

CX93610 Features

Operating Modes

- ◆ Visual verification of intruder via image sensor interface
- ◆ SXGA 1.3MP (1280x1024) and HD (1280x720) - B&W or Color @ up to 15 fps (512KB option only)
- ◆ D1 (720x480) and VGA (640x480) - B&W or Color @ up to 30 fps
- ◆ Up to 5MP (2592x1944) - B&W or Color, JPEG still captures (512KB option only)
- ◆ Resolution Scaling of ½ or ¼ (available for input resolutions of 1280x1024 or lower)
- ◆ 4:2:2 to 4:2:0 Sub-Sampling Conversion (available for input resolutions of 1280x1024 or lower)
- ◆ JPEG & MJPEG Image Compression (ISO/IEC 10918-1/2)
- ◆ Programmable Difference Threshold Encoded JPEG Mode (DIFT)
- ◆ Differential Encoded JPEG Mode (DIFF)
- ◆ Programmable DCT tables for ultimate flexibility in compression and image quality (2 pre-defined tables)
- ◆ Privacy Mode - blurs out image details
- ◆ Frame by Frame Motion Detection with programmable thresholds
- ◆ Light Detection through luminance measurements with auto IR LED control
- ◆ Continuous streaming and variable image modes

- ◆ 512KB/256KB frame buffer for compressed images (no external memory) with programmable audio buffer allocation
- ◆ Interface to external mP though SPI, UART, or I²C
- ◆ Variable IR illumination control port
- ◆ A/D for Photocell sensor, Battery voltage monitor, and microphone inputs
- ◆ Sleep mode - SoC off except frame buffer in retention mode
- ◆ Integrated DC-DC converter for reduced power consumption

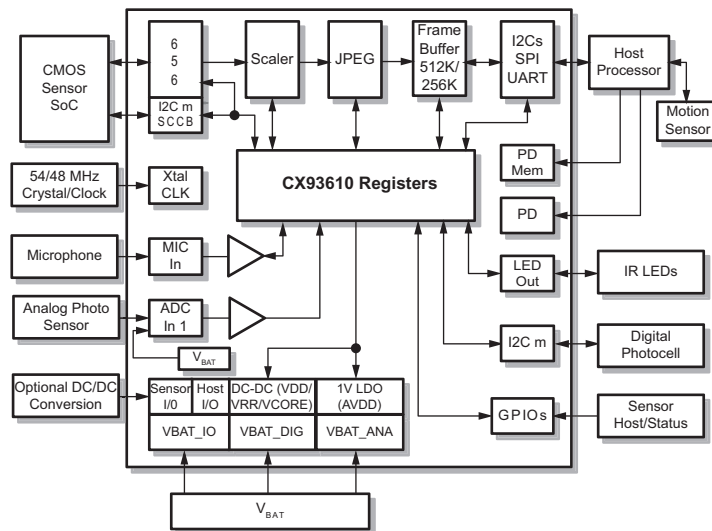
Interfaces

- ◆ Sensor i/f
 - 8-b 4:2:2 YCbCr with BT-656 embedded timing codes or frame/line sync support up to 54 MHz, progressive mode
 - Resolutions: 5MP (2592x1944), 1.3MP SXGA (1280x1024), (VGA (640x480) & QVGA (320x240)
 - 54 MHz or 48 MHz clk output with divide-by-two option for 27 MHz or 24 MHz output
 - Crystal/Clock input allowing 54 MHz, 48 MHz, 27 MHz, or 24 MHz. Supports fundamental and 3rd overtone crystals
 - 2/3 wire control i/f: I²C Master port or SCCB

- ◆ 4-wire I²C/SPI/UART slave port to external mP
- ◆ 8 GPIO (5 dedicated pins, 3 shared pins)
- ◆ IR illumination with variable DAC control
- ◆ Microphone input, mic boost 0-36 dB in 6 dB steps, 2- and 4- bit ADPCM
- ◆ DC measurement battery monitor
- ◆ Photocell sensor input - analog or I²C (shared with GPIO)
- ◆ Support for battery operation: 3.6 V to 1.8 V

56-pin eMLF/QFN

- ◆ -10 °C to +85 °C ambient,
- ◆ +100 °C junction
- ◆ Full industrial temperature version available (-40 °C to +85 °C)
- ◆ TBD mA in operational mode
- ◆ 10 nA in sleep mode



CX93610 Functional Block Diagram

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