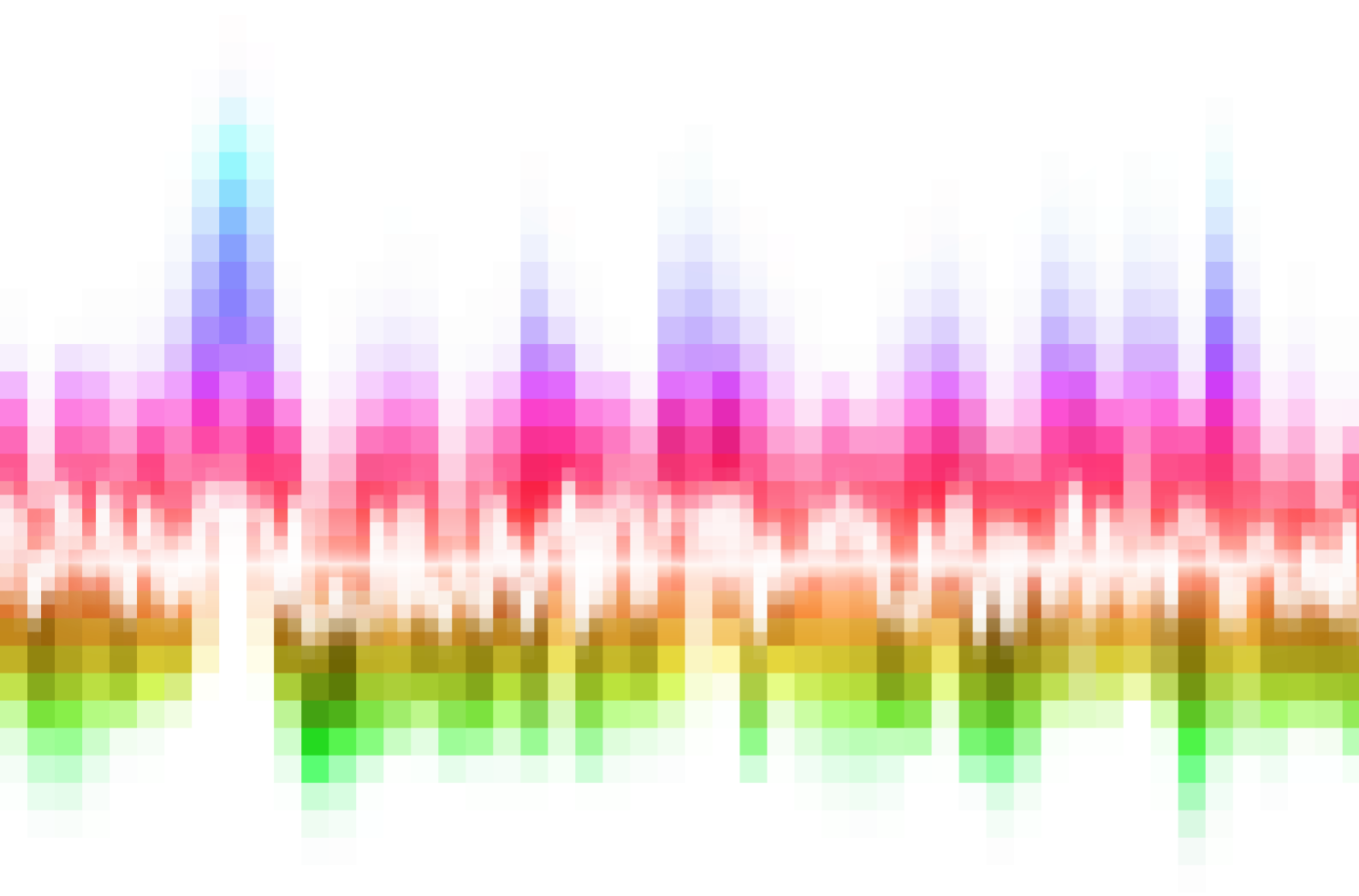


Chromatec

EN400 - DE400

Dirac-Pro
by NuMedia



EN400/DE400 HD-SDI TO SDI CONVERTER USING DIRAC PRO BY NUMEDIA

The EN400/DE400 is a unique product that allows the transport of HD-SDI images using the existing SD-SDI infrastructure. The EN400/DE400 allows the use of HD-SDI contribution wherever the link bandwidth is limited to SD-SDI. The EN400/DE400 is particularly suitable for live event coverage and has been used extensively at major sporting events worldwide. The encoded output is fully compliant with SMPTE 259M (the standard for SD-SDI contribution) and is viewable using a DAC or waveform monitor for confidence monitoring. As the encoded output runs at SD-SDI rates, the EN400 output will operate over much longer cable runs than HD-SDI and is significantly more tolerant of jitter build-up. The EN400/DE400 is designed to offer a wide range of options including a single channel optical transmitter and receiver. The EN400/DE400 incorporates true multi-standard interfacing and the decoder will bypass uncompressed SD-SDI (270Mbps). DIRAC Pro EN100/DE100 are stand alone

