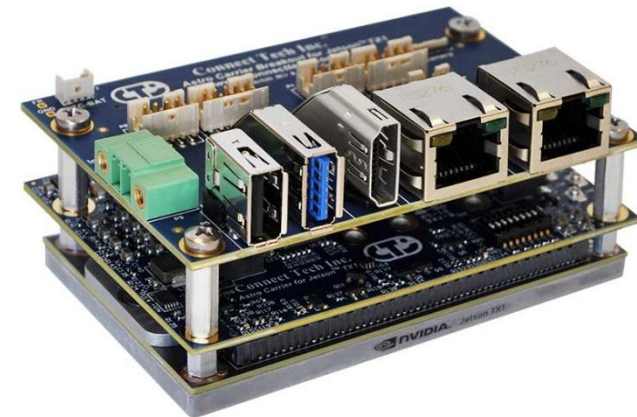
Astro- Carrier for NVIDIA® Jetson TX2/TX2i

ASG001 / ASG021

Astro is specifically designed to work with the [NVIDIA® Jetson TX2/TX2i](#) supercomputer-on-module.

The Astro Carrier provides access to features found on the Jetson TX2/TX2i module in an extremely small footprint (87 x 57 mm). It makes use of a high density, board-to-board connector that allows for use with Connect Tech's off the shelf or custom designed break out boards.

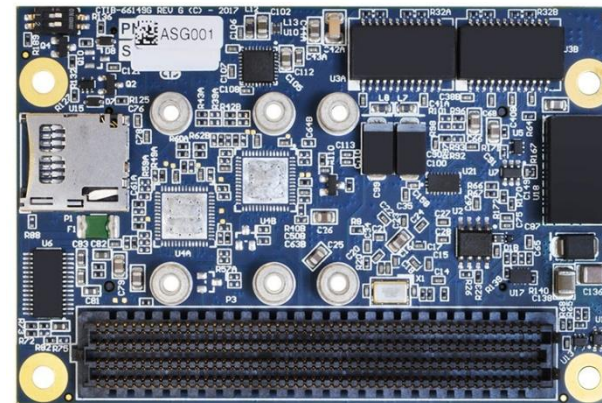
- 2xGbE (10/100/1000) Ports
- 2xUSB2, 1xUSB3 and 1xHDMI Ports
- 1xI2C, 1xAux, 4xGPIO, 1xmini PCIe, 1xSATA
- Use with COTS or custom break out boards
- Extended Temperature Range -40 C to +85 C (Astro Carrier)
- Video Inputs: MIPI, GMSL
- Dimensions: 87 x 57 mm



XBG201 Astro Breakout Board



Accessories



ASG001

Astro Carrier for NVIDIA® Jetson TX2i/TX2/TX2 4-GB

In addition to the common features for the Astro this board offers:

- 3 x CSI

XBG201

Astro Breakout Board for NVIDIA® Jetson TX2

ASG012

Astro Breakout Board for NVIDIA® Jetson TX2

In addition to the common features for the Astro this board offers:

- 2 x CSI

XBG206

Astro Breakout Board for NVIDIA® Jetson TX2i/TX2-4GB



ASG012	<i>ASG012 Astro Carrier Board Integrated Solution powered by NVIDIA® Jetson™ TX2i</i>
ASG012-01	The package consists of Astro Carrier Board (ASG012) integrated with NVIDIA® Jetson™ TX2i (900-83489-0000-000) with CTI-L4T BSP loaded (CMG508) + GMSL populated + Mimic (ASG001) + Breakout Board (XBG206) + Active Thermal (XHG302)



EXPERT JETSON TIPS

Additional Storage Capabilities



Elroy- Carrier for NVIDIA® Jetson TX2i/TX2

ASG002

- Head-to-Head Dual Mini-PCIe
- Dual half size or one single full length Mini-PCIe/mSATA expansion
- Dual x2 MIPI CSI-2 Video Input Connectors
- HDMI Video
- USB 3.0 and 2.0
- 1 x GbE
- 2 x RS-232/485
- 1 x microSD, SPI, I2C, GPIO
- Extended Temperature Range -40 C to +85 C (Elroy Carrier)
- Dimensions 87 x 50 mm



[Accessories](#)

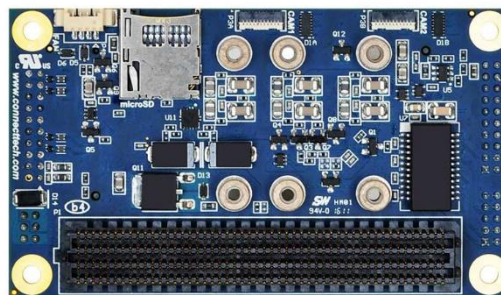
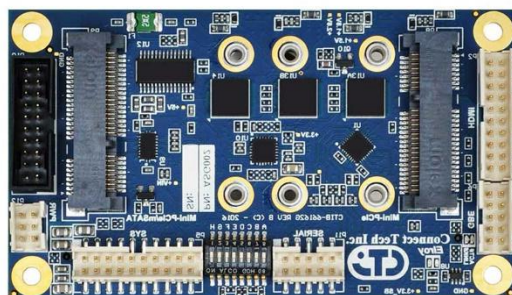
Designed to match the NVIDIA® Jetson TX2 and TX2i module form factor, Connect Tech's Elroy Carrier for [NVIDIA® Jetson TX2/TX2i](#) brings a low cost deployable Jetson TX2/TX2i Solution to the market.

Specialized for use in a small form factor rugged environment, with locking pin-header connectors, solder in standoffs, and industrial temperature range components, the Elroy is really going places.

ASG002

ASG002 Elroy Carrier Board Integrated Solution

ASG002-21 Elroy Carrier Board integrated with NVIDIA® Jetson™ TX2 (CMG503-21)



Orbitty- Carrier for NVIDIA® Jetson TX2i/TX2 Carrier

ASG003

Connect Tech's Orbitty Carrier for [NVIDIA® Jetson TX2, TX2i 4GB, TX2i](#) is designed to match the NVIDIA® Jetson TX2/TX2i module form factor. The Orbitty is fully equipped with 1x USB 3.0, 1x USB 2.0 OTG, 1x HDMI, 1x GbE, 1x microSD, 2x 3.3V UART, I2C, and 4x GPIO. Ideal for robotics and unmanned systems, as well as any small form factor rugged environment.

Orbitty completes Connect Tech's Jetson TX2 and TX2i product lines by providing our most affordable carrier yet. Get your Jetson™ TX2 module and Orbitty up and running quickly.

- 1x GbE, USB 3.0, USB 2.0, 1x HDMI, 1x MicroSD, 2x 3.3V UART, I2C, 4x GPIO
- +9V to +14V DC Nominal (+19V Peak)
- Extended Temperature Range: -40 C to +85 C (Orbitty Carrier)
- Dimensions: 87 x 50 mm



ASG003

**ASG003 Orbitty Carrier Board
Integrated Solution**

ASG003-21 Orbitty Carrier with NVIDIA® Jetson™ TX2 Flashed and Integrated (CMG503-21)



Accessories



OrbittyBox

ENC001

- Specifically designed for use with Jetson TX2 and Orbitty Carrier
- 2-Piece Metal Enclosure
- Weight: Enclosure + Fasteners – 113g
- (Orbitty, Module, Heatsink – 204g)
- Optional 2x SMA Antenna Connectors
- Dimensions WxHxD: 95,2 x 63 x 58.2 mm

Connect Tech's OrbittyBox easily turns the Orbitty carrier into a complete packaged [NVIDIA® Jetson TX2](#) system.

This two-piece metal enclosure is designed to house an Orbitty Carrier, an NVIDIA® Jetson TX2 module, and Connect Tech's active Heatsink. The enclosure is sold as an accessory, allowing it to be integrated with existing customer products. Its two-piece design allows for simple installation and assembly.

Case Study: Automated Marine Collision Avoidance System



Spacely- Carrier for NVIDIA® Jetson TX2i/TX2

Connect Tech's Spacely Carrier for [NVIDIA® Jetson TX2/TX2i](#) is an ideal product for unmanned vehicle applications, or any application where situational awareness is critical. Spacely enables users to simultaneously connect up to 6 MIPI CSI-2 cameras, as well as offering built-in expansion for a GPS/GNSS module. It includes a multi-I/O port specifically designed to allow easy connection to OEM Autopilots

Common features for all Spacely Carriers:

- Connect up to 6 MIPI CSI-2 Camera Inputs
- Tailored IO for easy connection to Pixhawk Autopilot
- 2x GbE, 1x uHDMI, 2x USB 3.0, 2x USB 2.0, 1x USB OTG
- 1x miniPCIe Slot, mSATA Slot, CAN 2.0b port
- 2x UART, I2C, SPI, 16 GPIO all at +3.3V IO
- Extended Temperature Range -40 C to +85 C (Spacely Carrier)



[Accessories](#)

ASG006 / ASG026

Spacely Carrier for TX2 up to 6 MIPI CSI-2 optional GPS/GNSS module.

ASG009 / ASG029

Spacely Carrier for TX2 up to 6 MIPI CSI with NEO-M8L GPS/GNSS module w/3D sensors

<https://connecttech.com/ftp/pdf/CTIU-00067.pdf>



Cogswell - Carrier for NVIDIA® Jetson TX2/TX2i

ASG007

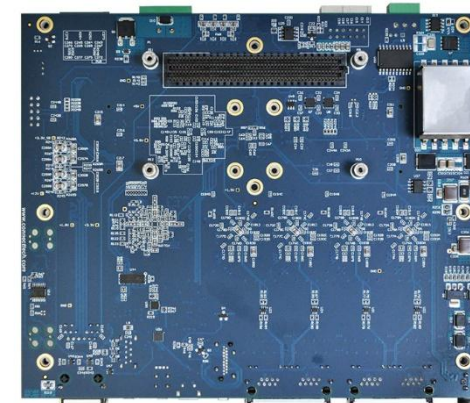
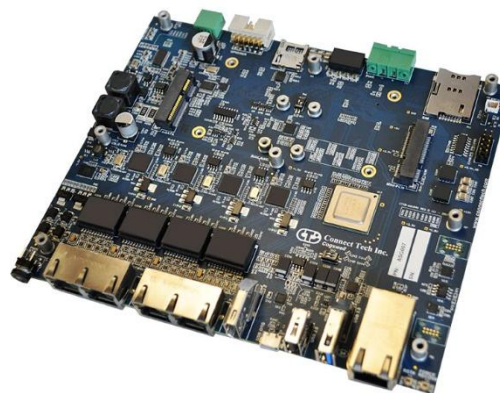
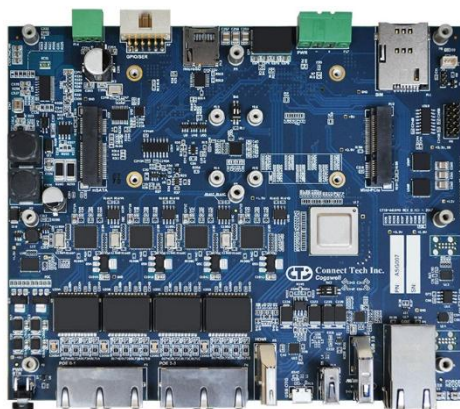
- 5 x Gigabit Ethernet Channels – 4 x PoE, 2 x PoE+ PSE Gigabit Ports
- Only a single +12V input required; No need for external 48V PoE power
- 1 x USB 3.0, 1x USB 2.0, 1x USB OTG, 2x RS-232, 1x miniPCle, 1x mSATA
- Extended Temperature Range: -20 C to +80 C
- Mounting option (Surface Edge Mount)



Specifically designed for use with GigE Vision Cameras. Allowing up to 5 Gigabit Ethernet cameras to be connected, 4 of which can be powered by on board Power over Ethernet. This system is ideal for Machine Vision applications.

Accessories

Connect Tech's Cogswell Carrier for [NVIDIA® Jetson TX2 and TX2i](#) is ideal for use in Gigabit Ethernet Vision applications. This product provides Gigabit Ethernet channels with built-in Power over Ethernet (PoE) sourcing capabilities, ideal for use with GigE Vision cameras.



Sprocket Carrier for NVIDIA® Jetson TX2/TX2i

ASG008

- Slimmest design possible in Z-axis – All components fit “under” TX2/TX2i module
- Extremely Small Size: 87 x 50 mm
- 1x USB OTG, 1 x4 lane MIPI CSI-2, 2x 3.3V UART, I2C, 4x GPIO
- +12V to +16V DC Input Range
- Extended Temperature Range -40 C to +85 C (Sprocket Carrier)



Connect Tech's Sprocket Carrier for [NVIDIA® Jetson TX2/TX2i](#) is designed to match the NVIDIA Jetson module form factor. This design provides our smallest and lowest profile solution yet. The Sprocket and Jetson TX2/TX2i stack can be mounted flat in the smallest of spaces, perfect for space constrained payloads such as that of a drone. Jump right into your next project with your Jetson TX2/TX2i module and Sprocket.

Accessories



NVIDIA® Jetson™ Solutions

How to overcome common NVIDIA® Jetson™ module integration challenges



Quasar - Carrier for NVIDIA® Jetson TX2/TX2i

ASG016



- 1x CAN, 1x 4-lane MIPI (I-PEX), 1x SATA
- 1x GbE, 2x USB 3.0, USB 2.0 OTG, 1x HDMI,
- 1x MicroSD, 2x 3.3V UART, I2C, 4x GPIO
- +9V – +14V DC Nominal (+19V Peak)
- Extended Temperature Range -40 C to +85 C (Quasar Carrier)
- Dimensions: 87 x 50 mm



[Accessories](#)

Connect Tech's **Quasar Carrier for NVIDIA® Jetson TX2/TX2 4GB/TX2i** is an update to the Orbitty Carrier, designed to match the NVIDIA Jetson TX2/TX2 4GB/TX2i module form factor. The Quasar design includes all the same connectors as the Orbitty (1x GbE, 1x microSD, 2x 3.3V UART, I2C, and 4x GPIO, 1x USB 2.0 OTG), with the addition of 2x USB 3.0 ports, 1x 4-lane MIPI (I-PEX), 1x CAN, an updated 1x HDMI 2.0 connector as well as a SATA 7-pin connector for storage while maintaining the extremely small 87 x 50 mm footprint.

Like the Orbitty, the Quasar is ideal for robotics, unmanned applications, or any small form factor rugged environment that require the addition of MIPI, CAN, SATA or HDMI 2.0 port. Quasar is the latest addition to the Connect Tech Jetson TX2, TX2 4GB and TX2i line of products offering a wide variety of connectors in a very small and affordable package.

Get up and running quickly with your Jetson module and Quasar.



Heatsinks

Connect Tech offers a variety of Heatsinks and thermal plates for each of its carrier boards. A carrier board requires no more than one. They are screw-mounted between the carrier board and the NVIDIA Jetson module. It is important to choose the right Heatsink or thermal plate for the application.

A customer would order a thermal plate when designing their own thermal solution, e.g. if they were planning to mount the module on the wall of an enclosure, which would allow them to use a much larger surface area for heat dissipation. Heat plates cannot be used with an active or passive Heatsink.

Heatsink Overview

CTI Thermal Solutions Jetson TX2i/TX2-4GB

XHG301 NVIDIA® Jetson™ TX2 4GB/TX2i Passive Heatsink
XHG302 NVIDIA® Jetson™ TX2 4GB/TX2i Active Heatsink

CTI Thermal Solutions Jetson TX2i/TX2-4GB

XHG303 NVIDIA® Jetson™ TX2 4GB/TX2i Passive Heatsink
XHG304 NVIDIA® Jetson™ TX2 4GB/TX2i Active Heatsink

CTI Thermal Solutions Jetson AGX Xavier

XHG305 NVIDIA® Jetson AGX Xavier™ Passive Heatsink
XHG306 NVIDIA® Jetson AGX Xavier™ Active Heatsink
XHG307 Liquid Cooling Block for NVIDIA Jetson AGX Xavier
XHG307-01 Liquid Cooling Development Kit

CTI Thermal Solutions Jetson Nano

XHG308 NVIDIA® Jetson Nano™ Passive Heatsink
XHG309 NVIDIA® Jetson Nano™ Active Heatsink
XHG310 NVIDIA® Jetson Nano™ Thermal Transfer Plate

CTI Thermal Solutions Jetson Xavier NX

XHG311 NVIDIA® Jetson Xavier™ NX Passive Heatsink
XHG312 NVIDIA® Jetson Xavier™ NX Active Heatsink
XHG313 NVIDIA® Jetson Xavier™ NX Thermal Transfer Plate
XHG314 NVIDIA® Jetson Xavier™ NX Active Heatsink

CTI Thermal Solutions Jetson TX2 NX

XHG316 NVIDIA® Jetson™ TX2 NX Thermal Transfer Plate
XHG317 NVIDIA® Jetson™ TX2 NX Passive Heatsink
XHG318 NVIDIA® Jetson™ TX2 NX™ Active Heatsink

CTI Thermal Solutions Jetson AGX Orin

XHG319 NVIDIA® Jetson™ AGX Orin Active Heatsink
XHG320 NVIDIA® Jetson™ AGX Orin Passive Heatsink
XHG321 Forge 10G PHY Finned Heatsink
XHG322 Forge 10G PHY Thermal Transfer Plate
XHG323 Thermal plate for NVIDIA® Jetson Orin™ NX (16GB)
XHG324 Passive Finned Heatsink for NVIDIA® Jetson Orin™ NX (16GB)



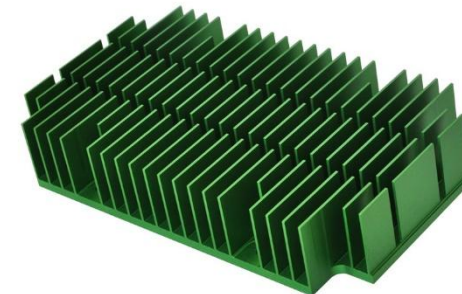
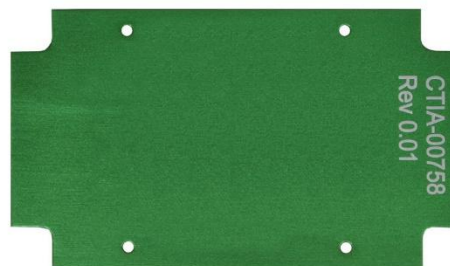
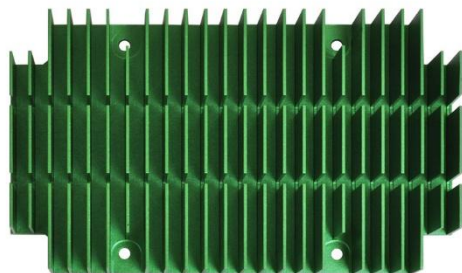
NVIDIA® Jetson™ TX2i/TX2-4GB Passive Heatsink

XHG301



The XHG301 Passive Heatsink dissipates the heat produced by the module through convection.

