

CAM512 High Speed Scientific Grade Camera

High Sensitivity and High Frame Rate Back-Illuminated Imaging Technology

Sarnoff Imaging Systems, with over 35 years of solid-state imaging experience, delivers client value through product differentiation. We support high-end industrial, scientific and government imaging requirements, with both application-specific and standard product solutions.

The Sarnoff model CAM512 digital cameras utilize 512 x 512 CCD sensors with 18 x 18 μm pixels, providing 300 frames per second (fps) operation for motion analysis, remote sensing, chemical or biological kinetics, high-throughput drug discovery and manufacturing in-process inspection. Unique back-illuminated technology delivers unrivaled speed, 100% fill factor and high QE together in the same cameras. They are designed to operate with a third party Camera Link[®] frame grabber card using dual-base configuration ports or with two single-port cards. The CAM512 offers an excellent solution for demanding industrial, scientific and government imaging applications where high throughput, sensitivity and reliability are critical.

Applications

- Remote sensing/surveillance
- High-throughput genomics
- High-throughput inspection for industrial, semiconductor or pharmaceutical production
- Hyperspectral imaging
- Solar astronomy
- Scientific imaging
- Military/defense imaging

Features

- 512 x 512 pixel images at 300 fps
- 100% fill-factor imager with high MTF
- High QE
- Dual high-speed outputs
- Camera control via RS232
- External, asynchronous trigger mode
- Antiblooming



Cam512 and Power Source

Specifications (Typical)

Resolution	.....512 x 512 pixels
Pixel Size	.....18 μm x 18 μm
Max Frame Rate	.....300 fps, 492 fps binned by 2, 500 fps 512 x 256 ROI (optional)
Binning	.....2 x 2
Scanning	.....Split frame transfer
Camera Outputs	.....Camera Link [®]
Read Out Noise	.....< 100 e ⁻ rms
Data Format	.....12 bit (4096 DN)
Antibloom	.....Capable
Lens Mount	.....C-mount, F-mount (optional)
Camera Size (HWD)	.....17.2 cm x 11.2 cm x 19 cm
Mass	.....< 2.3 kg
Storage Temp	.....0 to 50° C
Operating Temp	.....10 to 35° C
Input Voltage	.....90-260 VAC, 47-63 Hz
Power Supply Size	.....16.4 cm x 8.5 cm x 5.5 cm, 0.6kg
Power Dissipation	.....< 50 Watts

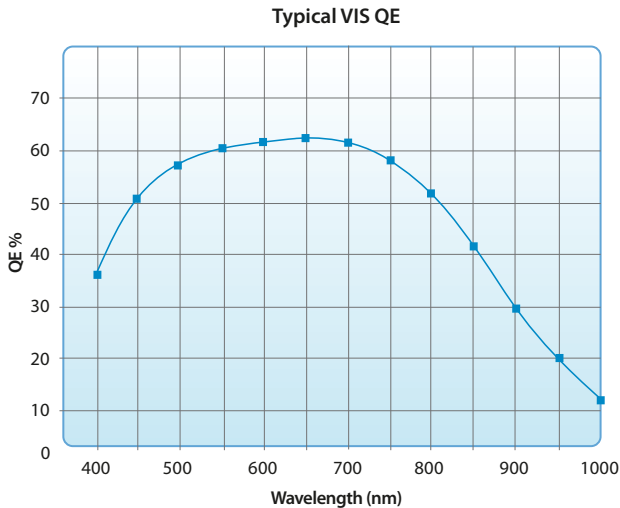
Sensor

The CAM512 uses a Sarnoff designed and fabricated back-illuminated split-frame-transfer CCD with 16 output taps. The sensor is available with the standard VIS response. Optional AR coating is available.

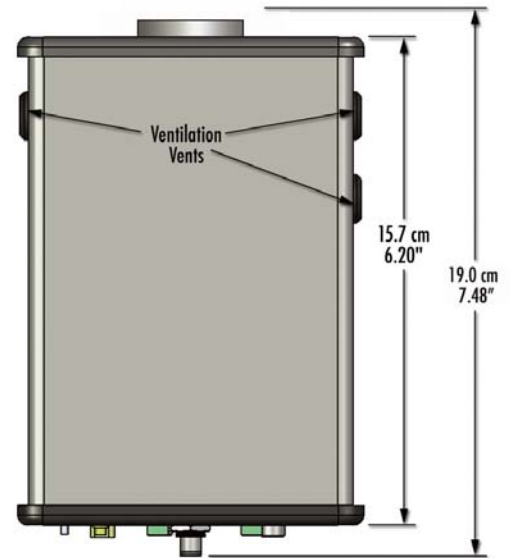
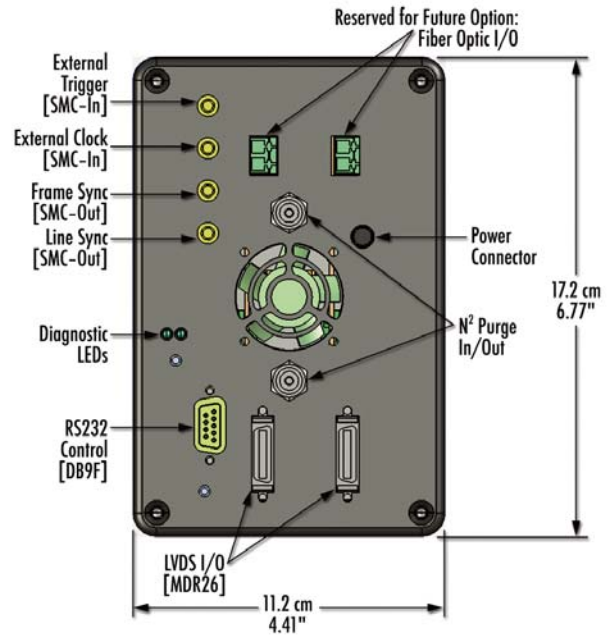
Ordering Information

Available options for the CAM512 camera include Frame Grabber, PC data acquisition system and Software Developer Kit (SDK).

The standard readout timing modes support selection via RS232 command of no binning or 2 x 2 binning of the image array. Alternatively, other binning patterns, region of interest readout patterns or special triggering modes maybe developed and stored in the camera's memory for selection via RS232.



Mechanical Drawings



Case length may vary with device packaging and cooling method.
 Dimensions subject to change without notice.
 Base includes mounting hole with 1/4 - 20 thread.



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