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**Connect Tech Inc.**  
Embedded Computing Experts

*Celebrating*  
**35** *years*  
1985-2020



**Jetson Product Guide**

[www.connecttech.com](http://www.connecttech.com)

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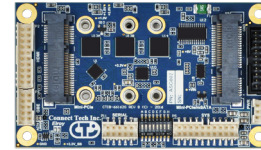
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## Jetson Accessories

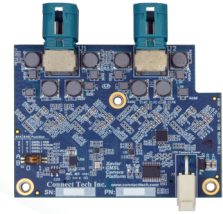
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NOTE: Specifications found in this guide are subject to change without notice.

## Nano-Pac



### Print Your Own Enclosures

In support of the NVIDIA® Jetson Nano™ community, one filled with makers, learners, developers and students, Connect Tech is offering free public download of a 3D printable enclosure, Nano-Pac, which can be 3D printed as a Jetson Nano Development Kit enclosure.



## Photon

NEW



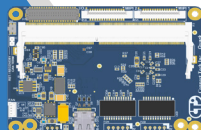
A specially designed carrier for AI enabled smart camera applications. Tailored from the ground up to work in a camera housing utilizing a PoE PD Gigabit Ethernet uplink for data and power. The Photon Camera Platform supports both the Jetson Nano and the Xavier NX modules.

### Features

- PoE PD capable, power via separate input or over ethernet. (IEEE 802.3af-2003 and IEEE 802.3at-2009 compatible)
- 1 x GbE, 1x NVMe (M.2 M-Key). 1 microSD, 4x GPIO, I2C, USB Console/UART, US OTG for programming
- DC barrel power input also available
- Dimensions: 145mm x 64.5mm (5.7" x 2.53")

## Quark

NEW



An ultra small form factor, just slightly larger than the Jetson SODIMM module. Quark's design includes a rich I/O set including 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 as well as positive locking IO connectors optimized for rugged environments.

### Features

- Small size is ideal for direct camera and vision payload integrations as well as Robotics and Unmanned Vehicle applications
- Extremely Small in Size: 82.6mm x 58.8mm
- 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

## Rudi-NX

NEW



Utilizing Jetson Xavier NX, the World's Smallest AI Supercomputer. Delivering up to 21 TOPS of performance in 15W, 384 CUDA Cores, 48 Tensor Cores, and 2 NVDLA engines, and can run multiple modern neural networks in parallel and process high-resolution data from multiple sensors simultaneously.

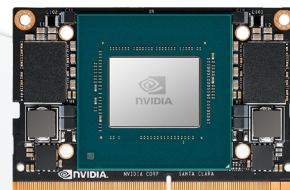
### Features

- Enables multiple vision and sensor inputs for up to 4x GMSL (MIPI CSI-2) Camera inputs, 4x USB 3.0 ports and 2x Gigabit Ethernet ports. As well CAN and multiple UART, RS-485, I2C, SPI, GPIO, PWM IOs
- Extremely small footprint: 135mm x 50mm x 105mm
- DC barrel power input also available
- Dimensions: 145mm x 64.5mm (5.7" x 2.53")



## NVIDIA® Jetson Nano™ & Xavier™ NX Solutions

The NVIDIA Jetson Nano and Xavier NX share the same pinout and footprint but the compute power is significantly different between the two. Both Nano and Xavier NX are ideal AI platforms for autonomous machines. *For full comparison details see page 6.*





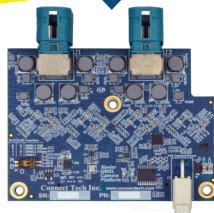
## GMSL2 Camera Platform

The GMSL platform is ideal for those needing a more robust MIPI solution; this platform will allow longer length cabling as well as a direct path to the Xavier ISPs. Traditionally found in the automotive space the GMSL2 Camera Board will bring this robust solution to a broader audience.



### Xavier GMSL2 Camera Platform

**NEW**



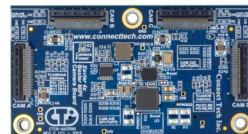
The Jetson AGX Xavier GMSL Camera Platform supports up to 8x GMSL2/1 camera inputs. Designed to mate to the Rogue carrier (PN: JCB002) this camera platform is also compatible with the NVIDIA® Jetson AGX Xavier™ Development Kit (PN: JCB004).

