

EN673

Professional 2M IP Camera SoC

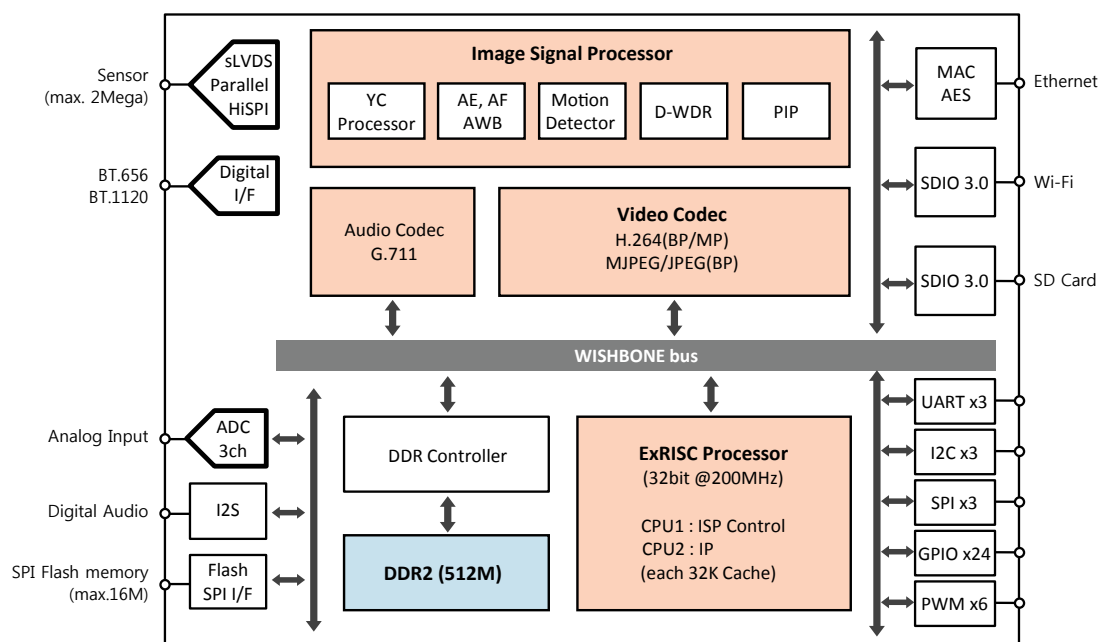


Descriptions

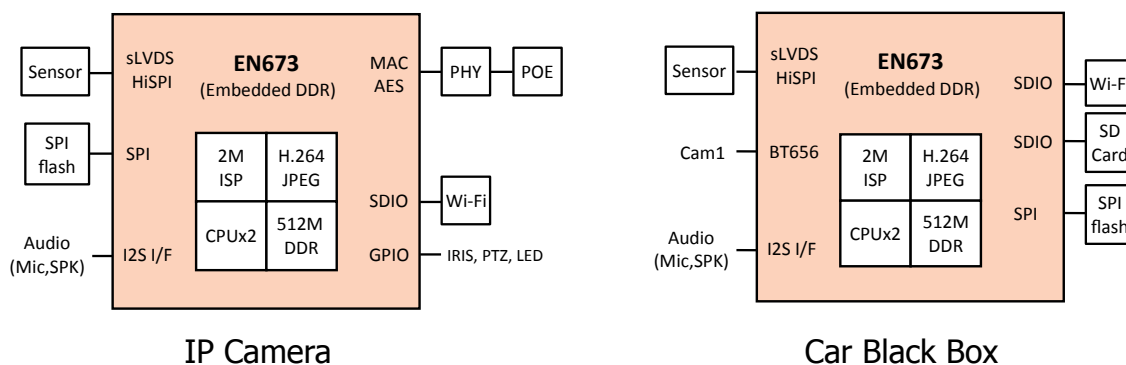
This is an IP camera encoder for security camera, black box and action cam system. The main features of the product are H.264 encoder, JPEG encoder, Ethernet MAC, AES, external Wi-Fi interface, SDIO interface and dual core CPU.

'Fast Booting within 1sec' 'Low power consumption'

Functional Block Diagram



Application



Main Feature

Process Core

- ▶ ExRISC 32bit Processor (Max 200MHz)
- ▶ CPU0, 1 – each 32KB (I/D Cache)
- ▶ Embedded SRAM
 - CPU0 : 32KB
 - CPU1 : 32KB
 - Shared 32KB X 2
- ▶ JTAG (33MHz hi-speed JTAG debug)

Video Encoder

- ▶ H.264 Encoder (BP/MP @Level 4.1)
- ▶ MJPEG/JPEG BP

Video Encoding Performance

- ▶ Realtime hard wired H.264 encoding
 - 1080p 30fps + VGA 30fps
- ▶ CBR/VBR control
- ▶ H.264 + MJPEG dual-streaming

Audio Encoding/Decoding

- ▶ Hard-wired G.711 audio codec
- ▶ I2S interface for external audio codec

ISP

- ▶ Double shutter WDR
- ▶ 3Auto controller (AE, AF, AWB)
- ▶ 3D ADNR (Adaptive digital noise reducer)
- ▶ 2 channel down scaler
- ▶ Adaptive contrast enhancer (ACE)
- ▶ Lens shading compensation
- ▶ Auto defect detection & correction
- ▶ Box OSD (32ea)
- ▶ Font OSD (Scalable 24x16 font)
- ▶ Anti-fog
- ▶ 1 channel PIP (for sub image input)

Sensor Interfaces

- ▶ 1M~2M bayer sensor input
 - Sub-LVDS, HiSPI, Parallel 12bit
- ▶ External video input
 - BT.656 (8/10bit)
 - BT.1120 (16/20bit)

Peripheral Interfaces

- ▶ UART 3ch, I2C 3ch, SPI 3ch
- ▶ GPIO 24ch
- ▶ Timer 6ch, PWM 6ch(GPIO mux)
- ▶ SDIO3.0 2ch for Wi-Fi and SD Card
- ▶ SPI Nor Flash : up to 16M
- ▶ On-chip ADC (3ch mux type)

Security Engine

- ▶ Encryption : AES

S/W

- ▶ based FreeRTOS
- ▶ Network protocol
 - TCP, UDP, IGMP, ICMP, DHCP, DNS,
 - HTTP, FTP, RTSP/RTP over HTTP
- ▶ File system
 - FAT32 for SD card
- ▶ ONVIF
 - gSOAP library ported

Physical Specifications

- ▶ Power consumption
 - 450mW@1080p30 (TBD)
- ▶ Operating voltages
 - 1.8V or 3.3V I/O
 - 1.2V core power
- ▶ Package
 - 144 ball FBGA 10mm x 10mm