



# Connect Tech Inc.

## Embedded Computing Experts

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

## Product Change Notification

### *NVIDIA® Jetson AGX Xavier™ Products*

<b>PCN Number:</b>	CTIU-00040
<b>Revision:</b>	0.02
<b>Issue Date:</b>	2022-09-16
<b>Effective Date:</b>	2022-02-15

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## 1 Document Revision History

Revision	Date	Change
0.00	2022-02-02	Initial release
0.01	2022-02-15	Updated wording in section 2
0.02	2022-08-31	Updated formatting, Software, Hardware and mechanical compatibility sections

## 2 Product Identification

### 2.1 Product Data

**Table 1: Affected Carrier Board Products**

Description	Original/Previous Part Numbers	New Alternate Part Numbers
Rogue Carrier	AGX101	AGX111
Rogue-X Carrier	AGX103	AGX113

**Table 2: Affected Embedded System Products**

Description	Original/Previous Part Numbers	New Alternate Part Numbers With Support for Jetson AGX Xavier Industrial
Rudi-AGX Embedded System	ESG610- [01 thru 16]	ESG610- [17 thru 32]
Sentry-X Rugged Embedded System	SGX001, SGX002, SGX003, SGX007, SGX008, SGX009	SGX010, SGX011, SGX012, SGX013, SGX014, SGX015

### 2.2 Means of Distinguishing Changed Products

		Remark
Product Number	<input checked="" type="checkbox"/>	Refer to the tables in Section 2.1
Hardware Revision	<input checked="" type="checkbox"/>	Refer to the tables in Section 2.1 Please contact Sales or Customer Support for details.
Lot Code	<input type="checkbox"/>	N/A
Label	<input type="checkbox"/>	N/A
Other	<input type="checkbox"/>	

### 3 Description and Reason of Change

AVL	<input type="checkbox"/>	Product Improvement	<input checked="" type="checkbox"/>
Material	<input checked="" type="checkbox"/>	BIOS Release	<input type="checkbox"/>
Assembly Process	<input type="checkbox"/>	Firmware Release	<input type="checkbox"/>
Assembly BOM	<input type="checkbox"/>	Datasheet / Manual	<input type="checkbox"/>
Testing	<input type="checkbox"/>	DFM	<input type="checkbox"/>
Manufacturing Site	<input type="checkbox"/>	Other	<input type="checkbox"/>
Equipment	<input type="checkbox"/>		

- 1) Due to industry wide supply chain shortages, CTI has updated the existing carrier products shown in section 2.1, to design in alternative components to ensure acceptable lead-times on product delivery. These changes include:
  - a. USB Control and Power circuitry (AGX111, AGX113)
  - b. USB UART (AGX113)
  - c. Removal of 5V fan connector (AGX111, AGX113)
- 2) Camera Expansion Connector updates to support additional camera vendors.
  - a. Open Drain Buffers added to Camera Expansion Connector (CAM0\_RST# and CAM1\_RST#) to support FRAMOS cameras
- 3) In addition to the updates listed above, CTI has also implemented design changes to ensure support of both the industrial and non-industrial versions of the AGX Xavier™.
  - AGX101 rev G and later
  - AGX103 rev E and later (Available Q4 2022)
  - AGX111 rev G and later
  - AGX113 rev E and later

## 4 Impact of change (positive or negative) on fit, form, function & reliability

### 4.1 Quality and Reliability

There is no change to quality or reliability.

### 4.2 Software Compatibility

All carriers are functionally compatible with existing and new BSP releases, with specific limitations as explained below.

#### 4.2.1 BSP Compatibility

Carriers with alternative parts (AGX111, AGX113), when used with BSP version 32.6.1-V004 or older, will have a limited advertised current capacity on the USB ports as shown below.

<b>AGX111, AGX113 (with BSP 32.6.1-V004 or older)</b>		
<b>USB Connector</b>	<b>Advertised</b>	<b>Actual</b>
J3	900mA	1.5A*
J4A	900mA	3.4A*
J4B	900mA	3.4A*

Carriers with alternative parts (AGX111, AGX113), when used with the updated BSP version 32.6.1-V005 or later, will have the correct advertised current capacity on the USB ports as shown below.

<b>AGX111, AGX113 (with BSP 32.6.1-V005 or later)</b>		
<b>USB Connector</b>	<b>Advertised</b>	<b>Actual</b>
J3	1.5A	1.5A*
J4A	1.5A	3.4A*
J4B	3A	3.4A*

On all BSP releases, the AGX101 and AGX103 will share the same advertised and actual current capacities as the table directly above.

\* Note: Actual power sourcing capabilities may be lower than stated when all USB ports are used simultaneously or other under heavy CPU/GPU load. The total +5V power budget for the AGX101/AGX111 is 8A total and this is shared between the 3 USB Type-C ports as well as the Jetson AGX Modules SYS\_VIN\_MV rail.