- Compatibility: NVIDIA Jetson TX2
- Weight: 50g
- Fin Space: 3 mm
- Thermal Resistance: 0,983 C/W
- Mounting Fasteners: M2.0X0.4, PPHMS, 4 mm long, S.S.
- Mounting Fastener Torque Rating: 1,5 in-lb
- Dimensions: 87 x 50 x 16 mm



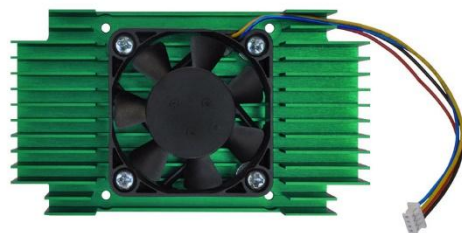
NVIDIA® Jetson™ TX2i/TX2-4GB Active Heatsink

XHG302



The XHG302 Active Heatsink dissipates the heat produced by the module through a fan

- Compatibility: NVIDIA Jetson TX2
- Weight: 59g
- Fan Connector: 4-pin Molex 51021-0400
- Mating Header: 4-pin Molex 53261-0471
- Fin Space: 3 mm
- Thermal Resistance: 1,244 C/W
- Mounting Fasteners: M2.0X0.4, PPHMS, 4mm long, S.S.
- Mounting Fastener Torque Rating: 1,5 in-lb
- Dimensions: 87 x 50 x 16 mm



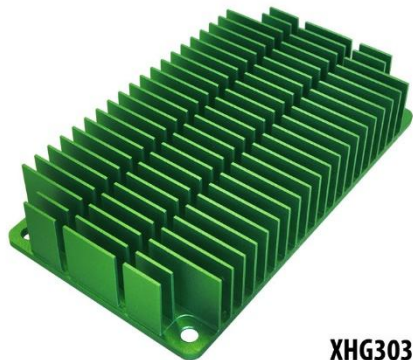
NVIDIA® Jetson™ TX2 4GB/TX2i Passive Heatsink

XHG303

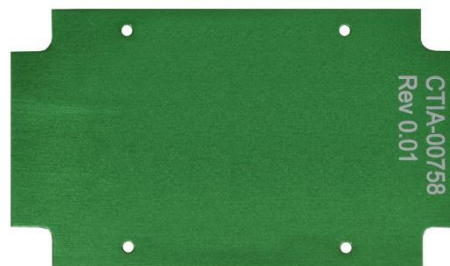


The XHG303 Passive Heatsink dissipates the heat produced by the module through convection.

- Compatibility: NVIDIA Jetson TX2 4GB / TX2i
- Weight: 50g
- Fin Space: 3 mm
- Thermal Resistance: 0,983 C/W
- Mounting Fasteners: M2.0X0.4, PPHMS, 4 mm long, S.S.
- Mounting Fastener Torque Rating: 1,5 in-ib
- Dimensions: 87 x 50 x 16 mm



XHG303

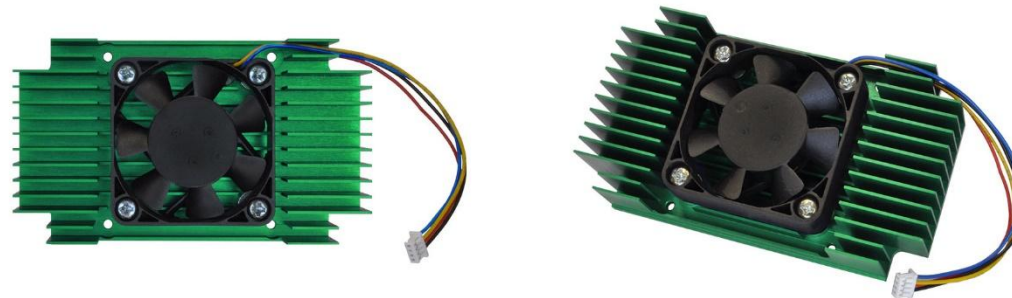


NVIDIA® Jetson™ TX2 4GB/TX2i Active Heatsink XHG304



The active Heatsink XHG304 dissipates the heat generated by the module via a fan.

- Compatibility: NVIDIA Jetson TX2-4GB / TX2i
- Weight: 59g
- Fan Connector: 4-pin Molex 51021-0400
- Mating Header: 4-pin Molex 53261-0471
- Fin Space: 3 mm
- Thermal Resistance: 1,244 C/W
- Mounting Fasteners: M2.0X0.4, PPHMS, 4 mm long, S.S.
- Mounting Fastener Torque Rating: 1,5 in-ib
- Dimensions: 87 x 50 x 16 mm



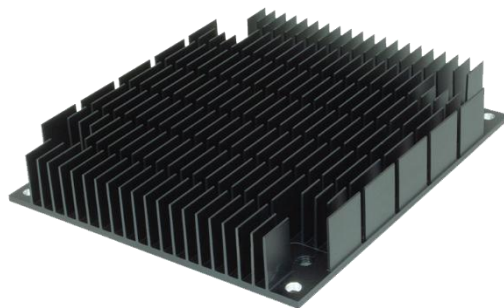
NVIDIA® Jetson AGX Xavier™ Passive Heatsink

XHG305



Designed to fit the NVIDIA® Jetson AGX Xavier™ modules this passive Heatsink dissipates the heat from the module by means of convection.

- Compatibility: NVIDIA Jetson AGX Xavier
- Thermal Resistance: 0,5 C/W
- Weight: 91g
- Mounting Fasteners: M3.0X0.5 PPHMS, 30mm long, S.S
- Mounting Fastener Torque Rating: 5,2 in-ib
- Dimensions: 100 x 87 x 16 mm



NVIDIA® Jetson AGX Xavier™ Active Heatsink

XHG306



Designed to fit the NVIDIA® Jetson AGX Xavier™ modules this active Heatsink dissipates the heat generated by the module via a fan.

- Compatibility: NVIDIA Jetson AGX Xavier
- Weight: 204g
- Fan Connector: 4-pin Molex 51021-0400
- Mating Header: 4-pin Molex 53261-0471
- Thermal Resistance: 0,5 C/W
- Mounting Fasteners: M3.0X0.5 PPHMS, 30 mm long, S.S
- Mounting Fastener Torque Rating: 5,2 in-lb
- Dimensions: 100 x 87 x 36,7 mm



Liquid Cooling Block for NVIDIA® Jetson AGX Xavier™

The Liquid Cooling Block is the only industrial grade water cooling thermal solution for the NVIDIA Jetson platform. Designed to attach directly to NVIDIA Jetson AGX Xavier's TTP, the Liquid Cooling Block provides thermal relief to the module's GPU, CPU, and memory components. Liquid Cooling is ideal for applications where sufficient airflow is unavailable, or any high-powered compute system that requires noise reduction or additional cooling. The Liquid Cooling Block can be plumbed into any size of radiator and has the flexibility of adjusting the inlet/outlet port selection.



Engineered for rugged and compact applications, the cooling block features a total of 8 low profile side ports that allow for versatile connectivity options. Optimized for even flow distribution, this Liquid Cooling Block will retain performance regardless of which position the inlet and outlet streams are oriented.

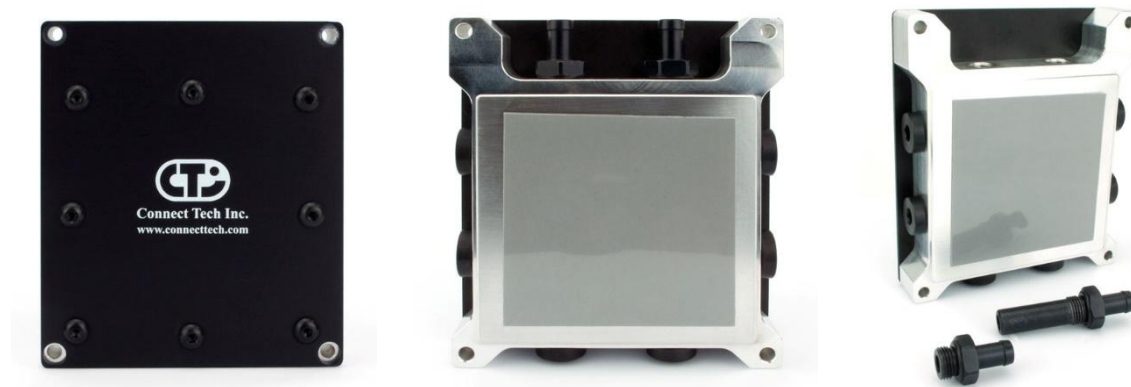
Liquid Block Specifications	
Compatibility	NVIDIA® Jetson AGX Xavier™ Production Module
Dimensions	100 x 87 x 18 mm (20,2 mm to top screws)
Input/Output Ports	8x customizable side ports for low profile usage • 2x ports per side, G1/8" threaded
Included Fittings	2x G1/8" 6 mm barb 6x G1/8" plug
Weight	231g
Mounting Hardware	Standoff: M3.0X0.5, 18 mm, QTY4 Spacer: M3.0, 4 mm, QTY4 Spacer: M3.0, 1 mm, QTY4 Screw: M3.0X0.5, PPHMS, 45 mm, QTY4 Thermal Pad: 60 x 60 x 1 mm
Mounting Fasteners	M3.0X0.5, PPHMS, length 45 mm
Fastener Torque Rating	5,2 in-lb
Available Integrations (for details refer to the Connect Tech website under Ordering information)	The Liquid Cooling Block can be integrated with the Rogue or Rogue-X Carrier Board. Optional assemblies come complete with a pre-installed, flashed NVIDIA Jetson AGX module which can be combined with user-preferred add-ons such as additional storage, WiFi, and Bluetooth options.



Liquid Cooling Block for NVIDIA Jetson AGX Xavier

XHG307

Industrial grade Liquid Cooling Block for production deployment. Comes equipped with thermal materials and mounting equipment to directly attach to the NVIDIA Jetson AGX Xavier TTP.



Liquid Cooling Development Kit

XHG307-01

The Liquid Cooling Development Kit is intended for laboratory testing only and comes with all materials needed for testing and verification. In addition to the liquid cooling block, the Development Kit also comes with tubing, reservoir, pump, fan, radiator, and coolant concentrate. As these additional components are commercially available, they are not recommended for production environments.

If you are looking for a complete production solution, The Liquid Cooling Block can be bundled with the [Rogue](#) or [Rogue-X](#) Carrier Board and supplied with the NVIDIA Jetson AGX Xavier module pre-installed and a choice of optional features such as Storage, Bluetooth and WiFi. CTI also flashes the module to enable a fast time-to-market. Contact us for further details.

LAB AND DEVELOPMENT AND TESTING

LIQUID BLOCK DEVELOPMENT KIT

The Liquid Cooling Development Kit comes supplied with all the materials needed for testing and verifying liquid cooling in a lab environment.

Included Components

- Liquid Cooling Block
- Reservoir & Pump (160 SPC PWM)
- Fan (500-2200rpm)
- Radiator (120 single)
- Rubber Tubing (2m)
- Coolant Concentrate (100mL)
- Clamps, assembly tools, and cables



NVIDIA® Jetson Nano™ Passive Heatsink

XHG308



Designed to fit the NVIDIA® Jetson Nano™ modules this passive Heatsink dissipates the heat generated by the module by means of convection.

- Compatibility: NVIDIA Jetson Nano
- Fin Space: 3mm
- Weight: 34g
- Mountain Fasteners: Alloy Steel M3.0X0.5, Ultra Low Profile 6 mm long
- Mountain Fasteners Torque Rating: 3,1 in-inb
- Dimensions: 61 x 40 x 16 mm



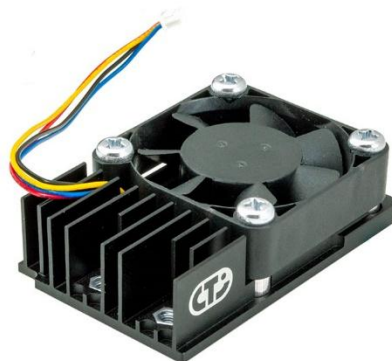
NVIDIA® Jetson Nano™ Active Heatsink

XHG309



The XHG309 unit was specifically developed for the NVIDIA® Jetson Nano™ modules and dissipates the heat generated by the module via a fan.

- Compatibility: NVIDIA Jetson Nano
- Fin Space: 3 mm
- Weight: 46g
- Mounting Fasteners: M3.0X0.5, Ultra Low Profile 6,0mm long, Alloy Steel
- Mounting Fasteners Torque Rating: 3,1 in-in
- Dimensions: 61 x 40 x 16 mm* / Note: *Screws of fan protrude past 16 mm



NVIDIA® Jetson Nano™ Thermal Transfer Plate

XHG310



Designed to fit the NVIDIA® Jetson Nano™ production modules. NVIDIA® Jetson Nano™ production module does not include a thermal transfer plate. With the XHG310, CTI offers a thermal transfer plate solution that users can integrate into a custom enclosure or to other interface material for further cooling.

- Compatibility: NVIDIA Jetson Nano
- Weight: 28g
- Mounting Fasteners: M3.0X0.5, Ultra Low Profile 6 mm long, Alloy Steel
- Mounting Fasteners Torque Rating: 3,1 in-inb
- Dimensions: 61 x 40 x 4,2 mm



NVIDIA® Jetson Xavier™ NX Passive Heatsink

XHG311



Designed to fit the NVIDIA® Jetson Xavier™ NX modules. The passive Heatsink dissipates the heat generated by the module by convection.

- Compatibility: NVIDIA Jetson Xavier NX
- Weight: 47g
- Mounting Fasteners: Shoulder Screw, M2.0X0.4, 3 mm Dia., 4mm Long Shoulder, Stainless Steel
- Mounting Fasteners Torque Rating: 1,5 in-lb
- Dimensions: 63 x 40 x 16 mm



NVIDIA® Jetson Xavier™ NX Active Heatsinks

XHG312 / XHG314 - Comparison

The NVIDIA® Jetson Xavier™ NX provides supercomputing power in a small footprint. As this module does not have integrated thermal solutions as standard, additional thermal considerations are required for all projects. To get your project off the ground, CTI has developed a selection of out-of-the-box thermal options to get you started in record time. There are two standard active Heatsinks for Xavier NX projects. Both are designed for the NVIDIA® Jetson Xavier NX™ modules; the XHG312 and the XHG314. Both dissipate the heat generated by the module via a fan. The differences between the specifications of the two Heatsink options for Xavier NX projects can be found in the Heatsink comparison table below.

- Compatibility: NVIDIA Jetson Xavier NX
- Aluminium Alloy black finish
- Weight: 57g
- Mounting Fasteners: Shoulder Screw, M2.0X0.4, 3mm Dia., 4 mm Long Shoulder, Stainless Steel + 1 Leaf Spring
- Mounting Fasteners Torque Rating: 1,5 in-lb
- Dimensions: 63 x 40 x 16 mm (Screws of fan protrude past 16 mm)

	XHG312 Connect Tech Active Heatsink	XHG314 NVIDIA Dev Kit Active Heatsink
Relief for GPU	✓	✓
Relief for SoC	✓	✓
Relief for Memory	✓	
Relief for Power Components	✓	
Conductivity	High-end TIM materials	One-time use thermal grease
Fan	40mm 6400 RPM	5500 RPM
Weight	57g	50g
Dimensions	63 x 40 x 16 mm (plus screw)	57.8 x 39 x 18 mm



NVIDIA® Jetson Xavier™ NX Active Heatsink

XHG312



The XHG312 is a high-end active Heatsink that offers maximum heat dissipation with the smallest possible footprint.

- Compatibility: NVIDIA Jetson Xavier NX
- Aluminium Alloy black finish
- Weight: 57g
- Mounting Fasteners: Shoulder Screw, M2.0X0.4, 3mm Dia., 4 mm Long Shoulder, Stainless Steel + 1 Leaf Spring
- Mounting Fasteners Torque Rating: 1,5 in-lb
- Dimensions: 63 x 40 x 16 mm (Screws of fan protrude past 16 mm)



XHG312



XHG312

[Cooling options for NVIDIA® Jetson Xavier™ NX projects](#)



NVIDIA® Jetson Xavier™ NX Thermal Transfer Plate

XHG313

The XHG313 is designed specifically for the NVIDIA® Jetson Xavier™ NX production module and can be integrated into a custom enclosure or other surface materials for further cooling.



