



Connect Tech Inc.

Embedded Computing Experts

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Product Change Notification

Photon NGX002, NGX003

PCN Number:	CTIU-00037
Revision:	0.00
Issue Date:	2022-09-14
Effective Date:	2022-09-14

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1 Document Revision History

Revision	Date	Change
0.00	2022-09-14	Initial release

2 Product Identification

	Version
Product Name	Photon Carrier Board
CTI Part Numbers	NGX002, NGX003
Hardware Revision	G

3 Description and Reason of Change

AVL	<input type="checkbox"/>	Product Improvement	<input checked="" type="checkbox"/>
Material	<input 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 checked="" type="checkbox"/>
Testing	<input type="checkbox"/>	DFM	<input type="checkbox"/>
Manufacturing Site	<input type="checkbox"/>	Other	<input type="checkbox"/>
Equipment	<input type="checkbox"/>		

Product Installation Advisory: Photon Carrier PoE PD Version NGX002 Rev G and later

The product manual CTIM-00080 has been updated with important guidelines regarding powering NGX002 with POE and then connecting any of P6 USB Console, P9 GPIO, P12 HDMI, and P13 USB OTG to **externally** powered equipment. Please review this section of the manual carefully to avoid damage to product and equipment.

Product Enhancement: Photon Carrier NGX002, NGX003 Revision G and Later

Grounding Schemes:

In order to provide more grounding connectivity options when integrating the Photon carrier into systems and applications, additional flexibility of ground and frame ground connection schemes are present via resistor population options. Please review this section of the manual carefully to choose the right scheme required for end products

PCIe Interface Improvements:

Photon can now utilize both the M.2 M and E key slots at the same time due to a change in the PCIe layout and switching circuitry.

This applies to the Xavier NX and TX2 NX modules that breakout out two interfaces.

A switch selection is still available for Jetson Nano to choose between which interface to use. Refer to manual for correct settings.

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

4.1 Quality and Reliability

There are no changes to quality or reliability.

4.2 Software Compatibility

There is no change to software compatibility.

4.3 Hardware Compatibility

The new implementation of the grounding scheme has changed some default connections. All but the RJ45 have the ability to have their state changed to suit end user applications.

Item	Description	Rev A-F Default State	Rev G Shell Default State
J2	USB Type C	Frame GND	Digital GND
P6	USB Debug UART	Frame GND Note: Rev F added an option to No Connect the shell	Digital GND
P7	RJ45	Frame GND	Frame GND
P11	SD Card	Frame GND	Digital GND
P12	HDMI	Frame GND	Digital GND
P13	USB OTG	Frame GND	Digital GND
Mounting Holes	-	Electrically isolated	Frame GND

4.4 Mechanical Compatibility

There is no change to mechanical compatibility.

5 Product / Revision Discontinuation

After the release of this document only updated product with this PCN applied will be shipped.

6 Contact Information

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