

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.

Preliminary



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

Model Name	NEON-J
Processors & Memory	
Processor	ARM Cortex-A57 2.0GHz Processor, quad core @ 2.0GHz & 256 Core nVidia Pascal GPU
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
I/O Interface	
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 RS-232
USB	1x USB 2.0
Mechanical	
Dimensions	72.5mm W x 110mm D x 64.5mm H/ 2.85" W x 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	
Operation System	Ubuntu
Environmental & Electrical	
Power Consumption	24VDC, 25W
Operating Temperature	0°C to 45°C
Vibration	Operating, 5 Grms, 5-500 Hz, 3 axes
Certification	IP67, CE, FCC Class A, UL



Standard M4 mounting holes enable easy installation



M12 connectors provide secure, rugged connection