



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



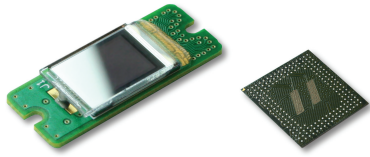
Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





OVP2200 + OVP921 product brief



available in
a lead-free
package

The World's Smallest 720p High Definition LCOS Display for Wearable Electronics

OmniVision's new ultra-compact and low-power OVP2200 liquid crystal on silicon (LCOS) solution delivers best-in-class 720p high-definition (HD) video at 60 frames per second (fps) to displays in next-generation wearable electronics. The single-chip OVP2200 is supported by the OVP921 companion chip, which provides image processing and further simplifies system design.

The OVP2200 is a single panel, color field sequential device based on a 4.5-micron pixel with a native resolution of 1280 x 720 pixels and a diagonal measurement of 0.26-inch. It uses all-digital technology to produce clear, stable images. The OVP2200's ultra-compact form factor and low-power consumption make it an ideal LCOS solution for applications ranging from wearable smartphone displays to sports and medical cameras.

The OVP921 provides enhanced system performance without the need for an external image processor. The OVP921 has built-in keystone correction, frame rate conversion, video input scaling, an LED controller, and an embedded 8051 microcontroller (MCU). Additionally, the OVP921 can accept inputs via 24-bit RGB, MIPI or USB.

The HD resolution enabled by the OVP2200 and the OVP921, combined with solid-state light sources, allows customers to create low-cost, compact projection systems with high optical output. These systems are capable of projecting images and video at more than 20 Lumens with LED power at 1.8W with a well-designed optical engine.

Find out more at www.ovt.com.



OmniVision

Applications

- wearable electronics
- compact front projector
- embedded projector
- high definition rear projection TV

Product Features

OVP2200

- standard 100% digital CMOS technology
- no spacers in active area
- digital interface
- high aperture ratio
- insensitive to photo-induced carrier generation
- designed for color field sequential operation
- horizontal alignment ± 8 pixels

OVP921 (driver)

- OVP921 will drive OmniVision's color field sequential LCOS panels with resolutions up to 1280 x 720
- includes three video inputs:
 - single pixel 24 bit RGB
 - 2 channel MIPI DSI receiver, 24 bit packed RGB888
 - USB input as a slave device
- includes dual internal PLL clock generation
- outputs enable/disable control signals to external solid state light sources
- supports horizontal and vertical flipping and programmable sync polarities
- supports several video scaling functions
- converts incoming video to fixed resolution of LCOS panel
- ± 15 degree vertical keystone correction
- includes on chip 8051 microcontroller with 32KB program space and 256 bytes RAM

OVP2200+OVP921



Ordering Information

- OVP2200-MAAA-TA (color, lead-free, 35-pin PCB)
- OVP921-B44G (lead-free, 144-pin BGA package)

Product Specifications

OVP2200

- **power supply:**
 - core: 1.5V typical
 - I/O: 1.5V $\pm 10\%$
 - pixel array: 5.5V typical
- **power requirements:**
 - active: 200 mW
 - standby: 1.5 mW
- **temperature range:**
 - operating: 10°C to 70°C

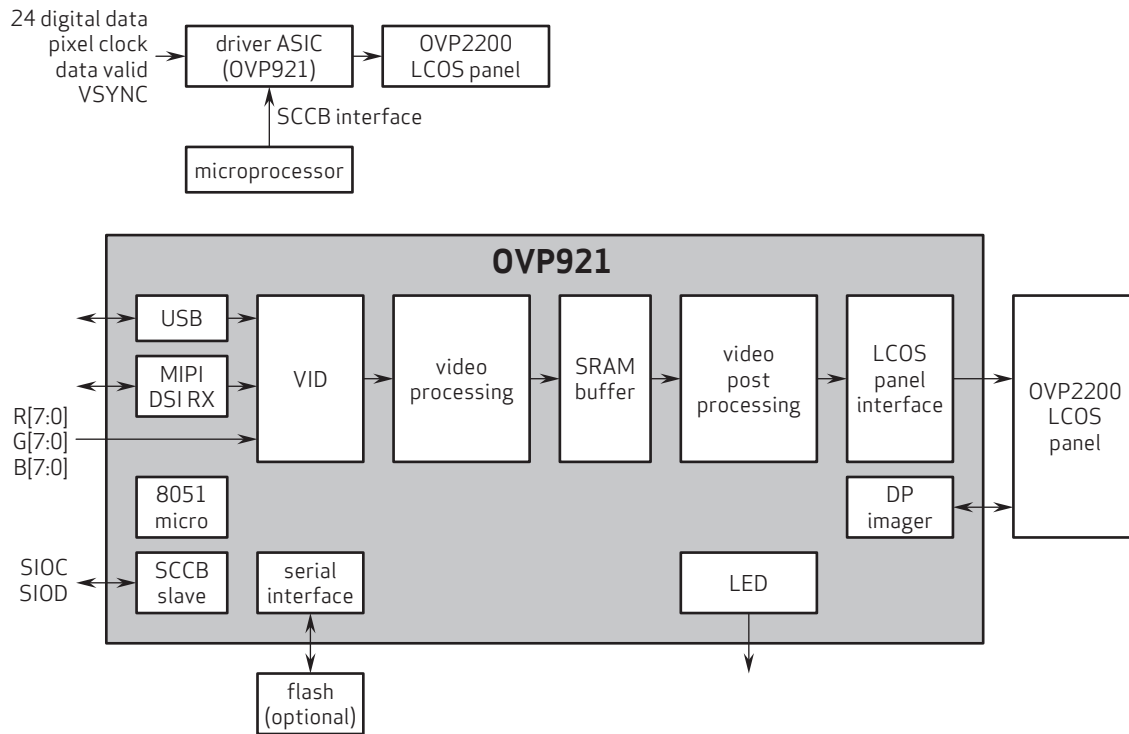
- **active area:** 5.832 mm x 5.28 mm
- **native resolution:** 1280 x 720
- **native device diagonal:** 0.26 in.
- **pixel pitch:** 4.5 μ m
- **package dimensions:** 17.5 x 6.6 x 3.2 mm

OVP921

- **power supply:**
 - core: 1.2V typical
 - I/O: 1.8V / 3.3V
- **temperature range:** 0°C to 70°C

- **power requirements:**
 - 1.2V: 210 mW (at max resolution)
 - 3.3V: 120 mW
- **package dimensions:** 9 mm x 9 mm

Functional Block Diagram



4275 Burton Drive
Santa Clara, CA 95054
USA

Tel: + 1 408 567 3000
Fax: + 1 408 567 3001
www.ovt.com

OmniVision reserves the right to make changes to their products or to discontinue any product or service without further notice. OmniVision, the OmniVision logo and OmniPixel are registered trademarks of OmniVision Technologies, Inc. OmniPixel3-H5 is a trademark of OmniVision Technologies, Inc. All other trademarks are the property of their respective owners.



OmniVision