



Optical Electronics
Incorporated

6730

PRELIMINARY DATA AND SPECIFICATIONS
DESCRIPTION AND INSTRUCTIONS

New Product Preview

VIDEO COLORIZER MODULE

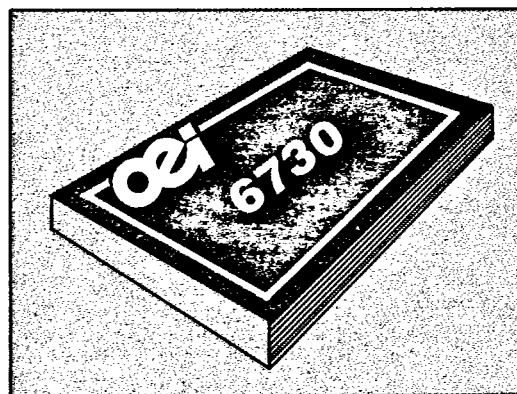
DESCRIPTION

The 6730 Video Colorizer Module is a video signal processing block that contains support circuitry for interfacing colorization into video systems. All that the user need supply is a power source, clock, 8-bit video analog to digital converter, and RS170 video source.

The 6730 is a real time image processing building block. It does not require a computer to perform some powerful video signal processing functions. The 6730 is versatile enough to add to an existing computer controlled image processing system since color programs may be loaded externally from a computer using its external control and mask interface.

The 6730 takes 8-bit monochrome video information and converts it into RGB pseudocolors via luminance levels. Two hundred fifty six separate colors can be produced out of 256K pseudocolor levels, including black and white. The 6730 contains 3 color look up tables of 256x6, one for each color. The color programs are loaded via internal circuitry from a 4Kx8 eprom containing up to 4 separate programs, any one of which is user selectable.

Besides colorization, programs can be mathematical functions. This feature, combined with its externally controlled masking capability, makes the 6730 a truly versatile device.



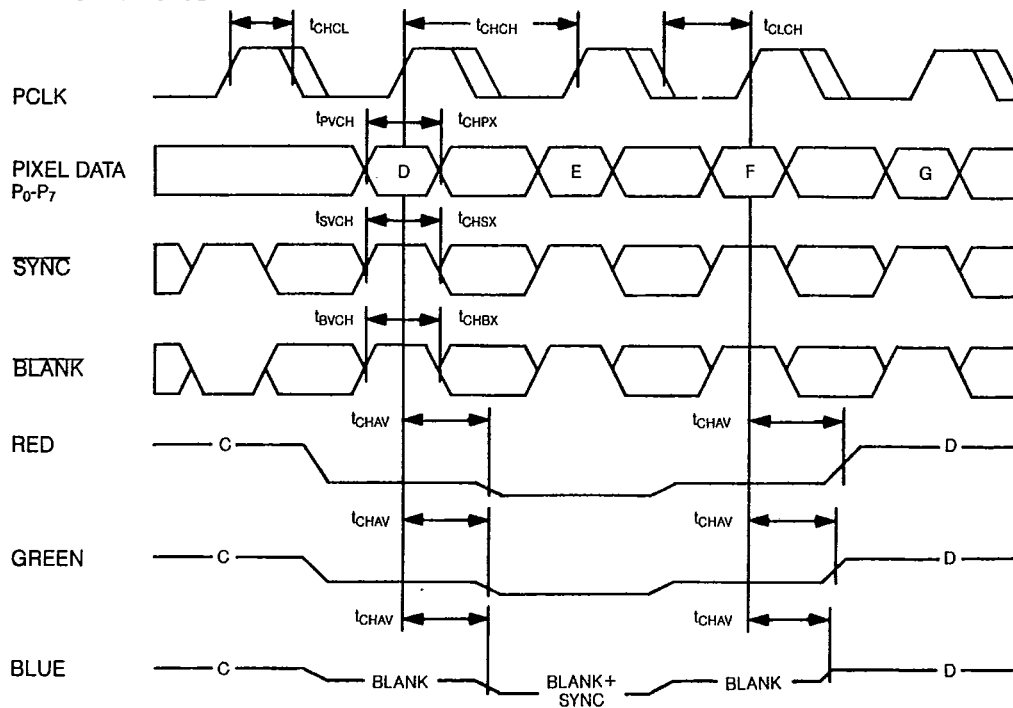
The mask interface enables the incoming data to be masked with a user supplied 8-bit code for custom program modification. Any one or a combination of the input bits can be selected by the mask input. A logic low on a mask bit drives the corresponding input bit low, thus "masking" the input which is then automatically loaded by internal circuitry.

The 6730 requires blanking and clock signals. The colorizer is particularly suited for monochrome NTSC. Other standards may be used as long as a blanking signal is provided to enable the loading of a color program into the L.U.T.'s*. The L.U.T.'s are inputted into three 6-bit D.A.C.S. for RGB. The RGB outputs will contain both blanking and sync information if the user supplies composite blanking and composite sync. Each output is capable of driving 75Ω at 1 volt peak.

