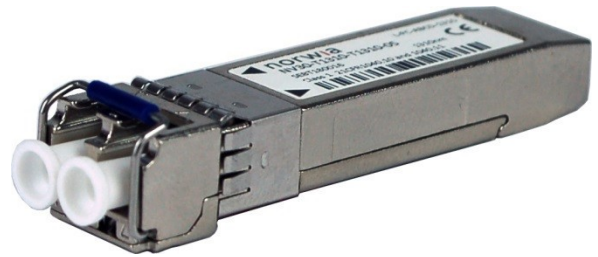


## NV30-C1xx0-R20-50

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

### Data Sheet



#### Description

The NV30-C1xx0-R20-50 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.

#### Features

- AutoSFP® enabled functionality
- Compliant to SMPTE 297-2006
- Excellent performance with SDI-Checkfield test signal at SD-, HD- and 3G-SDI
- DFB laser
- PIN receiver technology
- Typical Link lengths at 2.97Gbps:
  - Up to 50km @ 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

#### Part Number Options

Part Number	Laser wavelength (nm)	Temperature *)
NV30-C1270-R20-50	1270	-5°C to +55°C
NV30-C1290-R20-50	1290	-5°C to +55°C
NV30-C1310-R20-50	1310	-5°C to +55°C
NV30-C1330-R20-50	1330	-5°C to +55°C
NV30-C1350-R20-50	1350	-5°C to +55°C
NV30-C1370-R20-50	1370	-5°C to +55°C
NV30-C1390-R20-50	1390	-5°C to +55°C
NV30-C1410-R20-50	1410	-5°C to +55°C
NV30-C1430-R20-50	1430	-5°C to +55°C
NV30-C1450-R20-50	1450	-5°C to +55°C
NV30-C1470-R20-50	1470	-5°C to +55°C
NV30-C1490-R20-50	1490	-5°C to +55°C
NV30-C1510-R20-50	1510	-5°C to +55°C
NV30-C1530-R20-50	1530	-5°C to +55°C
NV30-C1550-R20-50	1550	-5°C to +55°C
NV30-C1570-R20-50	1570	-5°C to +55°C
NV30-C1590-R20-50	1590	-5°C to +55°C
NV30-C1610-R20-50	1610	-5°C to +55°C

\*) Rated temperature for the complete miniHUB.

## 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)	3.15	3.3	3.45	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 (9/125µm)			
Light source	DFB laser			
Optical output power	0		+3	dBm
Optical extinction ratio	5	7.5		dB
Optical center wavelength (λ = 1270nm to 1610nm)	λ-5.5nm	λ	λ+7.5nm	nm
Spectral width (-20dB)		0.2	1	nm
Optical rise/fall time (20-80%)		120	135	ps

## Receiver Optical Characteristics

Parameter	Minimum	Typical	Maximum	Unit
Transmitting circuit fiber	Single Mode (9/125µm), Multi Mode compatible			
Receiver technology	PIN			
Optical input overload power	-3	0		dBm
Optical receiver sensitivity @ 2.97 Gbps (3G-SDI Checkfield, BER = 10 <sup>-12</sup> , TX <sub>EXT</sub> ≥ 7dB)		-20	-19	dBm
Optical receiver sensitivity @ 1.485 Gbps (HD-SDI Checkfield, BER = 10 <sup>-12</sup> , TX <sub>EXT</sub> ≥ 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](mailto:info@norwia.no)  
web: [norwia.com](http://norwia.com)

