

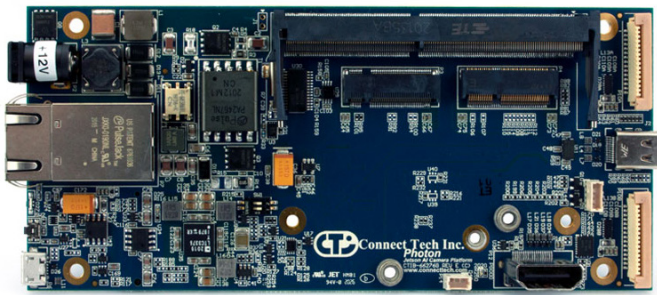


Photon is the Jetson carrier board specifically designed to support smart camera applications.



This Jetson platform provides a 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. Additional key features include expansion for WiFi/BT, Cellular and NVMe as well as dual MIPI (stereo) inputs.

Since Photon is compatible with the Jetson Nano, TX2 NX, and Xavier NX modules, users can seamlessly transition between modules depending on their AI processing requirements.



FEATURES

- ✓ Dimensions: 145mm x 64.5mm
- ✓ 1 x GbE, 1x NVMe (M.2 M-Key), 1 microSD, 4x GPIO, I2C, USB Console/UART, USB OTG for programming
- ✓ DC barrel power input also available
- ✓ PoE PD (NGX002) capable, power via separate input or over Ethernet (IEEE 802.3af-2003 and IEEE 802.3 at 2009 compatible)
- ✓ For applications that don't require PoE PD, ask about our lower cost options

SPECIFICATIONS WHEN USED WITH JETSON XAVIER NX MODULE

Front I/O (Camera End) MIPI Camera Inputs	2x 2-lane MIPI CSI-2 <ul style="list-style-type: none"> • 15-pin FPC 1mm Pitch Connector • Same MIPI connector used on Nano Dev Kit 	Front I/O (Camera End) Camera MISC Interface	1x I2C (can be used for Lens Control) 4x GPIO (can be used for Additional Camera Control) 1x Power Output (can be used for IR LEDs)
Front I/O (Camera End) USB	1x USB 3.1 (Gen 2) (Connector: USB Type-C)	Internal I/O Display Output	1x HDMI (Type-A Vertical)
Internal I/O Fan	1x 4-pin PWM Fan Connector	Rear I/O - Ethernet	1x 1000BASE-T Uplink PoE IEEE 802.3af-2003 (15.4W) PD PoE+ IEEE 802.3at-2009 (25.5W) PD Capable of operating on either network Lower-cost PoE Bypass Option Available
Rear I/O - USB OTG	1x USB 2.0 OTG for Flashing Capability (Micro USB)	Rear I/O - USB UART	1x USB FTDI UART (Micro USB) <ul style="list-style-type: none"> • Console Debug
Rear I/O - Power Input	1x 2mm DC Barrel Jack +12V DC +/-5%	Rear I/O - User Feedback	1x RGB LED I2C controlled
Rear I/O - Button	Dual RESET + FLASH Enable Functionality	Storage	1x microSD Card Slot 1x NVMe PCIe x4 (Gen 3) (M.2 M-Key) ¹
Wireless Expansion	1x WiFi Module (M.2 2230 E-Key) (PCIe and USB) ¹ 1x LTE Module (M.2 3042 B-Key) w/ SIM Card Slot	Operating Temperature	-25°C to +85°C (-13°F to +185°F)
Dimensions	145mm x 64.5mm (5.7" x 2.53")	Warranty and Support	1 Year Warranty and Free Support
Specification changes when used with Jetson Nano	NVMe PCIe x4 (Gen 2) (M.2 M-Key) ¹ 1x USB 3.1 (Gen 1) (Connector: USB Type-C)	Specification changes when used with Jetson TX2 NX	NVMe PCIe x2 (Gen 2) (M.2 M-Key) ¹ 1x USB 3.1 (Gen 1) (Connector: USB Type-C)

[1] Either NVMe OR WiFi module can be used. They cannot be used at the same time.

Integrations with external storage and WiFi/Bluetooth via Intel 8265 are also available, contact sales@connecttech.com for more details



