

# OV9718 720p product brief



available in  
a lead-free  
package

## Native High Definition OV9718 CameraChip™

The 1/4-inch OV9718 is a native high-definition (HD) image sensor capable of capturing high quality 720p video at 60 frames per second (fps). Built on an enhanced OmniPixel3-HS™ pixel, the OV9718 combines excellent low-light performance of 3300 mV/lux-sec with fast frame rates, making it ideally suited for telepresence and high-end security applications.

The sensor's new and improved OmniPixel3-HS pixel architectures offers improved dynamic range, better low-light sensitivity and enhanced signal-to-noise ratio (SNR) performance compared to the previous generation sensor. The OV9718's 12-bit RGB RAW

output capability provides improved dynamic range. In addition, the embedded sequential line- or frame-based HDR features allow higher dynamic range for high-contrast scenes using an external ISP. Its fast frame rate minimizes latency delay, resulting in quick response time for interactive real-time communication applications.

The OV9718 features a standard 2-lane MIPI/LVDS interface and comes in a 49-pin CSP3 package.

Find out more at [www.ovt.com](http://www.ovt.com).

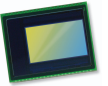
## Applications

- Security
- Telepresence

## Product Features

- automatic black level calibration (ABLC)
- programmable controls for frame rate, mirror and flip, cropping and windowing
- image quality controls: lens correction and defective pixel canceling
- supports output formats: 8/10/12-bit RAW RGB (MIPI/LVDS)
- supports horizontal and vertical sub-sampling
- supports image sizes: 1280x800, 640x400, 320x200, and 160x100
- fast mode switching
- support 2x2 binning
- standard serial SCCB interface
- two-lane MIPI/LVDS serial output interface
- embedded 256 bits one-time programmable (OTP) memory for part identification, etc.
- on-chip phase lock loop (PLL)
- programmable I/O drive capability
- built-in 1.5V regulator for core
- support alternate frame HDR/line HDR

# OV9718



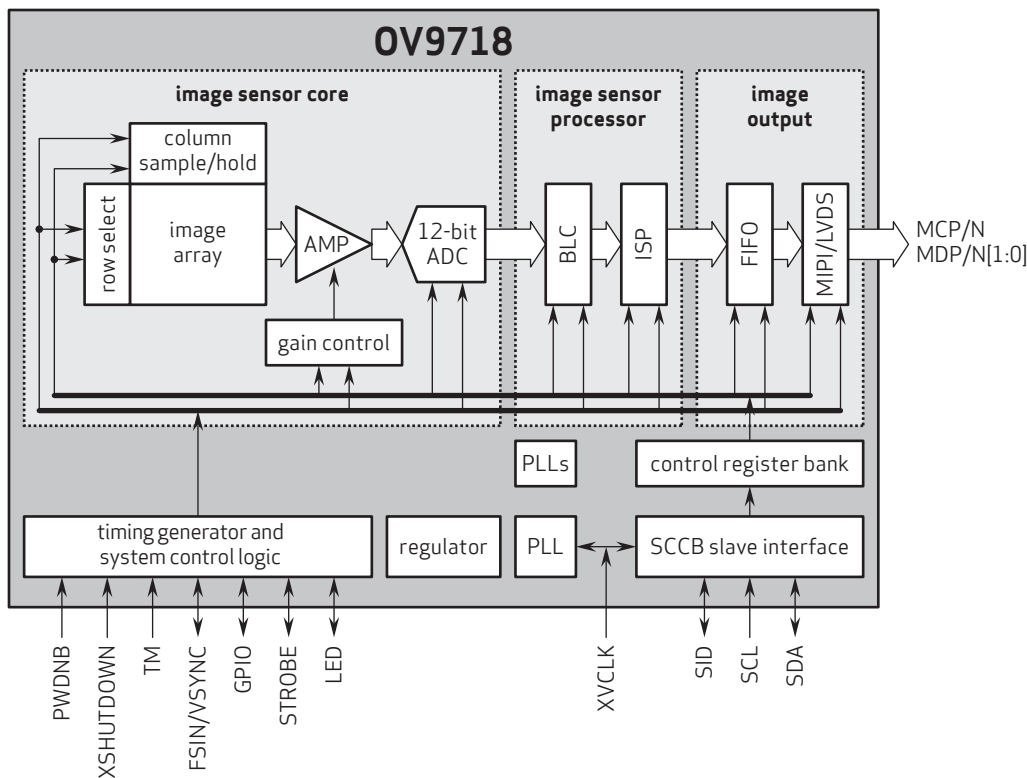
## Ordering Information

- OV09718-A49A-Z (color, lead-free, 49-pin CSP3)

## Product Specifications

- active array size: 1296 x 812
- power supply:
  - core: 1.5 VDC ±5%
  - analog: 2.6 - 3.0V
  - I/O: 1.7 - 3.0V
- power requirements:
  - active: 95 mA
  - standby: 30 µA
  - XSHUTDOWN: 5 µA
- temperature range:
  - operating: -30°C to 85°C junction temperature
  - stable image: 0°C to 50°C junction temperature
- output formats: 12-bit RGB RAW
- lens size: 1/4"
- lens chief ray angle: 0°
- input clock frequency: 6 - 27 MHz
- max S/N ratio: 39 dB
- dynamic range: 73 dB @ 8x gain
- maximum image transfer rate:
  - 1280x800: 60 fps
- sensitivity: 3.3 V/lux-sec
- scan mode: progressive
- maximum exposure interval: 800 x t<sub>ROW</sub>
- pixel size: 3.0 µm x 3.0 µm
- dark current: 2.3 mV/s @ 50°C junction temperature
- image area: 3936 µm x 2460 µm
- package dimensions: 6110 µm x 4930 µm

## Functional Block Diagram



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