#### Features

- GMSL1 or GMSL2 protocols
- Ideal for those needing a more robust MIPI solution
- Allows longer length cabling as well as a direct path to the Xavier ISPs
- 4x mini coax connectors
- Input voltage protection, and software power cycle

### 4x Basler MIPI Camera Board

**NEW**



The 4x Basler MIPI camera board is an expansion board that allows up to 4 Basler Dart cameras to be connected to the Jetson Xavier module. It was designed for the Rogue carrier but is also compatible with the NVIDIA® Jetson AGX Xavier™ Development kit.

#### Features

- 4x Basler BCON MIPI Connectors
- Onboard power regulation
- Compact size
- 2x GPI and 2x GPO per camera
- Operating Temperature -40°C to +85°C
- Dimensions: 75mm x 40.2mm (2.95" x 1.58")

### Mimic



The Mimic Adapter allows the NVIDIA® Jetson™ AGX Xavier™ module to be installed onto an NVIDIA Jetson TX2/TX2i/TX1 carrier. The Mimic Adapter is ideal for NVIDIA Jetson users who want to easily compare performance between their existing TX2/TX2i/TX1 designs to the new AGX Xavier.

#### Features

- Install NVIDIA® Jetson™ AGX Xavier™ on any NVIDIA® Jetson™ TX2/TX2i/TX1 Carrier Board
- Easily compare performance between Jetson TX2 and Jetson AGX Xavier on your current hardware platform
- Wide range of Jetson AGX Xavier interfaces passed to Jetson TX2/TX2i/TX1 carrier
- Dimensions: 92mm x 105mm (3.62" x 4.13")

## Sentry-X

NEW



Sentry-X Rugged Embedded System is built for the NVIDIA® Jetson™ AGX Xavier™. Features included in this system are 2x GbE, 3x USB 3.1, 2x HDMI, 2x CAN 2.0b, 2x RS-232/422/485, 1x UART 3.3V TTL, and 8x GPIO. Sentry-X is designed to MIL-STD 810g and DO-160G harsh environments.

### Features

- Unique docking stations – allow for quick release of Sentry-X compute module
- 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
- Ideal for Aerospace and Defense applications
- Designed to MIL-STD-810G, DO-160G for shock & vibration, ingress protection of IP67

## Fischer Rear I/O Dock

NEW



Sentry-X is a unique 2-piece design comprised of a Compute Module that includes the Xavier module and quick release docking sled. The Fischer MiniMax Circular Connectors are IP-67 rated and allow access to a wide assortment of IO.

### Features

- 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
- Additional docking sleds will include a fully sealed PC - style connector docking sled, sled, as well as D38999 and MilSTD.

## Rogue Carrier

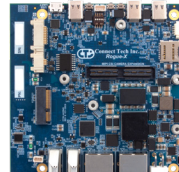


Rogue is a full featured Carrier Board for the NVIDIA® Jetson™ AGX Xavier™ module. This carrier board is specifically designed for commercially deployable platforms, and has an extremely small footprint of 92 x 105mm. Camera Board Platforms are available for the Rogue Carrier.

### Features

- Commercially deployable NVIDIA® Jetson™ AGX Xavier™ platform
- 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
- Dimensions: 92mm x 105mm (3.62" x 4.13")

## Rogue-X Carrier



The Rogue-X allows for the Xavier to interface up to two XIMEA xiX embedded vision cameras, each camera can utilize a PCIe Gen2 x4 connection. In addition the Rogue-X can also interface to 3x USB 3.1, 2x GbE, 2x HDMI and a locking Mini-Fit Jr. power input connector.

### Features

- Commercially deployable NVIDIA® Jetson™ AGX Xavier™ platform
- 6x 2-lane or 4x 4-lane MIPI CSI Camera Inputs
- 1x NVMe M.2 Key M Slots, 3x USB 3.1, 2x GbE
- Wide input power range 9-19V DC
- Dimensions: 105mm x 105mm (4.13" x 4.13")



## NVIDIA® Jetson™ AGX Xavier Products

The NVIDIA® Jetson™ AGX Xavier™ has an impressive 512-core Volta GPU and 64 Tensor cores with discreet dual Deep Learning Accelerator (DLA) NVDLA engines. Connect Tech is proud to feature an exciting family of products offering rugged small form factor solutions for the Xavier platform as well as Custom Design Services.



## OrbittyBox



Connect Tech's OrbittyBox easily turns the Orbitty carrier into a complete packaged NVIDIA® Jetson™ TX2/Jetson TX1 system. This two-piece metal enclosure is designed to house an Orbitty Carrier, NVIDIA® Jetson™ TX2 or Jetson TX1 module, and Connect Tech's active heat sink.