- Compatibility: NVIDIA Jetson Xavier NX
- Aluminium Alloy black finish
- Weight: 30g
- Mounting Fasteners: Shoulder Screw, M2.0X0.4, 3 mm Dia., 4mm Long Shoulder, Stainless Steel
- Mounting Fasteners Torque Rating: 1,5 in-lb
- Dimensions: 63 x 38,8 x 4,7 mm

Note: NVIDIA® Jetson Xavier™ NX production module does not include an integrated thermal transfer plate out of the box.



NVIDIA® Jetson Xavier™ NX Active Heatsink

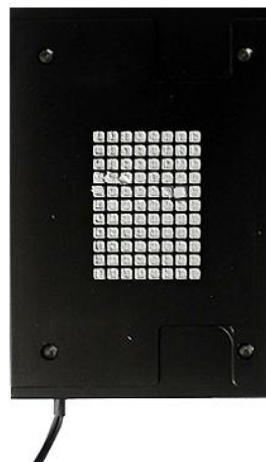
XHG314



The XHG314 is an active Heatsink for projects with non-complex thermal and spatial requirements. It was developed for the NVIDIA® Jetson Xavier NX™ modules. The active Heatsink dissipates the heat generated by the module via a fan.

- Compatibility: NVIDIA Jetson Xavier NX
- Weight: 50g
- Mounting Fasteners: Shoulder Screw, M2.0X0.4, 3 mm Dia., 4 mm Long Shoulder, Stainless Steel + 1 Leaf Spring
- Mounting Fasteners Torque Rating: 1,5 in-lb
- Dimensions: 57,8 x 39 x 18 mm

Note: NVIDIA® Jetson Xavier™ NX production module does not include an integrated thermal transfer plate out of the box.



NVIDIA® Jetson™ TX2 NX Thermal Transfer Plate

XHG316



Designed to fit the NVIDIA® Jetson™ TX2 NX module and protect the TX2 NX GPU die, the thermal transfer plate conduction-cools the heat produced by the module.

A customer would order this plate if designing their own thermal solution where they mount the module on the wall of an enclosure, for example, using a much larger surface area to dissipate heat. It cannot be used with an active or passive Heatsink.

- Compatibility: NVIDIA Jetson TX2 NX
- Aluminium Alloy black finish
- Weight: 35g (Heatsink only)
- Mounting Fasteners: (4X) Shoulder Screw M2.0X0.4, Dia. 3 mm, long 3 mm + (1X) leaf spring; mass/weight 3g
- Dimensions: 64 x 39 x 8 mm

Note: NVIDIA® Jetson Xavier™ NX production module does not include an integrated thermal transfer plate out of the box.



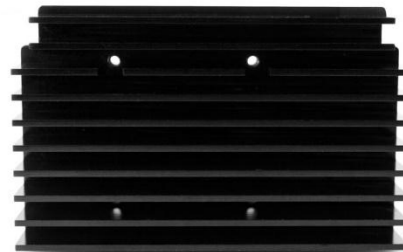
NVIDIA® Jetson™ TX2 NX Passive Heatsink

XHG317



Designed to fit the NVIDIA® Jetson™ TX2 NX module and protect the TX2 NX GPU die. It dissipates the heat generated by the module through convection.

- Compatibility: NVIDIA Jetson TX2 NX
- Aluminium Alloy black finish
- Weight: 44g (Heatsink only)
- Mounting Fasteners: (4X) Shoulder Screw M2.0X0.4, Dia. 3 mm, long 3 mm + (1X) leaf spring; mass/weight 3g
- Dimensions: 63 x 40 x 18 mm



NVIDIA® Jetson™ TX2 NX™ Active Heatsink

XHG318

The active Heatsink was specially developed for the NVIDIA® Jetson™ TX2 NX module and protects the TX2 NX GPU die. It dissipates the heat generated by the module by means of a fan.

- Compatibility: NVIDIA Jetson TX2 NX5
- Mounting Fasteners: Leaf spring, 4 x M2 screws
- Dimensions: 30 x 35 x 13,5 mm



Heatsinks for the NVIDIA® Jetson AGX Orin™

XHG319 XHG320 XHG321 XHG322

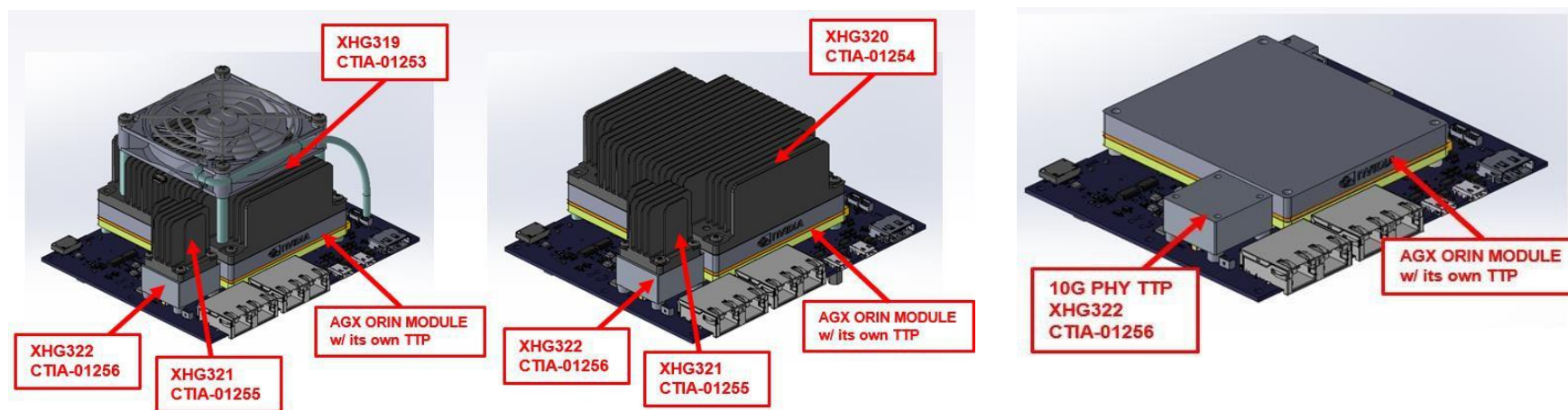
XHG319 AGX Orin Active Thermal

XHG320 AGX Orin Active Thermal

XHG321 Forge 10G PHY Finned Heatsink

XHG322 Forge 10G PHY Thermal Transfer Plate (TTP). *Note: This is pre-installed on all AGX201 / AGX201-XX builds*

Connect Tech recommends attaching both the 10G PHY TTP and the NVIDIA Jetson Module TTP to a surface that can provide adequate relief to keep the top surfaces of both TTPs below 80 C for conditioning cooling.



Heatsinks for the NVIDIA® Jetson Orin™ NX / Orin™ Nano

XHG323 Thermal plate for NVIDIA® Jetson Orin™ NX (16GB) / Orin™ Nano



The NVIDIA® Jetson Orin™ NX production module does not include a heat transfer plate. Connect Tech offers a thermal transfer plate that users may attach into a bespoke chassis or other interface material to help cool the Jetson Orin™ NX manufacturing module. Connect Tech offers a selection of heatsinks, allowing you to be up and running quickly.

- Mounting Fasteners: M3.0X0.5, Ultra Low Profile 6,0 mm long, Alloy Steel
- Mounting Fasteners Torque Rating: 3.1 in-ib
- Designed to fit the NVIDIA® Jetson Orin™ NX production modules
- NVIDIA® Jetson Orin™ NX production module does not include a thermal transfer plate
- CTI provides Thermal transfer plate that users can integrate into a custom chassis or to other interface material for further cooling
- Dimensions: 63mm x 39mm x 4,7mm



Heatsinks for the NVIDIA® Jetson Orin™ NX / Orin™ Nano

XHG324 Passive Finned Heatsink for NVIDIA® Jetson Orin™ NX (16GB) / Orin™ Nano



The NVIDIA® Jetson Orin™ Nano is a compact, potent computer for embedded applications and AI IoT that provides the power of contemporary AI. Connect Tech offers embedded system solutions and compact form factor carriers for the Jetson Orin™ Nano. Accessories that complement their products are available to aid in product selection. Quickly get operational with readily available thermal solutions.

The XHG324 Heat Sink, which is compatible with Jetson Orin™ NX modules, disperses heat via convection.

- Designed to fit NVIDIA® Jetson Orin™ NX modules
- Dissipates the heat produced by the module through convection
- Dimensions: 63 x 40 x 16 mm



Heatsinks for the NVIDIA® Jetson Orin™ NX / Orin™ Nano

XHG325 Active Thermal Heatsink for NVIDIA® Jetson Orin™ NX (16GB) / Orin™ Nano



NVIDIA® Jetson Orin™ NX delivers supercomputer performance in a small package. Because this module does not come with any integrated thermal solutions, all projects will necessitate additional thermal consideration. In order to get your project off the ground as quickly as possible, Connect Tech has designed a variety of easily available thermal alternatives.

- Designed to fit the NVIDIA® Jetson Orin NX™ modules
- Two standard Active Heat Sinks to choose from
- Dissipates the heat produced by the module through a fan
- Mounting Fasteners Torque Rating: 1.5 in-lb

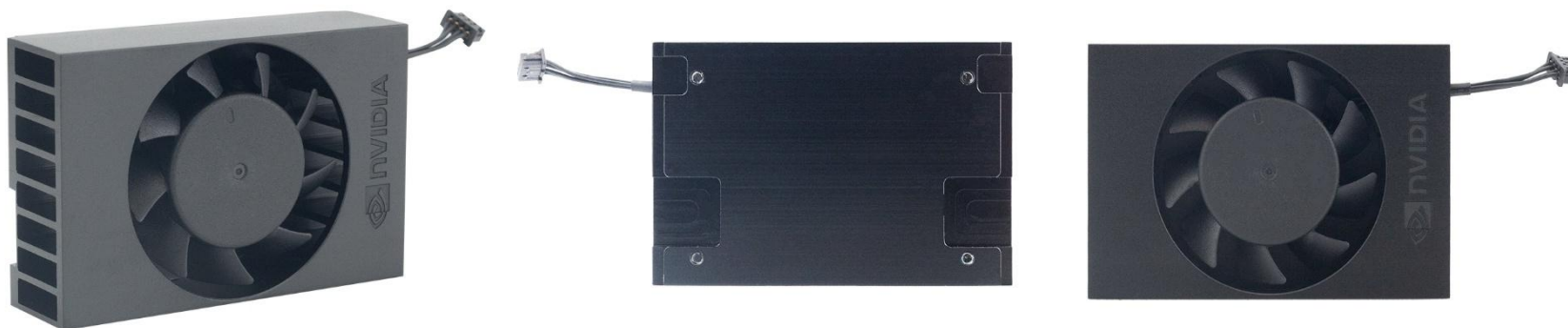


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ESG635	Anvil-RX – AGX Orin™
UAGX2U	Inference Server - AGX Orin™

EMBEDDED SYSTEMS – NVIDIA JETSON ORIN™ NX & ORIN™ NANO

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ESG605	Rudi-NX – Jetson Xavier™ NX
ESG606	Rudi-NX FPD-Link III – Orin™ NX
UAGX2U	Inference Server - AGX Orin™

EMBEDDED SYSTEMS – NVIDIA JETSON XAVIER™

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ESG603	Rudi-NX FPD-Link III – Xavier™ NX
ESG610	Rudi-AGX - AGX Xavier™
SGX001/SGX011	Sentry-X Rugged System – AGX Xavier™
VPX004	Graphite VPX

PART NUMBER OVERVIEW

PRODUCT CHANGE NOTIFICATIONS (PCN)

NVIDIA JETSON DEVELOPER KITS & MODULES



Part Number Overview

CORE01-02	CVS001	DXG302	ESG703	V7G001
CORE01-06	D7G001	ESG602	ESG704	V7G002
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CORE03-02	D7G004	ESG605	ESG710	V7G005
CORE03-05	D7G005	ESG606	ESG711	V7G006
CORE03-08	D7G006	ESG610	ESG712	VP004-01
CORE03-11	DXG201	ESG620	SGX001	VP004-02
CORE04-02	DXG202	ESG621	SGX001-05	VXG201
CORE04-05	DXG203	ESG630	SGX001-06	VXG202
CORE04-08	DXG204	ESG635	SGX011	VXG203
CORE04-11	DXG301	ESG701	UAGX2U	VXG204
		ESG702		VXG301
				VXG302



POLARIS & ANVIL

Embedded Excellence



Over the last year, Connect Tech launched two embedded systems: Anvil and Polaris. Though both are strong and feature-rich systems in their own right, they differ greatly in ruggedness, performance, and I/O. Designed for the strong NVIDIA Jetson AGX Orin and Jetson AGX Orin Industrial modules, Anvil; Polaris was built for the sturdy Jetson Orin NX and Orin Nano. Rated IP67, Polaris's companion is ready for its own tough version. While Polaris offers 16GB, Anvil offers up to 64GB. While Anvil lets for 8x GMSL camera in, Polaris offers 4x GMSL connections.

As an introduction to both Embedded Systems, Connect Tech has prepared two informative video presentations (*To view these, click on the camera symbols below*):



The Anvil Embedded System for NVIDIA Jetson AGX Orin Industrial

What industries are Anvil and Polaris best suited for?



Polaris for Orin NX

Understandably, Anvil and Polaris are both suited for a wide range of applications across numerous industries. See the list of targeted applications below.

[COMPARISON CHART](#)



Essential EdgeAI- Low-Cost Network Node for AGX Orin

CORE01 / CORE02

Essential EdgeAI solutions are designed for generative AI and AI-enabled video analytics at scale. Each system supports active or passive thermal management and incorporates USB 3.2, Gigabit Ethernet, an NVMe M.2 M-Key 2280 storage device, and a wide input power range. While the Essential EdgeAI network nodes are a low-cost option, they additionally include the Connect Tech Board Support Package (BSP) support, which ensures that large-scale installations go smoothly from start to finish.



- Get your pick of the NVIDIA® Jetson Orin™ Nano, Jetson Orin™ NX, or Jetson AGX Orin™ pre-integrated solutions.
- Choice of Active and Passive Thermal Cooling
- Includes key interfaces: USB 3.2, GbE, and UART
- Scalable AI solution
- Small footprint

CORE - Essential EdgeAI integrated with NVIDIA® Jetson AGX Orin™				
Part No.	Jetson module	Thermal Cooling options		NVMe
		Passive	Active	
CORE01-03	AGX Orin 32GB		X	1TB
CORE03-05	AGX Orin 16GB		X	0,5TB

Not the perfect fit? Engage with Jetson experts to guarantee successful large deployment.



CORE - Essential EdgeAI Recommended cables/accessories	
Part No.	Description
<i>Cabling</i>	
CBG788	Serial Debug Cable, USB-UART 3.3V Cable
<i>Power Adapter</i>	
MSG119	Core Edge AI - Power Supply, Jetson AGX Orin variant
MSG120	Core Edge AI - Power Supply, Jetson Orin NX/Nano variant



Essential EdgeAI- Low-Cost Network Node for Orin NX/Nano

CORE03 / CORE04

Essential EdgeAI solutions are designed for generative AI and AI-enabled video analytics at scale. Each system supports active or passive thermal management and incorporates USB 3.2, Gigabit Ethernet, an NVMe M.2 M-Key 2280 storage device, and a wide input power range. While the Essential EdgeAI network nodes are a low-cost option, they additionally include the Connect Tech Board Support Package (BSP) support, which ensures that large-scale installations go smoothly from start to finish.



- Get your pick of the NVIDIA® Jetson Orin™ Nano, Jetson Orin™ NX, or Jetson AGX Orin™ pre-integrated solutions.
- Choice of Active and Passive Thermal Cooling
- Includes key interfaces: USB 3.2, GbE, and UART
- Scalable AI solution
- Small footprint

Main Units		
P/N	Jetson Module	NVMe
CORE03-02	NVIDIA® Jetson Orin™ NX 8GB, Active	0.5TB
CORE03-05	NVIDIA® Jetson Orin™ NX 16GB, Active	0.5TB
CORE03-08	NVIDIA® Jetson Orin™ Nano 4GB, Active	0.5TB
CORE03-11	NVIDIA® Jetson Orin™ Nano 8GB, Active	0.5TB
CORE04-02	NVIDIA® Jetson Orin™ NX 8GB, Passive	0.5TB
CORE04-05	NVIDIA® Jetson Orin™ NX 16GB, Passive	0.5TB
CORE04-08	NVIDIA® Jetson Orin™ Nano 4GB, Passive	0.5TB
CORE04-11	NVIDIA® Jetson Orin™ Nano 8GB, Passive	0.5TB

Cables and accessories

CBG788 Serial Debug Cable, USB-UART 3.3V Cable

MSG120 Power Supply, Jetson Orin NX/Nano variant



Not the perfect fit? Engage with Jetson experts to guarantee successful large deployment.



