



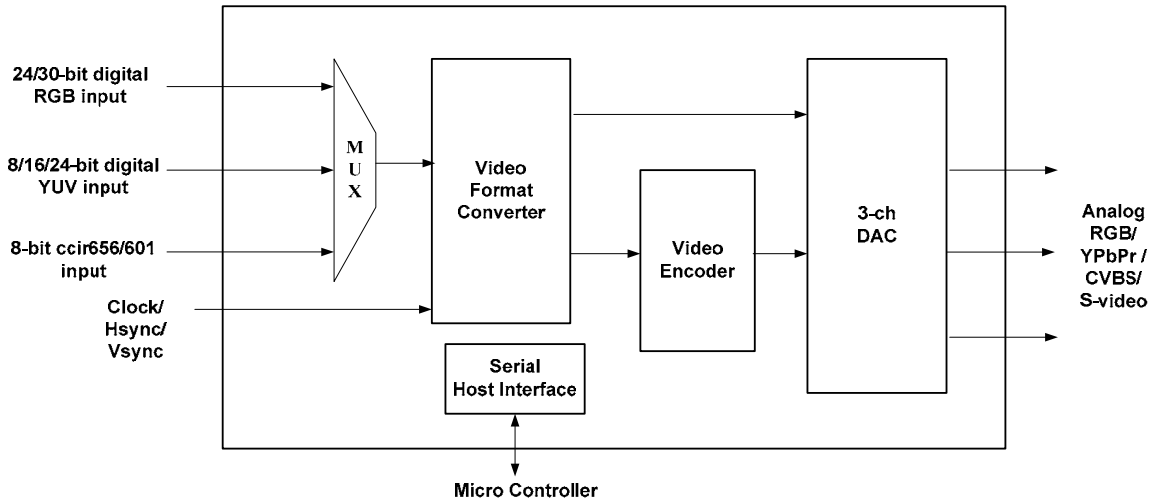
VS9126

TRIPLE 10-BIT HIGH SPEED
VIDEO DAC
AND
MULTI-FORMAT
SD/HD VIDEO ENCODER

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