

# HUBbox™ 12G NV120-R14-R14

Dual Channel Optical Receiver for UHDTV Video applications

## Data Sheet



### Description

Dual Optical Fiber to 12G-SDI converter supports 12G-/6G-/3G-/HD-/SD-SDI. Support data rates from 270Mbps to 11.88Gbps.

The HUBbox™ 12G is equipped with AutoSFP® functionality, similar to miniHUB and OC-4B-SDI. This makes the HUBbox™ 12G extremely flexible. Simply by replacing the SFP it can easily be changed into a dual transmitter or a transceiver. Also dual BNC's per channel has been added to the design, giving dual outputs or loop-trough.

It is housed in a compact and rugged aluminium case ideally suited to both studio and portable applications.

The HUBbox™ 12G is perfect for using with the miniHUB system where one or two signals are required remotely.

### Part Number Options

Part Number	Temperature
HUBbox 12G NV120-R14-R14	-20°C to +55°C

### Features

- AutoSFP® functionality
- Supports 4k and 8k UHDTV
- Dual output with reclocked SDI
- Multi-rate reclocking with automatic rate detection and automatic bypass for non SDI data rates
- Automatic Cable Equalisation
- LEDs display power and SDI lock status
- Locking DC jack
- Optical LC/PC connector
- PIN receiver technology
- Typical Link lengths at 11.88Gbps:
  - Up to 10km @ 9µm SMF
- Excellent performance with SDI-Checkfield test signal
- Use in conjunction with HUBbox™ 12G NV120-T1310-T1310-10 or the miniHUB system for a complete fibre transmit/receive system

### General Operating Conditions

Parameter	Minimum	Typical	Maximum	Unit
Operating temperature	-20		+55	°C
Supply voltage (Vcc)	11		27	V
Dimensions	63.5mm x 84mm x 30mm (excluding connectors)			
Weight	200g			

## Electrical Characteristics

Parameter	Minimum	Typical	Maximum	Unit
Supported standards:				
<ul style="list-style-type: none"> <li>SMPTE</li> </ul>	292M-2008, 259M-2008, 297M-2006, 424M-2006, ST 2082-1, ST 2081-1			
<ul style="list-style-type: none"> <li>Laser safety</li> </ul>	Class 1 21CFR and IEC60825-1			
Number of IN/OUT BNCs	2 (transmitter input or receiver output)			
Number of OUT BNC's	2 (transmitter loop-throuh or receiver output)			
Typical input cable length equalization	Up to 50m of Belden 1694A @ 11.88Gbps Up to 140m of Belden 1694A @ 2.97Gbps Up to 200m of Belden 1694A @1.485Gbps Up to 400m of Belden 1694A @270Mbps			
Output signal level	800mVp-p $\pm$ 10%			
Connectors	BNC			
Impedance	75ohm			
LED Indicators	Power, SFP type and SDI lock			
Data rate	2		3000	Mbps

## Receiver Optical Characteristics

Parameter	Minimum	Typical	Maximum	Unit
Transmitting circuit fiber	Single Mode (9/125 $\mu$ m)			
Receiver technology	PIN			
Optical input overload power	0			dBm
Optical receiver sensitivity @ 11.88Gbps (12G-SDI, BER = $10^{-12}$ , TX <sub>EXT</sub> $\geq$ 7dB)			-14	dBm
Optical receiver sensitivity @ 2.97Gbps (3G-SDI Checkfield, BER = $10^{-12}$ , TX <sub>EXT</sub> $\geq$ 7dB)			-17	dBm
Optical receiver sensitivity @ 1.5Gbps (HD-SDI Checkfield, BER = $10^{-12}$ , TX <sub>EXT</sub> $\geq$ 7dB)			-18	dBm
Optical receiving window	1260		1620	nm

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