Rudi-NX GMSL Embedded System

Powered by NVIDIA® Jetson Xavier™ NX

ESG602

- Extremely small footprint: 135 x 50 x 105 mm
- GMSL, USB 3.0, USB 2.0, CAN 2.0b, USB OTG, RS-485, I2C, GPIO, SPI, PWM
- 1x NVMe (PCIe x4, 2280), 1x SD card slot
- Operating Temperature Range: -20 to +80 C



Connect Tech's Rudi-NX Embedded System utilizes the new NVIDIA® Jetson Xavier™ NX, the World's Smallest AI Supercomputer. Delivering up to 21 TOPS of performance in 15W. With 384 CUDA Cores, 48 Tensor Cores, and 2 NVDLA engines, it can run multiple modern neural networks in parallel and process high-resolution data from multiple sensors simultaneously.

The Rudi-NX enables multiple vision inputs including up to 4x GMSL (MIPI CSI-2) Camera inputs, 4x USB 3.0 ports and 2x Gigabit Ethernet ports. Additional connectivity via CAN, UARTs, RS-485, I2C, SPI, and GPIO.

Important Note: The ESG602 series has no active fans installed. All ESG602 Rudi Embedded units that come pre-installed with NVMe have a passive thermal plate and a different base plate other than the standard ESG602-01. If NVMe is added later to an ESG602-01, then the customer is responsible to finding their own thermal solution.



Rudi-NX GMSL Embedded System with NVIDIA® Jetson Xavier™ NX

Available options

Rudi-NX GMSL Embedded System					
Part No.	Rudi-NX GMSL System	Jetson Xavier NX 16GB	NVMe	WiFi/BT	EMEA LTE
ESG602-01	X	X			
ESG602-04	X	X	1TB	X	
ESG602-07	X	X	1TB		X
ESG602-08	X	X	1TB	X	X
ESG602-19	X	X	1TB		

The above integrated solutions are for the EMEA region, for other regions, please contact us. Not the perfect fit? Contact us to engage with Connect Tech's Jetson experts to guarantee successful large-scale deployment.



Rudi-NX GMSL Embedded System Accessories

Part No.	Description
CBG341	Quad FAKRA GMSL Cable, 1 metre length
MSG067	Rudi Embedded System External Mounting Brackets (2 Brackets included). No additional mounting HW is required
MSG085	Power Supply 19V 120W AC/DC External Desktop PSU (Class I) with CBG315 Input Power Cable and CBG411 4-pin DIN to 4-Pin Mini-Fit Jr. suitable for Rogue, Rudi-NX and Rudi-AGX.
MSG093	WiFi/BT Antenna
MSG094	LTE Antenna
MSG095	GPS Active External Antenna with 3m RG174 Cable + SMA Male Connector
PAR502	WiFi Modules (802.11) Intel Dual Band Wireless-AC 7265



Rudi-NX FPD-Link III – Embedded System with NVIDIA® Jetson Xavier™ NX ESG603

- Extremely small footprint: 135mm x 50mm x 105mm
- 4x FPD Link, USB 3.0, USB 2.0, CAN 2.0b, USB OTG, RS-485, I2C, GPIO, SPI, PWM
- 1x NVMe (PCIe x4, 2280), 1x SD card slot
- Operating Temperature Range: -20 to +80 C

The Rudi-NX from Connect Tech is the ultimate Edge AI computing device for cutting-edge, compute-intensive applications. It is capable of delivering up to 21 TOPS of performance in 15W. It can run many current neural networks in parallel and analyse high-resolution data from multiple sensors at the same time thanks to its 384 CUDA Cores, 48 Tensor Cores, and 2 NVDLA engines.

The Rudi-NX supports up to four GMSL (MIPI CSI-2) camera inputs, four USB 3.0 ports, and two Gigabit Ethernet interfaces. CAN, UARTs, RS-485, I2C, SPI, and GPIO provide further connectivity.



Polaris Embedded System with NVIDIA® Jetson Orin™ NX ESG604

- IP67 Rated, Actively Cooled
- Rugged M12: 2x GbE, 2x CAN, GPIO
- Wide range isolated power input (+18V – +48V)
- 2x USB3.1
- 4x GMSL2 via sealed FAKRA
- 4G/5G/LTE, WiFi/BT, GNSS, M.2 2280 NVME M-Key
- Operating Temp.: -20 to +80 C
- Dimensions: 285 x 150 x 70 mm



The robust Polaris system, powered by the Jetson Orin™ NX and designed for robotics, smart cities, and autonomous machines, offers a wide range of connectivity in an IP67-rated rugged chassis.



Polaris Embedded System with NVIDIA® Jetson Orin™ NX

ESG604 - Polaris Embedded System with NVIDIA® Jetson Orin™ NX module						
Part No.	Jetson module	Thermal Cooling options		NVMe	WiFi	LTE
		Passive	Active			
ESG604-1C	Orin NX 16GB		X	2TB		
ESG604-1D	Orin NX 16GB		X	2TB	WiFi	

ESG604 - Polaris Embedded System - Recommended Optional Accessories	
Part No.	Description
<i>Power Adapter</i>	
MSG110	Polaris Power Cable Assembly, 48VDC 200W. Universal IEC 320-C14 AC input.

Recommended Antennas		
Type	Part No.	Manufacturer
LTE/WiFi/GNSS	MA850.A.LBICG.002	TAOGLAS
5G/LTE/GNSS	YB0007AA	Quetel
LTE	TG.66.0723	Taoglas
WiFi	GW.05.AE23	Taoglas
GNSS	AA.105.301621	Taoglas



Rudi-NX GMSL – Embedded System with NVIDIA® Jetson Orin™ NX ESG605

- 4x GMSL, USB 3.0, USB 2.0, CAN 2.0b, USB OTG, RS-485, I2C, GPIO, SPI, PWM
- 1x NVMe Expansion (M.2 key - PCIe x4, 2280)
- Operating Temperature Range: -20 to +80 C
- Extremely small footprint: 135mm x 50mm x 105mm

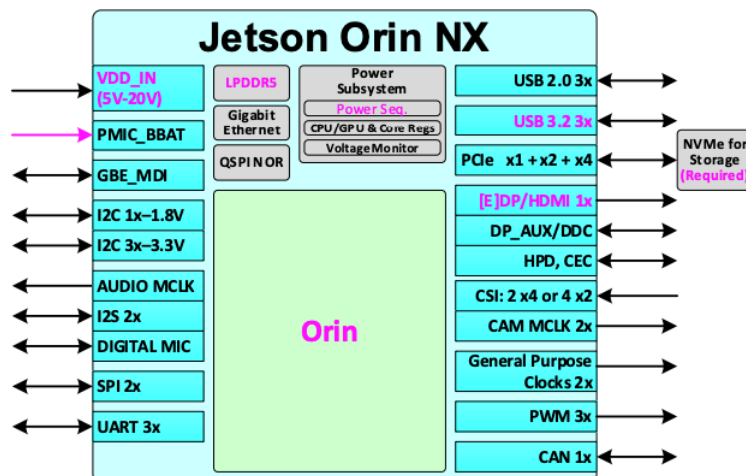


The Rudi-NX from Connect Tech is the pinnacle of Edge AI computing for cutting-edge, computationally demanding applications. It can give up to 100 TOPS of performance in 15W when powered by NVIDIA® Jetson Orin™ NX. It can process high-resolution data from numerous sensors at once and run several contemporary neural networks in parallel thanks to its 1024 CUDA Cores, 32 Tensor Cores, and two NVDLA v2 engines.

Up to four GMSL (MIPI CSI-2) camera inputs, four USB 3.0 ports, and two Gigabit Ethernet ports are all supported by the Rudi-NX. Further communication through RS-485, I2C, SPI, GPIO, CAN, UARTs, and CAN.

Note: The User Manual for this product has not been released yet. Please contact us for further information and to request the link when it has been published.

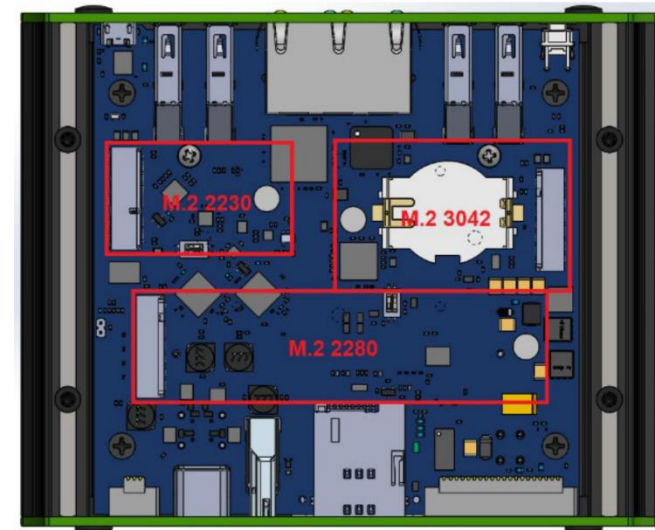
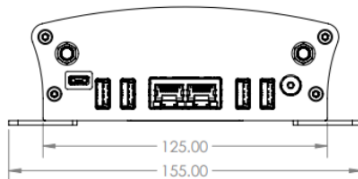
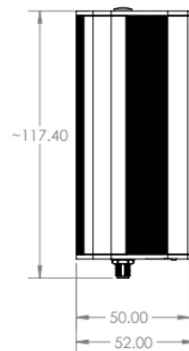
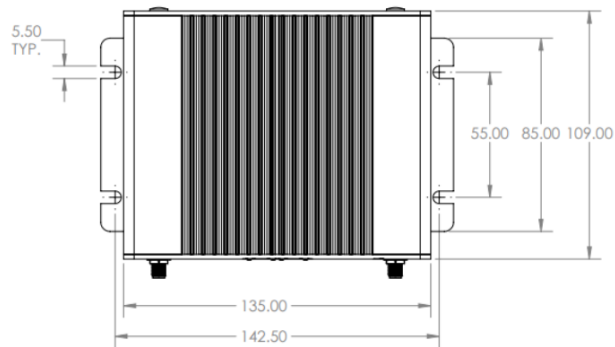
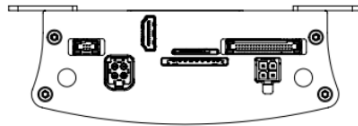
Caution: The Jetson Orin NX Block Diagram, published by NVIDIA, illustrates what connectors the NX Orin offer. Since these may differ from those offered by Connect Tech's Carrier Board, please consult the User Manual for exact details.



ESG605 Rudi-NX GMSL for Orin NX

The Rudi NX for Orin NX contains thermocouples designed specifically for the Rudi. The housing acts as a thermal, and there is also an internal heat transfer plate that transfers heat from the internal components to the Rudi housing.

These are different from our board level active and passive thermostats that you can find on Connect Tech's website.



ESG605 Rudi-NX GMSL for Orin NX

ESG605 - Rudi-AGX Embedded System with NVIDIA® Jetson AGX Xavier™ module						
Part No.	Jetson module	Thermal Cooling options		NVMe	WiFi	LTE
		Passive	Active			
ESG605-03	Orin NX 8GB			1TB	WiFi	
ESG605-19	Orin NX 16GB			1TB		
ESG605-20	Orin NX 16GB			1TB	WiFi	
ESG605-21	Orin NX 16GB			2TB		
ESG605-24	Orin NX 16GB			1TB	WiFi	EMEA
ESG605-26	Orin NX 16GB			2TB	WiFi	EMEA

ESG605 - Rudi-AGX Embedded System - Recommended Optional Accessories	
Part No.	Description
<i>Cabling</i>	
CBG341	Quad FAKRA GMSL1/2 Cable
CBG408	Rudi-AGX Power Connector Matin Cable
CBG629	GPIO Cable - 40-pin Tiger-Eye to Unterminated Flying Leads - SFSD-20-28C-G-12.00-SR
CBG814	CAN Cable - SFSD-03-28C-G-12.00-SR
<i>Diverse</i>	
MSG067	Mounting Brackets
MSG093	WiFi/BT Antenna
MSG094	LTE Antenna
<i>Power Adapter</i>	
MSG085	Rudi-AGX AC/DC Power Supply



Rudi-NX FPD-Link III – Embedded System with NVIDIA® Jetson Orin™ NX ESG606

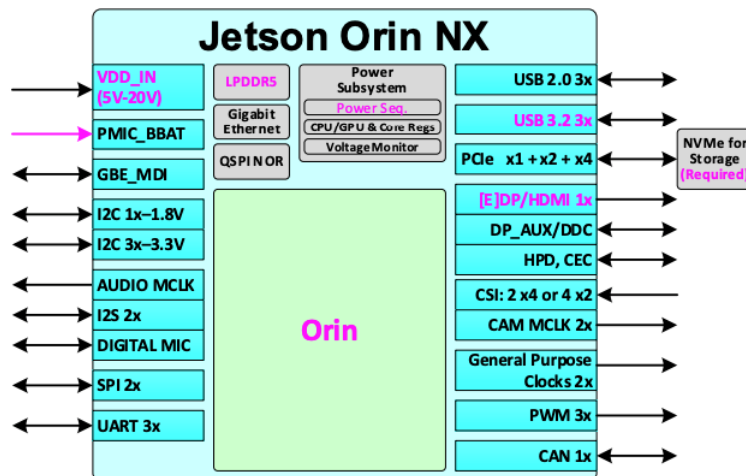
- 4x FPD Link, USB 3.0, USB 2.0, CAN 2.0b, USB OTG, RS-485, I2C, GPIO, SPI, PWM
- 1x NVMe Expansion (M.2 key - PCIe x4, 2280)
- Operating Temperature Range: -20 to +80 C
- Extremely small footprint: 135mm x 50mm x 105mm



For cutting-edge, computationally demanding applications, Connect Tech's Rudi-NX represents the apex of edge AI computing. When powered by NVIDIA® Jetson Orin™ NX, it can deliver up to 100 TOPS of performance in 15W. Its 1024 CUDA Cores, 32 Tensor Cores, and two NVDLA v2 engines enable it to handle high-resolution data from several sensors simultaneously and run several modern neural networks in parallel.

The Rudi-NX supports up to four GMSL (MIPI CSI-2) camera inputs, four USB 3.0 ports, and two Gigabit Ethernet interfaces. Additional communication through CAN, UARTs, RS-485, I2C, SPI, GPIO, and SPI.

Note: The User Manual for this product has not been released yet. Please contact us for further information and to request the link when it has been published.



Xavier powered Rudi-AGX

ESG610



The Rudi AGX Embedded System is a full-featured and thermally optimized, fan-less embedded system can instantly deploy any advanced AI application.

As NVIDIA® Jetson's largest hardware partner Connect Tech is constantly striving to develop off-the-shelf solutions that support the Jetson community's production goals. As the most powerful SoC in the Jetson line-up, the AGX Xavier empowers customers to deploy state-of-the-art and computationally heavy AI workloads at the Edge. Today we're unveiling our latest commercially available edge device: Rudi-AGX.

Rudi-AGX unleashes the full potential of the Jetson AGX Xavier module. It is capable of running AI programs at Maximum Performance (MAX-N) while maintaining a safe operating temperature. Rudi-AGX is the edge device designed to seamlessly deploy the next generation of autonomous vehicles, smart city applications, and intelligent video solutions.

With a AGX Xavier SoM embedded, Rudi-AGX features a Volta GPU with 512 CUDA® cores, 64 Tensor Cores, and capable of achieving an AI performance of 32 TOPs. Not all AGX Xavier systems are built the same. Rudi-AGX's thermal optimization allows access to the module's full AI performance capabilities, making it the AI Edge solution compute-intensive applications rely on.



Rudi-AGX Embedded System Solutions

Designed to accommodate sensor heavy applications, Rudi-AGX provides the ability to directly connect eight GMSL cameras, expand storage with NVMe or an SD card, and utilize a video capture card. Connectivity will not be a problem with WiFi, Bluetooth, and LTE slots, as well as two GbE ports available. This feature rich edge device also comes equipped with 6x GPIO, 4x USB 3.0, 2x UART, 2x I2C, 2x SPI, and an RS-485 connector. Rudi-AGX is ready for instant field deployment with any program developed using NVIDIA's JetPack SDK or deep learning toolkit application.

Don't sacrifice AI performance due to thermal limitations. Rudi-AGX will not throttle performance within the operating temperature range when running in 30W mode with 0 CFM airflow, or with 125 CFM airflow at MAX-N.

ESG610 - Rudi-AGX Embedded System with NVIDIA® Jetson AGX Xavier™ module					
Part No.	Jetson module	Thermal Cooling options		NVMe	WiFi
		Passive	Active		
ESG610-01	AGX Xavier				
ESG610-03	AGX Xavier			1TB	

ESG610 - Rudi-AGX Embedded System - Recommended Optional Accessories	
Part No.	Description
<i>Cabling</i>	
CBG341	Quad FAKRA GMSL1/2 Cable
CBG408	Rudi-AGX Power Connector Matin Cable
CBG629	GPIO Cable - 40-pin Tiger-Eye to Unterminated Flying Leads - SFSD-20-28C-G-12.00-SR
CBG814	CAN Cable - SFSD-03-28C-G-12.00-SR
<i>Diverse</i>	
MSG067	Mounting Brackets
MSG093	WiFi/BT Antenna
MSG094	LTE Antenna
<i>Power Adapter</i>	
MSG085	Rudi-AGX AC/DC Power Supply



Anvil Embedded System with NVIDIA® Jetson AGX Orin

ESG620 ESG621

Rudi-AGX Orin unleashes the full potential of the NVIDIA® Jetson AGX Orin™ module, an Industrial Embedded AI system ideal for a range of Edge Computing applications.

