Milbeaut® Image Processor: SC2002

▪ Overview

"SC2002" is the newst member of the Milbeaut Surveillance Camera series. It features the new H.265 video encoder and image processor that deliver high performance while maintaining low power consumption (less than 1.5 Watt in typical operating conditions).
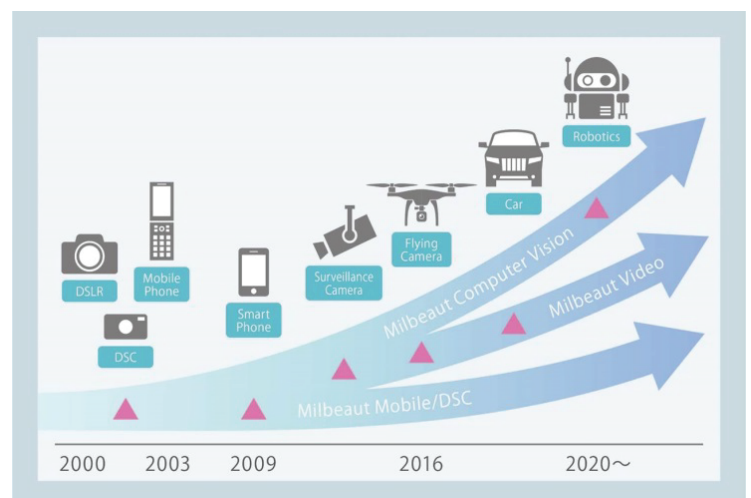
The surveillance camera market continues expand its security needs and demands products with excellent backlight correction, low illuminance shooting and support for various spoiled functions at high performance and low power. The SC2002 is purpose built to meet the surveillance market needs.

▪ Milbeaut ISP Solution

Since its first release the Milbeaut series of image processors has established a track record of success for the surveillance cameras and other various cameras.

In recent years, video shooting by equipment such as drones, action cameras and security cameras has becoming more demanding for high definition picture quality.

The SC2002 delivers high-speed processing of increased image data at low power and is essential component for these new applications.

▪ Functions

● DOL WDR

WDR synthesizes two or three images taken with different exposures and achieves the dynamic range of 120dB, which enhance visibility greatly when an image contains areas of different levels of light.

● HEVC Encoder

HEVC encoder keeps detail information at half of bit rate of H.264.
- Improve the sharpness of static object
- Keep the outline of moving object
- Reduce block noise of moving object
- Reduce network bandwidth

H.264   *HEVC*

● Video Analytics

Built-in DSP and HW core realize intelligent functionality that allows various application.
- Face detection
- Object detection
- Tampering alarm

Face Detection   *Object Detection*

▪ Specification

Feature	Specification
ISP Process	28nm
CPU	Cortex A9 Dual 600MHz
Package Size	17x17mm, 0.65mm pitch
SDRAM I/F	DDR3/3L
Image Processing	Max. 3MP@60fps
Max. Pixel Input Size	3MP (2048x1536)
Sensor I/F	S-LVDS(8lane/1clk) 648Mbps 12bit RAW
Video Input	16bit Parallel (ITU-R BT.656, BT.1120)
Host I/F	USB 2.0, 1Gbit Ethernet
TV I/F	NTSC/PAL BT.656, BT.1120

Feature	Specification
Video Codec	H.264 3MP p30 HEVC 3MP p30
Audio Codec	G.711, G.726, ARM-NB PCM, AAC-LC
2D NR	○ (Hardware)
3D NR	○ (Hardware)
Face Detection	○ (Hardware Assist)
Video Analytics function	Face Detection Object Detection Tampering Alarm
Wide Dynamic Range	○ (DOL*)
High Light Compensation	○
Electronic Zoom & OSD	○
Privacy Mask	○

*DOL(Digital Over Lapping)