



ICM-512 Series

CIF RESOLUTION COMPOSITE VIDEO OUTPUT (NTSC) COLOR CMOS IMAGE SENSOR

Features

- 87,840 (360x244) pixels, CIF format, used with 1/4" optical system
- Output: NTSC composite video
- Input interface: I2C
- Automatic gain control
- Electronic exposure control
- On-chip 9-bit ADC
- Correlated double sampling
- On-chip digital signal processing
- Real-time color interpolation
- Programmable white balancing and color correction
- Programmable gamma correction
- Single 5 V power supply

General Description

ICM-512D is a single-chip digital color imaging device. It incorporates a 360x244 sensor array operating at 30 frames per second (60 fields/sec) in interlaced manner. Each pixel is covered by a color filter, which formed a so-called Bayer pattern. Correlated double sampling is performed by the internal ADC and timing circuitry. Depending on the brightness of the scene, the raw data can be adjusted by the automatic (or manual) gain control (AGC). The data is then processed by the color interpolation module so that each pixel will get a complete set of RGB values. To correct or enhance color, the user may perform white balancing and color

correction. At the next stage, the gamma correction can also be performed. After these digital processing steps, the signal is fed to an embedded NTSC encoder which generates composite video output to be sent to TV for display.

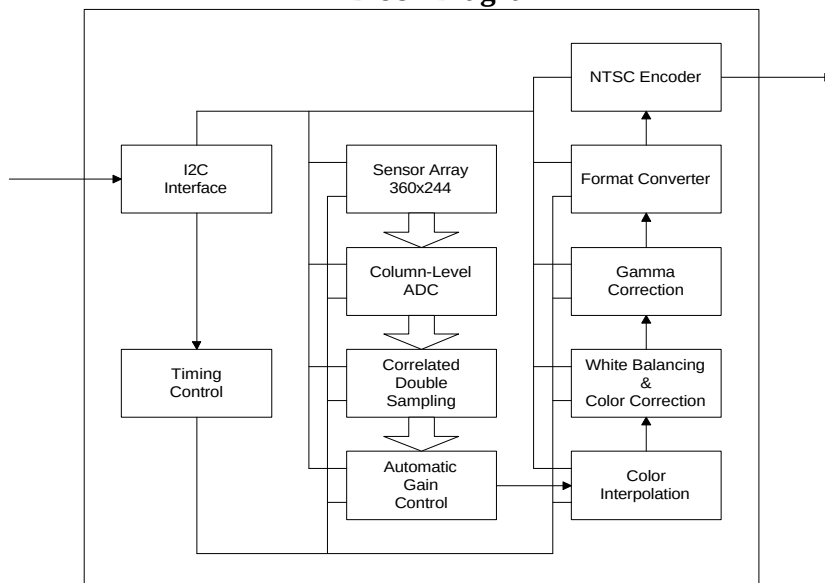
Application

- Digital camcorder
- PC camera
- Security system
- Visual toy
- Environment monitor system

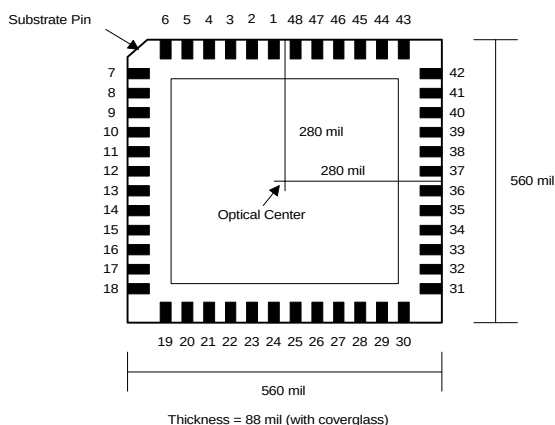
Key Parameters

- Number of Pixels: 360x244
- Frame Rate: 30 fps (60 fields/sec)
- Pixel Size: 8.9 μm x 9.8 μm
- Sensor Area: 3.2 mm x 2.4 mm (4:3)
- Main Clock Frequency: 27 MHz
- Exposure Time: 64 μs (1 line) ~ 16.6 ms (261 lines)
- Digital Gain: 1 ~ 64 x
- Gamma Correction: Programmable
- S/N Ratio: TBD dB @ TBD lux
- Power Supply: from 3.0V to 5V
- Power Requirement: 110mA @3.3V, 160mA @5V
- Package: CLCC48 or PLCC48

Block Diagram



Mechanical Information



CLCC48 (Top View)

IC Media Corporation

545 E. Brokaw Road
San Jose, CA 95112, U.S.A.
Phone: (408) 451-8838
Fax: (408) 451-8839
E-mail: sales@ic-media.com
Web Site: www.ic-media.com

IC Media Technology Corporation

6F, No.61, ChowTze Street, Nei Hu,
Taipei, Taiwan, R.O.C.
Phone: 886-2-2657-7898
Fax: 886-2-2657-8751
E-mail: AP.Sales@IC-Media.Com.tw
Web Site: www.ic-media.com.tw

Ordering Information

Part number for different package:

Description	Part Number
CLCC 48 packaged, CIF resolution sensor	ICM-512Dcc
PLCC 48 packaged, CIF resolution sensor	ICM-512Dpc