Features:

- Compatibility: NVIDIA® Jetson AGX Orin™ 32Gb or 64GB Module
- Option for either Active (ESG620) or Passive (ESG621) cooling
- Networking: 2x 10GBASE-T (10G Ethernet) | 1000BASE-T (1G Ethernet)
- 1x DisplayPort
- Camera Inputs: 1x 16-Lane MIPI Expansion Connector
- Interface directly to a range of MIPI CSI, GMSL2 r FPD-Link III image sensors.
- USB: 1x USB 3.2 Ports (Type-C – OTG Capable), 1x USB 3.2 Ports (Type-C)
- Storage: 1x Micro SD, 2x NVMe M.2 Key M Slots
- UART: 2x @ 3.3V levels UART1 and UART2 | 2x RS-232/485 UARTs
- I2C/SPI: 2x I2C Channel @ 3.3V IO | 2x SPI Channel @ 3.3V IO
- CAN: 2x CAN 2.0b Non-Isolated Port
- Input Power: +10 to 36V DC Wide Input Power (6-pin Mini-fit Jr. Connector)



- GPIO: 4x GPI, 4x GPO User Expansion:
1x M.2 Key E 2230 Wifi/BT (PCIe/USB2)
1x M2 Key B 3042/3052 (LTE/5G – USB3) with Micro SIM
- Buttons: Power, Reset, Recovery
Tactile Buttons as well as fine pitch pin header connector)
- RTC Battery: 3-pin Picoblade connector to accept CTI battery cable assembly
- Dimensions: 155 x 125mm
- Operating Temperature: -40 to +85C



With its power-efficient and feature-rich design, Anvil is ready to handle even the most compute-intensive AI applications. With this cutting-edge NVIDIA® Jetson AGX Orin™ supercomputer, you can easily deploy your next generation autonomous vehicle, smart city application, or intelligent vision solution. Custom integrations with external storage, LTE, 5G, and WiFi/Bluetooth are also available via Intel 8265.



Anvil Embedded System with NVIDIA® Jetson AGX Orin

Anvil System Embedded System Configuration options								
Part No.	Anvil System	AGX Orin 32GB	Cooling		WiFi5/BT	SSD	EMEA LTE	GMSL JCB002
			Active	Passive				
ESG620-ORT	X	X	X		WiFi5	1TB	X	X
ESG620-ORU	X	X	X		WiFi5	2 x 1TB	X	X
ESG620-ORV	X	X	X		WiFi5	12TB	X	X
ESG620-ORW	X	X	X		WiFi5	2 x 2TB	X	X
ESG621-ORT	X	X		X	X	1TB	X	X
ESG621-ORU	X	X		X	X	2 x 1TB	X	X
ESG621-ORV	X	X		X	X	2TB	X	X
ESG621-ORW	X	X		X	X	2 x 2TB	X	X

ESG620/621 - Anvil Embedded System for AGX Orin
- Recommended cables/accessories

Part No.	Description
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<i>Cabling</i>	
<u>CBG136</u>	CR2032 RTC Battery w/ 3-pin Connector Cable Assembly - 6032101013, 70mm
CBG341	Quad FAKRA GMSL1/2 Cable
<i>Diverse</i>	
MSG067	Mounting Brackets
MSG093	WiFi/BT Antenna
MSG094	LTE Antenna
<i>Power Adapter</i>	
MSG103	PSU 6pin 12V 250W (CTI sourced power brick)

Sentry-X2 MIL-Rugged System

Powered by NVIDIA® Jetson AGX Orin™ Industrial

ESG630



- 2x 3G-SDI/HD-SDI/SDI Inputs
- 2x 3G-SDI/HD-SDI/SDI Outputs
- Up to 4TB NVMe Storage
- 3x Ethernet Ports: 10GbE, 2.5GbE, 1GbE
- Tested to IP67, MIL-STD-810H



ESG630 - Sentry-X2 Embedded System integrated with NVIDIA® Jetson AGX Orin™ Industrial Module						
Part No.	Jetson module	Thermal Cooling options		NVMe	SDI Camera Connectors	MIL-STD-1553
		Passive	Active			
ESG630-02	AGX Orin 64GB Ind.	X		2TB	4x 3G-SDI inputs	
ESG630-11	AGX Orin 64GB Ind.	X		2TB	4x 3G-SDI inputs	

Powered by the NVIDIA® Jetson AGX Orin™ Industrial module, Sentry-X2 is a MIL-Rugged system. ESG630 Sentry-X2 is best suited for avionic applications.

The Sentry-X2 is a MIL-SPEC certified artificial intelligence system for tactical edge computing, built for mission-critical applications in challenging situations. A 2048-core GPU with 248 TOPS, the NVIDIA® Jetson AGX Orin™ Industrial is perfect for sophisticated AI and machine learning applications. The Sentry-X2 has two 3G-SDI/HD-SDI/SDI inputs and two 3G-SDI/HD-SDI/SDI outputs, making it appropriate for complicated vision systems. It also has two USB 3.2 ports, 10Gb, 2.5Gb, and 1Gb Ethernet, and a variety of I/O choices.

Sentry-X2 is made to satisfy the exacting standards of heavy industrial, military, and aerospace applications. It is tested to MIL-STD criteria for stress and vibration and uses IP67 certified D38999 connections for data integrity.



Anvil-RX Rugged System with NVIDIA® Jetson AGX Orin™

ESG635



Anvil-RX elevates tough AI and powerful computing performance to new heights.

Connect Tech's Anvil-RX is a rugged embedded system that uses the NVIDIA® Jetson AGX Orin™. This powerful edge system is fully IP67 protected and comes with M12 and sealed PC ports, making it ideal for mission-critical applications in hostile locations. The Anvil-RX is best suited land-based vehicles, Autonomous Mobile Robot (AMR), Automated Guided Vehicles (AGVs) in particular in agriculture, and industrial applications. For MIL STD please contact us.

[Request Manual](#)

- IP67 Rated
- Rugged M12 Connectors
- 8x GMSL2 Camera Inputs
- Up to 2x NVMe (2/4/8TB)
- 2x USB 3.2, 2x CAN, HDMI, UART, GNSS
- Storage: 64GB eMMC (on Jetson Modules) and up to 2 x NVMe (2/4/8TB)
- Dimensions: 279 x 214 x 145mm



- Operating Temp.: -40 to +65 C



Anvil-RX Rugged System with NVIDIA® Jetson AGX Orin™

ESG635 - Anvil-RX Embedded System integrated with NVIDIA® Jetson AGX Orin™								
Part No.	Jetson module	Thermal Cooling options		NVMe	WiFi6	5G	RTK/GNSS	GMSL Camera Connectors
		Passive	Active					
ESG635-01E	AGX Orin 64GB	X		2TB				
ESG635-09J	AGX Orin 64GB	X		2TB				X
ESG635-09P	AGX Orin 64GB	X		2TB	X			X
ESG635-0A3	AGX Orin 64GB	X		2TB	X	X		X
ESG635-0AU	AGX Orin 64GB	X		4TB	X	X	X	X
ESG635-0C6	AGX Orin 64GB Ind.	X		4TB	X	X	X	X

ESG635 - Embedded Systems - Recommended cables/accessories	
Part No.	Description
<i>Cabling</i>	
CBG756	Anvil-RX CAN Cable (M12 5-Pin)
CBG757	Breakout/Peripherals End - Connector Type Flying Lead Anvil-RX I/O Cable: I2C, SPI (M12 8-Pin)
CBG758	Anvil-RX I/O Cable: GPIO (M12 12-Pin)
CBG759	Anvil-RX Flying Lead (M12 5-Pin)
<i>Diverse</i>	
MSG093	WiFi/BT Antenna
MSG094	LTE Antenna
MSG114	Anvil-RX Dust Cap Kit
<i>Power Adapter</i>	
MSG116	Anvil-RX AC/DC Power Supply



Array Servers

Inference Server, Powered by NVIDIA® Jetson AGX Orin™

UAGX2U

[Request Manual](#)


- 12x 275 TOPS, 2048-core NVIDIA® Ampere™ GPU and 64 Tensor Cores
- 4x 10G SFP+ uplink capability
- Supports External NVMe Storage
- 2U ATX style redundant power supply
- Operating Temperature: 0°C to +50°C



UAGX2U - NVIDIA® Jetson AGX 2U Inference Server with 12x AGX Orin™ 32GB Modules			
Part No.	Jetson module	Built in Cooling	NVMe
UAGX2U-07	AGX Orin 32GB	X	12 x 1TB
UAGX2U-13	AGX Orin 32GB	X	12 x 1TB
UAGX2U-16	AGX Orin 32GB	X	12 x 1TB
UNGX2U-10	AGX Orin 32GB	X	24 x 1TB

High-powered computing gains flexibility and cost economy from GPU-Accelerated Machine Learning and Inferencing Servers.

Designed in association with USES Integrated Solutions, the AGX Orin Inference Server is a very low wattage, high performance AI workstation driven by the NVIDIA Jetson AGX Orin 64GB module. Running NVIDIA's most potent deep-learning software libraries, this inference server addresses the difficulty of widely distributing edge solutions. Via a dedicated Managed Ethernet Switch with 10G uplink capacity, a Gigabit Ethernet fabric links all of the on-board 12x Jetson AGX Orin modules.



Sentry-X Rugged Embedded System

Powered by NVIDIA® Jetson AGX Xavier™

SGX001 / SGX011



- Wide I/O assortment including 2x GbE, 3x USB 3.1, 2x HDMI, 2x CAN 2.0b, 4x GPI, 4x GPO, 2x RS-232/422/485
- Unique docking stations – allows for quick release of Sentry-X compute module
- Ideal for Aerospace and Defence applications
- Tested to MIL-STD-810G, DO-160G for shock & vibration, ingress protection of IP67

Connect Tech's Sentry-X Rugged Embedded System is designed for the NVIDIA® Jetson AGX Xavier™, providing a diverse range of I/O. This embedded system comes with 2x GbE, 3x USB 3.1, 2x HDMI, 2x CAN 2.0b, 1x RS-232, 1x RS-422/485, 1x UART 3.3V TTL, and 8x GPIO.

Sentry-X has been tested to MIL-STD-810G and DO-160G stress and vibration standards, as well as IP67 ingress protection.

The embedded system is suited for Aerospace and Defence applications, as well as any market that may benefit from the exceptional performance of the Jetson AGX Xavier in a durable enclosure.

Sentry-X Rugged Embedded System powered by NVIDIA® Jetson AGX Xavier™				
Part No.	Jetson module	NVMe	Rear Connectors	Description
SGX001-01	AGX Xavier		Fischer MiniMax	Fischer MiniMax Series Connectors Rear I/O PSU Quick Release Docking Sled
SGX001-03	AGX Xavier		Sealed PC	Sealed PC Style Connectors on Rear I/O Quick Release Docking Sled
SGX002-01	AGX Xavier	1TB	Fischer MiniMax	Fischer MiniMax Series Connectors Rear I/O PSU Quick Release Docking Sled
SGX002-03	AGX Xavier	1TB	Sealed PC	Sealed PC Style Connectors on Rear I/O Quick Release Docking Sled
SGX003-01	AGX Xavier	2TB	Fischer MiniMax	Fischer MiniMax Series Connectors Rear I/O PSU Quick Release Docking Sled
SGX003-03	AGX Xavier	2TB	Sealed PC	Sealed PC Style Connectors on Rear I/O Quick Release Docking Sled



Sentry-X Options and Accessories

Sentry-X Rugged Embedded System Recommended cables/connector options	
Part No.	Description
<i>Connectors</i>	
RI0001-01	Fischer MiniMax Series Connectors Rear I/O Dock
RI0001-02	Fischer MiniMax Series Connectors and MIL-STD-PSU Rear I/O Dock
RI0001-03	Sealed PC Style Connectors Rear I/O Dock
RI0001-04	Sealed PC Style Connectors and MIL-STD-PSU Rear I/O Dock
RI0001-05	Meritec Hercules Rugged Circular MIL-DTL-38999L Series III Shell Connectors Rear I/O Dock
RI0001-06	Meritec Hercules Rugged Circular MIL-DTL-38999L Series III Shell Connectors and MIL-STD-PSU Rear I/O Dock
RI0001-07	M12 Shell Connectors Rear I/O Dock
RI0001-08	M12 Shell Connectors and MIL-STD-PSU Rear I/O Dock
<i>Cable options</i>	
CBG333	Fischer MiniMax Series 08 Shell 08 Pin 01 Key GBE Cable (RJ45 Socket)
CBG334	Fischer MiniMax Series 08 Shell 09 Pin 01 Key USB 3.0 Cable (USB 3.0 Type A socket)
CBG334	Fischer MiniMax Series 08 Shell 09 Pin 01 Key USB 3.0 Cable (USB 3.0 Type A socket)
CBG335	Fischer MiniMax Series 06 Shell 04 Pin 01 Key Power Cable (2.5mm barrel socket)
CBG336	Fischer MiniMax Series 08 Shell 24 Pin 02 Key Serial/GPIO Cable (flying leads)
CBG337	Fischer MiniMax Series 08 Shell 24 Pin 01 Key HDMI Cable (HDMI Type A plug)
CBG339	Fischer MiniMax Series 08 Shell 08 Pin 02 Key CAN Bus Cable (flying leads)
CBG523	Meritec Hercules 38999 size 09 Plug, Cadmium plated, "N" key shell to Pigtails (flying leads)
CBG524	Meritec Hercules 38999 size 17 Plug, Cadmium plated, "N" key shell to Pigtails (flying leads)
CBG525	Meritec Hercules DisplayPort Connector
CBG526	Meritec Hercules 38999 size 23 Plug, Cadmium plated, "N" key shell to (2) HDMI (Socket) cable, (2) USB 3.0 Type A (Socket) cable, and (2) RJ45 (Socket) UTP CAT6 cable
<i>Power Adapter</i>	
MSG089	AC/DC Power Supply for Sentry-X Rugged Embedded System. 100-240VAC Input, +24V DC Output, 220W





V7G GPU System

ESG701 ESG702 ESG703 ESG704 ESG705 ESG706 ESG710 ESG711 ESG712

Connect Tech's V7G GPU System combines Intel® Xeon® D (Server Class) and Intel® Atom™ C3000 x86 processors with high-end NVIDIA® Quadro® and Tesla® graphics processing units (GPUs) in a small form factor embedded system. You have a choice of the highest performance and lower performance models, all ideal for high-end video encoding/decoding applications or GPGPU CUDA® processing, deep learning and artificial intelligence applications.

This embedded system has all the latest generation interconnects including: 10GbE and Gigabit Ethernet, USB 3.0 and 2.0, HDMI, SATA III, GPIO, I2C, M.2, miniPCIe. The black aluminium housing offers two mounting options: Half-rack rail mounting or standalone mounting bracket.

- High-End GPUs paired with Intel® Xeon® D Server Class and Intel® Atom™ C3000 x86 Processors
- 4 independent display outputs or GPGPU processing system using CUDA® cores

Part Number	Intel® CPU	NVIDIA® GPU	Display Output	GbE
ESG701	Xeon® D1577	Quadro® P5000	4x HDMI Variant	2
ESG702	Xeon® D1577	Quadro® P3000	4x HDMI Variant	2
ESG703	Xeon® D1577	Tesla® P6	No Display Output Variant	2
ESG704	Xeon® D1559	Quadro® P5000	4x HDMI Variant	2
ESG705	Xeon® D1559	Quadro® P3000	4x HDMI Variant	2
ESG706	Xeon® D1559	Tesla® P6	No Display Output Variant	2
ESG710	Atom™ C3958	Quadro® P5000	4x HDMI Variant	
ESG711	Atom™ C3958	Quadro® P3000	4x HDMI Variant	
ESG712	Atom™ C3958	Tesla® P6	No Display Output Variant	



Graphite VPX

VPG004

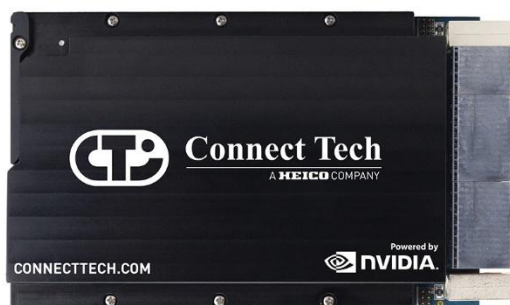
- Designed with NVIDIA® Jetson AGX Orin™ Industrial
- 3U VPX SOSA aligned
- PCIe x8 Gen4 (Endpoint or Host)
- 2x 10GBASE-KR Ethernet
- Complete IPMI Support



The Graphite VPX is a durable 3U VPX single board computer engineered using the NVIDIA® Jetson AGX Orin™. Conforming to the Sensor Open Systems Architecture (SOSA) standard, it guarantees smooth interoperability with SOSA-compliant systems.

The Graphite VPX, featuring comprehensive IPMI compatibility, facilitates effective remote management and monitoring functionalities. High-speed connectivity options, including twin 10GBASE-KR Ethernet, dual USB 3.2 Gen2, and PCIe x8 Gen4, facilitate substantial expansion and integration. Complying with MIL-STD-810H and DO-160 for stress and vibration, it is an optimal selection for contemporary mission-critical aerospace and defence AI applications.