### Features

- Specifically designed for use with Jetson™ TX2/TX1 and Orbitty Carrier
- 2-Piece Metal Enclosure
- Dimensions: 95.2mm x 63mm x 58.2mm (3.75" x 2.48" x 2.29") (WxHxD)
- Optional 2x SMA Antenna Connectors

## Orbitty

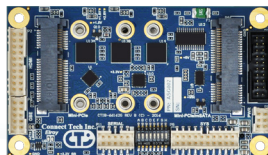


Connect Tech's Orbitty Carrier for NVIDIA® Jetson™ TX2, TX2i and Jetson™ TX1 is designed to match the NVIDIA Jetson TX2/TX2i/TX1 module form factor. The Orbitty's design includes 1x USB 3.0, 1x USB 2.0 OTG, 1x HDMI, 1x GbE, 1x microSD, 2x 3.3V UART, I2C, and 4x GPIO

### Features

- Ideal for robotics and unmanned applications or any small form factor rugged environment
- Extremely Small Size: 87mm x 50mm (3.42" x 1.96")
- 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)

## Elroy

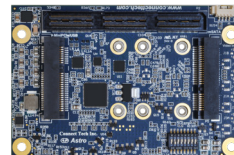


The Elroy Carrier for NVIDIA® Jetson™ TX2/TX2i/TX1 brings a low cost deployable, small form factor solution to the market. The Elroy's design includes Dual x2 MIPI CSI-2 Video Inputs, Mini-PCIe/mSATA expansion, HDMI Video, USB 3.0 and 2.0, and two Serial Ports for RS 232/485.

### Features

- Extremely Small Size: 87mm x 50mm (3.425" x 1.968")
- Head-to-Head Dual Mini-PCIe
- Dual x2 MIPI CSI-2 Video Inputs
- Locking pin-header connectors
- Operating Temperature -40°C to +85°C (-40°F to +185°F)

## Astro

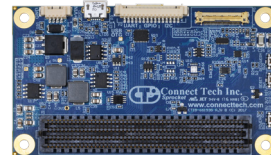


Astro is specifically designed to work with the NVIDIA® Jetson™ TX2, TX2i, or TX1 supercomputer-on-module. The Astro Carrier provides access to features found on the Jetson TX2/TX2i/TX1 module in an extremely small footprint (87mm x 57mm/3.43" x 2.24")

### Features

- 2 Gigabit (10/100/1000) Ports
- USB and HDMI Ports
- Use with COTS or custom breakout boards
- Extended Temperature Range -40°C to +85°C (Astro Carrier)
- Video Inputs: MIPI, GMSL\*

## Sprocket

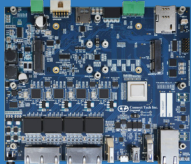


Connect Tech's Sprocket Carrier for NVIDIA® Jetson™ TX2, TX2i, and TX1 is designed to match the NVIDIA Jetson module form factor. The Sprocket's design includes 1x USB OTG, 1 x4 lane MIPI CSI-2, 2x 3.3V UART, 2x I2C, and 4x GPIO. This is our smallest and lowest profile solution.

### Features

- Slimmest design possible in Z-axis – All components fit "under" TX2/TX2i/TX1 module
- Extremely Small Size: 87mm x 50mm (3.42" x 1.96")
- 1x USB OTG, 1 x4 lane MIPI CSI-2, 2x 3.3V UART, I2C, 4x GPIO
- +12V to +16V DC Input Range

## Cogswell



Connect Tech's Cogswell Carrier for NVIDIA® Jetson™ TX2, TX2i, and TX1 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.

### Features

- Specifically designed for use with GiGE Vision Cameras
- 5 x Gigabit Ethernet Channels – 4 x PoE, 2 x PoE+ PSE Gigabit Ports
- Only a single +12V input required; No external 48V PoE power required
- 1 x USB 3.0, 1x USB 2.0, 1x USB OTG, 2x RS-232, 1x miniPCIe, 1x mSATA

## Spacely



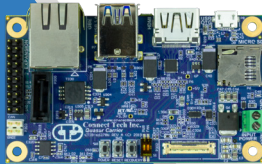
Spacely Carrier for NVIDIA® Jetson™ TX2/TX2i/TX1 is an ideal product for unmanned vehicle applications, or any application where situational awareness is critical. Spacely enables users to simultaneously connect up to 6 MIPI CSI-2 cameras and more.

