

NV120-R14-R14

Dual Channel Optical Receiver for UHDTV Video applications

Data Sheet



Description

The NV120-R14-R14 is a Small Form Factor Pluggable (SFP+) LC dual channel optical receiver. The unit is specially designed to meet SMPTE ST 2082-1. All SD-, HD-, 3G-, 6G and 12G-SDI signal formats are supported. It is made with AutoSFP® enabled functionality to fit the miniHUB product range.

Part Number Options

Part Number	Temperature *)
NV120-R14-R14	-5°C to +55°C

*) Rated temperature for the complete miniHUB unit.

Features

- AutoSFP® enabled functionality
- Supports 4k and 8k UHDTV
- Compliant to SMPTE ST 2082-1, ST 2081-1, 424M, 292M, 297-2006
- Supports SDI-Checkfield test signal
- PIN receiver technology
- Typical Link lengths at 11.88Gbps:
 - Up to 40km @ 9µm SMF (limited by laser)
- Non-MSA Video compliant pinning
- SFF-8472 diagnostic features
- Hot-pluggable
- 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	3.6	V

Recommended Operating Conditions

Parameter	Minimum	Typical	Maximum	Unit
Case operating temperature:	-5		+70	°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			1000	mW
Data rate	0.27		11.88	Gbps

Receiver Optical Characteristics

Parameter	Minimum	Typical	Maximum	Unit
Transmitting circuit fiber	Single Mode (9/125µm)			
Receiver technology	PIN			
Optical input overload power	0			dBm
Optical receiver sensitivity @ 11.88 Gbps (12G-SDI Color Bar, BER = 10^{-12} , TX _{EXT} ≥ 7dB)			-14	dBm
Optical receiver sensitivity @ 2.97 Gbps (3G-SDI Color Bar, BER = 10^{-12} , TX _{EXT} ≥ 7dB)			-17	dBm
Optical receiver sensitivity @ 1.485 Gbps (HD-SDI Color Bar, BER = 10^{-12} , TX _{EXT} ≥ 7dB)			-18	dBm
Optical receiving window	1260		1620	nm

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