

## 9 Channel Video Surveillance processor

### Description

AL37219 is a 9-CH video surveillance processor that empowers any surveillance system with rich set of features. They include: simultaneous monitoring-playback-recording operation, flexible video display mode, bitmapped and dynamic colored OSD, rich modes of recording, accurate motion detection (16X12 grids) with flexible threshold and trigger methods, replay on all input and playback Channels. One AL37219 chip can provide 9-CH real time surveillance system. Two chips can be cascaded together to provide 16-CH real-time application.

It can be combined with AverLogic's MPEG4 encoder (AL9V576) and video decoders (AL240) to provide high quality surveillance systems with cost effective solution. Its 4 channel counterpart, AL37204, can be used for real-time 4-CH surveillance applications.

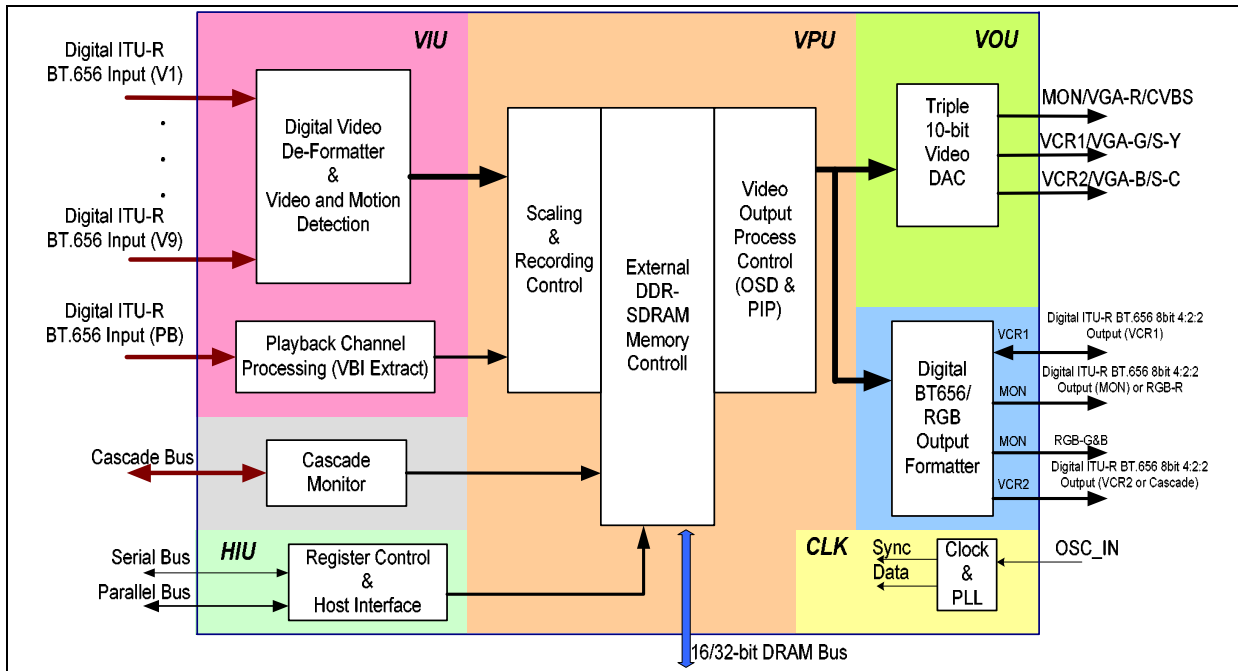
### Application

- ✓ Video surveillance Multiplexer/Processor
- ✓ DVR and POS DVR
- ✓ Video Server
- ✓ Highway traffic throughput surveillance
- ✓ Medical inspecting/surgery
- ✓ ATM machine surveillance
- ✓ Defense surveillance
- ✓ Recovery room monitoring in hospital
- ✓ Home stay monitoring
- ✓ Long hour monitoring in biological experiment laboratory

### Features

- Support NTSC and PAL standards
- A single chip supports 9-CH real-time surveillance; two chips can be cascaded to support 16-CH real-time video surveillance applications
- Support Triplex operation, (i.e., simultaneously real-time monitoring + recording + playback).
- Support (at least) 1,2,4,6,7,8,9,10,13,16 and multi- windows display modes
- Support PIP /POP display modes
- Independent linear horizontal/vertical (H/V) scaling down factors (ex. 1/2, 1/3, 1/4, 2/3, 3/4)
- Programmable brightness, contrast and saturation
- Individual channel freeze
- Replay on individual channel
- Programmable bitmap type font for embedded OSD display
- Recording type: (D1 multiplexing/QUAD/PIP/as screen)
- D1 multiplexing Recording modes: weighted /regular/MPEG-GOP type
- Support DDR 16/32-bit interface up to 8G bit memory
- Support motion detection /video loss/blind detection
- Motion detection resolution: 16X12 grids
- Support channel-switching at front-end TV decoder
- VBI insertion and extraction
- Support external VCR/DMR/DVR signal triggered
- Built in de-interlacer for the RGB output
- Embedded three TV encoders with three DACs
- 1.8/3.3V power supply
- 256-pin 24x24 mm<sup>2</sup> LQFP package
- 336-pin 27x27 mm<sup>2</sup> BGA package

# Functional Block Diagram



## Interface

- 9-CH ITU-R BT. 656 inputs and one ITU-R BT. 656 Playback input
- 3 independent digital ITU-R 656 output ports
- Digital output video format: ITU-R BT. 656 4:2:2 or digital Progressive RGB

**Table 1: Digital Output Configuration Table**

DOUT [39:32]	DOUT [31:24]	DOUT [23:16]	DOUT [15:8]	DOUT [7:0]
ITU-R 656(VCR2)	ITU-R 656(VCR1)	R(MON)	G(MON)	B(MON)
ITU-R 656(VCR2)	ITU-R 656(VCR1)			ITU-R 656(MON)
Cascade (I/O)	ITU-R 656(VCR1)	R(MON)	G(MON)	B(MON)
Cascade (I/O)	ITU-R 656(VCR1)		ITU-R 656(VCR2)	ITU-R 656(MON)

- 3 independent analog output ports that support Progressive RGB, S-video, or Composite signals
- The 3 analog outputs can be different configurations of composite CVBS, S-Video or analog RGB signals as follows:

**Table 2: Analog Video Output Combination**

MON(DAC1)	VCR1(DAC2)	VCR2(DAC3)
Composite <sub>1</sub>	Composite <sub>2</sub>	Composite <sub>3</sub>
Composite	S-Video	
*S-Video	Composite <sub>2</sub>	*S-Video
S-Video		
R	G	B

- HPI (Host Parallel Interface) and 2 wire serial bus
- DDR Interface: 16 bit or 32 bit up to 8G bit meory

## Ordering Information

Part Number	Package	Power
AL37219C-LF-PBF	256-LQFP	+1.8/3.3V
AL37219C-PC-PBF	336-BGA	+1.8/3.3V

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