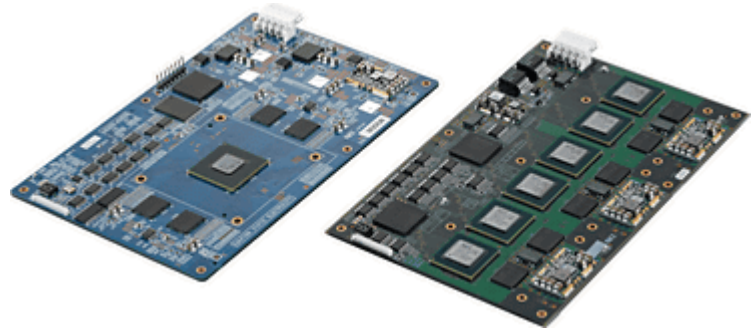


## H.264/AVC HDTV Encoder/Decoder Modules for professional applications Support for H.264/AVC (High 4:2:2 Profile) and MPEG-2 (4:2:2 Profile)

# SC50KE/SC50KD NEW

Compact module products incorporating **SARAENC** and **SARADEC** (H.264/AVC Encoder/Decoder LSIs for professional applications).

SARAENC/SARADEC LSIs and DDR mounted on module help reduce development time.



## Key features

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- SC50KE: HDTV encoder module with six SARAENC LSIs and DDR memory
- SC50KD: HDTV decoder module with one SARADEC LSI and DDR memory
- Support for H.264/AVC and MPEG-2 standards
- High compression and excellent picture quality based on frame structure, field structure, MBAFF, and PAFF
- Maximum bit rate of 160Mbps
- CABAC support to achieve high compression ratio at low bit rate

## Applications

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Broadcast content transmission and relay equipment

- Transmission from field pickup unit
- Satellite news gathering
- Transmission systems using dedicated line
- IP transmission
- Program server
- Commercial server
- Playout encoder

