

DUA family

DUA series is a small and flexible board camera family providing uncompressed high-resolution images and videos. Its double-head system is perfect for synchronized stereo vision. Impressive image quality and reliable design make DUA suitable for industrial machine vision and medical imaging applications.

Designed and developed specifically to the OEM market, every DUA configuration is tailor made for the OEM customer who seeks a wide range of possibilities within one device.

DUA's double sensor heads are separated from the rest of the logic and can be assembled together with the board if needed. These two mounting options let the camera match tight space requirements for any kind of application.

DUA's complete set of image controls and the unique TripleLUT feature available on DUA camera series provide powerful onboard image processing, leveraging PC applications from heavy computation.

DUA cameras provide real-time image capture for time-critical applications and support various triggering modes as well as different hardware and software trigger sources. The general purpose multi-I/O connectors feature 6 inputs and 6 outputs configurable as user-defined signals, trigger source digital inputs and exposure-synchronized outputs

DUA 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++).

Even beyond

Alkeria development team is also deeply focused on full-custom camera products. If you need more from your DUA camera, we can implement smarter hardware and extra firmware features for you. Even for small 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.

USB 3.0 interface

Up to 5Gbps USB 3.0 interface allows easy interface to your PC, eliminating expensive framegrabbers and bulky cables.

Double Remote Synchronized Head

Double independent remote sensor heads allow maximum installation flexibility in legacy analog camera replacement. The synchronized dual head system allows perfect stereo vision and a wide range of mixed possibilities.

Sony CCD Sensor

All DUA cameras use SONY CCD sensors, world renowned highest quality components for machine vision.

14 bit A/D Conversion

Low noise front-end design, 14 bit A/D conversion and high bit depth data path guarantee natural shades, smooth color tones and sharper detail reproduction.

Triple 16 bit Programmable LUTs

Each head provides independent LUTs (one for each color) that allow easy color thresholding, filtering and calibration for color critical applications.

12 Programmable I/O

With 6 inputs and 6 outputs, DUA series offers unprecedented flexibility for interfacing to outer world signals: fast triggering, synchronization and flash strobing have never been so easy.

Fits everywhere

DUA camera series has been developed specifically to comply to the most critical demands of the machine vision market in terms of integration and connectivity.

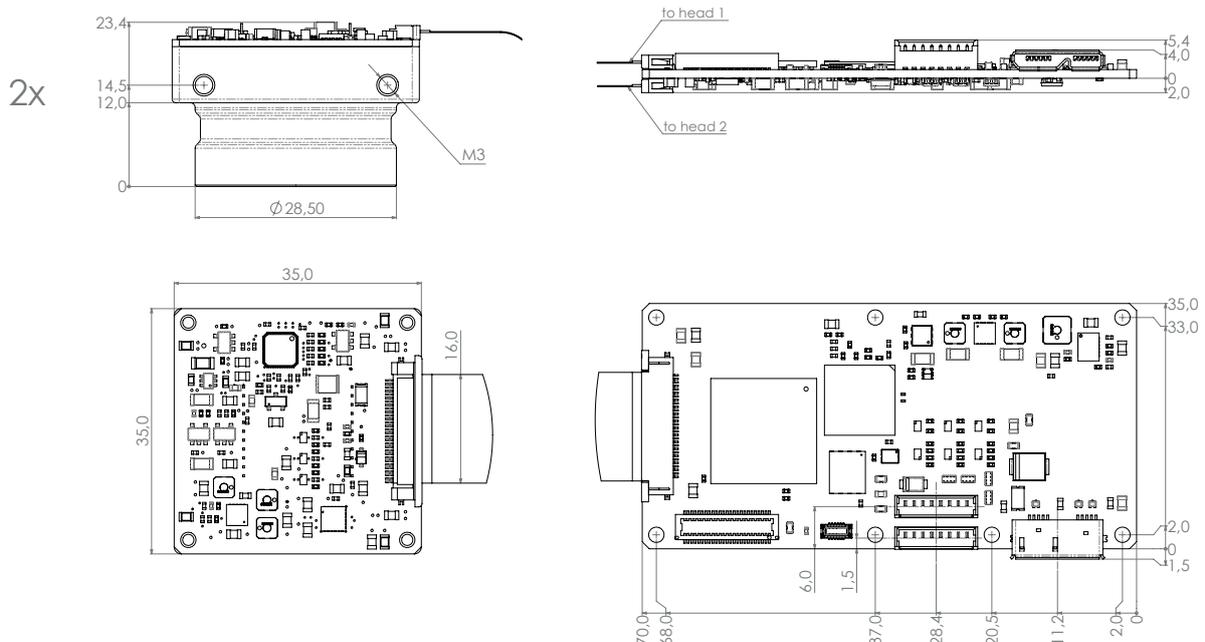
DUA Camera Series

Technical Specifications

Model*	DUA445C	DUA274C	DUA414C
	DUA445BW	DUA274BW	DUA414BW
Sensor Type	ICX445	ICX274	ICX414
Sensor Size	1/3"	1/1.8"	1/2"
Cell Size	3.75 x 3.75 μm^2	4.40 x 4.40 μm^2	9.9 x 9.9 μm^2
Resolution	1292 x 962	1624 x 1232	652 x 490
Interface	USB 3.0		
A/D Conversion	14 bit per pixel		
Video Modes	RGB 24 bit, YUV 4:2:2, MONO8, MONO16		
Max FPS at full resolution	23 fps	15 fps	62 fps
Controls	Brightness, contrast, sharpness, shutter (auto/man), gain, saturation**, hue**, white balance** (auto/man), gamma		
Shutter Control	100 μs to 4 sec, 100 μs per step		
Synchronization	Single shot (trigger mode 0 and mode 1), free-run		
Gain Control	0 to 21 dB		
LUT	Up to 3 16 bit programmable LUTs 1 16 bit LUT		
Inputs / Outputs	6 general purpose inputs, 6 general purpose outputs (also available as trigger inputs or sync outputs)		
IR Filter Cut-off	700 nm (optional)		
Lens Adapter	C-mount standard		
Power Supply	Direct via USB 3.0 cable (max power 3 W), no external supply required		

* Examples of possible combinations for DUA cameras. Different components can be equipped on the same camera depending on specific OEM customer needs. Contact Alkeria for more information.

** Controls available only for color sensor models.



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