

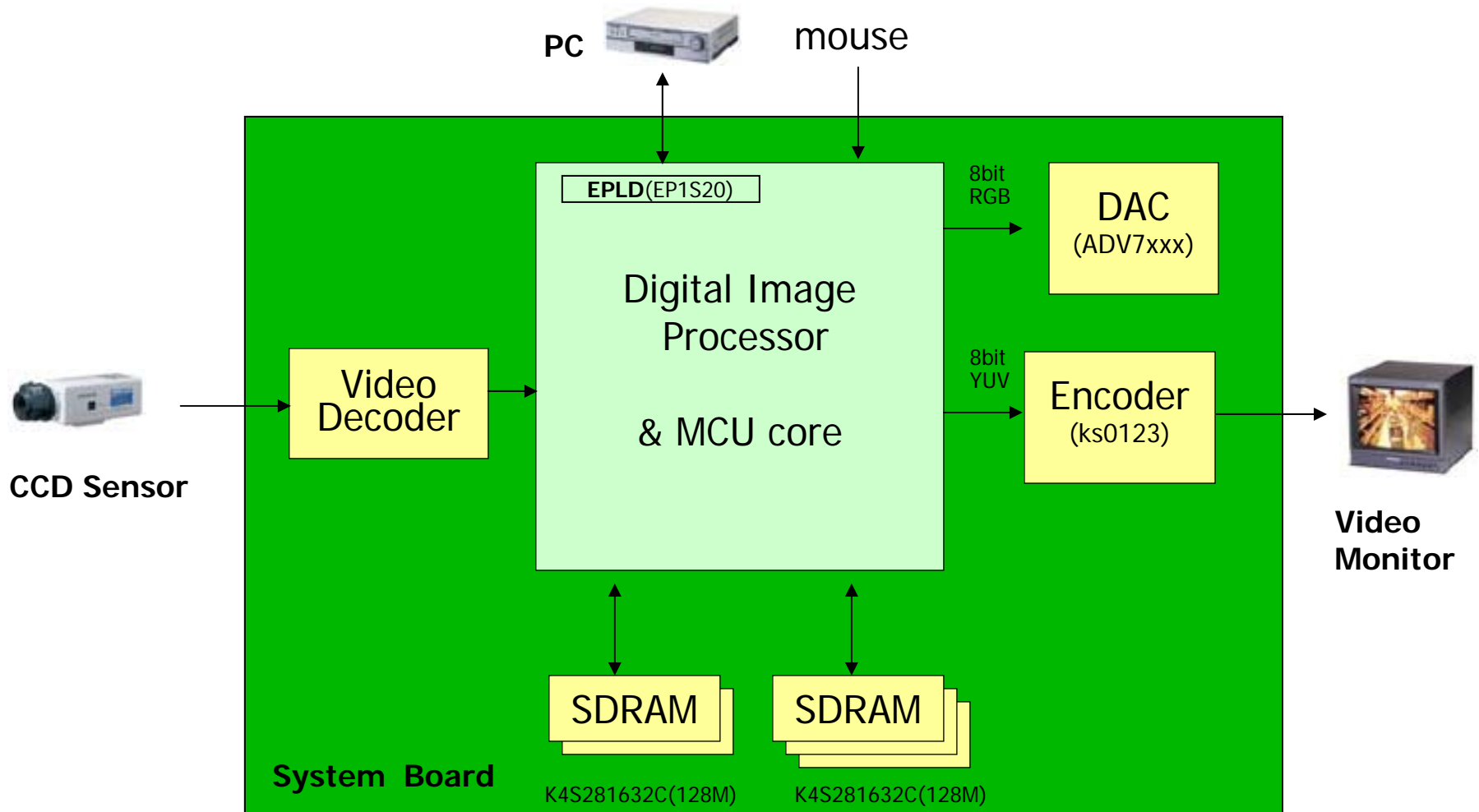


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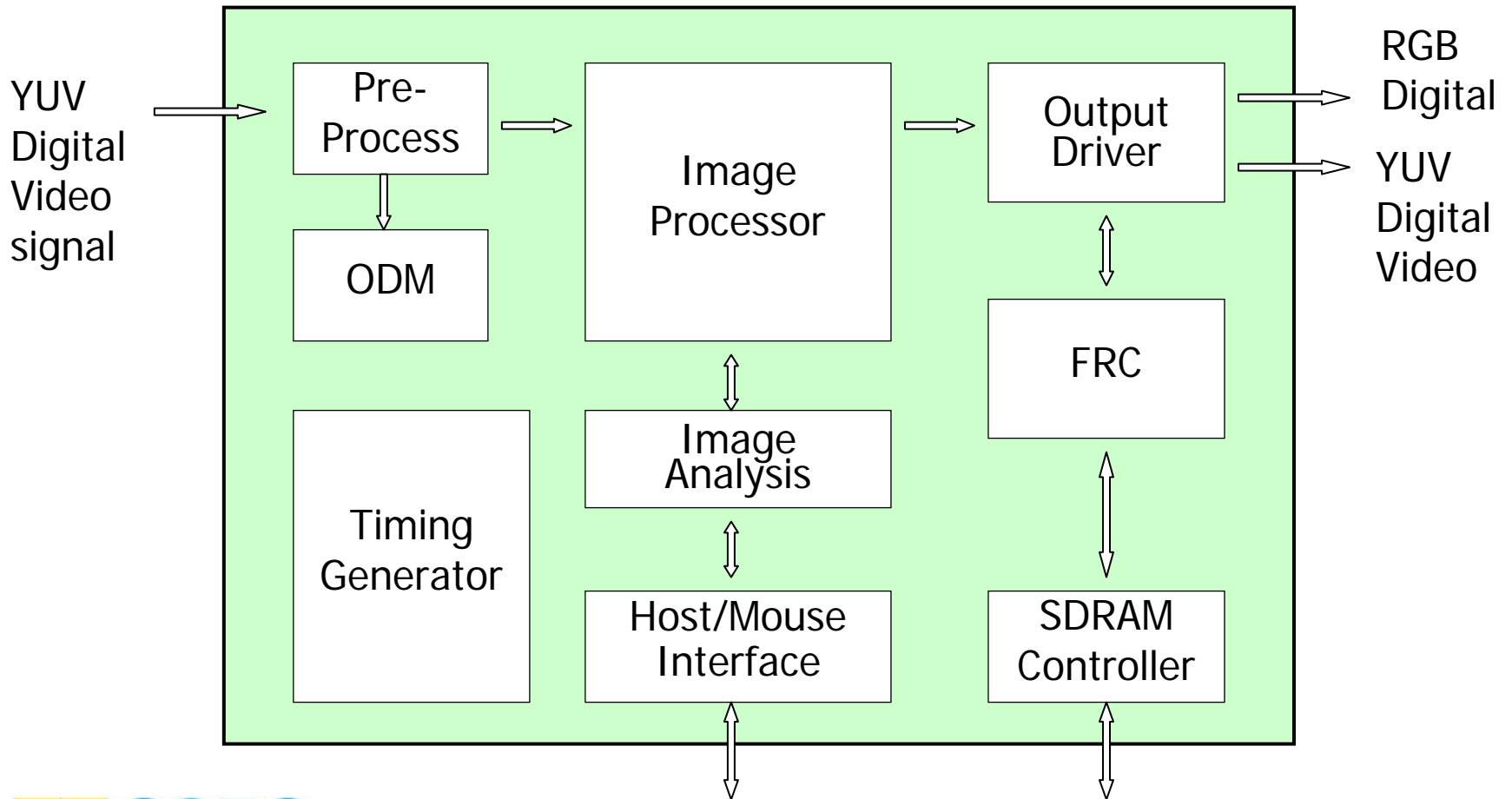
Digital Video Processor & Applications

- *Super Noise Reducer*
- *Digital Image Stabilizer*
- *Motion Tracer*

DVP System



DVP Logic module



1. Super Noise Reducer



Noise image (gaussian 0.3)



Restored image

1. Super Noise Reducer

- Removing picture noise
 - 3-D Time based processing
 - Adaptive Motion compensation
- Free from Ghost effect
- Effect of Disk Saving in using DVR

2. Digital Image Stabilizer



Motion blurred image



Stabilized image

2. Digital Image Stabilizer

- Motion Detection from Moving Image
- Image Stabilizing
 - . Frame Memory Control
 - . Adaptive motion evaluation
- Effect of Anti-Vibration of Video Image
- Effect of Disk Saving in using DVR
- Digital Image Scaling : 256 steps

3. Motion Tracer



Original Image (1/2)

