



# OVM9724 720p HD CameraCubeChip™ product brief



## Industry's Most Compact Front-Facing HD Camera for Smartphones, Tablets, Notebooks and Ultrabooks



available in  
a lead-free  
package

OmniVision's ultra-compact OVM9724 CameraCubeChip™ captures 720p high definition (HD) video at 30 frames per second (fps) in an industry-leading miniaturized module of 3.9 x 2.9 x 2.3 mm. Because the OVM9724 CameraCubeChip is a reflowable all-in-one camera drop-in solution, the need for additional components is eliminated and manufacturing is significantly streamlined.

The low-power 1/9-inch OVM9724 utilizes OmniVision's powerful OmniBSI+™ pixel architecture to enable high quality color images and fast frame 720p HD video at 30 fps or cropped VGA at 60 fps. This combination of

high-performance and small form factor allows HD cameras to be integrated into ultra-slim, narrow-bezel devices, making it an attractive solution for next generation smartphones, tablets, notebooks and Ultrabooks™.

The OVM9724 provides full-frame, sub sampled or windowed 8- and 10-bit images. All required image processing functions, including exposure control and defective pixel cancelling are programmable through the serial camera control bus (SCCB) interface.

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



## Applications

- Phones
- Security and Surveillance
- Wearable Devices
- Toys and Games

## Product Features

- MIPI and D-PHY specification (contains one clock lane and one data lane) with a maximum of 400 Mbps data transfer rate
- low operating voltage and low power consumption for embedded portable applications
- high sensitivity and low dark current for low-light conditions
- supports global analog gain
- supports free-running clock and gated clock
- supports down sample mode and VarioPixel\*
- auto black level calibration
- defect correction capability

# OVM9724



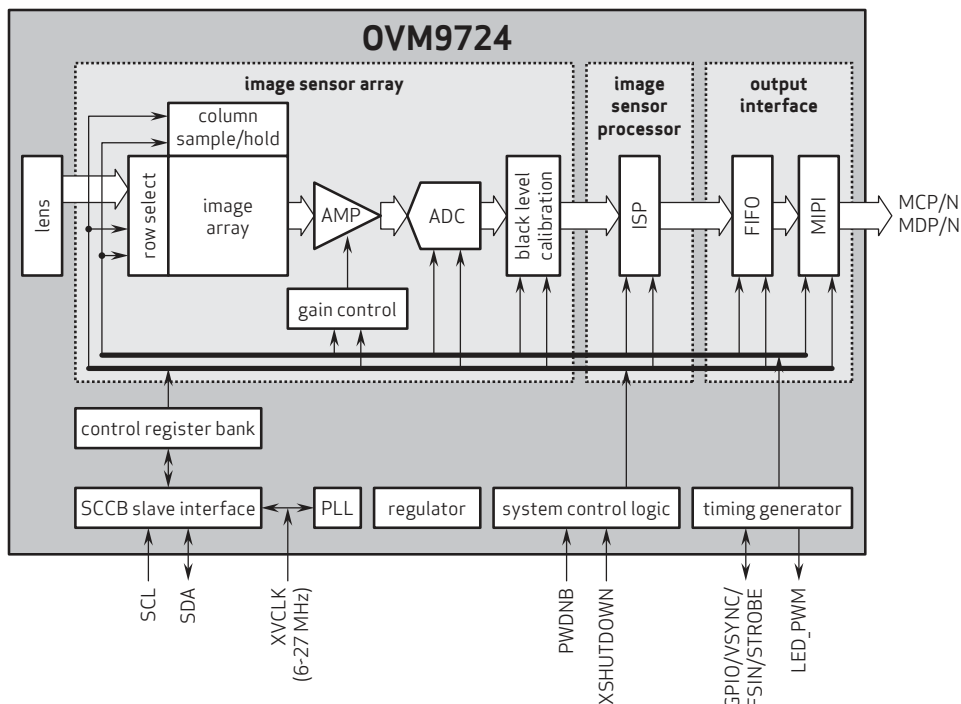
## Ordering Information

- **OVM9724-RYDA**  
(color, lead-free, CameraCubeChip™ with metal can)
- **OVM9724-RADA**  
(color, lead-free, CameraCubeChip™ with black coating)

## Product Specifications

- **active array size:** 1280 x 720
- **power supply:**
  - core: 1.5V
  - analog: 2.8V
  - I/O: 1.8V
- **power requirements:**
  - active: 55 mA
  - hardware standby: 60  $\mu$ A
  - XSHUTDOWN: 20  $\mu$ A
- **temperature range:**
  - operating: -30°C to +70°C junction temperature
  - stable image: 0°C to +50°C junction temperature
- **output formats:** 10-bit RAW RGB data
- **lens size:** 1/9"
- **diagonal field of view (FOV):** 65°
- **f no.:** 2.8
- **focal length:** 1.66 mm
- **input clock frequency:** 6 - 27 MHz
- **max S/N ratio:** 36.2 dB
- **dynamic range:** 70.4 dB @ 8x gain
- **maximum image transfer rate:** 30 fps
- **sensitivity:** 740 mV/lux-sec
- **scan mode:** progressive
- **maximum exposure interval:** 760 x  $t_{row}$
- **pixel size:** 1.4  $\mu$ m x 1.4  $\mu$ m
- **dark current:** 80 mV/s @ 50°C junction temperature
- **image area:** 1840  $\mu$ m x 1040  $\mu$ m
- **package dimensions (including ball height):**
  - RYDA: 4180 x 3280 x 2610  $\mu$ m
  - RADA: 3900 x 2890 x 2340  $\mu$ m

## Functional Block Diagram



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