### Features

- Built-in expansion for a GPS/GNSS module
- 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 CLIENT, 1x miniPCIe Slot, mSATA Slot
- 2x UART, I2C, SPI, 16 GPIO all at +3.3V IO

## Quasar

NEW



Connect Tech's Quasar is the latest carrier board addition for the NVIDIA TX2/TX2 4GB/TX2i/TX1. While very similar to the popular Orbitty Carrier, the Quasar brings in a few new features while maintaining the small 87mm x 50mm footprint.

### Features

- Additions: 2x USB3.0, 1x 4-lane MIPI (I-PEX), 1x CAN, SATA 7-pin connector for storage
- Updated 1x HDMI 2.0 connector
- Dimensions: 87mm x 50mm (3.42" x 1.96")
- Operating Temperature: -40°C to +85°C (-40°F to +185°F)

## Carrier Boards



## NVIDIA® Jetson™ Products TX2 | TX2i | TX2 4GB | TX1

In business for 35 years, Connect Tech is the global leader for NVIDIA Jetson solutions. With more readily available Jetson platforms than any other NVIDIA partner you can choose from our carrier board solutions or fully packaged, ready to deploy embedded systems. In addition to our hardware platforms our customers have direct access to our in house Jetson experts; enjoy engineer to engineer discussion helping you get to market.





## Visit Connect Tech on the Road

Connect Tech is regularly on the road at industry events around the globe.

*Celebrating*  
**35** years  
1985-2020

Visit our website at

[www.connecttech.com](http://www.connecttech.com)

to find out where you can see us next!



### Graphite VPX/CPU-TX2/TX2i

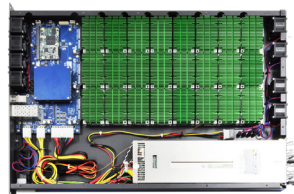


Connect Tech's GraphiteVPX/CPU-TX2/TX2i is a VITA 65 compliant 3U VPX single board computer that brings the NVIDIA® Jetson™ TX2/TX2i embedded computing platforms to the VPX form factor. This complete host solution delivers over a TeraFLOP of performance.

#### Features

- Multiple USB 3.0 ports, multiple GbE channels, and 6 x CSI camera interfaces
- 1 TFLOP, 256 CUDA cores with NVIDIA® Pascal™ or Maxwell™ GPU Architecture
- Conduction cooled
- The onboard PCIe Gen 3.0 switch supports two x4 port dataplane connections

### Jetson™ TX2 or AGX Xavier™ Array Server



This scalable array server contains 24 NVIDIA® Jetson™ TX2/TX1 modules. Three array boards house eight Jetson TX2/TX1 modules each, all connected via a Gigabit Ethernet fabric through a specialized managed Ethernet Switch developed by Connect Tech with 10G uplink capability.

#### Features

- 24x 1 TFLOP/s, 6,144 GPU CUDA cores with NVIDIA® Pascal™ or Maxwell™ Architecture
- 2x 10G SFP+, 2x 1G SFP Uplink Capability
- 3x 2.5" SATA drives
- 1U ATX style redundant power supply

VPX

Embedded Systems

### Rosie



Connect Tech's Rosie is a small form factor, rugged embedded system based on the NVIDIA® Jetson™ TX2/TX2i/TX1. Housed in a rugged compact enclosure with optional mounting brackets, Rosie features revolutionary NVIDIA Pascal™ or Maxwell™ architecture.

#### Features

- 163.6mm x 108.0mm x 96.3mm (6.438" x 4.250" x 3.790")
- 1x HDMI, 2x GbE, 2x USB 2.0, IEEE 802.11 ac, 1x RS-232
- +9V to +36V Power Input
- Designed to MIL-STD 810g and DO-160G for shock and vibration
- Designed to IP68 ingress protection rating

### Rudi



Connect Tech's Rudi Embedded System holds a lot of power in a small package. Rudi is pre-integrated with the NVIDIA® Jetson™ TX2/TX1 supercomputer-on-module, providing 256 CUDA® Cores on the NVIDIA Pascal™ or Maxwell™ architecture.

#### Features

- 1 TFLOP/s, 256 CUDA cores with NVIDIA® Pascal™ or Maxwell™ GPU Architecture
- Extremely small footprint 135mm x 50mm x 105mm
- USB 3.0, USB 2.0, CAN 2.0b, USB OTG, RS-232, I2C, GPIO, WIFI, Bluetooth
- 1 x miniPCIe Slot with PCIe & USB Connectivity

### Cogswell Vision System



Connect Tech's Cogswell Vision System is powered by NVIDIA® Jetson™. This system is pre-integrated with the NVIDIA® Jetson™ TX2 or TX1 supercomputer-on-module, providing 256 CUDA® cores on the NVIDIA® Pascal™ or Maxwell™ architecture. Cogswell Vision is both fanless and cable free.

