

OV6920 NTSC product brief



ultra small 1/18-inch CMOS camera-on-a-chip

The OV6920 is a 1/18-inch optical format CMOS image sensor incorporating a high level of functionality and very low power consumption in an ultra-small footprint package. This makes it ideal for use in small disposable cameras for medical imaging applications such as diagnostic and intubation systems.

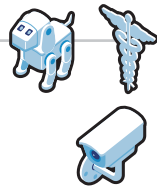
The 2.1 x 2.3 mm CSP packaged sensor enables a microscopic camera module with a 4.0 mm diameter, to make medical procedures even less invasive for the patient.

Having been designed for very low power operation, the OV6920 only requires a clock and a single 3.3-volt DC power supply to get the NTSC composite signal out to a direct interface with a VCR and TV monitor.

The OV6920 is built on OmniVision's proprietary OmniPixel2™ architecture providing the highest image quality, performance and clarity. It is an ideal solution for medical applications that require both color video and a very small footprint package.

applications

- medical and dental equipment
- security and surveillance
- toys and games



OV6920



ordering information

- **OV06920-V09A**
(color, NTSC, 9-pin CSP2)

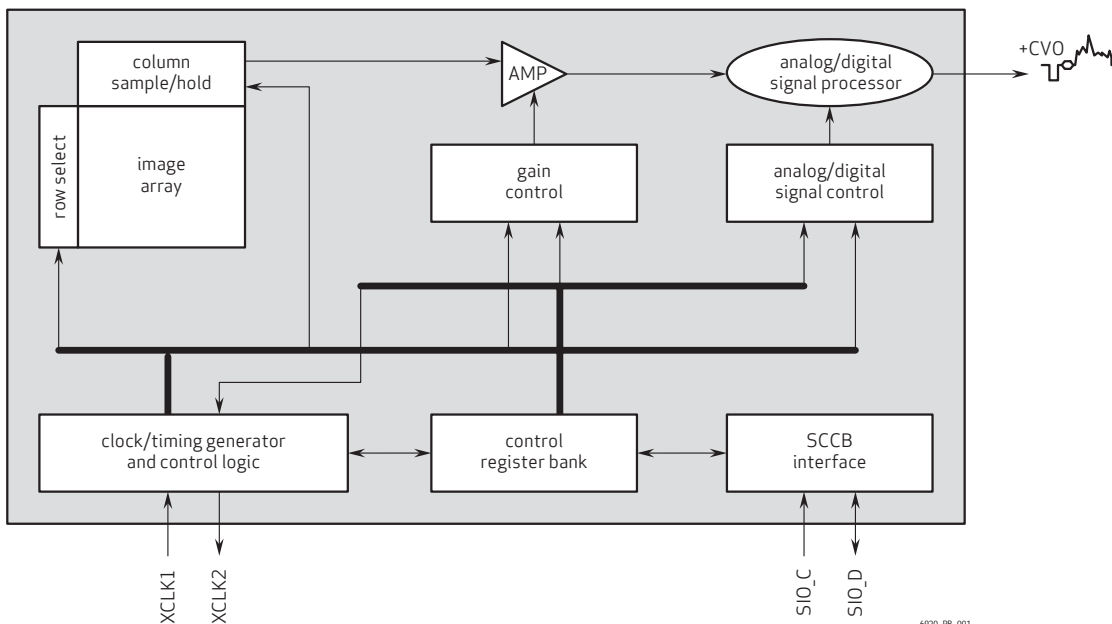
product features

- single chip 1/18" NTSC lens video camera
- composite video output
- automatic exposure/gain/white balance
- aperture correction
- gamma correction
- low power consumption
- +3.3V only power supply
- wide dynamic range, anti-blooming, zero smearing
- SCCB programmable controls:
 - color saturation
 - exposure
 - gain
 - gamma curve

product specifications

- **array size:**
 - total: 328 x 250
 - active (NTSC): 320 x 240
- **power supply:** 3.3VDC \pm 5%
- **power requirements:**
 - without loading: 20 mA
 - with 75 ohm loading: 30 mA
- **temperature range:**
 - operating: 0°C to 50°C
- **electronic exposure:** 1/60s to 5.7 μ s
- **output format:** composite video
- **optical size:** 1/18"
- **color mosaic:** RGB Bayer pattern
- **sensitivity:** 0.7V(Lux-sec)
- **S/N ratio:** 42 dB
- **dynamic range:** 42 dB
- **pixel size:** 2.5 μ m x 2.5 μ m
- **dark current:** 3 mV/sec
- **image area:** 820 μ m x 625 μ m
- **package dimensions:** 2135 μ m x 2265 μ m

functional block diagram



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