

FLASHLINK

DWC-HD-DMUX

HD down-converter with optical input and audio decoding

The DWC-HD-DMUX is a fully functional down-converter, from HD-SDI to SD-SDI, with CVBS monitoring and audio decoding. This down-converter can play a part in a wide range of video transportation networks. Cutting-edge algorithms are used ensuring that the unit provides a very high feature/cost ratio.

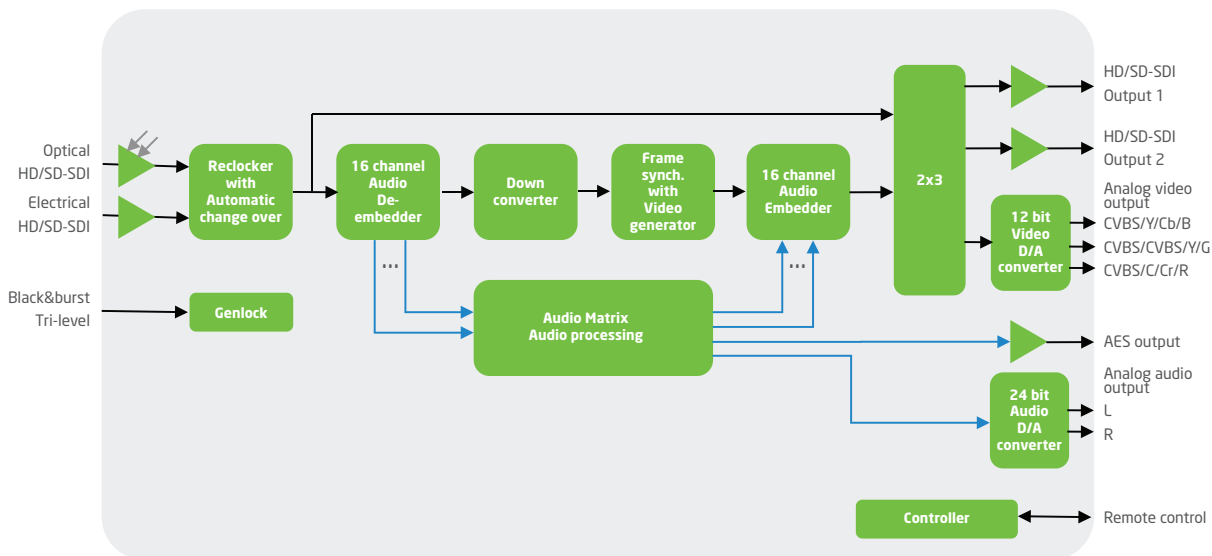
The DWC-HD-DMUX combines both the feature-set and industry leading reliability that the industry expects from the Nevision's Flashlink range, which is why more and more broadcasters routinely rely on Flashlink products.

Applications

- Studio infrastructure
- Studio interconnect
- OB production
- Aspect ratio conversion
- Frame synchronisation
- 12bit HD/SD digital to analog conversion
- HD/SD monitoring

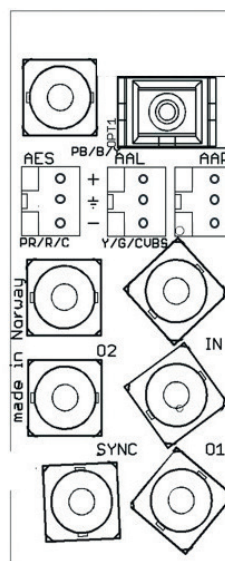
Key features

- Optical input with direct reclocked electrical output
- High quality down-conversion
- Analog audio monitoring
- SDI and analog high quality video output
- Audio delay
- Internal video and audio generator
- SD framestore for down-converted output
- Sync input



DWC-HD-DMUX

- Multi rate fiber optical receiver with SD and CVBS monitoring output. A typical application is as an optical receiver for OB vans. This very compact solution also provides multi-rate incoming line monitoring.
- Transmitter side optical receiver for HD broadcast with SD down-conversion for simultaneous SD broadcasting.
- General purpose HD to SD down-conversion with full broadcast quality and full audio re-embedding functionality.
- Full audio and video HD monitoring on low-cost SD and CVBS monitors.