Main Products	
P/N	Description
VPG004-01	Graphite VPX – Powered by the Jetson AGX Orin™ Module (PCIe Host Mode) Two x4 downstream ports
VPG004-02	Graphite VPX – Powered by the Jetson AGX Orin™ Module (PCIe Endpoint Mode)
RTG005	RTM for Graphite VPX VPG004



JETSON DEVELOPER KITS / MODULES

Embedded Systems for Next-Generation Autonomous Machines



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900-13701-0080-000	NVIDIA Jetson AGX Orin Industrial Module 64GB	900-83489-0080-000	NVIDIA Jetson TX2 Module 4GB
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900-13767-0010-000	NVIDIA Jetson Orin NX 8GB	900-83668-0030-000	NVIDIA Jetson Xavier NX Module 16GB
900-13767-0030-000	NVIDIA Jetson Orin Nano 8GB	945-13730-0055-000	NVIDIA Jetson AGX Orin Development Kit 64KB
900-82888-0040-000	NVIDIA Jetson AGX Xavier Module 32GB	945-13766-0005-000	NVIDIA Jetson Orin Nano Super Developer Kit 4GB
		945-14070-0085-000	NVIDIA Jetson Thor Developer Kit

NVIDIA® JETSON™ MODULE COMPARISON: <https://connecttech.com/jetson/jetson-module-comparison/>

NVIDIA® JETSON LIFECYCLE: <https://developer.nvidia.com/embedded/lifecycle>

As a rule, NVIDIA issues a Last Time Buy approx. 3 months before one of their modules is announced EOL. However, to be certain you should always check their website.

Connect Tech provides complete support for all Jetson solutions. Their Jetson Gurus can assist you with getting your application up and running. Any technical questions you may have can be addressed by phone or email. Some frequently asked questions can be found in their FAQ section.



The table lists the modules that are currently supported.

<https://connecttech.com/jetson/nvidia-jetson-support/>

NVIDIA® Jetson™ systems deliver enhanced performance and energy efficiency for operating autonomous machine software, achieving superior speed while consuming less power. Each constitutes a comprehensive System-on-Module (SOM), incorporating a CPU, GPU, PMIC, DRAM, and flash storage - thereby conserving development time and financial resources. Additionally, Jetson modules offer great flexibility - simply choose the appropriate SOM for the application and construct a tailored system to fulfil specific requirements.

High-efficiency, low-energy NVIDIA Jetson modules provide real-time artificial intelligence (AI) performance precisely where it is most required—at the Edge. Complex data processing can now occur on small, power-efficient devices, ensuring rapid and precise inference in network-constrained settings.

NVIDIA Jetson developer kits and modules, along with the NVIDIA JetPack SDK, furnish all necessary components for the development and deployment of applications across various use cases utilising a singular software architecture. This significantly lowers software development expenses and provides a scalable AI strategy for autonomous devices, unleashing substantial potential across several sectors, including healthcare, manufacturing, agriculture, and more.



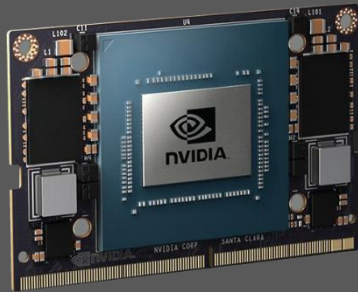
Video Presentation from Connect Tech, NVIDIA Jetson and e-Con Systems:

[The Rise of Automonous Mobile Robots](#)

NVIDIA Jetson Lifecycle		
<i>NVIDIA Jetson Modules</i>	<i>EOL</i>	<i>Last Time Buy</i>
Commercial Modules		
Jetson AGX Orin 64GB	jan.32	sep.31
Jetson AGX Orin 32GB	jan.32	sep.31
Jetson Orin NX 16GB	jan.32	sep.31
Jetson Orin NX 8GB	jan.32	sep.31
Jetson Orin Nano 8GB	jan.32	sep.31
Jetson Orin Nano 4GB	jan.32	sep.31
Jetson AGX Xavier 64GB	jan.25	sep.24
Jetson AGX Xavier (32GB)	jan.28	sep.27
Jetson Xavier NX 16GB	jan.28	sep.27
Jetson Xavier NX (8GB)	jan.28	sep.27
Jetson TX2 NX	feb.28	oct.27
Jetson TX2	jan.25	sep.24
Jetson Nano	jan.27	sep.26
Industrial Modules		
Jetson AGX Orin Industrial	jul.33	feb.33
Jetson AGX Xavier Industrial	jul.31	feb.31
Jetson TX2i	apr.28	oct.28



New additions to the Jetson Line-up



Jetson Orin NX 8GB

- 1024-core NVIDIA Ampere GPU
- 6-core Arm® Cortex®
- 8 GB LPDDR5
- Supports NVMe

[Click here to learn more](#)



Jetson AGX Orin 32GB

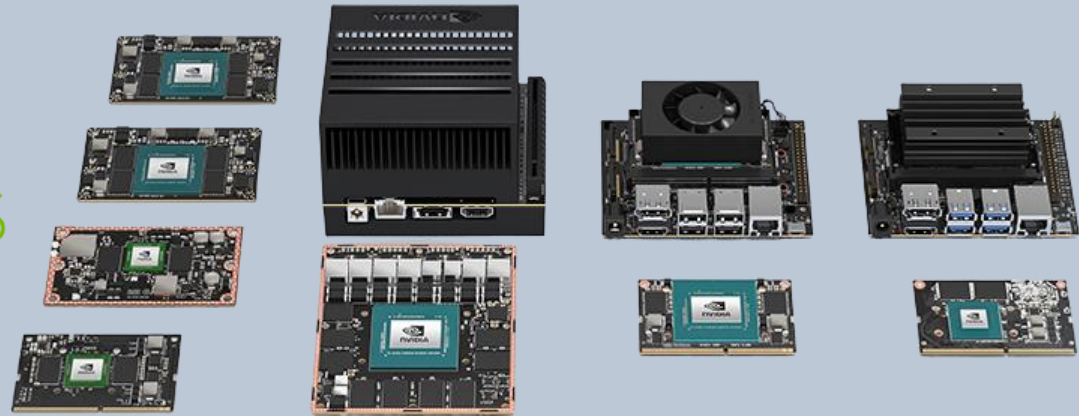
- 512-Core NVIDIA Volta GPU with Tensor Cores
- (2x) NVDLA Engines
- 8-Core ARM® v8.2 64-Bit Carmel CPU
- 32GB 256-Bit LPDDR4x | 136.5GB/s
- 32 GB eMMC 5.1 Flash Storage
- 7-Way VLIW Vision Accelerator Processor

[Click here to learn more](#)



ADVANCED AI EMBEDDED SYSTEMS

NVIDIA Jetson: The AI platform for autonomous machines.



NVIDIA JETSON - THE FUTURE OF EMBEDDED COMPUTING

From automating company processes and obtaining insight through data analysis to engaging with consumers and workers, AI is generating competitive advantage.

The industry-leading platform for embedded applications and autonomous machines is NVIDIA Jetson™. Included in this ecosystem are sensors, software development kits (SDKs), services, and devices that can hasten development; the Jetson modules, which are tiny, powerful computers; and the NVIDIA JetPack™ SDK, which can accelerate applications. To help businesses create software-defined autonomous machines, Jetson offers the performance and power efficiency they require while being compatible with cloud-native workflows and other NVIDIA platforms.

NVIDIA Jetson Module Comparison: <https://connecttech.com/jetson/jetson-module-comparison/>



NVIDIA Jetson Nano Module 4GB

900-13448-0020-000

- 128-core NVIDIA Maxwell GPU
- Quad-core ARM A57 CPU
- 4 GB 64-bit LPDDR4
- 10/100/1000BASE-T Ethernet

DEPLOYING AI ACROSS NUMEROUS NEW EDGE SYSTEMS

The NVIDIA Jetson Nano module is creating remarkable new opportunities for edge computing. It provides up to 472 GFLOPS of accelerated computing, capable of executing numerous contemporary neural networks concurrently, and offers the performance necessary to interpret input from various high-resolution sensors—an essential prerequisite for comprehensive AI systems. It is production-ready and compatible with all major AI frameworks. Jetson Nano is the optimal platform for the development of mass-market AI products, including AIoT gateways, smart network video recorders and cameras, consumer robots, and optical inspection devices.

The system-on-module is equipped with the NVIDIA Maxwell GPU and 4 GB of memory, facilitating real-time processing of high-resolution inputs. It provides a distinctive amalgamation of performance, power superiority, and an extensive array of I/O interfaces, ranging from high-speed CSI and PCIe to low-speed I2Cs and GPIOs. Additionally, it accommodates several unique sensor arrays to provide a multitude of applications with remarkable power efficiency, utilising as low as 5 W.

The Jetson Nano is compatible with NVIDIA JetPack, which comprises a board support package (BSP), Linux operating system, NVIDIA CUDA, cuDNN, and TensorRT software libraries for deep learning, computer vision, GPU computing, multimedia processing, and more applications.

The extensive software stack facilitates rapid AI deployment on autonomous devices, decreases complexity, and accelerates time to market. The identical JetPack SDK is utilised throughout the complete NVIDIA Jetson™ product line and is entirely compatible with NVIDIA's preeminent AI platform for the training and deployment of AI software.

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NVIDIA Jetson TX2 NX Module 4GB

900-13636-0010-000

- NVIDIA Pascal architecture with 256 NVIDIA CUDA cores
- Dual-core NVIDIA Denver 2 64-bit CPU and quad-core Arm Cortex-A57 MPCore processor complex
- 4GB 128-bit LPDDR4
- 16 GB eMMC 5.1
- 10/100/1000 Base-T Ethernet
- Voltage Input: 5V
- Module Power: 7.5W | 15W



For low level embedded and edge devices, the NVIDIA® Jetson™ TX2 NX offers the next stage in artificial intelligence capabilities. It offers up to 2.5X the performance of Jetson Nano and shares form-factor and pin compatibility with Jetson Nano and Jetson Xavier™ NX.

Perfect for developing mass-market AI products in the sectors of manufacturing, logistics, retail, service, agriculture, smart city, and healthcare and life sciences, the small, power-efficient Jetson TX2 NX system-on-module (SOM). While using cloud-native technologies to create, deploy, and control the same software across all Jetson modules, intelligent machine OEMs may now scale their product offerings with pin-compatible Jetson modules.

While containerised deployments offer flexible and seamless upgrades, pre-trained AI models from NVIDIA NGC™, coupled with the NVIDIA Transfer Learning Toolkit, enable a quicker route to inference with optimised AI networks.

NVIDIA JetPack™ SDK lets you create AI apps for Jetson TX2 NX using accelerated libraries supporting all main AI frameworks, as well as computer vision, graphics, multimedia, and more. JetPack guarantees quick time to market and lower development expenses when combined with the most recent NVIDIA tools for application creation and optimisation.

The Jetson TX2 NX is the perfect mass-market AI product platform to bring to market and keep updating over the life of a product given its ease of development and quick deployment as well as its unusual mix of form-factor, performance, and power benefit.

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NVIDIA Jetson AGX Orin Module 32GB

900-13701-0040-000

- 1792-core NVIDIA Ampere architecture GPU with 56 tensor cores
- 2x NVDLA v2.0
- 8-core Arm Cortex-A78AE v8.2 64-bit CPU 2MB L2 + 4MB L3
- 32GB 256-bit LPDDR5
- 64GB eMMC 5.1
- PVA v2.0
- Voltage input 5V, 7V-20V
- Module Power: 15W - 4

With 15W–40W power, NVIDIA Jetson AGX Orin 32GB module delivers 200 TOPS of AI performance. This provides more than 6X the performance of Jetson AGX Xavier in a compact form factor for robotics and autonomous machines.

These system-on-modules support various AI application pipelines with an NVIDIA Ampere architecture GPU, next-generation deep learning and vision accelerators, high-speed IO, and fast memory bandwidth. You can now handle natural language understanding, 3D perception, and multi-sensor fusion challenges using your largest and most complicated AI models.

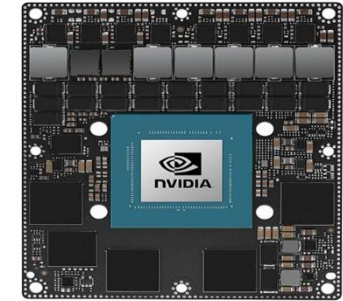
Jetson is used by use case-specific application frameworks e.g., Riva for conversational AI, DeepStream for visual AI, and NVIDIA Isaac for robotics. For synthetic data generation (SDG) and fine-tuning NGC catalogue pretrained AI models, NVIDIA TAO Toolkit and NVIDIA Omniverse Replicator are time-saving tools.



NVIDIA Jetson AGX Orin Developer Kit: Getting Started



NVIDIA Jetson AGX Orin: Next-level AI Performance for Next-Gen Robotic Applications

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NVIDIA Jetson AGX Orin Module 64GB

900-13701-0050-000

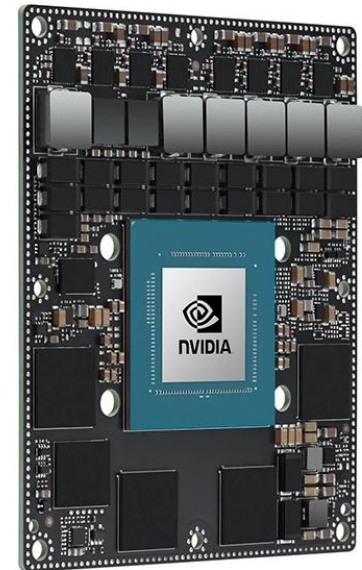
- 275 TOPS
- 2048-core NVIDIA Ampere architecture
- GPU with 64 tensor cores
- 2x NVDLA v2.0
- 12-core Arm Cortex-A78AE v8.2
- 64GB 256-bit LPDDR5
- 64GB eMMC 5.1
- PVA v2.0
- Dimensions: 100mm x 87mm
- 699 pin connector
- Module Power: 15W - 60W
- Production Lifecycle: 7 years until 2031

Power configurable between 15W and 60W allows the NVIDIA Jetson AGX Orin 64GB module to provide up to 275 TOPS of AI output. In the same small form-factor for robotics and other autonomous machine use cases, this offers over 8X the performance of Jetson AGX Xavier.

With the NVIDIA Ampere GPU architecture, next-generation deep learning and vision accelerators, high-speed IO, and fast memory bandwidth, this system-on-module enables several concurrent AI application pipelines. You may now create solutions for issues like natural language comprehension, 3D perception, and multi-sensor fusion utilising your most sophisticated and largest artificial intelligence models.

Jetson maintains the NVIDIA AI software stack, besides offering user-case specific Application frameworks, including Isaac for robotics. DeepStream for visual AI, and Riva for conversational AI. The Jetson Orin provides time-saving features including NVIDIA TAO to fine-tune pretrained AI models from the NGC catalogue and NVIDIA Omniverse Replicator for synthetic data generation (SDG).

Unmatched in performance and efficiency for robots and other autonomous machines, Jetson Orin modules offer you the freedom to design the next generation of artificial intelligence solutions using the newest NVIDIA GPU technology. Your journey to market has never been quicker than with the world-standard NVIDIA AI software stack and an ecosystem of products and services.



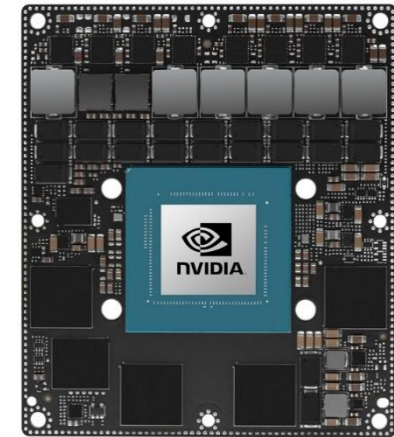
Edge Generative AI powered by NVIDIA Jetson Orin

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NVIDIA Jetson AGX Orin Industrial Module 64GB

900-13701-0080-000

- 248 TOPS
- 2048-core NVIDIA Ampere architecture
- GPU with 64 Tensor Cores
- 2x NVDLA v2.0
- 12-core Arm Cortex-A78AE v8.2
- 64GB 256-bit LPDDR5 @ 3200MHz 204.8GB/s (+ECC)
- 64GB eMMC 5.1
- PVA v2.0
- Mechanical Shock: 50G Operational
- Vibration: 5G Operational
- Extended Temp. Range: -40 to +85 C
- Dimensions: 100mm x 87mm
- 699 pin connector
- Module Power: 15W – 75W
- Production Lifecycle: 10 years until 2033



Edge AI is increasingly being employed in agriculture, construction, energy, aerospace, satellites, the public sector, and other industries. You can deploy AI and computation for sensor fusion in these complicated environments with the NVIDIA Jetson Edge AI and robotics platform. The NVIDIA Jetson AGX Orin Industrial 64GB module offers AI performance up to 275 TOPS with customizable power between 15W and 60W. This provides for robotics and other autonomous machine use cases more than 6X the performance of Jetson AGX Xavier in the same small form-factor.

With an NVIDIA Ampere architecture GPU, next-generation deep learning and vision accelerators, high-speed IO, and quick memory bandwidth, these system-on-modules support many concurrent AI application pipelines. You may now create solutions utilizing your most intricate and expansive AI models to address issues like multi-sensor fusion, 3D perception, and natural language understanding.

The European Space Agency and the Barcelona Supercomputing Centre collaborated to investigate the impact of radiation on the Jetson AGX Xavier Industrial modules. More information may be found in the document [Sources of Single Event Effects in the NVIDIA Xavier SoC Family Under Proton Irradiation](#). Their radiation statistics show that the Jetson AGX Xavier Industrial module, in conjunction with a tough casing, is an excellent choice for high-performance processing in thermally limited satellites deployed in both low-Earth and geosynchronous orbits.