#### Features

- Specifically designed for use with GigE Vision Cameras
- 5 x Gigabit Ethernet Channels – 4 x PoE, 2 x PoE+ PSE Gigabit Ports
- Only a single +12V input required; No external 48V PoE power required
- 1 x USB 3.0, 1x USB 2.0, 1x USB OTG, 2x RS-232, 1x miniPCIe, 1x mSATA

## Embedded Systems



## NVIDIA® Jetson™ Systems TX2 | TX2i | TX2 4GB

Our NVIDIA Jetson embedded systems offer a platform that move our customers from development to deployment in the fastest way possible. These systems can also be modified to incorporate additional storage, WIFI/Bluetooth modules and more. Choose from a variety of packaging options including rugged MIL-STD 810g and DO-160 tested solutions.

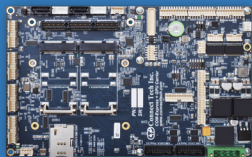


# NVIDIA® Jetson™ TX2 & TX1 Solutions



| Name                  | Astro   | Elroy   | Orbitty                                    | Quasar                                     | Spacely  | Cogswell  | Sprocket                                 |
|-----------------------|---|---|--|--|--|---|--|
| Part Number           | ASG001 w/ XBG206  | ASG002  | ASG003                                     | ASG016                                     | ASG006   | ASG007  | ASG008                                   |
| Dimensions            | 87mm x 57mm<br>(3.43" x 2.24")  | 87mm x 50mm<br>(3.425" x 1.968")  | 87mm x 50mm<br>(3.425" x 1.968")           | 87mm x 50mm<br>(3.425" x 1.968)            | 125mm x 95mm<br>(4.92" x 3.74")  | 178mm x 147.5mm<br>(7.008" x 5.81")   | 87mm x 50mm<br>(3.425" x 1.968")         |
| Mini-PCIe/<br>mSATA   | 1x half size card or 1x<br>full size card PCIe and<br>USB signalling (Mini<br>PCIe) | 1x Mini-PCIe/mSATA half<br>or full size (use of full size<br>removes secondary Mini<br>PCIe slot) | N/A  | N/A  | 1 x miniPCIe Slot with<br>PCIe, USB + SIM;<br>1x mSATA Full Size Slot              | 1 x miniPCIe Slot with<br>PCIe & USB,<br>x mSATA Full Size Slot                         | N/A                                      |
| SATA                  | 1x SATA Link  | 1x mSATA half or full size<br>(use of full size removes<br>secondary Mini PCIe slot)              | N/A  | 1x SATA (7-pin Data<br>Connector)          | N/A  | N/A   | N/A                                      |
| Display               | 1x HDMI   | 1x HDMI   | 1x HDMI                                    | 1x HDMI                                    | 1x HDMI  | 1x HDMI   | N/A                                      |
| Serial                | 2x RS-232/RS-485  | 2x RS-232/RS-485  | 2x 3.3V UART through<br>discreet connector | 2x 3.3V UART through<br>discreet connector | 2x 3.3V from TX2/TX1<br>UART0 and UART1  | 2x RS-232   | 2 x 3.3V from TX2/TX1<br>UART0 and UART1 |
| USB                   | 1x USB 3.0,<br>2x USB 2.0   | 1x USB 3.0<br>(Integrated USB 2.0),<br>1x USB 2.0   | 1x USB 3.0,<br>1x USB 2.0 OTG              | 2x USB 3.0                                 | 2x USB 3.0,<br>1x USB OTG,<br>2x USB 2.0, 1x USB 2.0<br>to miniPCIe Slot           | 1 x USB 3.0,<br>1 x USB OTG (Micro-AB),<br>1 x USB 2.0, 1 x USB 2.0<br>to miniPCIe Slot | 1 x USB OTG                              |
| Ethernet              | 2x GbE  | 1x GbE  | 1x GbE                                     | 1x GbE                                     | 1x GbE   | 5 x GbE<br>(4x PoE, 2x PoE+)  | N/A                                      |
| Audio                 | HDMI Integrated Audio   | HDMI Integrated Audio   | HDMI Integrated Audio                      | HDMI Integrated Audio                      | HDMI Integrated Audio  | N/A   | N/A                                      |
| SD Card               | 1x microSD Card Slot  | 1x microSD Card Slot  | 1x microSD Card Slot                       | 1x microSD Card Slot                       | 1x microSD Card Slot   | 1x microSD Card Slot  | N/A                                      |
| Video Inputs          | 1 x2 Lane MIPI CSI-2<br>2 x4 Lane MIPI CSI-2  | 2x 2-Lane (2x) MIPI CSI 2.0   | N/A  | N/A  | 6 x2 Lane MIPI CSI-2<br>OR 3 x4 Lane MIPI CSI-2                                    | 5x capable GbE ports  | 1 x4 lane MIPI CSI-2                     |
| Misc                  | 1x I2C Link 1x System<br>Control,<br>1x RTC Battery Input,<br>4x GPIO               | 1x I2C Link, 1x SPI Link,<br>1x System Control,<br>1x RTC Battery Input, 4x<br>GPIO               | I2C, 4x GPIO                               | 2x 3.3V UART,<br>I2C, 4x GPIO,<br>1x CAN   | 1x USB OTG, I2C, CAN,<br>GPIO, 1x GPS/GNSS<br>(optional), SPI Channel<br>@ 3.3V IO | 1x USB OTG, I2C, CAN<br>2.0, GPIO   | 1x USB OTG, I2C,<br>4x GPIO              |
| Power<br>Requirements | +9V to +36V Input   | DC Input Range +12V DC<br>Nominal Input   | +9V to +14V DC<br>Nominal<br>(+19V Peak)   | +9V - +14V DC<br>Nominal (+19V Peak)       | +12V to +22V DC  | +12 DC Only   | +9V to +16V DC                           |