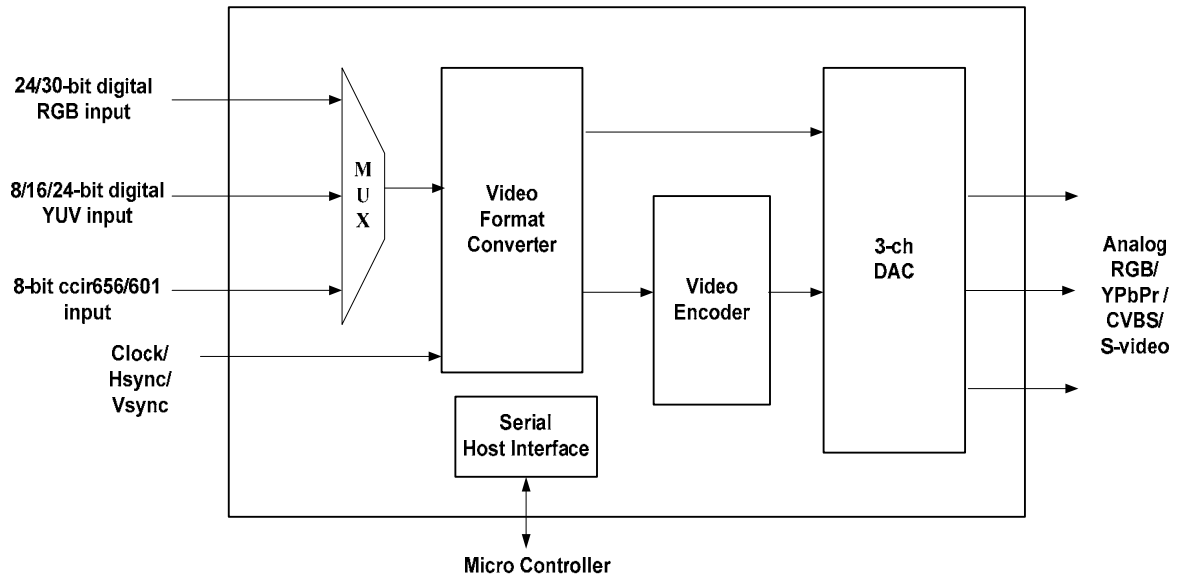
VXIS Technology Corp.
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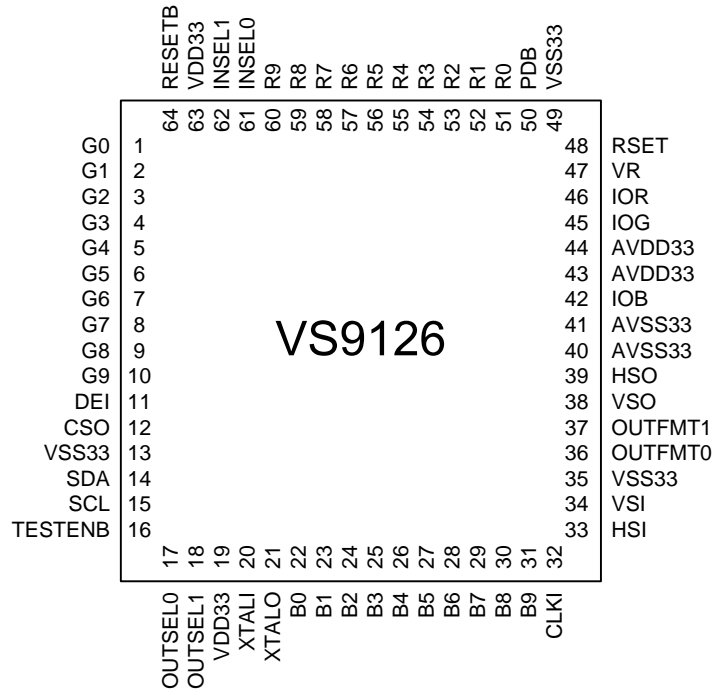
1. BLOCK DIAGRAM