Edge Generative AI powered by NVIDIA Jetson Orin

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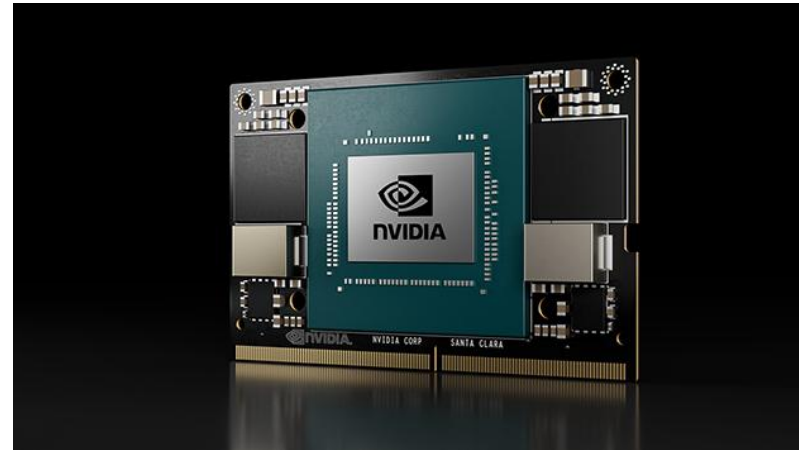
[Tutorials](#)



NVIDIA Jetson Orin NX 16GB

900-13767-0000-000

- 1024-core NVIDIA Ampere architecture
- GPU with 32 Tensor Cores
- 2x NVDLA v2.0
- 6-core Arm Cortex-A78AE v8.2 64-bit CPU 1,5MB L2 + 4MB L3
- 16GB 128-bit LPDDR5
- PVA v2.0
- Supports external NVMe



With power configurable between 10W and 40W, NVIDIA Jetson Orin 16GB series modules provide up to 157 TOPS of AI performance in the smallest Jetson form-factor. Ideal for compact form-factor, low-power items like drones and handheld gadgets, this offers 5X the performance of NVIDIA Jetson AGX Xavier and 7.5X the performance of Jetson Xavier NX.

With an NVIDIA Ampere architecture GPU, next-generation deep learning and vision accelerators, high-speed IO, and rapid memory bandwidth, these system-on-modules support several concurrent AI application pipelines. You may now create solutions for issues like natural language understanding, 3D perception, and multi-sensor fusion utilising your largest and most sophisticated artificial intelligence models.

Running the NVIDIA AI software stack, Jetson offers use-case-specific application frameworks include NVIDIA Isaac for robotics, NVIDIA Metropolis for visual AI, and NVIDIA Holoscan for sensor processing. Running the NVIDIA AI software stack, Jetson offers use-case-specific application frameworks include NVIDIA Isaac for robotics, NVIDIA Metropolis for visual AI, and NVIDIA Holoscan for sensor processing.

Easier to create, control, and deploy AI at the edge, the Jetson Xavier NX 16GB module makes use of enhanced cloud-native software features spread over the Jetson platform range.



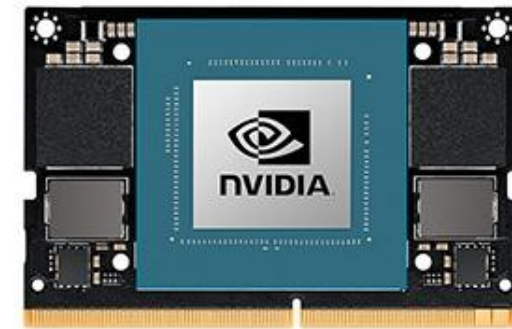
Edge Generative AI powered by NVIDIA Jetson Orin

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NVIDIA Jetson Orin NX 8GB

900-13767-0010-000

- 1024-core NVIDIA Ampere GPU architecture with 32 tensor cores
- 1x NVDLA v2.0
- 6-core Arm® Cortex®-A78AE v8.2 64-bit CPU
- 8 GB LPDDR5
- PVA v2.0
- Supports NVMe



THE MOST SOPHISTICATED AI COMPUTER FOR SMALLER, LOWER-POWER AUTONOMOUS SYSTEMS

With power configurable between 10W and 40W, NVIDIA Jetson Orin NX 8GB series modules provide up to 117 TOPS of AI performance in the smallest Jetson form-factor. Ideal for compact form-factor, low-power products like drones and handheld gadgets, this offers 5X the performance of NVIDIA Jetson AGX Xavier and 7.5X the performance of Jetson Xavier NX.

Thanks to the NVIDIA Ampere architecture GPU, next-generation deep learning and vision accelerators, high-speed I/O, and fast memory bandwidth, these system-on-modules can run multiple AI application processes at simultaneously. thanks to an NVIDIA Ampere architecture GPU, next-generation deep learning and vision accelerators, high-speed I/O, and fast memory bandwidth, these system-on-modules can run multiple AI application processes at simultaneously. time. Now you can use your most sophisticated and most complex AI models to assist with answers to problems like understanding natural language, observing things in 3D, and combining data from multiple sensors.

Running the NVIDIA AI software stack, Jetson offers use-case-specific application frameworks include NVIDIA Isaac for robotics, NVIDIA Metropolis for visual AI, and NVIDIA Holoscan for sensor processing. Running the NVIDIA AI software stack, Jetson offers use-case-specific application frameworks include NVIDIA Isaac for robotics, NVIDIA Metropolis for visual AI, and NVIDIA Holoscan for sensor processing.

When it comes to robotics and other autonomous machines, Jetson Orin modules offer unrivalled performance and efficiency, and they also give you the freedom to develop the next generation of AI solutions using cutting-edge NVIDIA GPU technology.



Edge Generative AI powered by NVIDIA Jetson Orin

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NVIDIA Jetson Orin Nano Module 8GB

900-13767-0030-000

- 1024-core NVIDIA Ampere
- architecture GPU with 32 tensor cores
- 6-core Arm Cortex-A78AE v8.2
- 8GB 128-bit LPDDR5
- Support for external NVMe

With power settings that can range from 7W to 25W, the NVIDIA Jetson Orin Nano 8GB module gives you up to 67 TOPS of AI speed in the smallest Jetson form factor. This makes the NVIDIA Jetson TX2 NX up to 50 times faster and extends the range of entry-level Edge AI.

In addition to being pin-compatible with Jetson Orin NX, this system-on-module supports multiple AI application streams at the same time, has fast I/O, and houses an NVIDIA Ampere architecture GPU. Therefore, cheaper consumer, retail analytics, and industrial quality assurance (QA) devices can use more complicated AI models.

The NVIDIA AI software stack is run by Jetson. It has application libraries for different use cases, such as NVIDIA Isaac for robotics, NVIDIA Metropolis for vision AI, and NVIDIA Holoscan for sensor processing. When you use NVIDIA Omniverse Replicator to make synthetic data (SDG) and NVIDIA TAO Toolkit to fine-tune AI models that have already been learnt from the NGC™ catalogue, you can save a lot of time.

When it comes to speed and efficiency, Jetson Orin modules are among the finest for robots and other self-driving machines. With the latest NVIDIA GPU technology, they also give you the freedom to make the next generation of AI solutions. When you use the world-renowned NVIDIA AI software stack and a network of services and goods, you can get to market faster than ever.

Visit <https://developer.nvidia.com/jetson> to find out more.



Edge Generative AI powered by NVIDIA Jetson Orin

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NVIDIA Jetson Orin Nano Module 4GB

900-13767-0040-000 Nano 4GB

With power adjustable from 7W to 25W, the NVIDIA Jetson Orin Nano 4GB module offers up to 34 TOPS of AI performance in the smallest Jetson form-factor. This establishes the new baseline for entry-level Edge AI and gives you up to 68X the performance of NVIDIA Jetson Nano.

This system-on-module is pin-compatible with Jetson Orin NX, and supports multiple concurrent AI application pipelines with high-speed IO and an NVIDIA Ampere architecture GPU. This enables lower-priced consumer, retail analytics, and industrial QA devices to benefit from more complex AI models.

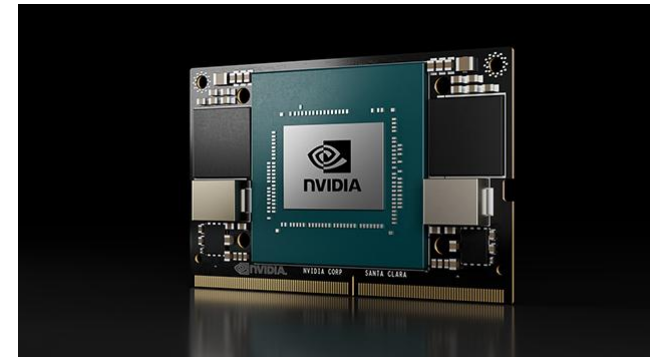
Running the NVIDIA AI software stack, Jetson offers use-case-specific application frameworks include NVIDIA Isaac for robotics, NVIDIA Metropolis for visual AI, and NVIDIA Holoscan for sensor processing. NVIDIA TAO Toolkit for fine-tuning pretrained AI models from the NGC catalogue and NVIDIA Omniverse Replicator for synthetic data generation (SDG) help you to save great time.

Unmatched in performance and efficiency for robots and other autonomous machines, Jetson Orin modules offer you the freedom to design the next generation of AI solutions using the newest NVIDIA GPU technology. Your journey to market has never been quicker than with the world-standard NVIDIA AI software stack and an ecosystem of products and services.

Visit <https://developer.nvidia.com/jetson> to find out more.



Edge Generative AI powered by NVIDIA Jetson Orin

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NVIDIA Jetson AGX Xavier Module 32GB

900-82888-0040-000

- 512-Core NVIDIA Volta GPU with Tensor Cores
- (2x) NVDLA Engines
- 8-Core ARM® v8.2 64-Bit Carmel CPU
- 32GB 256-Bit LPDDR4x|136.5GB/s
- 32 GB eMMC 5.1 Flash Storage
- 7-Way VLIW Vision Accelerator Processor

In a small package using under 30 watts, the NVIDIA Jetson AGX Xavier provides up to 32TOPS of accelerated processing power.

Designed for performance-driven and cost-effective autonomous machine applications, this sophisticated system-on-module runs on the NVIDIA Xavier SoC. Heterogeneous accelerated computing architecture enables artificial intelligence at the edge and offers improved compute performance. Its creative thermal design, integrated memory, storage, power management, and other features help to accelerate time to market. Visual inspection, production, logistics, smart cities, healthcare, retail, and services are just a few of the areas where Jetson AGX Xavier can handle current AI workloads.

Software libraries for deep learning, computer vision, GPU computing, multimedia processing, and much more are included in the NVIDIA JetPack SDK, which supports Jetson AGX Xavier. The SDK also includes Linux OS, NVIDIA CUDA, cuDNN, and TensorRT. Both the NVIDIA Isaac SDK, which provides software tools for developing robots, and the NVIDIA DeepStream SDK, which provides real-time situational awareness through intelligent video analytics (IVA), are compatible with it. In addition to lowering development costs and effort, these aid in speeding up software development and improving performance.

PRODUCT SUPPORT

Download the SDK from the NVIDIA Developer Site and locate all you require to begin. Running autonomous machines software, faster and with less power, NVIDIA Jetson systems offer the performance and power economy. Each is a full System-on-Module (SOM) with flash storage, PMIC, DRAM, CPU, and GPU, thereby saving development time and cost. Jetson is extendable as well. Simply choose the SOM appropriate for the application and construct the bespoke system around it to satisfy its particular requirements.

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NVIDIA Jetson AGX Xavier Module 64GB

900-82888-0050-000

- 512-Core NVIDIA Volta GPU with 64 Tensor Cores 22 TOPS (INT8)
- (2x) NVDLA Engines 10 TOPS [INT8]
- 8-Core ARM® v8.2 64-Bit Carmel CPU 8MB L2 + 4MB L3
- 64GB 256-Bit LPDDR4x | 136.5GB/s
- 32 GB eMMC 5.1 Flash Storage
- 7-Way VLIW Vision Accelerator Processor

Running in as little as 10W and producing up to 32 TOPs, the Jetson AGX Xavier 64GB module enables AI-powered autonomous devices. The 64GB RAM lets users save several AI models, execute sophisticated apps, and improve their real-time pipelines. Being part of the top AI computing platform in the world, it gains from the extensive collection of NVIDIA AI tools and processes, which helps developers to rapidly train and deploy neural networks. NVIDIA JetPack SDK supports Jetson AGX Xavier 64GB, which can help you reduce development work and cost.

Modern AI workloads can be executed on the Jetson AGX Xavier, which can also address issues in optical inspection, manufacturing, robotics, logistics, retail, service, agriculture, smart cities, and healthcare. The NVIDIA JetPack SDK, which comprises board support package (BSP), Linux OS, NVIDIA CUDA®, cuDNN, and TensorRT software libraries for deep learning, computer vision, GPU computing, multimedia processing, and much more, supports Jetson AGX Xavier. The NVIDIA DeepStream SDK additionally supports it by means of intelligent video analytics (IVA) and NVIDIA Isaac SDK, which provides a software framework for robot development, hence providing a whole toolset for real-time situational awareness. While lowering development cost and effort, these help to improve performance and speed up software creation.

Visit <https://developer.nvidia.com/jetson> to find out more.

PRODUCT SUPPORT

Download the SDK from the NVIDIA Developer Site and locate all you require to begin. Running autonomous machines software, faster and with less power, NVIDIA Jetson systems offer the performance and power economy. Each is a full System-on-Module (SOM) with flash storage, PMIC, DRAM, CPU, and GPU, thereby saving development time and cost. Jetson is extendable as well. Simply choose the SOM appropriate for the application and construct the bespoke system around it to satisfy its specific requirements.

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NVIDIA Jetson AGX Xavier Industrial Module 32GB

900-82888-0080-000

- 512-Core NVIDIA Volta GPU with Tensor Cores
- (2x) NVDLA Engines
- 8-Core ARM® v8.2 64-Bit Carmel CPU
- 32GB 256-Bit LPDDR4x| 136.5GB/s
- 32 GB eMMC 5.1 Flash Storage
- 7-Way VLIW Vision Accelerator Processor

In a power-efficient, tough form-factor, NVIDIA Jetson AGX Xavier Industrial offers the maximum performance for AI integrated industrial and functional safety applications. This system-on-module enables consumers bring cutting-edge AI models to their most demanding use cases with up to 20X the performance and 4X the memory of Jetson TX2i. Perfect for industrial grade and/or safety certified AI products, the Jetson AGX Xavier Industrial module offers enhanced temperature range, shock, and vibration specifications as well as new functional safety features supervised by the Safety Cluster Engine. Other security measures to safeguard customer software included in the module are hardware validated secure boot, hardware accelerated cryptography, support for encrypted storage and memory.

You can reduce development time and costs for AI software for production with the help of the NVIDIA JetPack SDK and pretrained models from the NGC catalogue. Included in JetPack are the most recent software development tools from NVIDIA, the Jetson Linux driver package (L4T), and libraries that accelerate all major AI frameworks, graphics, multimedia, computer vision, and more. Over the course of the industrial module's 10-year lifespan, cloud-native technologies provide smooth model and software upgrades, and NGC's pre-trained models are performance optimised and prepared to be fine-tuned with customer datasets.

Customers interested in developing products that comply with IEC 61508 standards and using Jetson AGX Xavier Industrial for both safety-related and non-safety applications can purchase the Jetson Safety Extension Package, which includes the necessary software and documentation. For customers looking for examples of ISO-13849 Cat. 2/3 PLd architecture as well as recommendations, guidelines, and other useful information, we have a safety design guide accessible. With its form-factor, performance, and power advantages, as well as its ease of development and rapid deployment, Jetson AGX Xavier Industrial is the perfect platform for bringing robust and safety-ready AI products to market and for continuous updates throughout their lifetime.

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NVIDIA Jetson TX2 MODULE 8GB

900-83310-0001-000

The most innovative technology for AI computing and visual computing comes in a supercomputer the size of a credit card. Its small form factor and power envelope make the Jetson TX2 module ideal for intelligent edge devices like robots, drones, smart cameras, and portable medical devices.

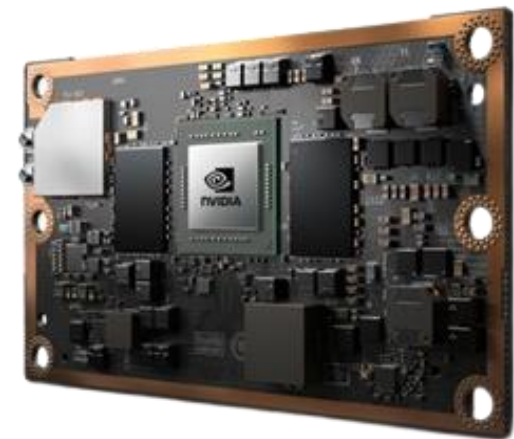
- NVIDIA Pascal architecture GPU
- Dual-core Denver 2 64-bit CPU + quad-core
- ARM A57 Complex
- 8 GB L128 bit LPDDR4
- 32 GB eMMC 5.1

THE HIGH-PERFORMANCE, LOW-POWER JETSON TX2 TAKES REAL-TIME AI PERFORMANCE EVEN FURTHER

Supercomputers the size of credit cards have the most cutting-edge technology for artificial intelligence and visual computing. The Jetson TX2 module is perfect for smart cameras, drones, robotics, and portable medical equipment because to its small size and power envelope.