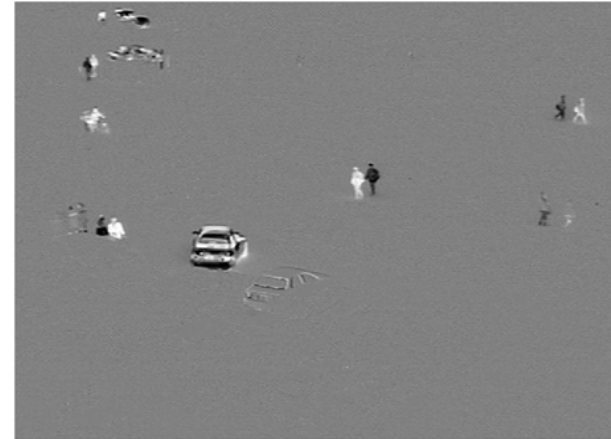
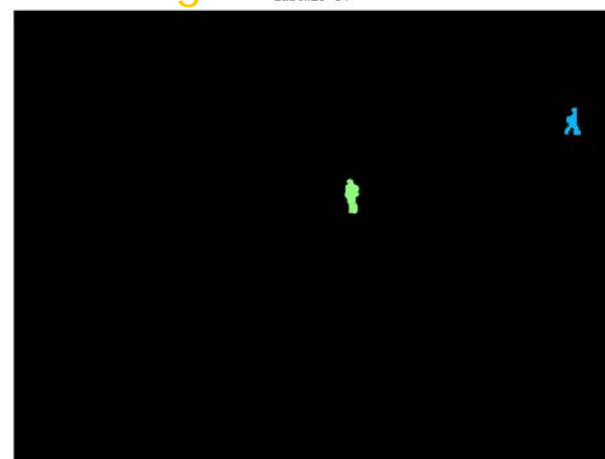


Image Differentiation



Segmentation & Labeling

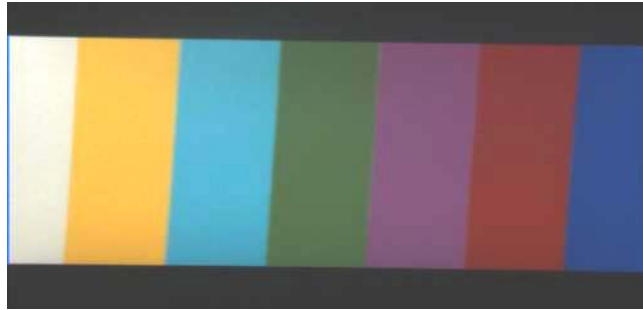


Target Identification

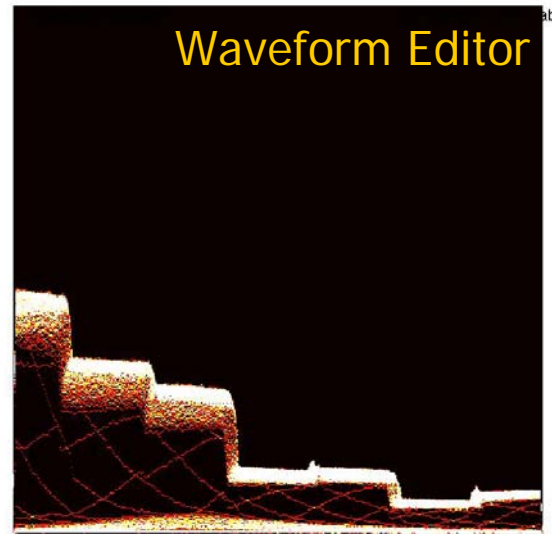
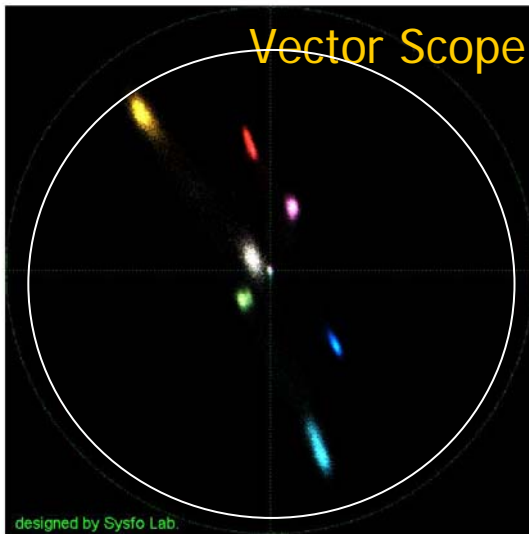
3. Motion Tracer

- Moving Object Detection
 - Temporal Difference
 - Image segmentation & Labeling
- Motion Analyzer
- Target Tracking for security application

4. Image Analyzer



Input Image



4. Image Analyzer

- Function of Waveform Monitor
- Function of Vector Scope
- Function of Histogram Analyzer

System Configuration

■ General I/O

- Input : (NTSC/PAL)
- Output : (NTSC/PAL) / RGB Sync
- Video Decoder : S5D2650
- Video Decoder : AD7170
- Mouse : PS2
- SXGA : 3ch DAC
- Frame buffer : SDRAM (128Mbit x 3ea)

System Specification (FPGA)

ITEM		etc
Main Processor	1S20F672C7	Stratix
Ext. Frequency	max 80MHz	DAC Output
Int. Frequency	Max 104MHz	TG control
Logic Cell	15K	
Memory	~100Kbit	
Enhanced PLL	2	