NV03-CVBS-IO

CVBS Coaxial Encoder / Decoder for PAL/NTSC with AutoSFP® functionality

Data Sheet

Description

The NV03-CVBS-IO is a Small Form Factor Pluggable (SFP) CVBS Encoder and Decoder. The unit is specifically designed to Encode and Decode PAL/NTSC analog video signals into SD-SDI. The unit consists of one Encoder and one Decoder.

The unit offers one encoder and one 10-bit video decoder enabling systems with mixed analog and digital signal support.

When using the NV03-CVBS-IO with miniHUB, full legacy support for PAL/NTSC will be achieved. Later upgrade to digital SDI video is already in place by just unplugging this module.

This SFP also includes AutoSFP® enabled functionality to fit the Utah-XFD and miniHUB product ranges.

Features

- AutoSFP® enabled functionality

- SMPTE-259M-C compliant

- Supported standards:

    - NTSC M, NTSC J, NTSC 4.43

    - PAL B/G/H/I/D, PAL M, PAL N, PAL 60

- 10 bit video decoders

- 4x signal oversampling (54MHz)

- HD-BNC connectors (75ohm)

- Hot-pluggable

- Pb-free and RoHS compliant

Part Number Options

Part Number	Temperature *)
NV03-CVBS-IO	-5°C to +50°C

*) Rated temperature for the complete miniHUB unit.

Absolute Maximum Ratings

Absolute maximum ratings are those values beyond which functional performance is not intended, device reliability is not implied, and damage to the device may occur.

Parameter	Minimum	Maximum	Unit
Storage temperature (non-operating)	-40	+85	°C
Case operating temperature:	-20	+80	°C
Relative Humidity (non-condensing)	5	95	%
Supply voltage (Vcc)	0	3.6	V

Recommended Operating Conditions

Parameter	Minimum	Typical	Maximum	Unit
Case operating temperature	0		+65	°C
Relative Humidity (non-condensing)	5		90	%
Supply voltage (Vcc)	3.15	3.3	3.45	V

Electrical Characteristics

Parameter	Minimum	Typical	Maximum	Unit
Power dissipation		1027	1478	mW
Serial Data rate		270		Mbps

Analog Video Input Characteristics

Parameter	Minimum	Typical	Maximum	Unit
Number of inputs (# of converters)		1		
Connector type		HD-BNC (Amphenol)		
Connector impedance		75 ohm		
VITS transfer		Vertical blanking area/lines are blanked		
Output resolution		10		bits
Sampling frequency		54		MHz
Video Luminance Bandwidth		5.5		MHz
Video Chrominance Bandwidth		1		MHz
Luminance Nonlinearity		0.7		%
Differential Gain		0.9		%
Differential Phase		0.6		°
Signal to Noise Ratio (Luma Ramp)		60		dB

Analog Video Output Characteristics

Parameter	Minimum	Typical	Maximum	Unit
Number of outputs (# of converters)		1		
Connector type		HD-BNC (Amphenol)		
Connector impedance		75 ohm		
Output resolution		10		bits
Luminance Nonlinearity		±0.5		%
Differential Gain		0.5		%
Differential Phase		0.5		°
Signal to Noise Ratio (Luma Ramp)		58		dB
Signal to Noise Ratio (Flat field, full bandwidth)		75		dB