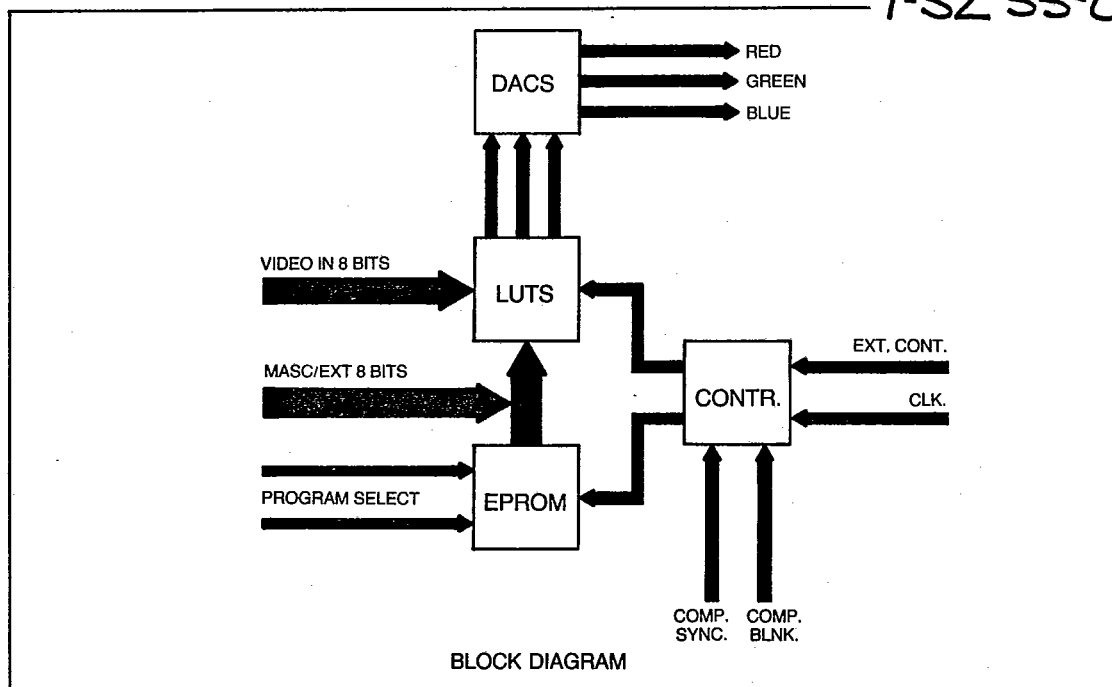
*Look up tables.

6730**PRELIMINARY SPECIFICATIONS**Specifications at $T_A = +25^\circ\text{C}$ and $V_{CC} = +15, +5\text{VDC}$ unless otherwise noted.

MODEL	6730				
PARAMETER	CONDITION	MIN	TYP	MAX	UNITS
PCLK Period	t_{CHCH}	28		10000	ns
Δ PCLK Jitter	t_{CHCH}			2.5	%
PCLK Width Low	t_{CLCH}	9		10000	ns
PCLK Width High	t_{CHCL}	9		10000	ns
Pixel Word Setup Time	t_{PVCH}	4			ns
Pixel Word Hold Time	t_{CHPX}	4			ns
SYNC Setup Time	t_{SVCH}	4			ns
BLANK Setup Time	t_{BVCH}	4			ns
SYNC Hold Time	t_{CHSX}	4			ns
BLANK Hold Time	t_{CHBX}	4			ns
PCLK to Valid DAC Output	t_{CHAV}	15		45	ns
Δ Differential Output Delay	t_{CHAV}			1	ns
Pixel Clock Transition Time				50	ns

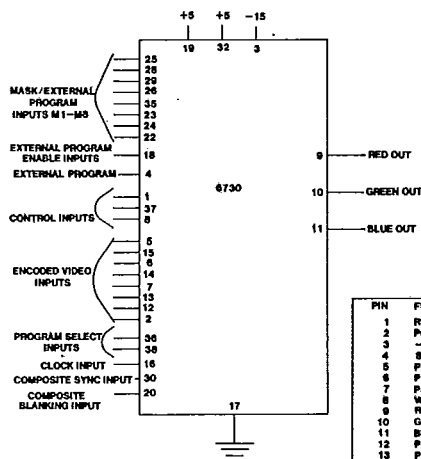
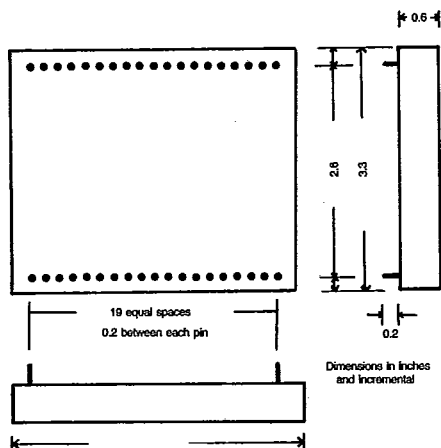
VIDEO TIMING

T-52-33-09



MECHANICAL DESCRIPTION: The 6730 uses an epoxy encapsulant and is enclosed in a glass-fiber-filled diallyl-phthalate case. Its pins are gold-plated per MIL-G-45204, Type 2, Class 2. They are 0.040 inches (0.102 cm) in diameter.

PIN CONNECTIONS



PIN	FUNCTION	CONNECTIONS 6730
1	RSO	
2	PO	
3	-15	
4	8	
5	P7	
6	P5	
7	P3	
8	VHS	
9	RED OUT	
10	GREEN OUT	
11	BLUE OUT	
12	P1	
13	P2	
14	P4	
15	P6	
16	CK	
17	COMMON	
18	EXT	
19	+5	
20	CS	
21	M-C	
22	S1	
23	M3	
24	M2	
25	M6	
26	M5	
27	M-C	
28	M7	
29	M6	
30	CS	
31	M-C	
32	+5	
33	M-C	
34	M-C	
35	M4	
36	PR1	
37	RSI	
38	PR2	

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Optical Electronics Incorporated

P.O. Box 11140 • Tucson, Arizona 85734 • TLX 283347 • Ph. 602-624-8358