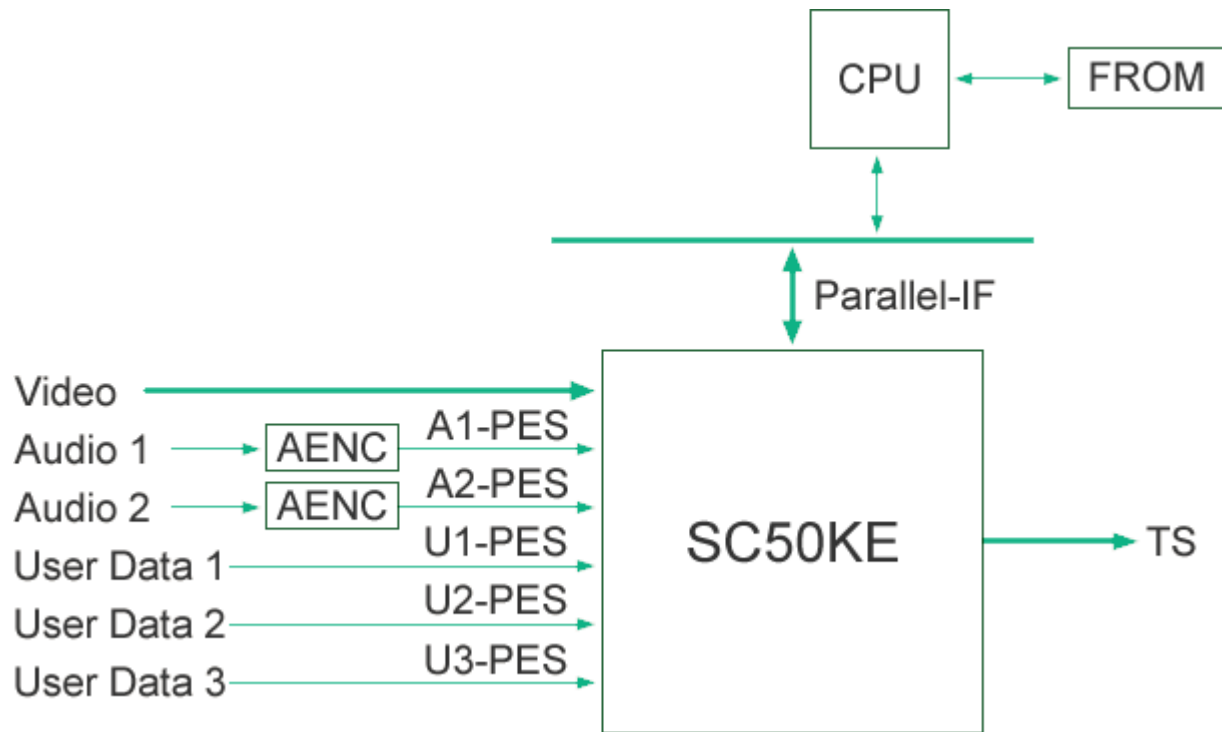
## Specifications: Encoder Module

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### Encoder Module (SC50KE)

H.264/AVC Specifications	Profile	High422 (8bit), High, Main, Baseline
	Level	4.1 / 4.0 / 3.2 / 3.1 / 3.0
	Picture structure	Field Structure MBAFF
		Frame Structure PAFF
	Intra prediction mode	All Mode (Intra 4 x 4, 8 x 8, 16 x 16)
	Motion compensation pixel precision	1/2, 1/4 Pixel
	Motion compensation block-size	16 x 16, 16 x 8, 8 x 16, 8 x 8
Entropy coding	CABAC, CAVLC	
MPEG-2 Specifications	Profile and level	422P@HL, MP@HL, MP@H14L, 422P@ML, MP@ML
	Picture structure	Field Structure
		Frame Structure
		Field Structure / Frame Structure Adaptive
	Motion compensation pixel precision	1/2 Pixel
Motion compensation block-size	16 x 16, 16 x 8	
Common Specifications	Video interface	Y/C Separated Input (HDTV)
		Y/C Multiplexed Input (SDTV)
	PES input interface	PES Serial (Standard / 3line) 2Port
		PES Serial (Standard / 3line) 3Port
	Streaming output interface	MPEG-2 TS (8bit Parallel)
	TS output bit rate	Max 160Mbps
	Host CPU interface	Data Bus: 32bit
		Address Input: 18bit
	Size	170mm(L) x 110mm(W)
	Power supply	5.0V
	Power consumption	35.0W (Max)
	Video input format	1080i 1920 x 1080 (29.97 / 25 fps)
		720p 1280 x 720 (59.94 / 50 fps)
		480i 720 x 480 (29.97fps)
		576i 720 x 576 (25fps)
Video preprocessing	Horizontal down-sample filter(3/4)	
	Chroma 4:2:2 - 4:2:0 filter	
	Adaptive low pass filter	
	Scene change detection	

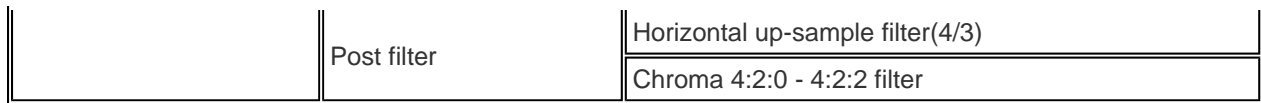
**Block Diagram: Encoder Module SC50KE**