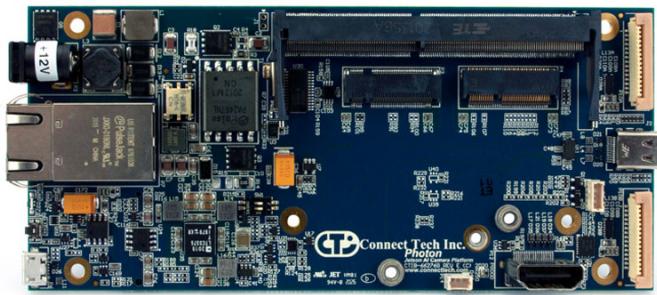


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SPECIFICATIONS WHEN USED WITH JETSON TX2 NX MODULE

Front I/O (Camera End) MIPI Camera Inputs	2x 2-lane MIPI CSI-2 <ul style="list-style-type: none"> • 15-pin FPC 1mm Pitch Connector • Same MIPI connector used on Nano Dev Kit 	Front I/O (Camera End) Camera MISC Interface	1x I2C (can be used for Lens Control) 4x GPIO (can be used for Additional Camera Control) 1x Power Output (can be used for IR LEDs)
Front I/O (Camera End) USB	1x USB 3.1 (Gen 1) (Connector: USB Type-C)	Internal I/O Display Output	1x HDMI (Type-A Vertical)
Internal I/O Fan	1x 4-pin PWM Fan Connector	Rear I/O - Ethernet	1x 1000BASE-T Uplink PoE IEEE 802.3af-2003 (15.4W) PD PoE+ IEEE 802.3at-2009 (25.5W) PD Capable of operating on either network Lower-cost PoE Bypass Option Available
Rear I/O - USB OTG	1x USB 2.0 OTG for Flashing Capability (Micro USB)	Rear I/O - USB UART	1x USB FTDI UART (Micro USB) <ul style="list-style-type: none"> • Console Debug
Rear I/O - Power Input	1x 2mm DC Barrel Jack +12V DC +/-5%	Rear I/O - User Feedback	1x RGB LED I2C controlled
Rear I/O - Button	Dual RESET + FLASH Enable Functionality	Storage	1x microSD Card Slot 1x NVMe PCIe x2 (Gen 2) (M.2 M-Key) ¹
Wireless Expansion	1x WiFi Module (M.2 2230 E-Key) (PCIe and USB) ¹ 1x LTE Module (M.2 3042 B-Key) w/ SIM Card Slot	Operating Temperature	-25°C to +85°C (-13°F to +185°F)
Dimensions	145mm x 64.5mm (5.7" x 2.53")	Warranty and Support	1 Year Warranty and Free Support
Specification changes when used with Jetson Nano	NVMe PCIe x4 (Gen 2) (M.2 M-Key) ¹	Specification changes when used with Jetson Xavier NX	1x USB 3.1 (Gen 2) (Connector: USB Type-C) NVMe PCIe x4 (Gen 3) (M.2 M-Key) ¹

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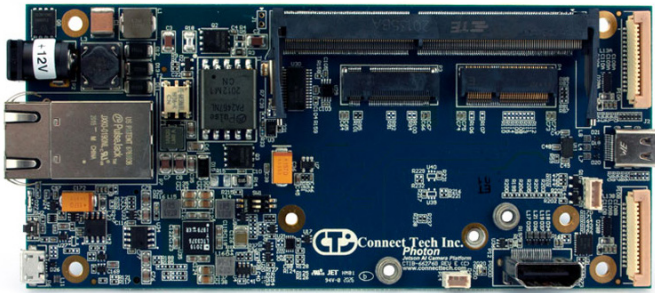


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SPECIFICATIONS WHEN USED WITH JETSON NANO MODULE

Front I/O (Camera End) MIPI Camera Inputs	2x 2-lane MIPI CSI-2 <ul style="list-style-type: none"> • 15-pin FPC 1mm Pitch Connector • Same MIPI connector used on Nano Dev Kit 	Front I/O (Camera End) Camera MISC Interface	1x I2C (can be used for Lens Control) 4x GPIO (can be used for Additional Camera Control) 1x Power Output (can be used for IR LEDs)
Front I/O (Camera End) USB	1x USB 3.1 (Gen 1) (Connector: USB Type-C)	Internal I/O Display Output	1x HDMI (Type-A Vertical)
Internal I/O Fan	1x 4-pin PWM Fan Connector	Rear I/O - Ethernet	1x 1000BASE-T Uplink PoE IEEE 802.3af-2003 (15.4W) PD PoE+ IEEE 802.3at-2009 (25.5W) PD Capable of operating on either network Lower-cost PoE Bypass Option Available
Rear I/O - USB OTG	1x USB 2.0 OTG for Flashing Capability (Micro USB)	Rear I/O - USB UART	1x USB FTDI UART (Micro USB) <ul style="list-style-type: none"> • Console Debug
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Dimensions	145mm x 64.5mm (5.7" x 2.53")	Warranty and Support	1 Year Warranty and Free Support
Specification changes when used with Jetson TX2 NX	NVMe PCIe x2 (Gen 2) (M.2 M-Key) ¹	Specification changes when used with Jetson Xavier NX	1x USB 3.1 (Gen 2) (Connector: USB Type-C) 1x NVMe PCIe x4 (Gen 3) (M.2 M-Key) ¹

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