## COM Express® Type 6 + GPU Embedded System



The COM Express® + GPU Embedded System from Connect Tech combines Intel® Skylake and Kaby Lake x86 processors with high-end NVIDIA® Quadro®, Tesla®, and GeForce™ Graphics Processing Units (GPU) all into a ruggedized small form factor embedded system.

### Features

- Combines High-End GPUs with latest generation x86 processors in a ruggedized small form factor
- GPUs can be targeted for 4 independent display outputs OR for a headless GPU processing system utilizing CUDA® cores
- System uses a building block approach, mix and match CPUs with NVIDIA® Quadro®, Tesla® or GeForce™ GPUs

## COM Express® Type 7 + GPU Embedded System



The COM Express Type 7 + GPU Embedded System from Connect Tech combines Intel® Xeon® D (Server Class) and Intel® Atom™ C3000 x86 processors with high-end NVIDIA® Quadro® and Tesla® Graphics Processing Units (GPU) all into a small form factor embedded system.

### Features

- Combines High-End GPUs with Intel® Xeon® D Server Class and Intel® Atom™ C3000 x86 Processors
- GPUs can be targeted for 4 independent display outputs OR for a headless GPGPU processing system using CUDA® cores
- 10 GbE interconnect: 2x 10GBASE-SR/LR From Dual Inphi CS4223E (Quad SFP+)

## V7G System



The V7G GPU System from Connect Tech combines Intel® Xeon® D (Server Class) and Intel® Atom™ C3000 x86 processors with high-end NVIDIA® Quadro® and Tesla® Graphics Processing Units (GPU) all into a small form factor embedded system.

### Features

- All models ideal for high-end encode/decode video applications or GPGPU CUDA® processing, Deep Learning and Artificial Intelligence applications.
- 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
- Black Aluminum Enclosure



## NVIDIA® Quadro & Tesla Solutions

Connect Tech is a leader in high-end compute platforms for the embedded market. Choose from NVIDIA® Quadro® or Tesla® GPUs paired with Xeon D (Server Class) and Intel Atom C3000 x86 processors in a compact system designed to be highly portable. Available in a fully enclosed system as well as a non-enclosed version for customer designed thermal solutions.





