

NV30-T1310-R17-05

Optical Transceiver with AutoSFP® functionality for SMPTE 297-2006 Video applications

Data Sheet



Description

The NV30-T1310-R17-05 is a Small Form Factor Pluggable (SFP) LC dual channel optical transceiver. The unit is specially designed to meet SMPTE 297-2006 and to give robust performance when SDI pathological signals are present. DVB-ASI and all SD-, HD- and 3G-SDI signal formats are supported. It is made with AutoSFP® enabled functionality to fit the miniHUB product range. It is also available with two temperature ranges, standard and extended.

Part Number Options

Part Number	Temperature *)
NV30-T1310-R17-05	-5°C to +55°C

*) Rated temperature for the complete miniHUB.

Features

- AutoSFP® enabled functionality
- Compliant to SMPTE 297-2006
- Excellent performance with SDI-Checkfield test signal at SD-, HD- and 3G-SDI
- 1310nm Fabry-Perot laser
- PIN receiver technology
- Typical Link lengths at 2.97Gbps:
 - Up to 30km @ 9µm SMF
- Non-MSA Video compliant pinning
- SFF-8472 diagnostic features
- Hot-pluggable
- Class 1 21CFR and IEC60825-1 laser safety compliant
- Pb-free and RoHS compliant

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
Relative Humidity (non-condensing)	5	95	%
Supply voltage (Vcc)	0	3.8	V

Recommended Operating Conditions

Parameter	Minimum	Typical	Maximum	Unit
Case operating temperature:	-5		+70	
Relative Humidity (non-condensing)	5		90	%
Supply voltage (Vcc)	3.14	3.3	3.47	V

Electrical Characteristics

Parameter	Minimum	Typical	Maximum	Unit
Power dissipation			1100	mW
Data rate	50		3000	Mbps

Transmitter Optical Characteristics

Parameter	Minimum	Typical	Maximum	Unit
Transmitting circuit fiber	Single Mode (9/125 μ m), Multi Mode compatible			
Light source	Fabry-Perot laser			
Optical output power	-6	-2	-0	dBm
Optical extinction ratio	5	7.5		dB
Optical center wavelength	1290	1310	1330	nm
Spectral line width		1.5	3	nm
Optical rise/fall time (20-80%)		115	135	ps
Typical link length with 9 μ m SMF:				
@ 2.97 Gbps	10	30		km
@ 1.485 Gbps	20	30		km
@ 270 Mbps	30	30		km

Receiver Optical Characteristics

Parameter	Minimum	Typical	Maximum	Unit
Transmitting circuit fiber	Single Mode (9/125 μ m), Multi Mode compatible			
Receiver technology	PIN			
Optical input overload power	-3			dBm
Optical receiver sensitivity @ 2.97 Gbps (3G-SDI Checkfield, BER = 10^{-12} , TX _{EXT} \geq 7dB)		-20	-19	dBm
Optical receiver sensitivity @ 1.485 Gbps (HD-SDI Checkfield, BER = 10^{-12} , TX _{EXT} \geq 7dB)		-22	-20	dBm
Optical receiving window	1260		1620	nm

Norwia AS
Kilgata 12
3217 Sandefjord
Norway

Contact:
phone: +47 33 45 20 90
e-mail: info@norwia.no
web: norwia.com

