

## NECTA family

NECTA family of line scan CMOS USB3 cameras provides unrivaled scan speed and quick system integration.

Ultra-fast acquisition rate, extremely reduced dimensions and rugged design make NECTA cameras suitable for the most demanding applications: automated optical inspection, high performance sorting systems, industrial metrology, spectrometry, web inspection and machine vision.

NECTA is directly powered by the USB3 bus eliminating the need for external power adapters. USB3 provides the most cost effective widespread interface, pushing speed performances at the top level.

NECTA provides powerful on-line user-controlled image processing: AOI, independent LUTs, FPN (DSNU & PRNU), gamma correction, white balance, saturation, hue and black level offset calibration.

NECTA multipurpose I/O connector provides user I/O, line/frame triggering and direct encoder interface.

NECTA comes with a very simple set of software API which allows developers to quickly produce fast and well readable code on Windows (VC++/C#/VB.NET) and Linux (C++).

NECTA accessories available upon request: F-mount adapter, C-mount adapter (N2K and N4K-3 models only) and shielded I/O cable.

## Even beyond

Alkeria development team is also deeply focused on full-custom camera products. If you need more from your NECTA camera, we can implement smarter hardware and extra firmware features for you. Depending on volumes, we can design your custom camera to protect your IP, differentiate your products and let you gain market share over competitors. If you have been discouraged with custom designs, give us a call. You'll be surprised.

### USB3 interface

Up to 5 Gbps USB3 interface allows easy interface to your PC, eliminating expensive framegrabbers and bulky cables while keeping highest performances.

### Tiny rugged design

Small, ultra-lightweight, rugged aluminium machined high precision case allows maximum installation flexibility even in space constrained environments.

### Ultra-low power

Latest technology electronics achieves lowest power consumption ever (below 3 W for all models).

### CMOS technology

AMS Dragster CMOS sensors, color and monochrome, featuring 12 bit A/D converter, up to 8192 pixels, up to 95000 lines/s.

### Triple programmable LUTs

Independent LUTs (one for each color) allow easy color thresholding, filtering and calibration for color-critical applications.

### Smart Data

Embedded timestamp, trigger counters, encoder position at line, latched input status and input change detection allow perfect image-to-real-world pairing.

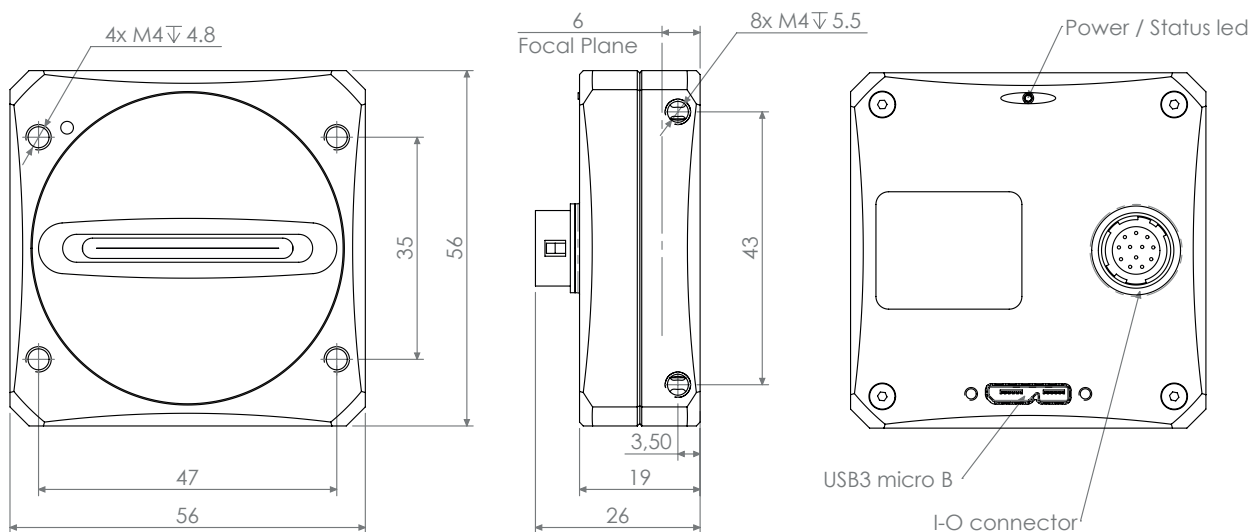
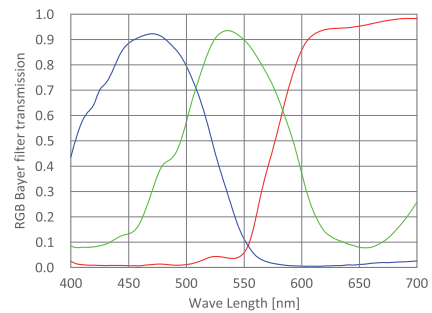
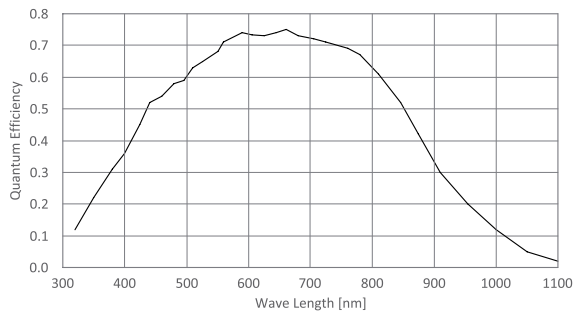
### Versatile I/O