# Jetson Comparison

| Jetson Nano    |   | Jetson TX2 Series  |                              |  | Jetson Xavier NX   | Jetson AGX Xavier Series                                 |   |
|----------------|---|--|------------------------------|--|--|--|---|
|                | Nano                                      | TX2 4GB  | TX2                          | TX2i                                       | Xavier NX  | AGX XAVIER 8GB   | AGX XAVIER  |
| AI Performance | 472 GFLOPs                                | 1.33 TFLOPs  |                              | 1.26 TFLOPs                                | 21 TOPs  | 20 TOPs  | 32 TOPs   |
| GPU            | 128-core NVIDIA Maxwell™ GPU              | 256-core NVIDIA Pascal™ GPU  |                              |  | 384-core NVIDIA Volta™ GPU with 48 Tensor Cores          | 384-core NVIDIA Volta™ GPU with 48 Tensor Cores          | 512-core NVIDIA Volta™ GPU with 64 Tensor Cores             |
| CPU            | Quad-Core ARM® Cortex®-A57 MPCore         | Dual-Core NVIDIA Denver 1.5 64-Bit CPU and Quad-Core ARM® Cortex®-A57 MPCore processor |                              |  | 6-core NVIDIA Carmel ARM®v8.2 64-bit CPU 6MB L2 + 4MB L3 | 6-core NVIDIA Carmel Arm®v8.2 64-bit CPU 6MB L2 + 4MB L3 | 8-core NVIDIA Carmel Arm®v8.2 64-bit CPU 8MB L2 + 4MB L3    |
| Memory         | 4 GB 64-bit LPDDR4 25.6GB/s               | 4 GB 128-bit LPDDR4 51.2GB/s   | 8 GB 128-bit LPDDR4 59.7GB/s | 8 GB 128-bit LPDDR4 (ECC Support) 51.2GB/s | 8 GB 128-bit LPDDR4x 51.2GB/s                            | 8 GB 256-bit LPDDR4x 85.3GB/s                            | 16 GB 256-bit LPDDR4x 136.5GB/s                             |
| Storage        | 16 GB eMMC 5.1 *                          | 16 GB eMMC 5.1   | 32 GB eMMC 5.1               | 32 GB eMMC 5.1                             | 16 GB eMMC 5.1   | 32 GB eMMC 5.1   |   |
| Power          | 5W / 10W                                  | 7.5W / 15W   |                              | 10W / 20W                                  | 10W / 15W  | 10W / 20W  | 10W / 15W / 30W   |
| PCIe           | 1 x4 (PCIe Gen2)                          | 1 x1 + 1 x4 OR 1 x1 + 1 x1 + 1 x2 (PCIe Gen2)  |                              |  | 1 x1 + 1 x4 (PCIe Gen3, Root Port & Endpoint)            | 1 x8 + 1 x4 + 1 x2 + 2 x1 (PCIe Gen3)                    | 1 x8 + 1 x4 + 1 x2 + 2 x1 (PCIe Gen4, Root Port & Endpoint) |
| CSI Camera     | Up to 4 cameras                           | Up to 6 cameras (12 via virtual channels)  |                              |  | Up to 6 cameras (24 via virtual channels)                | Up to 6 cameras (36 via virtual channels)                |   |
| Audio          | —   | —  |                              |  | 2x NVDLA Engines   | 2x NVDLA Engines   |   |
| DL/Vision      | 10/100/1000 BASE-T Ethernet               |  |                              |  |  |  |   |
| Mechanical     | 69.6 mm x 45 mm 260-pin SO-DIMM connector | 87 mm x 50 mm 400-pin connector  |                              |  | 69.6 mm x 45 mm 260-pin SO-DIMM connector                | 100 mm x87 mm 699-pin connector                          |   |



ELITE  
PARTNER

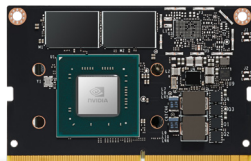
## The Jetson Family

for AI at the Edge and Autonomous System designs

*Partnering Together – Creating Excellence*

### JETSON NANO

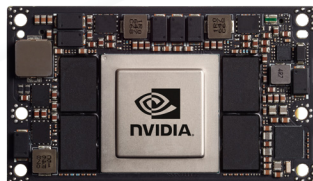
0.5 TFLOPS (FP16)



5 - 10W  
45mm x 70mm

### JETSON TX2 series

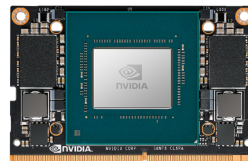
1.3 TFLOPS (FP16)



7.5 - 15W\*  
50mm x 87mm

### JETSON Xavier NX

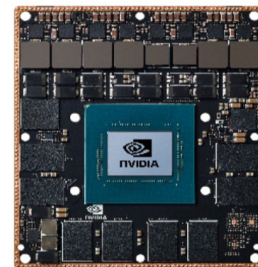
6 TFLOPS (FP16)  
21 TOPS (INT8)