2. FEATURES

- Support Various digital video Input
 - RGB 24/30 bit
 - YUV 24/30 bit
 - YUV 16/20 bit (or BT1120)
 - YUV 8/10 bit (BT656,BT601)
 - Max data rate 160MHz
- Support Various Analog Output Formats
 - Composite video output (NTSC/PAL)
 - S-video output (NTSC/PAL)
 - Analog R/G/B output + Horizontal Sync + Vertical Sync
 - Analog Y/Pb/Pr output
 - Max output resolution 1080P@60
- 480P to NTSC, 576P to PAL convert
- Active data shift in horizontal and vertical direction
- Horizontal and vertical sync pulse size adjustment
- Data mask
- Video Brightness,contrast,saturation,hue adjustment
- R/G/B input port swap & rotation control
- Input resolution auto detect
- 2 wire serial control
- 3.3V tolerant I/O
- 3.3V power supply only
- 64 pin LQFP

3 BLOCK DIAGRAM


4. PIN DIAGRAM



5 PIN ASSIGNMENT OF VS9126

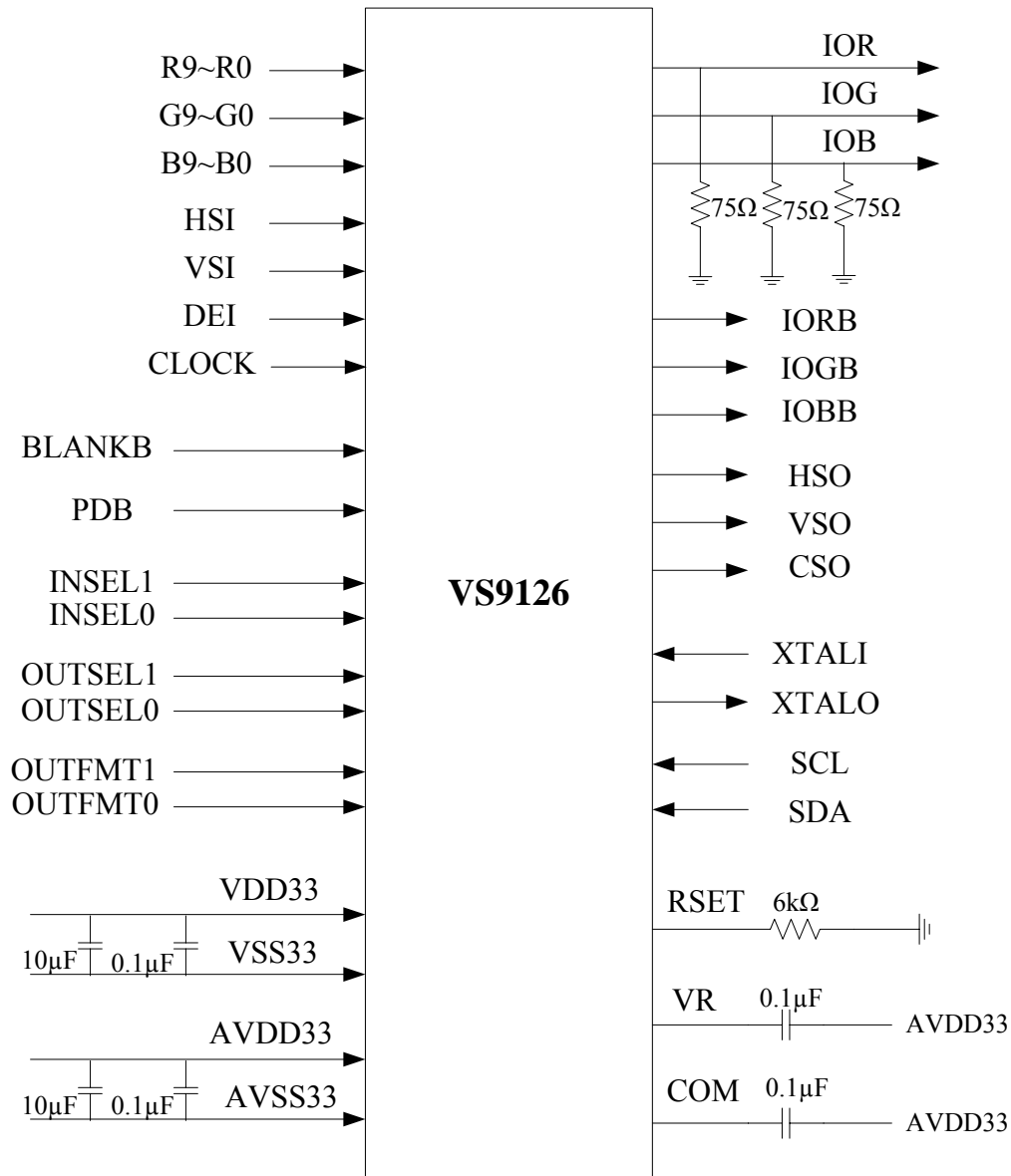
Pin #	Pin Name	Pin #	Pin Name	Pin #	Pin Name	Pin #	Pin Name
1	G0	17	OUTSEL0	33	HSI	49	VSS33
2	G1	18	OUTSEL1	34	VSI	50	PDB
3	G2	19	VDD33	35	VSS33	51	R0
4	G3	20	XTALI	36	OUTFMT0	52	R1
5	G4	21	XTALO	37	OUTFMT1	53	R2
6	G5	22	B0	38	VSO	54	R3
7	G6	23	B1	39	HSO	55	R4
8	G7	24	B2	40	VSS33	56	R5
9	G8	25	B3	41	VSS33	57	R6
10	G9	26	B4	42	IOB	58	R7
11	DEI	27	B5	43	VDD33	59	R8
12	CSO	28	B6	44	VDD33	60	R9
13	VSS33	29	B7	45	I0G	61	INSEL0
14	SDA	30	B8	46	I0R	62	INSEL1
15	SCL	31	B9	47	VR	63	VDD33
16	TESTENB	32	CLKI	48	RSET	64	RESETB

