

# NIR-600P / NIR-610P

Near-infrared Camera with 640 x 512 pixels



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## Features

- 640 (H) x 512 (V) pixels
- Spectral response **900nm – 1700nm** (NIR)
- InGaAs sensor
- 25  $\mu\text{m}$  x 25  $\mu\text{m}$  pixels
- 14 bit digital processing
- Frame rate 30 Hz
- Different interfaces available (**Camera Link** or **Gigabit Ethernet**)
- Adapted for C-Mount or F-Mount lenses
- Peltier Cooling for longer exposure times

By means of the **NIR-6x0P** Allied Vision Technologies GmbH offers a further camera model for the NIR area from 900 to 1700nm. The camera has an InGaAs sensor with a resolution of 640 x 512 pixels.

InGaAs detectors are known to be very sensitive with good linearity and high damage threshold against intense illumination.

At a frame rate of 30 frames/sec. the **NIR-6x0P** camera delivers excellent, low noise images with a 14 bit resolution.

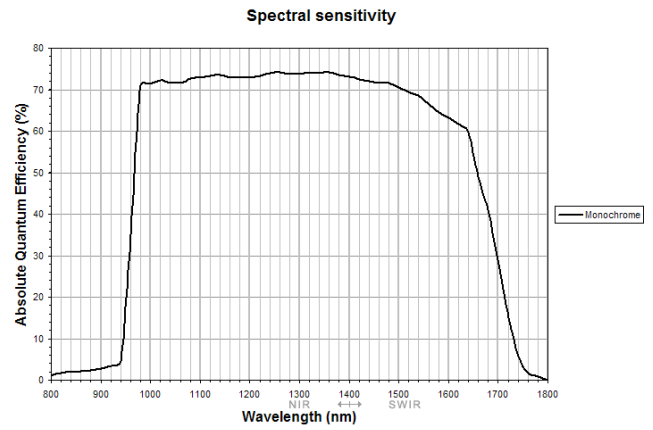
In addition to a continuous image capture with 30 Hz, the camera has an Image on demand mode, enabling to exposure all pixels at the same time and to output them in the following.

The **NIR-6x0P** camera is available with two different interfaces: Camera Link (**CL**) or Gigabit Ethernet (**GE**).

The camera has a Peltier cooling for longer exposure times or in order to enable an exact measuring within the image.

**Applications:**

- Near-infrared imaging
- Thermal imaging of hot objects (in a range of 250°C to 800°C)
- Imaging spectroscopy
- Laser beam profiling
- Sorting according to plastic
- Semiconductor inspection
- Water or moisture detection
- Medical science and biology
- Vision enhancement



**Power and Control Input (15-pin D-SUB Jack)**

Pin	Function
1	+12V DC
2	
3	GND
4	
5	
6	
7	
8	
9	Mode: (Open) → Continuous Mode (GND) → Image on Demand
10	Trigger Input (Opto Coupler)
11	
12	Exposure Output (Opto Coupler)
13	
14	Line Sync Output (active low)
15	Frame Sync Output (active low)

**Mechanical dimensions:**

**Technical Data**

- Resolution: 640 (H) x 512 (V) pixels
- Pixel size: 25 µm x 25 µm
- InGaAs sensor
- Spectral response: 0.9 µm - 1.7 µm (NIR)
- Quantum efficiency: > 70% (1.0 µm -1.6 µm)
- Sensitive area: 16.0 mm x 12.8 mm
- Electronic full-frame shutter
- Exposure times: 64 µs – 1 s
- Progressive scan
- Frame rate up to 30 Hz
- Fullwell > 1x10<sup>6</sup>e (50ke, @gain20)
- Read out noise: 400e (125e, @gain20)
- Dynamics: > 1:2500 (> 1:400, @gain20)
- Pixel clock: 10.5 MHz
- 14 bit digital processing, 12 bit output (Camera Link Base or 1000Base-T Gigabit Ethernet)
- Peltier cooling stabilized to -5°C
- C-Mount (NIR-600) or F-Mount (NIR-610) optical interface
- Power supply + 12V (SELV)  
NIR-6x0PCL: 0.8 A (max. 1.1 A)  
NIR-6x0PGE: 1.0 A (max 1.3 A)
- Ambient air temperature: 10°C up to 35°C
- Forced air cooling
- CE conform
- Made in Germany