10 - 15W  
45mm x 70mm

### JETSON AGX XAVIER series

11 TFLOPS (FP16)  
32 TOPS (INT8)



10 - 30W  
100mm x 87mm

AI at the edge

Fully autonomous machines

*Celebrating*  
**35**  
years  
1985-2020



Connect Tech Inc.  
Embedded Computing Experts

**Multiple Devices - Same Software**

### AGX Xavier™ Passive Heat Sink



#### Features

- Designed to fit the NVIDIA® Jetson AGX Xavier™ modules
- Dissipates the heat produced by the module through convection
- Dimensions: 100mm x 87mm x 16mm/3.93" x 3.43" x 0.63"

### AGX Xavier™ Active Heat Sink



#### Features

- Designed to fit the NVIDIA® Jetson AGX Xavier™ modules
- Dissipates the heat produced by the module through a fan
- Dimensions: 100mm x 87mm x 36.7mm/3.93" x 3.43" x 1.44"

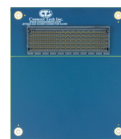
### AGX Xavier™ Liquid Cooling Solution



#### Features

- Liquid Cooling Block for Xavier Module
- 8-port cooling block with non-return valves
- Enables a circular liquid flow inside the block regardless from which side in/out fittings are installed

### Connector Saver



#### Features

- Designed to fit the NVIDIA® Jetson AGX Xavier™ modules
- Dimensions: 92mm x 105.1mm/3.62" x 4.13"

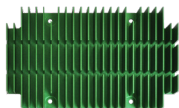
## Jetson Accessories

Accessories are available for our Jetson product line. Our packaged solutions such as Rudi, Rosie and Sentry-X can be customized with a variety of modules.

### Accessories include:

Cables, power supplies, camera adapters, camera expansions, enclosures, thermals, WIFI modules, frame grabbers, storage, bluetooth modules and more.

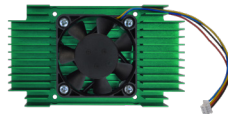
### TX2 | TX2i | TX2 4GB Passive Heat Sink



#### Features

- Designed to fit the NVIDIA® Jetson™ TX2 and TX1 modules
- Dissipates the heat produced by the module through convection
- Dimensions: 87mm x 50mm x 16mm/3.43" x 1.97" x 0.63"

### TX2 | TX2i | TX2 4GB Active Heat Sink



#### Features

- Designed to fit the NVIDIA® Jetson™ TX2 and TX1 modules
- Dissipates the heat produced by the module through a fan
- Fin Space: 3.00mm
- Dimensions: 87mm x 50mm x 16mm/3.43" x 1.97" x 0.63"

### Nano™ & Xavier™ NX TTP



#### Features

- Designed to fit the NVIDIA Jetson Nano module
- Thermal Transfer Plate provides a surface for customers to further develop their own thermal solution
- Dimensions: 61mm x 40mm x 4.20mm

### Nano™ & Xavier™ NX Passive Heat Sink



#### Features

- Designed to fit the NVIDIA Jetson Nano module
- Dissipates the heat produced by the module through convection
- Dimensions: 61mm x 40mm x 16mm

### Nano™ & Xavier™ NX Active Heat Sink



#### Features

- Designed to fit the NVIDIA Jetson Nano module
- Dissipates the heat produced by the module through convection
- Dimensions: 61mm x 40mm x 16mm



# Connect Tech Inc.

**Embedded Computing Experts**

[www.connecttech.com](http://www.connecttech.com)

Connect Tech, the global leader for NVIDIA Jetson platforms, offers an extensive line of commercial off the shelf solutions for Jetson Nano, Xavier NX, Jetson TX2 and the Jetson AGX Xavier. Offering AI camera platforms, carrier boards and fully packaged Jetson solutions, Connect Tech have the products that will move you from development to deployment! We also pair the most current Intel processors with NVIDIA Quadro and Tesla GPUs in embedded formats.

Other embedded offerings include carrier boards for industry standards including COM Express, SMARC and Qseven, an extensive line of embedded managed Ethernet Switches including 10GB offerings as well as a wide range of I/O boards. Custom design is also part of our day to day offering; when off the shelf just doesn't fit, we have a deep IP pool that allows for fast turn re-use to provide our customers with an exact fit solution.

## Mission Statement

*Connect Tech is a designer and manufacturer of computer interface products for the global market. Our commitment is customer satisfaction through fair and ethical relationships with our customers, suppliers and employees.*

**Connect Tech Inc. - ISO 9001:2015 Certified**



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