The Jetson TX2 is easily integrated into a wide range of products and form factors thanks to its choice of common hardware connectors. It also contains the full Jetpack software development kit (SDK), which can speed up your program development with tools like the BSP and libraries for deep learning, computer vision, graphics processing units (GPUs), multimedia processing, and more.

Technical note: When used with any of the Connect Tech carrier boards: CTI L4T needs to be loaded for full functionality: [\(Further info\)](#)



EOL

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NVIDIA JETSON TX2i INDUSTRIAL MODULE 8GB

900-83489-0000-000

- NVIDIA Pascal architecture GPU
- Dual-core Denver 2 64-bit CPU and quad-core
- Arm A57 Complex
- 8 GB 128 bit LPDDR4 (ECC support)
- 32 GB eMMC 5.1

Jetson TX2i has several common hardware interfaces that facilitate its integration into a broad spectrum of products and form factors. In addition, it includes the whole NVIDIA Jetpack SDK, which has the BSP, deep learning libraries, computer vision, GPU computing, multimedia processing, and much more to speed your software creation.



EXTEND AI PERFORMANCE TO INDUSTRIAL ENVIRONMENTS WITH THE HIGH-PERFORMANCE, LOW-POWER JETSON TX2i..

Jetson TX2i features a variety of standard hardware interfaces that make it easy to integrate it into a wide range of products and form factors. Plus, it comes with the complete NVIDIA Jetpack SDK, which includes the BSP, libraries for deep learning, computer vision, GPU computing, multimedia processing, and much more to accelerate your software development.

A supercomputer the size of a credit card holds the most creative technologies for GPU-enabled AI processing. High-performance edge computing devices including industrial robots, machine vision cameras, and portable medical equipment are best suited for the NVIDIA Jetson TX2i module because of its sturdy build, compact size, and lower power envelope.

Built for consistent performance in demanding industrial settings, Jetson TX2i has long operating life (MTBF) and comes with an extended warranty and sales lifecycle.

Technical note: When used with any of the Connect Tech carrier boards: CTI L4T needs to be loaded for full functionality: [\(Further info\)](#)

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NVIDIA JETSON TX2 MODULE 4GB

900-83489-0080-000

- 256-core Pascal™ GPU
- Dual-core NVIDIA Denver 2 Quad-core ARM A57 complex
- ARM A57 Complex
- 4 GB 128 Bit LPDDR4 | 25.6 GB/s
- 16 GB eMMC 5.1



EOL

Running contemporary AI applications, the NVIDIA Jetson TX2 4GB offers strong computational performance in a tiny credit card shape. Configurable between 7.5W and 15W, the module is perfect for a variety of intelligent edge devices like robots, drones, smart cameras, and portable medical devices.

At the same price, Jetson TX2 4GB provides double the performance per watt of Jetson TX1, hence allowing the creation of inexpensive, energy efficient, high-performance products. From low speed GPIOs to high-speed PCIe and USBs, Jetson TX2 4GB boasts several conventional hardware connections. This facilitates integration into a broad spectrum of form factors and products. NVIDIA JetPack also supports the module; it comprises a board support package (BSP), Linux OS, NVIDIA CUDA, cuDNN, and TensorRT™ software libraries for deep learning, computer vision, GPU computing, multimedia processing, and much more.

The software is simple to use and allows you to get started quickly. The same Jetpack SDK is used throughout the NVIDIA Jetson family of products and is completely interoperable with NVIDIA's world-class AI platform for training and deploying AI software. This tried-and-true software stack simplifies development and saves time and effort.

Technical note: When used with any of the Connect Tech carrier boards: CTI L4T needs to be loaded for full functionality: [\(Further info\)](#)

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NVIDIA JETSON XAVIER NX MODULE 8GB

900-83668-0000-000

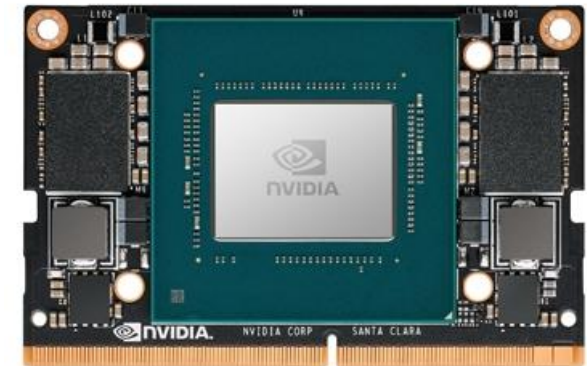
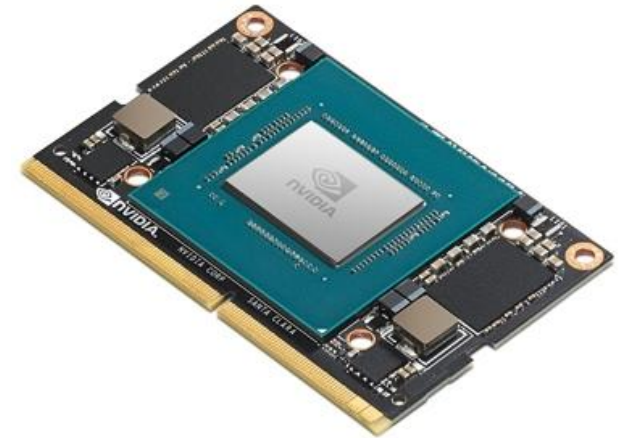
Jetson Xavier NX System-on-Module (SOM):

- 384-Core Volta GPU
- 6-Core ARM 64 Bit CPU
- 8 GB LPDDR4
- 16 GB eMMC

The NVIDIA Jetson Xavier NX is a compact system-on-module (SOM) that is smaller than a credit card that delivers supercomputer capability. It has new cloud-native capability and outperforms its widely accepted predecessor, Jetson TX2, by more than 10 times. This power efficiency enables precise multi-modal AI inference in a tiny form factor, paving the way for revolutionary edge devices in manufacturing, logistics, retail, service, agriculture, smart cities, healthcare, and life sciences, and more.

The Jetson Xavier NX module now has cloud-native support throughout the Jetson platform line - up, making it easier to build, deploy, and manage AI at the edge. Pre-trained AI models from NVIDIA NGC, in conjunction with the NVIDIA Transfer Learning Toolkit, enable a faster path to inference with optimized AI networks, while containerized deployment to Jetson devices enables flexible and seamless updates.

The NVIDIA JetPack SDK enables the creation of AI applications for the Jetson Xavier NX by providing accelerated libraries that support all major AI frameworks, as well as computer vision, graphics, multimedia, and other technologies. JetPack, in conjunction with the most recent NVIDIA tools for application development and optimization, ensures a quick time to market and lower development costs. Jetson Xavier NX is the most flexible and scalable platform to get to market and continuously update over the lifetime of a product due to its ease of development and speed of deployment, as well as a unique combination of form-factor, performance, and power advantage.



Announcing Cloud-Native Support for Jetson Platform

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NVIDIA JETSON XAVIER NX 16GB

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Jetson Xavier NX System-on-Module (SOM):

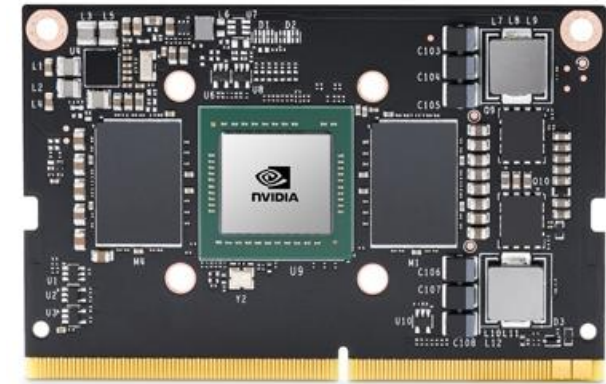
- 384-Core Volta GPU
- 6-Core ARM 64 Bit CPU
- 16 GB 128-bit LPDDR4
- 16 GB eMMC4

The NVIDIA® Jetson Xavier™ NX 16GB module benefits from new cloud-native software capabilities across the entire Jetson platform line up, making it easier to build, manage, and deploy AI at the edge. NVIDIA® Jetson Xavier™ NX 16GB brings supercomputer performance to the edge in a compact system-on-module (SOM) that is smaller than a credit card. The energy-efficient Jetson Xavier NX module delivers server-class performance—up to 14 TOPS at 10W or 21 TOPS at 15W or 20W. This unique combination of form-factor, performance, and power advantage opens the door for innovative edge devices in the fields of manufacturing, logistics, retail, service, agriculture, smart city and medical instruments. The Jetson Xavier NX 16GB module benefits from new cloud-native software capabilities across the entire Jetson platform line up, making it easier to build, manage, and deploy AI at the edge.

Pre-trained AI models from NVIDIA NGC together with the NVIDIA TAO Toolkit give a faster path to trained and optimized AI networks. Containerized deployment to Jetson devices allows flexible and seamless updates.

NVIDIA JetPack™ SDK enables multi-modal AI application development for Jetson Xavier NX 16GB with accelerated libraries supporting all major AI frameworks, as well as computer vision, computer graphics, multimedia, and more. Together with the latest NVIDIA tools for application development and optimization, JetPack™ ensures fast time to market and reduced development costs.

Designed for ease of development and speed of deployment, Jetson is the most flexible and scalable platform to get to market and continuously update AI software over the lifetime of a product.

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NVIDIA Jetson AGX Orin 64GB Development Kit

945-13730-0055-000

- 2048-core NVIDIA Ampere architecture GPU with 64 Tensor cores
- 2x NVDLA v2.0
- 12-core Arm Cortex-A78AE v8.2 64-bit CPU
- 64GB 256-bit LPDDR5
- 64GB eMMC 5.1
- PVA v2.0



Getting started with Jetson Orin is made simple thanks to the NVIDIA Jetson AGX Orin Developer Kit. This development kit is great for creating sophisticated AI-powered robots and other autonomous machines given its small size, many ports, and up to 275 TOPS of AI performance. The kit includes a Jetson AGX Orin module that can emulate all Jetson Orin modules. The NVIDIA Ampere GPU architecture, next-generation deep learning and vision accelerators, high-speed IO, and rapid memory bandwidth enable it to serve several AI application pipelines at the same time. You can now use your most powerful and complicated AI models to solve challenges like natural language understanding, 3D perception, and multi-sensor fusion.

Jetson manages the NVIDIA AI software stack, and use-case-specific application frameworks are available, such as Isaac for robotics, DeepStream for vision AI, and Riva for conversational AI. You can save time by using NVIDIA Omniverse Replicator for synthetic data generation (SDG) and NVIDIA TAO toolbox to fine-tune pretrained AI models from the NGC™ catalogue.

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With the computing power of more than 8 Jetson AGX Xavier computers in a development kit that combines the latest NVIDIA GPU technology with the world's most comprehensive deep learning software stack, you'll be able to create both tomorrow's and today's AI solutions.



NVIDIA Jetson Orin Nano 8GB Super Development Kit

945-13766-0005-000

- NVIDIA Ampere architecture with 1024 NVIDIA CUDA cores with 32 tensor cores
- 6-core Arm Cortex-A78AE v8.2 64-bit CPU
- 8GB 128-bit LPDDR5 102 GB/s
- Supports for external via microSD slot
- external NVMe via M.2 KeyM



The NVIDIA Jetson Orin Nano Super Developer Kit is a small yet powerful computer that reimagines generative AI for small edge devices. It provides up to 67 TOPS of AI performance—a 1.7X increase over its predecessor—and can run a wide range of generative AI models, including vision transformers, big language models, vision-language models, and more. It offers developers, students, and makers the most affordable and accessible platform, backed by NVIDIA AI software and a vast AI software ecosystem, to democratise generative AI at the edge. Existing Jetson Orin Nano Developer Kit customers can benefit from this performance gain by simply upgrading their software, allowing everyone to explore new possibilities with generative AI.

The developer kit includes a Jetson Orin Nano 8GB module and a reference carrier board that can hold all Orin Nano and Orin NX modules, making it an ideal foundation for prototyping your next-generation edge AI product. The Jetson Orin Nano 8GB module includes an Ampere GPU and a 6-core ARM CPU, allowing for several concurrent AI application pipelines and high-performance inference. The carrier board has a large number of ports, including two MIPI CSI connectors that accommodate camera modules with up to four lanes, allowing for greater resolution and frame rate than before.



The world's most affordable generative AI computer



Generative AI Models at the Edge Powered by NVIDIA Jetson Orin



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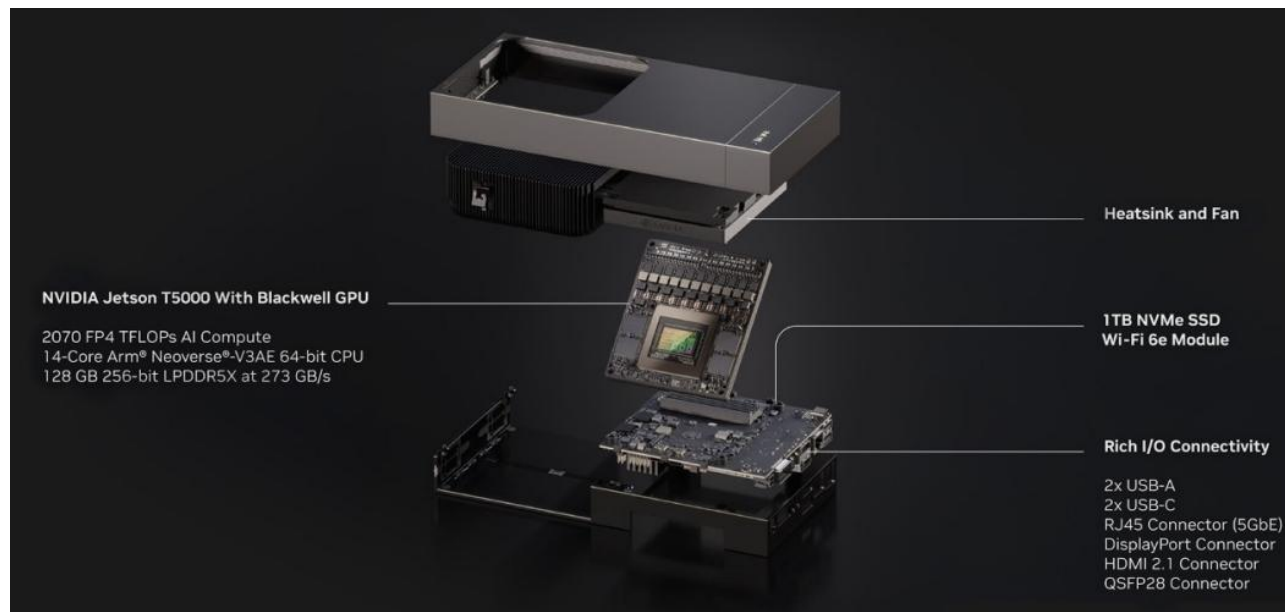
NVIDIA Jetson Thor Development Kit

945-14070-0085-000

- Includes a Quick Start Guide
- NVIDIA Jetson T5000 module with reference carrier board and heat sink, DC power 140W,
- 802.11ax wireless network interface controller
- 1 TB NVMe populated in M.2 Key-M slot

The Most Innovative Humanoid Robotics Platform

The best platform for humanoid robotics is the NVIDIA Jetson AGX Thor Developer Kit, which offers unparalleled scalability and performance. With 128 GB of RAM and an NVIDIA Blackwell GPU, it can easily execute the newest generative AI models with up to 2070 FP4 TFLOPS of AI compute—all within a 130W power envelope. It offers up to 7.5x more AI computation and 3.5x more energy efficiency than the NVIDIA Jetson AGX Orin.



NVIDIA EMBEDDED SOLUTIONS

Jetson Thor's powerful 14-core Arm Neoverse-V3AE CPU and innovative Blackwell Multi-Instance GPU (MIG) technology enable you speed up low-latency, real-time applications. A third-generation Programmable Vision Accelerator (PVA), two encoders and decoders, an optical flow accelerator, and other accelerators are also included. The developer kit provides a wide range of I/O options for high-speed sensor fusion, such as a wired Multi-GbE RJ45 connector, several USB ports, a QSFP slot with 4x25GbE, and various connectivity interfaces. Additionally, it is built to integrate seamlessly with current humanoid robot platforms, making tethering simple and enabling rapid prototyping.

Designed from the ground up to power the next generation of humanoid robots, Jetson Thor is a member of a new class of robotic computers. From all of the well-known LLMs and VLMs to Vision Language Action (VLA) models like the NVIDIA Isaac GR00T N, it supports a broad variety of generative AI models. Jetson Thor uses the NVIDIA AI software stack for physical AI applications, such as NVIDIA Holoscan for sensor processing, NVIDIA Metropolis for visual agentic AI, and NVIDIA Isaac for robotics, to provide a smooth cloud-to-edge experience. NVIDIA agentic AI procedures, such as Video Search and Summarisation (VSS), can also be used to create AI agents at the edge.

To speed up solution creation in sectors including robotics, smart spaces, retail, industrial, medical, and more, our network of partners provides all the carrier boards, design services, cameras, and other sensors you require in addition to extra AI and system software.

The Jetson AGX Thor Developer Kit is the perfect platform for developers wishing to explore new possibilities for physical AI applications, such as humanoid robotics, because of its massive AI performance and sensor capabilities in a small form factor.

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