

## Specifications

Analog Inputs:	NTSC or PAL Analog Composite
Differential Input	Common Mode rejection >3.5V
Input Return Loss	> 35 dB at 5 MHz
Input A to D Quantization	10 bits
A/D sampling rate	8:4:4 (2x)
Frequency Response	Y 0-5.0 MHz +/- 0.25 dB
K-Factor	< 1%
SCH Phase	< 1 degrees
Differential Gain	< 1.8%
Differential Phase	< 0.8%
S/N	> 50 dB
Chroma Luma Delay	< 2 ns
Y/C Separation	4 or 3 line Adapt. Comb, or notch filter
Conversion Time	1.25H
Digital Outputs:	3 with EDH
Output Quantization	10 bits
Output Return loss	>17 dB @ 270Mbit
Output Error Coding	SMPTE EDH
Jitter Filter LBW	2Hz
Operating Temperature Range	40-110 degrees F.
Humidity	(non-condensing)
Power Input	+5V @ 0.6 Amps
Size	3.7x 2.75x 0.75" (94 x70x19mm)

This product is not authorized for use in life support systems. Product liability limited only to the replacement of this unit. Cobalt Digital Inc. does not assume any liability for loss of use due to failure of this component.

*Specifications subject to change without notice.*

**Cobalt Digital Inc.**  
[www.cobaltdigital.com](http://www.cobaltdigital.com)

2406 E. University Ave. Urbana, IL 61802 USA  
Office: 217-344-1243 Fax: 217-344-1245

Rev. 1.0 gjz

Copyright 2003

Cobalt Digital Inc.

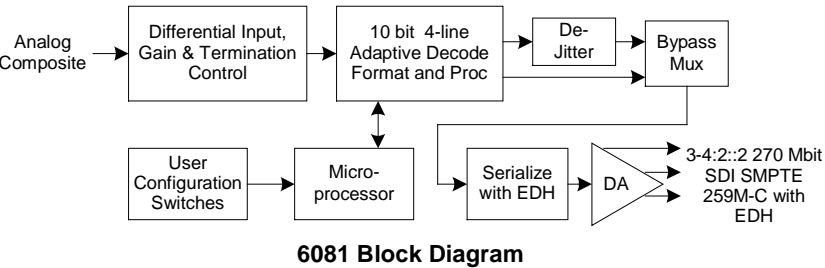


Model 6081

Analog Composite  
4-line Adaptive Comb Filter,  
10 bit A/D to 270Mb  
4:2:2 SDI Decoder with EDH

*Owner's Manual*

The COBALT 6081 is a high quality full 10 bit analog to digital decoder for converting 525 and 625 line, analog composite signals to 270 Mb 4:2:2 SDI (SMPTE 259M-C compliant) output with SMPTE EDH. The user can select different Y-C separation modes (4 or 3 line adaptive or notch filter) for composite input.



Features include user configurable 75-ohm input termination and user input gain control. The user has a choice of direct or de-jittered SDI output, Color Bar test pattern and Pedestal On/Off functions through externally accessible switches.

Figure 2 - External configuration settings.

6081 SWITCH 1-8 SETTINGS								
1	2	3	4	5	6	7	8	Function
1 - Adpt.-Comb: 4-Line (ON) / 3-Line OFF								
2 - Comb (ON) / Notch OFF								
3 - AGC (ON) / Manual gain OFF								
4 - De-jitter filter (ON) / OFF								
5 - VBit SMPTE (ON) / ITU OFF								
6 - Setup Removal (ON) / OFF (NTSC only)								
7 - Color (ON) / OFF								
8 - Test Color Bars (ON) / OFF								
Examples:								
1	2	3	4	5	6	7	8	Function
On	On	On	On	On	On	Off		NTSC or PAL 4-Line Adapt., AGC, Jitter Filter
On	On	On	On	On	On	On		Output Color Bars

USER SWITCH SETTINGS

- SW 1

ADAPTIVE LINE MODE

ON - 4-line Adaptive Comb

OFF - 3-line Adaptive Comb
- SW 2

COMB ENABLE

ON - Comb filter enabled

OFF - Notch filter enabled
- SW 3

AUTOMATIC GAIN CONTROL

ON - AGC enabled

OFF - Manual Gain enabled
- SW 4

DEJITTER FILTER

ON - De-jitter Filter enabled

OFF - De-jitter Filter disabled
- SW 5

V-BIT CONTROL

ON - SMPTE standard

OFF - ITU standard
- SW 6

SETUP REMOVAL (Works on NTSC ONLY)

ON - 7.5 IRE pedestal removed for NTSC only

OFF - Pedestal not removed (JAPAN NTSC)
- SW 7

COLOR ON/OFF

ON - PASS Color Signals

OFF - Force Black and White
- SW 8

COLOR BARS ON/OFF

OFF - Display Video

ON - Display COLOR BARS

TERMINATION CONFIGURATION

Remove the top cover and locate the termination switch by the SDI input BNC. Move the switch away from the input BNC to terminate the BNC at 75 ohms or move the switch towards the input BNC to un-terminate the input.

LED INDICATOR

The LED indicates video lock when ON and loss of video when blinking. A dark LED indicates loss of power.

INPUT GAIN ADJUST

Set SW-3 to Manual Gain Control, then open the top cover and adjust RP1 (GAIN) for input gain level. Do not adjust input gain while the unit is in AGC – ON mode.