Rear connector

General

Power	5V, +/-15V DC, <7W
Control	DIP switches, GYDA system controller
Monitoring	Front panel LEDs, GYDA system controller

Electrical video input

Video data rate	270Mbps or 1485Gbps; Conform to SMPTE 292M-1998, SMPTE 259M-C
Video frame rate	1080i/29.97; 1080p/23.976; 1080i/25; 1080p/25; 720p/59.94; 720p/50
Equalization	Automatic 300m @270Mbps with Belden 8281 100m @1485Mbps with Belden 1694A
Impedance	75 Ohm
Return loss	>40dB w/ SM fiber
Jitter tolerance	SD limit - 10Hz-1kHz: >1 UI - 10kHz – 5MHz: >0.2 UI HD limit - 10Hz-100kHz: >1 UI - 100kHz-10MHz: >0.2 UI
Signal level	nom. 800mV
Connector	BNC

Optical video input

Optical wavelength	1200-1620nm
Maximum optical power	-3dBm
Minimum optical power	HD/ SD -22/-28dBm
Return loss	Better than 27dB
Maximum reflected power	4%
Transmission circuit fiber	Single mode HD PIN Multi-mode option on request
Connector	SC/UPC

Electrical video output

Number of HD/SDI outputs	2
Connector	BNC
Impedance	75 Ohm
Return loss	> 15dB to1.5GHz
Signal level	nom. 800mV ± 10%
Signal rise / fall time	SD limit: [0.4ns – 1.5ns]; <0.5ns rise/fall HD limit: < 270ps, <100ps rise/fall
Amplitude overshoot	<10%
Timing jitter	SD: <0.2 UI HD: <1 UI
Alignment jitter	SD: <0.15 UI HD: <0.15 UI
Number of analog video outputs	3
Analog video output formats	3 x CVBS, component G/B/R, component Y/Pb/Pr or S-video, PAL and NTSC
Connector	BNC
Impedance	75 Ohm
Return loss	> 35dB @ 10MHz, > 40dB @ 5MHz

Analog video output, NTSC/PAL

Number of outputs	1 Component RGB/ YUV or 3 CVBS
Connector	3 x 75R BNC
DC offset	< 0±15mV
White level, NTSC	100±1 IRE
Sync level, NTSC	40±1 IRE
Return loss	> 35dB @ 10MHz, >40dB @ 5MHz
White level, PAL	100±1 IRE

Analog video output, NTSC/PAL (cont.)

Sync level, PAL	40±1 IRE
Diff gain	<0.5%
Diff phase	<1deg
AM noise	< -60dB
PM noise	< -60dB
S/N	< -60dB
2T K-factor (2T pulse distortion)	< 0.5%
Luma non-linearity	< 2%
Output resolution	10 bits

Analog video output, HD

Number of outputs	1 component RGB/ YPbPr
Connector	3 x 75R BNC
DC offset	< 0±15mV
White level	100±1 IRE
Return loss	> 30dB @ 30MHz
Output resolution	10 bits

Analog audio output

Number of outputs	1 stereo pair
Connectors	2 x WECO audio connectors
Impedance	< 66R
Dynamic range	>100dB(A)
Crosstalk	< -60dB 20Hz-20kHz
THD+N	-70dB
Frequency response	20Hz-20kHz +/- 0.5dB
Output level	24dBu +/- 1dB
Common mode DC 0 – 48V immunity	
Level adjustment range	0 – 24dBu with 1db step
Two tone intermodulation	< -80dB
Output resolution	24 bits

AES output

Number of outputs	1
Connectors	WECO audio connector
Return loss	110R +/-20% 0.1MHz – 6.144MHz
Output jitter	<0.0025UI peak

Ordering options

DWC-HD	HD down converter, SD/CVBS output
DWC-HD-DMUX	HD down converter, SD/CVBS output, AES/EBU and stereo analog audio output
DWC-HD-R	HD down converter with high sensitivity 9/125um single mode optical input, SD/CVBS output
DWC-HD-DMUX-R	HD down converter with high sensitivity 9/125um single mode optical input, SD/CVBS output, AES/EBU and stereo analog audio output
DWC-HD-M	HD down converter for monitoring applications, SD/CVBS output, without Genlock
DWC-HD-M-DMUX	HD down converter for monitoring applications, SD/CVBS output, without Genlock, AES/EBU and stereo analog audio output
DWC-HD-M-R	HD down converter with high sensitivity 9/125um single mode optical input, for monitoring applications, SD/CVBS output, without Genlock
DWC-HD-M-DMUX-R	HD down converter with high sensitivity 9/125um single mode optical input, for monitoring applications, SD/CVBS output, without Genlock, AES/EBU and stereo analog audio output



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