

## LC7KT - Digital Tri-Linear Color Camera



### Technical description:

- Resolution: 7500 pixels x 3 lines;  
from 100 dpi up to 600 dpi for DIN A3,  
or 1200 dpi for DIN A5.
- Speed (depending on the line period):
  - DIN A4 landscape 200 dpi – 128 IPS (670 DPM)
  - DIN A4 landscape 300 dpi – 60 IPS (310 DPM)
  - DIN A4 portrait 200 dpi – 160 IPS (640 DPM)
- Interfaces:
  - Native BAP G-Link (GL) serial interface for image data and camera control.
  - Camera Link (CL) Medium: 3 x 10 bit and 3 x 8 bit modes for third-party frame grabbers (Mini D Ribbon socket).
- Cable: UTP CAT7 (or dual Camera Link for image transfer and camera setup).
- Mechanically compatible with previous BAP cameras: LC-60M, LC-70M, and LC7K570MCL.
- Power supply: single 12 V DC.
- 10-bit CCD sampling and 3 x 12-bit pixel representation on the entire processing path.

### Advantages:

- Three-line CCD technology with a true 30-bit RGB sampling and 24 or 30-bit RGB / YUV output in the native resolution
- Pre-processing of the images
- Same device is adjustable for various applications, resolutions, and scan widths
- Adjustable active line length up to 7,500 pixels
- Adjustable line period
- Horizontal and vertical image re-scaling
- Color components alignment and re-mapping (also fractional)
- LUT-based contrast and gamma enhancement for perfect tonal mapping.
- Shading correction for different light sources and work conditions
- RGB or YUV output image
- Color Correction Matrix in hardware

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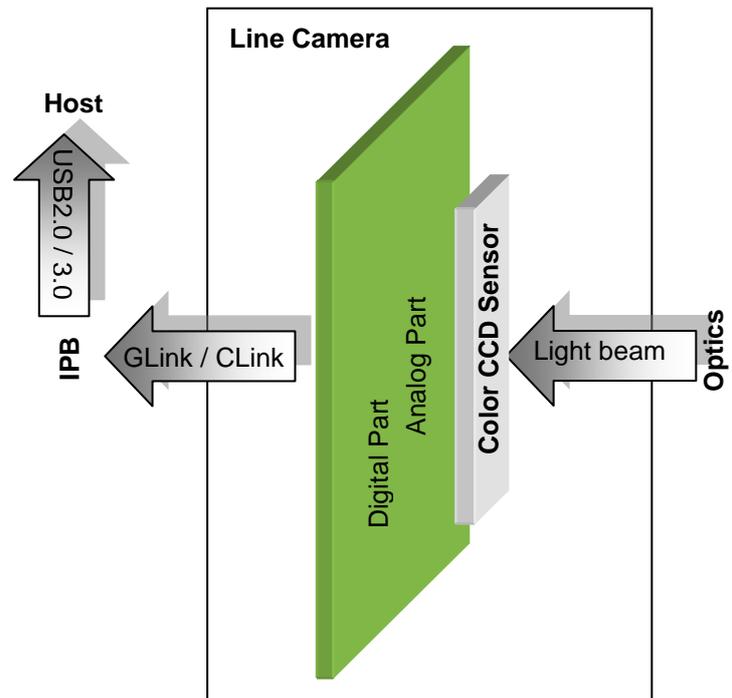
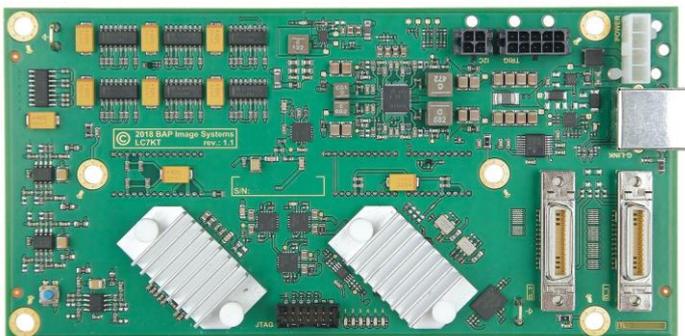
The electronics of the LC7KT camera are capable of capturing a true 30-bit RGB image stream of up to 7500 pixels in width without a Bayer filter mosaic. This allows high-quality 600 dpi imaging of DIN A3 documents or 1200 dpi for DIN A5 documents without any interpolation.

The unit's resolution depends on the optical part of the camera, lighting system, and the camera's setup parameters. The camera electronics have to be mounted in the customer's optic system.

The camera is able to scan images with a defined resolution depending on the active number of pixels. Image quality may be enhanced further using precise and adjustable color components alignment (re-mapping) capability, LUT-based contrast enhancement module. There are several processing options already available in the camera, e.g. horizontal and/or vertical anti-aliased re-scaling, allowing the user to get images in resolutions different from the native optical resolution.

The LC7KT works with general Camera Link-based frame grabbers in Base or Medium configurations and with BAP Image Systems engines (IE5G\_SS). BAPis Image Processing Boards support two camera inputs serviced in parallel simultaneously. All necessary image processing functions can be customized using the open interface.

This solution can be implemented in different paper transport systems to scan images up to 670 ppm DIN A4 format at 200 dpi.



**BAP Image Systems (BAPis)** is a dependable and reliable imaging products and solution provider with highly proven industry experience. BAPis develops and manufactures cameras based not only on high-speed CCD and CMOS line sensors, but also on area CMOS/CCD sensors. BAPis cameras are used in the machine vision industry, as well as in the film industry. Additionally, BAPis develops and produces image grabbers and processing boards based on DSP and FPGA technologies using its own algorithms. Image processing boards are matched with camera performance and, when combined, are able to reach the highest possible throughput.

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