If you are still unsure which [BSP](#) is required for your Rogue or Rogue-X carrier, please contact [support@connecttech.com](mailto:support@connecttech.com).

## 4.2.2 USB UART Compatibility

The AGX113 uses a MaxLinear USB UART controller over the FTDI controller found on the AGX103. It is recommended to install the latest driver to ensure proper operation of the UART on the non AGX carrier side of the link.

Drivers can be found on MaxLinear's website:

<https://www.maxlinear.com/product/interface/uarts/usb-uarts/xr21v1410>

## 4.3 Hardware Compatibility

Advertised USB current capacity may differ as noted in software compatibility.

- Applies to AGX111, AGX113

5V fans are no longer useable with these alternate part builds

- Applies to AGX111, AGX113

CAM0\_RST#, Pin 95 and CAM1\_RST#, Pin 92 on the camera expansion connector can no longer be used as an I/O input.

- Applies to AGX101, AGX111, AGX103, AGX113

Carrier boards now support AGX and AGX Industrial Modules

- Applies to AGX101, AGX111, AGX103, AGX113

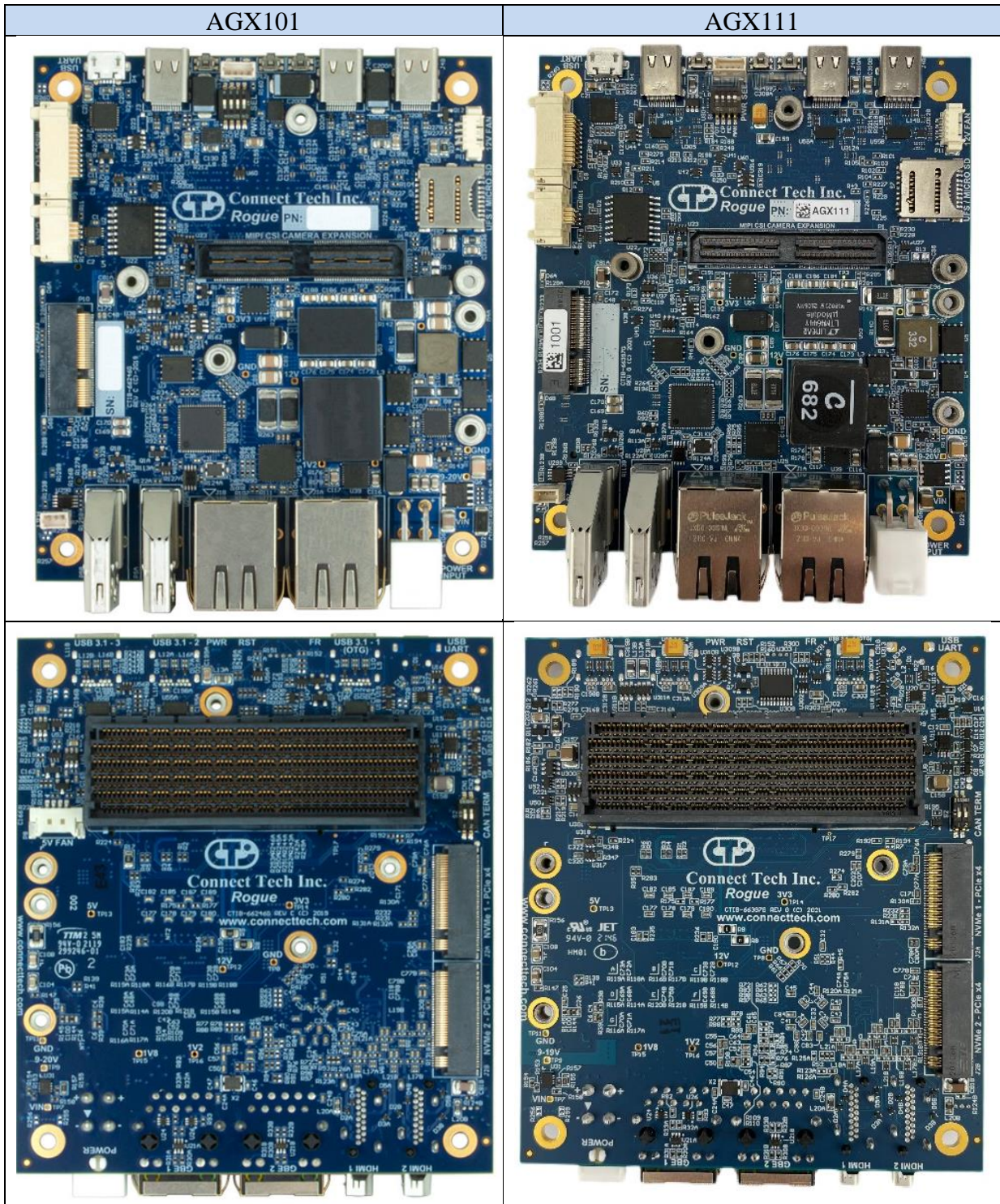
## 4.4 Mechanical Compatibility

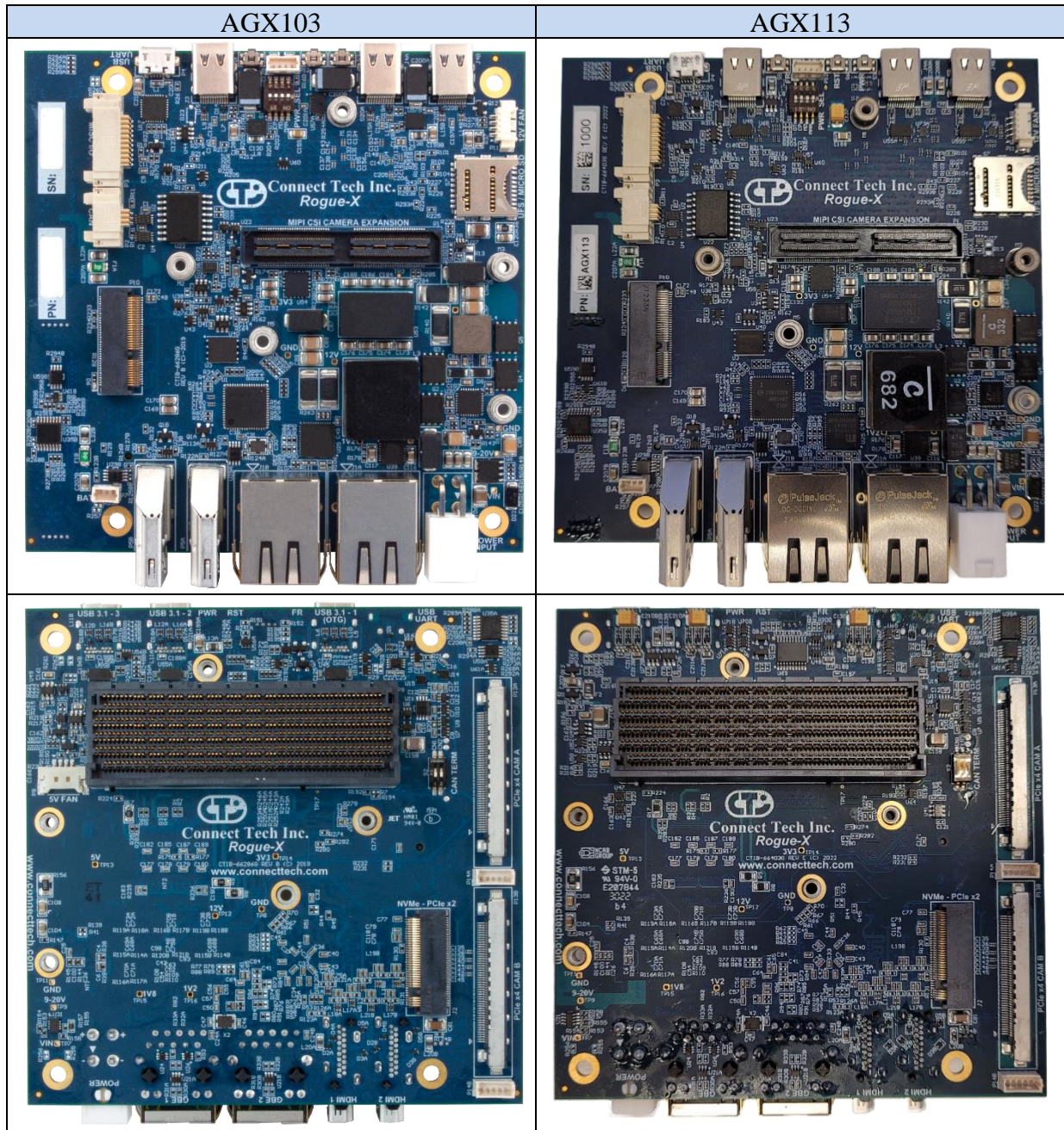
While the AGX111 and AGX113 are designed to be form fit and functionally equivalent to the originals; component placement has had to change to fit the alternate circuitry.

Ensure mechanical compatibility with end user designs by downloading new 3d models found on the CTI Website or by contacting [support@connecttech.com](mailto:support@connecttech.com).

<https://connecttech.com/product/rogue-x-carrier-nvidia-jetson-agx-xavier/>

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## 5 Product / Revision Discontinuation

All existing products are still active. Some part numbers have a longer lead-time due to industry wide supply chain shortages.

## 6 Contact Information

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