

VC7103 is a dedicated ISP chip for surveillance HD cameras. Through the serial (the MIPI/LVDS) or parallel (DVP, CCIR656/BT.1120) interface, it accepts data from CMOS or CCD sensor, then outputs processed high quality YUV data through DVP or CCIR656/BT.1120 interface. Besides the basic ISP function, VC0710 also supports Electronic Image Stabilization (EIS), Wide Dynamic Range (WDR), 3D NR (3D noise reduction) and other advanced image preprocessing functions.

KEY FEATURES

Video Input Interface

- 4 channels 12bits, or 1 channel 16bits DVP parallel input interface
- Support MIPI up to 4 data lanes
- Support LVDS/SubLVDS up to 12 data lanes
- Support CCIR656/BT.1120 input interface

Video Output Interface

- Support 1 channel 20bits DVP parallel output
- Support CCIR656/BT.1120 output interface

Image Signal Processing

- Support 16-bit ISP
- AE/AF/AWB
- Backlight compensation
- Chromatic aberration correction
- Color correction
- Defective pixel concealment
- Defog
- De-mosaic with anti-aliasing filter
- Edge enhancement
- Electronic Image Stabilization
- False color suppression
- Fish-eye lens correction
- Flicker detection
- Gamma correction
- Lens distortion correction
- Lens shading correction
- Perspective correction
- Temporal and spatial noise reduction
- Wide dynamic range

Video capability

- 1280x720 @ 120fps
- 1920x1080 @ 60fps
- 5MP @ 25fps
- 16MP @ 7fps

MCU

- Built-in 8051 micro controller
- Support external serial flash for program code
- Support EEPROM for setting and code

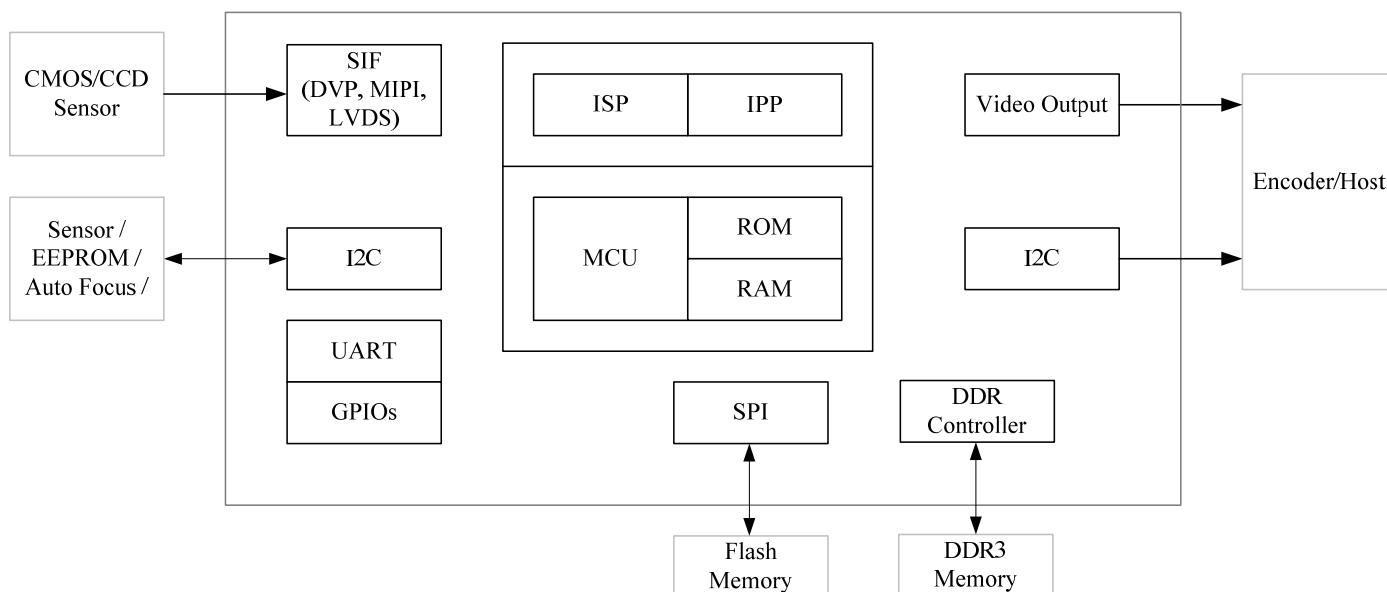
Other Functions

- Hardware motion detection
- Privacy zone
- OSD
- Support Auto-focus
- Support Optical Zoom function
- Support Iris control
- DDR3
- SPI (for Flash Memory)
- GPIO / PWM / UART / I2C

Package Information

Marking	VC7103BTNA
Package	BGA-421pins
Dimension	15x15mm

Chip Block Diagram



Application Diagram

