SHARP

NEW PRODUCT INFORMATION

LZ0P3908
LZ0P390E

0.6 cc CMOS camera module with built-in DSP and lens

♦ Under development

■ Outline

LZ0P3908♦ / LZ0P390E♦ are CMOS camera modules with built-in DSPs and lenses, realizing the industry's smallest volume (0.6 cc), thinnest design (5 mm thick), and lowest power consumption (45 mW). Their high sensitivity enables photography even in candlelight, realizing a minimum subject illumination of 5 lux, the lowest in the industry. Their integrated image sensors, signal processing DSPs, and optical lenses allow easier designing of optical systems.

■ Main specifications

<Camera functions>

- 1/7" CIF-CMOS image sensor with built-in DSP
- Optical size: 1/7"
- Number of pixels: 110 000
- Image pixels: 367 (H) x 291 (V)
- Pixel size: 5.6 x 5.6 µm square pixels
- Filter: RGB color
- Transmission system: Progressive system

<DSP functions>

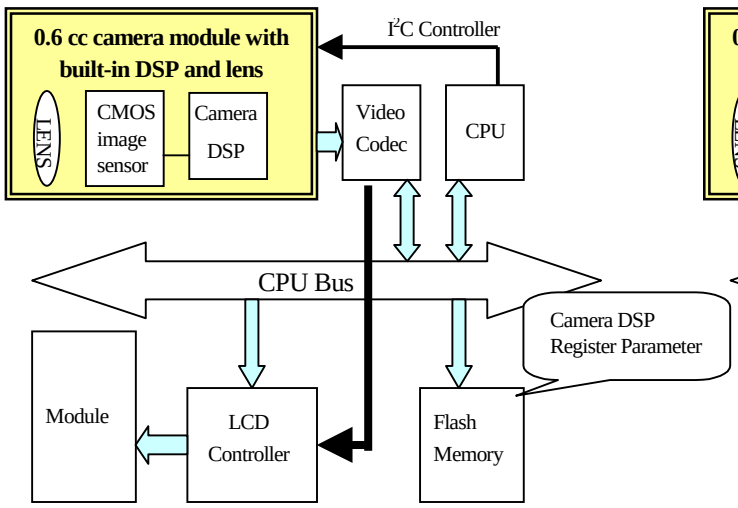
- Bus interface or digital YUV output
  (Output format: CIF, QCIF, QVGA)
- Built-in automatic control of exposure
- Built-in automatic control of white balance and IRIS carrier balance

<Module specifications>

- F. No: F2.8
- Focal length: 2.0 mm
- Horizontal viewing angle: 58°
- Construction: Single
- Minimum subject illumination: 5 lux
- DSP control interface:
  I^2C bus (LZ0P3908)
  CPU 16-bit bus (LZ0P390E)
- Output signals:
  8-bit digital YUV parallel (LZ0P3908)
  16-bit bus interface (LZ0P390E)
- Operating temperature: -20 to +60°C
- Power supply voltage: 2.8 V
- Power consumption: 45 mW (15 fps)
- Dimensions: 11 x 11 x 5.0 mm
- Package: 36 pin LCC type

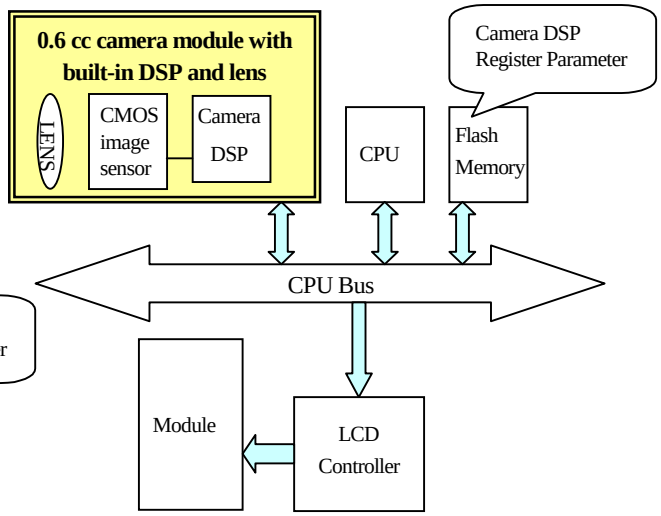
■ System Block Diagram

LZ0P3908 (for W-CDMA)



Because W-CDMA handles moving pictures, an LSI for video codecs is added. A parallel interface is necessary for the DSP output of video codec LSIs.

LZ0P390E (for PDC)



Because of the growing demand for additional camera functions that don't require PDC system modification, a conventional bus interface is necessary.