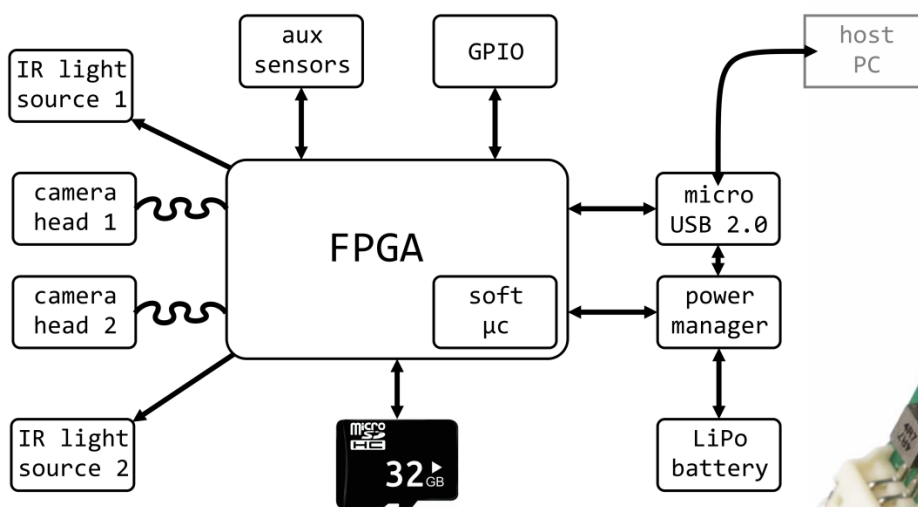


AC62KMP – Dual NanEye sensor low power video and motion logger

The Dual NanEye mini-camera video and motion logger is designed to receive signals from two subminiature CMOS image camera cubes with embedded lenses, over up to 1 m of flexible cable. The received data is preprocessed, joined with accelerometric data, then stored on a micro SD card for later transfer to a host PC. The device is equipped with a micro USB 2.0 interface for convenient configuration and battery charging. The device is powered from a micro-USB socket or by one Li-Poly cell integrated into the system for portability. Battery life may be further extended using commercial of-the-shelf USB power banks.



Technical description:

- Runtime power supply – battery
- Setup, evaluation, and charging from PC via micro-USB 2.0 cable
- Supply voltage: 5 V DC \pm 5% typical micro-USB 2.0 charger
- Internal battery voltage: 2.7 to 4.2 V DC (Li-Poly cell range)
- Internal battery capacity: 400 to 600 mAh, typical 540 mAh
- Supply current – active mode & no charging, IR on: 180 mA max
- Supply current – active mode & charging from PC: 250 mA
- Supply current – active mode & charging from wall adapter: 250 mA
- Supply current – sleep / scheduled wakeup mode: 50 μ A max
- Internal battery life in a sample: one picture per minute capture cycle: 144 hours
- Internal battery life in a sample: one picture per 10 minutes capture cycle: 60 days
- Device life in a sample: one picture per 10 minutes capture cycle if supplied from a 5000 mAh USB power bank: 650 days
- Operating ambient temperature: -10 to 80 °C
- Maximum video bit depth: 10 bit/pixel
- Offline system capacity using micro SDXC 64 GB memory card: ~800 000 frames
- Processing board dimensions: 45 mm x 25 mm w/o battery
- System weight, including typical battery: 35 g
- Communications: USB 2.0 Micro-B Type
- Auxiliary light: dual, intensity controlled infrared LEDs

NanEye sensor specification:

- Number of Pixels: 62k pixels (249 x 250)
- Bit depth: 10-bit color
- Pixel size: 3 μ m x 3 μ m
- Color: Bayer Pattern RGB
- Shutter: Rolling
- Dynamic range: 58 dB
- Programmable Gain Range: -1.5 dB \pm 6 dB \pm 2 dB
- Responsivity at nominal gain: 5.5 DN/nJ/cm²
- Responsivity max gain: 11.5 DN/nJ/cm²
- Full well capacity: 15 Ke-
- Full well capacity: 6 Ke-
- DSNU: < 0.4%
- PRNU: < 5%

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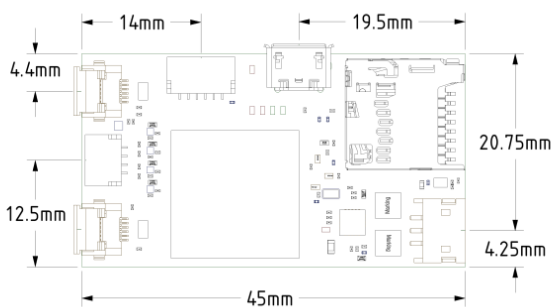
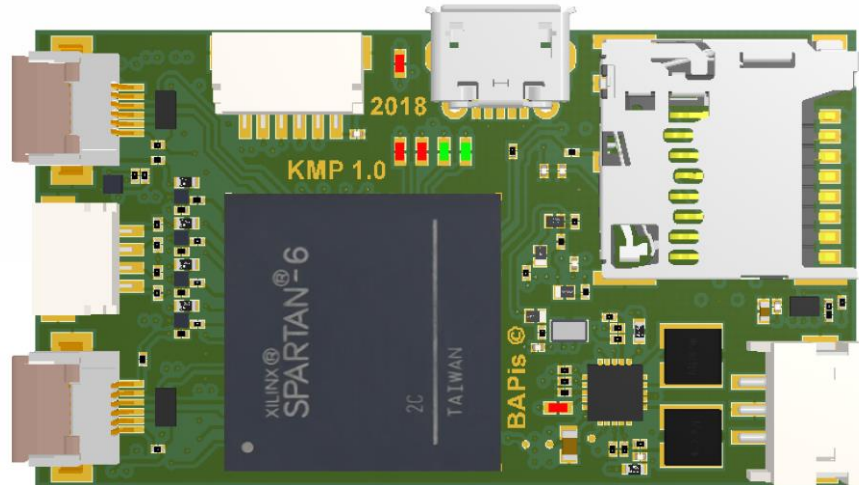
Advantages:

The camera controls external infrared LED light sources automatically, adjusting illumination strength and frame exposure.

A high-quality video output is based on a true 10-bit per pixel video processing.

The PC software offers a wide variety of flexibly adjustable capture scenarios well-matched for various scientific research or surveillance tasks.

The system is capable of registering not only video from two independent camera heads at once, but also movement – based on an integrated accelerometer module.



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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