

NEON-J

nVidia Jetson TX2-based AI Industrial Camera

Features

- Compact integration of nVidia Jetson TX2 and 2Mp 60fps color image sensor
- Easy installation supporting machine vision applications
- 256 core Pascal nVidia GPU supports Deep Learning Inference
- ARMv8 (64-bit) multi-processor CPU complex for heterogeneous multi-processing
- Global shutter image sensor
- 1x Ethernet port, 1x USB and 1x RS-232
- 4x digital input, 4x digital output, 1x trigger input





Introduction

ADLINK'S NEON-J is the first AI industrial camera to integrate the nVidia Jetson TX2, image sensor, and I/O control in a compact chassis serving machine vision applications at the edge.

Addressing problems beyond current machine vision algorithms, the NEON-J utilizes cutting-edge nVidia GPU technology and ARM Cortex-A57 processors, enabling robust Deep Learning inference, empowering defect inspection and object classification requirements in manufacturing environments.

A neural model optimized by nVidia tools like Digits or TensorRT can be deployed on the NEON-J directly, easing development of user-specific machine vision solutions.

The NEON-J provides an Ethernet port for GigE camera connection, 4x digital input, 4x digital output, 1x communication port, and VGA output for maximum integration.

Software Support

- Ubuntu
- Open GL, CUDA

Ordering Information

- NEON-J
 - nVidia Jetson TX2 based AI camera with 2MP 60fps color sensor
- DIN-1040 terminal board
 - For DI/O, RS-232, GigE, USB and power input for NEON series
- 5m GigE cable
 - 5m Ethernet cable, shielded and AWG 26 stranded, with M12 to RJ45 plug
- Power & DI/O cable 3m
 - 3m cable for connection to power, DI/O and UART cable
- VGA & USB cable 3m
 - 3m cable for connection to VGA and USB M12 plug to VGA female and USB-type A female plug



Specifications

SensorImage Sensore2ν EV76C570Resolution1600 x 1200Sensor Size1/1.8"FormatColorPixel Size (μm)4.5Frame Rate(fps)60ShutterGlobalTrigger ModeExternal trigger, software trigger, free runI/O InterfaceTrigger Input1x opto-isolated trigger inputDigital Output4x sink type output, max sink 100mA sink voltage max 30VDCDigital Input4x TTL level input	Model Name	NEON-J
Display VGA output RAM 8GB LPDDR4 (built-in Jetson TX2) Storage 32GB eMMC (Built-in Jetson TX2) Sensor Image Sensor e2v EV76C570 Resolution 1600 x 1200 Sensor Size 1/1.8" Format Color Pixel Size (µm) 4.5 Frame Rate(fps) 60 Shutter Global Trigger Mode External trigger, software trigger, free run VO Interface 1/5 Trigger Input 1x opto-isolated trigger input Digital Output 4x sink type output, max sink 100mA sink voltage max 30VDC Digital Input 4x sink type output, max sink 100mA sink voltage max 30VDC Digital Input 4x STL Level input LED Lighting Driver Supported voltage from 12V to 30V with PWM dimming control Ethernet 1x CbE Serial Communication 1x R5-232 USB 1x USB 2.0 Mechanical C mount Connectors 1x M12 8-pin (female), 1x M12 17-pin (male), 1x M12 12-pin (male) Software Support	Processors & Memory	
RAM 8GB LPDDR4 (built-in Jetson TX2) Storage 32GB eMMC (Built-in Jetson TX2) Sensor Image Sensor e2v EV76C570 Resolution 1600 x 1200 Sensor Size 1/1.8" Format Color Pixel Size (µm) 4.5 Frame Rate(fps) 60 Shutter Global Trigger Mode External trigger, software trigger, free run //O Interface Trigger Input Trigger Input 1x opto-isolated trigger input Digital Output 4x sink type output, max sink 100mA sink voltage max 30VDC Digital Input 4x TTL level input LED Lighting Driver Supported voltage from 12V to 30V with PWM dimming control Ethernet 1x GbE Serial Communication 1x R5-232 USB 1x USB 2.0 Mechanical Dimensions 72.5mm Wx 110mm D x 64.5mm H/ 2.85" Wx 4.33" D x 2.54" H Lens mount C mount Connectors 1x M12 8-pin (female), 1x M12 17-pin (male), 1x M12 12-pin (male) Software Support Ubuntu	Processor	ARM Cortex-A57 2.0GHz Processor, quad core @ 2.0GHz & 256 Core nVidia Pascal GPU
Storage 32GB eMMC (Built-in Jetson TX2) Sensor Resolution 62V EV76C570 Resolution 1600 x 1200 Sensor Size 1/1.8" Format Color Pixel Size (µm) 4.5 Frame Rate(fps) 60 Shutter Global Trigger Mode External trigger, software trigger, free run I/O Interface 1 Trigger Input 1x opto-isolated trigger input Digital Output 4x sink type output, max sink 100mA sink voltage max 30VDC Digital Input 4x TITL level input LED Lighting Oriver Supported voltage from 12V to 30V with PWM dimming control Ethernet 1x GbE Serial Communication 1x RS-232 USB 1x USB 2.0 Mechanical Dimensions Dimensions 72.5mm Wx 110mm Dx 64.5mm H/ 2.85" Wx 4.33" Dx 2.54" H Lens mount C mount Connectors 1x M12 8-pin (female), 1x M12 17-pin (male), 1x M12 12-pin (male) Software Support Ubuntu Operation System Ubuntu	Display	VGA output
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Image Sensor	Storage	32GB eMMC (Built-in Jetson TX2)
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Operating Temperature0°C to 45°CVibrationOperating, 5 Grms, 5-500 Hz, 3 axes	Power Consumption	24VDC, 25W
Vibration Operating, 5 Grms, 5-500 Hz, 3 axes		·
		Operating, 5 Grms, 5-500 Hz, 3 axes
	Certification	







Standard M4 mounting holes enable easy installation



M12 connectors provide secure, rugged connection