## Specifications: Decoder Module

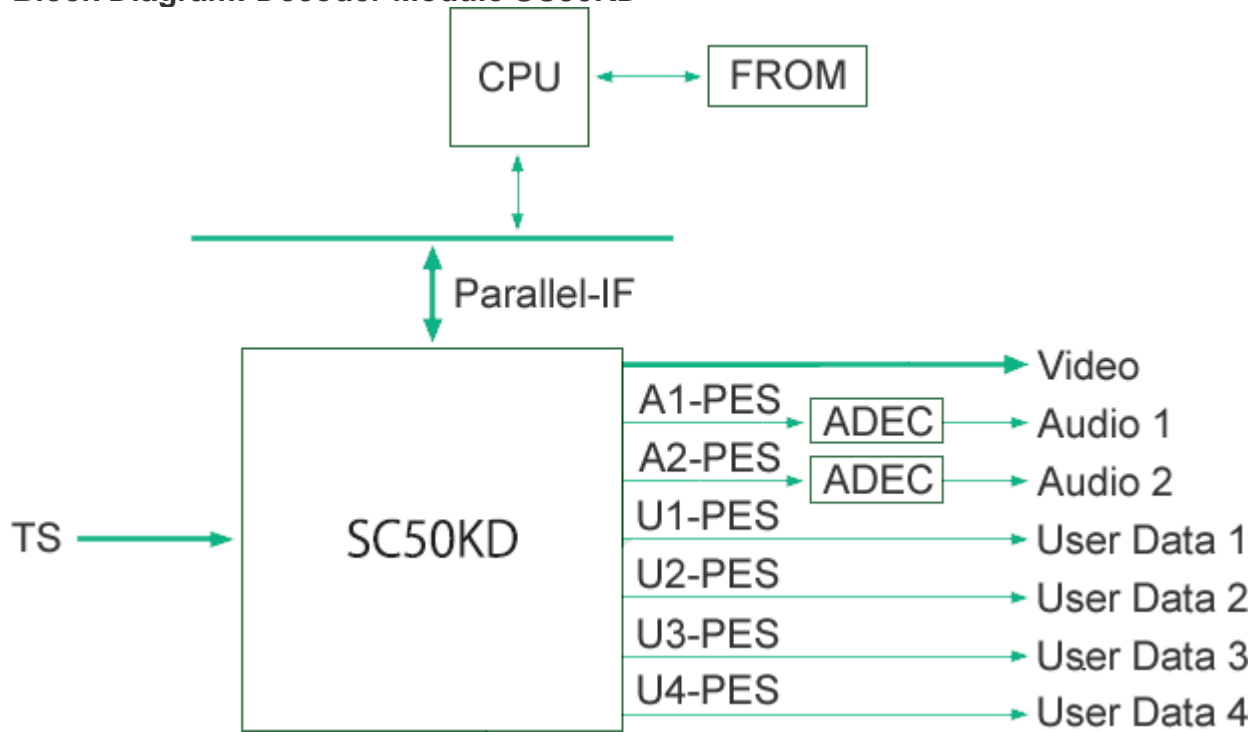
### Decoder Module (SC50KD)

H.264/AVC Specifications	Profile	High422 (8bit), High, Main, Baseline*
	Level	422 (4.0), 420 (4.1)
MPEG-2 Specifications	Profile and level	422P@HL, MP@HL, MP@H14L, 422P@ML, MP@ML
Common Specifications	Video output interface	Y/C Separated Output (HDTV)
		Y/C Multiplexed Output (SDTV)
	PES output interface	PES Serial (Standard / 4line) 2Port
		PES Serial (Standard / 4line) 4Port
	Streaming input interface	MPEG-2 TS (8bit Parallel)
	TS input bit rate	Max 160Mbps
	Host CPU interface	Data Bus: 32bit
		Address Input: 18bit
	Size	170mm(L)x110mm(W)
	Power supply	5.0V
	Power consumption	15.0W (Max)
Video output format	1080i 1920 x 1080 (29.97 / 25fps)	
	720p 1280 x 720 (59.94 / 50fps)	
	480i 720 x 480 (29.97fps)	
	576i 720 x 576 (25fps)	



\* Excluding ASO and FMO (unsupported)

**Block Diagram: Decoder Module SC50KD**



This products is RoHS compliant.

Specifications and external appearance are subject to change without notice.