With 2 inputs and 2 outputs and 1 I/O, NECTA series offers unprecedented flexibility for interfacing to outer world signals: line/frame triggering, direct encoder readout and strobed lighting have never been so easy.

# NECTA Camera Series

## Technical Specifications

Model	N2K-7	N2K2-7	N2K2-7C	N4K-3	N4K-7	N4K2-7	N4K2-7C	N8K-3
Resolution	2048	2 x 2048	2 x 2048	4096	4096	2 x 4096	2 x 4096	8192
Pixel Size	7 x 7 $\mu\text{m}^2$	7 x 7 $\mu\text{m}^2$	7 x 7 $\mu\text{m}^2$	3.5 x 3.5 $\mu\text{m}^2$	7 x 7 $\mu\text{m}^2$	7 x 7 $\mu\text{m}^2$	7 x 7 $\mu\text{m}^2$	3.5 x 3.5 $\mu\text{m}^2$
Color / Mono	Mono	Mono	Color	Mono	Mono	Mono	Color	Mono
Line Rate	Up to 95 kHz (Mono 8)							
Pixel Format	RGB 24 bit, YUV 4:2:2, MONO8, MONO16, RAW16							
A / D Conversion	Up to 12 bit							
Synchronization	External trigger, software trigger							
Shutter Control	1.3 $\mu\text{s}$ ÷ 100 ms, 100 ns per step							
Readout	Normal, AOI, binning							
Power Supply	< 3 W, powered by USB3 interface							
Inputs / Outputs	2 in (direct encoder interface), 2 out and 1 I/O (RS422, RS644 LVDS, LVTTTL)							
Lens Adapter	Built-in baseplate, C-mount, F-mount							
Interface	USB 3.1 Gen 1							
Weight	96 g (without additional lens adapter)							
Dimensions (L x W x D)	56 mm x 56 mm x 19 mm							
Conformity	CE, RoHS, FCC/IC							
Main Controls	Shutter, contrast, gain, LUT and gamma correction, white balance, line delay, DSNU/PRNU correction, black level offset calibration							
Operative Temp	0 ÷ 60 °C							



All dimensions are expressed in millimeters.  
 Camera specifications are subject to change without notice.  
 Sensor specifications (monochrome and color) are extracted from the data sheet of the manufacturer excluding lens and filter.