

1/3" CMOS Color Image Sensor with DSP

Features

- 352 x 288 active pixel array with color filters†
- 1/3 inch lens format
- **Variable 2-dimensional edge enhancement!**
- **Automatic White Balance control!**
- **Automatic Bad Pixel correction!†**
- **Improved 3-Line color interpolation!**
- Programmable CIF 352x288, CCIR601 NTSC and PAL
- Digital output CCIR601 4:2:2 (8-bit or 16-bit)
- YCrCb or YUV output
- Improved automatic shutter, gain and black level control
- <4 LUX sensitivity with f1.5 lens
- Programmable Serial bus control:
 - Frame rate: 30fps to <1fps in six steps
 - Gamma correction
 - Shutterspeed: 1.2Sec-16uSec
 - Analog gain
 - 16 backlight compensation zones
 - Black clamp level
 - White balance adjustment
 - Power down modes
- Stand-alone operation with automatic features

† Patents pending

Description

The CH5002 is a next generation active pixel CMOS color video camera with digital video output. Using analog and digital noise correction techniques, the CH5002 provides a superb quality picture in a low cost device.

The CH5002 builds on the product base of the Chrontel CH5001, with enhancements such as improved autoshutter control and fully automatic white balance. The CH5002 also incorporates proprietary new programmable digital signal processing on chip to provide capabilities not available elsewhere in an integrated solution. These include programmable digital edge detection and enhancement in the horizontal and vertical directions, and real-time bad pixel correction! This means a crisp picture under all conditions of light and contrast. The CH5002 also provides 16 programmable zones for digital backlight compensation, as well as programmable frame rate, shutter duration, gamma, analog gain and black clamp level.

As in the CH5001, at power-up many of the programmable features are selectable without IIC control by using the shared OUTPUT / PUD pins.

The CH5002 provides a new highly integrated solution for the next generation video conferencing, videophone, biometrics and surveillance products.

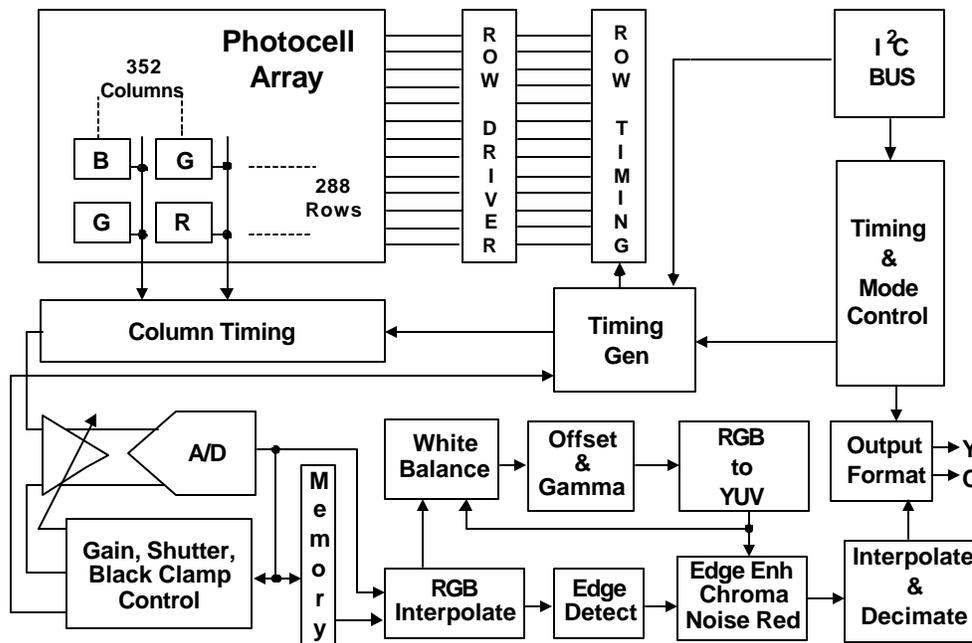


Figure 1: Functional Block Diagram

Packaging Specifications

ORDERING INFORMATION			
Part number	Package type	Number of pins	Voltage supply
CH5002A-L	LCC	52	5V
CH5002A-Q	QFP	52	5V

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