6 PIN DESCRIPTION

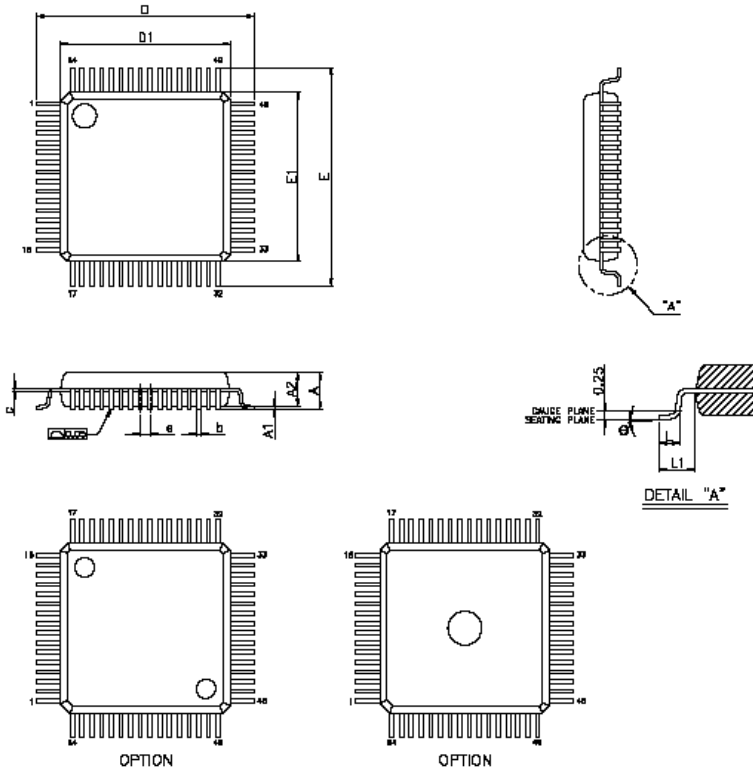
Video Input Pins			
Name	Type	Description	Notes
R9~R0	I	Digital Video Input R/Cr Data	
G9~G0	I	Digital Video Input G/Y Data	
B9~B0	I	Digital Video Input B/Cb Data	
CLKI	I	Digital Video Input Clock	
HSI	I	Digital video input horizontal synchronization	
VSI	I	Digital video input vertical synchronization	
DEI	I	data enable input	
Video Output Pins			
Name	Type	Description	Notes
IOR	O	R/Pr/S-Y Analog Video Output	
IOG	O	G/Y /CVBS Analog Video Output	
IOB	O	B/Pb/S-C Analog Video Output	
HSO	O	video output horizontal synchronization	
VSO	O	video output vertical synchronization	
CSO	O	composite sync output	
Miscellaneous I/O Pins			
Name	Type	Description	Notes
/RESETB	I _{PU}	Chip Reset (Active Low)	
XTAL_OUT	XO	Crystal Output	
XTAL_IN	XI	Crystal Input	
SDA	I _{PU} /O	Host Interface Serial Data / Address	
SCL	I _{PU}	Host Interface Serial Clock	
/TESTENB	I _{PU}	Test Mode Enable (Active Low)	
INSEL1,INSEL0	I	Input mode select	
OUTSEL1,OUTSEL0	I	Output mode select	
OUTFMT1,OUTFMT0	I	CVBS output format select	
PDB	I	power down pin (Active Low)	
RSET	A	resistor connection for DAC	
VR	A	voltage reference for DAC, connect to Cap to ground	
Power Pins			
Name	Type	Description	Notes
VDD33	P ₃₃	Digital 3.3V power for I/O	Qty: 2
VSS33	G	Digital Ground For I/O	Qty: 3
AVDD33	P ₃₃	Analog 3.3V power for DAC	Qty: 2
AVSS33	G	Analog ground for DAC	Qty: 2

note :

I	3.3V input
O	3.3V output
I/O	3.3V input/output
I _{PU}	3.3V input with internal pull up
XI,XO	crystal input, output pin
P ₃₃	3.3V power pin
P ₁₈	1.8V power pin
G	Ground pin

7 CONNECTION DIAGRAM REFERENCE


8 PACKAGE

LQFP64 :


VARIATIONS (ALL DIMENSIONS SHOWN IN MM)

SYMBOLS	MIN.	NOM.	MAX.
A	—	—	1.60
A1	0.05	—	0.15
A2	1.35	1.40	1.45
b	0.13	0.18	0.23
c	0.09	—	0.20
D	9.00 BSC		
D1	7.00 BSC		
e	0.40 BSC		
E	9.00 BSC		
E1	7.00 BSC		
L	0.45	0.60	0.75
L1	1.00 REF		
θ	0°	3.5°	7°

- NOTES:
- JEDEC OUTLINE : MS-D2B BDD
 - DIMENSIONS D1 AND E1 DO NOT INCLUDE MOLD PROTRUSION. ALLOWABLE PROTRUSION IS 0.25mm PER SIDE. D1 AND E1 ARE MAXIMUM PLASTIC BODY SIZE DIMENSIONS INCLUDING MOLD MISMATCH.
 - DIMENSION b DOES NOT INCLUDE DAMBAR PROTRUSION. ALLOWABLE DAMBAR PROTRUSION SHALL NOT CAUSE THE LEAD WIDTH TO EXCEED THE MAXIMUM b DIMENSION BY MORE THAN 0.08mm.