

LIRA family

LIRA series is a small and flexible USB 3.0 OEM board camera family providing uncompressed high-resolution images and videos. Impressive image quality and reliable design make Lira suitable for industrial, machine-vision and medical imaging applications.

LIRA's sensor head is 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.

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

LIRA provides real-time image capture for time-critical applications and supports many 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.

LIRA 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++).

In order to comply to legacy solutions, LIRA can be provided with Firewire™ technology, still supporting the same sensor and mounting options.

Even beyond

Alkeria development team is also deeply focused on full-custom camera products. If you need more from your LIRA 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.

Remote Head

Space-saving remote sensor head allows maximum installation flexibility in legacy analog camera replacement.

SONY CCD Sensor

All LIRA 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

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

12 Programmable I/O

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

Fits everywhere

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

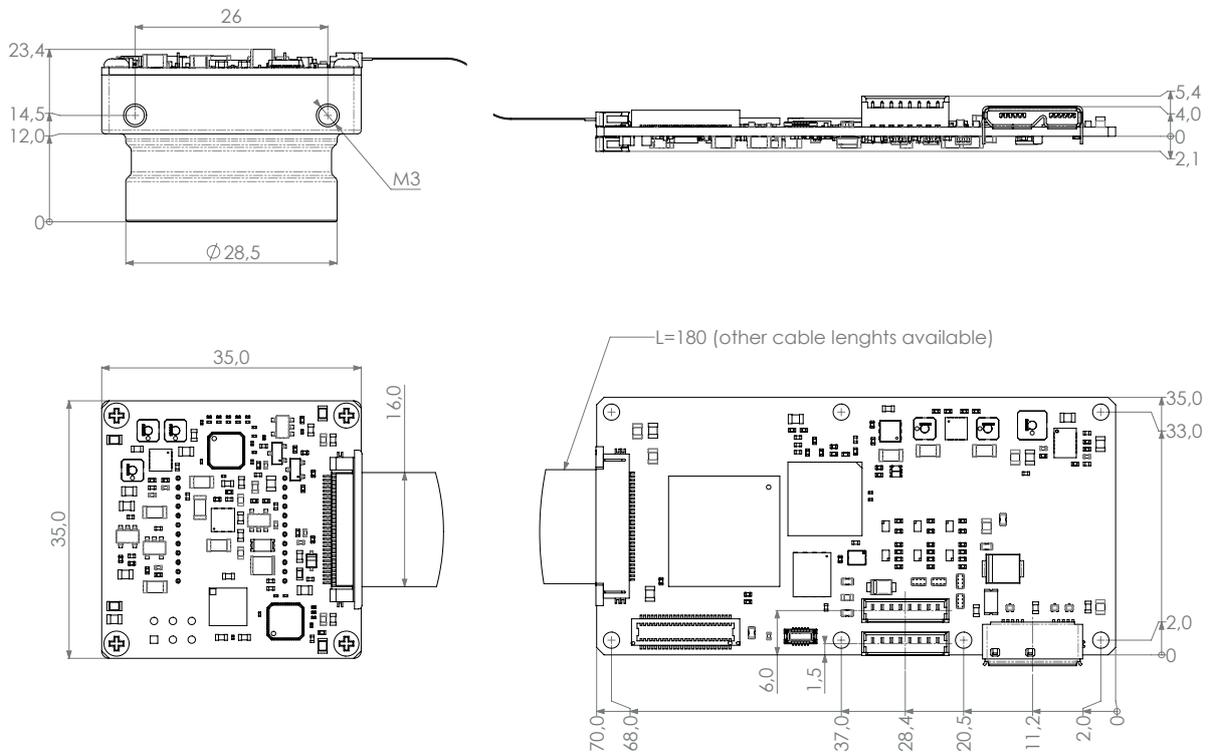
LIRA Camera Series

Technical Specifications

Model*	LIRA424C	LIRA445C	LIRA274C	LIRA415C	LIRA414C	LIRA655C
	LIRA424BW	LIRA445BW	LIRA274BW	LIRA415BW	LIRA414BW	LIRA655BW
Sensor Type	ICX424	ICX445	ICX274	ICX415	ICX414	ICX655
Sensor Size	1/3"	1/3"	1/1.8"	1/2"	1/2"	2/3"
Cell Size	7.4 x 7.4 μm^2	3.75 x 3.75 μm^2	4.40 x 4.40 μm^2	8.3 x 8.3 μm^2	9.9 x 9.9 μm^2	3.45 x 3.45 μm^2
Resolution	652 x 490	1292 x 962	1624 x 1232	768 x 576	652 x 490	2452 x 2054
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	62 fps	23 fps	15 fps	52 fps	62 fps	9 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					

* All models available both in color and B/W option.

** 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.