LI5040SA

2/3 inch Diagonal 5.33MP CMOS Sensor on 180pin LGA with 3.4µm Square Pixels at 120fps.

DESCRIPTION

LI5040SA is a CMOS type of solid-state image sensor with a 2/3 inch effective pixel array of 5.33M pixels.

It uses a global shutter feature as a charge storage period control.

It can output an effective 2592 x 2056 pixels of video at 120 fps and 12bit via 12 channels of digital signal output.

*LI5040SA series consists of LI5040SAC (color), LI5040SAM (monochrome) and LI5040SAI (RGBIR).

FEATURES

- LI5040SAM: Monochrome sensor
- LI5040SAC: Color sensor (RGB on-chip color filter)
- LI5040SAI: RGBIR sensor (RGB IR on-chip color filter)
- Global shutter / Progressive scan
- Recording screen size: 2/3 inch equivalent (8.8 mm x 7.0 mm)
- Number of effective pixels: 2592 x 2056 (Horizontal x Vertical)
- Pixel size: 3.4 µm x 3.4 µm
- Number of output channels Data: 12 lanes, Clock: 2 lanes
- Main clock frequency: 36 MHz (recommended)
- Output format: LVDS output maximum 864 Mbps @12 bit
- Analog gain: 0 to 36 dB
- Digital gain: 0 to 24 dB
- Maximum of 8 areas (horizontal 8, vertical 8) of optional segmentation (ROI: Region Of Interest) feature
- Horizontal and vertical inverted output feature
- External trigger exposure control feature (Overlap trigger feature)
- Sensitivity (Green) of LI5040SAC: 30,000 e/lx/sec @Analog gain x1 (TBD)
- Sensitivity (Green) of LI5040SAI: 30,000 e/lx/sec @Analog gain x1 (TBD)
- Sensitivity of LI5040SAM: 54,000 e/lx/sec @Analog gain x1 (TBD)
- Saturation: 12,000 e @Analog gain x1, 60fps, Dynamic Range Priority Mode (TBD)
- Saturation: 7,000 e @Analog gain x1, 120fps, Frame Rate Priority Mode (TBD)
- Dark random noise: 2.6 e rms @Analog gain x1 (TBD)
- Dark current: 1.3 e/sec @Analog gain x1, room temperature (TBD)
- Power consumption: 510 mW(Typ.) @using all pixels 120 fps
- Power consumption: 440 mW(Typ.) @using all pixels 42 fps
- Power supply voltages: 3.3 V, 1.2 V
- 180 pin ceramic LGA
- Package size: 18.96mm x 18.10mm x 2.51mm

FUNCTIONAL BLOCK DIAGRAM