units, which can use an external mains power supply (supplied). They can also be powered by external DC, such as batteries. There is also a version of the EN400 which is ideal for use in the field since it is shower proof. These features allow system designers to introduce HD-SDI capability into existing SD-SDI equipment as demand develops and provides for fully integrated solutions for the transmission of video and audio signals over distances that cannot be accomplished using conventional copper co-axial cable. Up to 40 km of fibre can be driven when HD-SDI signals are applied. The EN400 can be supplied in either 1310nm or 1550nm versions. Other frequencies between 1470nm and 1610nm can be supplied for CWDM applications.

Both the EN400 and DE400 are fully compatible with Chromatec's openGear Dirac Pro card TR400.

APPLICATIONS

- HD-SDI contribution using SD-SDI links
- OB and Live Sporting Event coverage using roving camera crews
- Remote studio contribution

FEATURES

EN400

- Dual multi-standard inputs & outputs
- 1080i & 720P capability
- Low latency multi-wavelet encoder using DIRAC PRO (VC-2)
- Automatic standard detection
- Automatic bypass SDSDI, HDSDI & 3GSDI
- Input CRC checking
- Monitoring digital RGB DVI-D output (1080i, 720P)
- Monitoring audio de-embedder with audio pair selection
- Optical SPDIF monitoring audio output
- Optional single-mode SFP fiber output
- Retains configuration settings when powered down
Ethernet Browser Control

DE400

- Dual multi-standard inputs & outputs
- 1080i & 720P capability
- Low latency multi-wavelet decoder using DIRAC PRO (VC-2)
- Automatic standard detection
- Automatic bypass SDSDI, HDSDI & 3GSDI
- Input CRC checking
- Monitoring digital RGB DVI-D output (1080i, 720P)
- Monitoring audio de-embedder with audio pair selection
- Optical SPDIF monitoring audio output
- Optional single-mode SFP fiber input
- Retains configuration settings when powered down
Ethernet Browser Control

SPECIFICATIONS

EN400

SDI VIDEO	
STANDARDS (Note 1):	SMPTE 259M/292M/424M
VIDEO FORMAT TO	
VC-2 ENCODER:	292M (1080i/720P)
RETURN LOSS/JITTER:	as per SMPTE 292M/424M
CABLE LENGTH:	Belden 1694A 150m (292M), 100m (424M)
DVI	DVI-D Digital GBR 8-bit
FORMAT	1920x1080i/1280x720P
CONNECTOR	DVI-D. Female
AUDIO	Digital AES-3 SPDIF
CONNECTOR:	Optical TOSLINK
FIBER (Optional):	Dual-Transmitter Single-Mode
CONNECTOR	SFP
CONTROL	IP: Resident Web Page in unit
(RJ45)	
ADDRESS:	DHCP Assigned (default) with static assignment of IP Address if required.
INDICATORS	POWER: OK (Green) Input A CRC Error (Red) Input B CRC Error (Red) 1080i Detected (Green) EPROM Save (shared with 720P Detected) (Green)
POWER SUPPLY	12V DC at 1.25A
POWER CONSUMPTION	10 watts (max)
POWER CONNECTOR	locking 2.1mm jack
DIMENSIONS	144mm W x 130mm D x 37mm H
WEIGHT	425 grams
OPERATING	
TEMPERATURE:	0 TO 35 deg C

Note 1: Video formats other than 1080i & 720P be bypassed automatically.

DE400

SDI VIDEO	
STANDARDS (Note 1):	SMPTE 259M/292M/424M
VIDEO FORMAT TO	
VC-2 DECODER (Note 2):	259M (VC-2 CODED)
RETURN LOSS/JITTER:	as per SMPTE 292M/424M
CABLE LENGTH:	Belden 1694A 150m (292M), 100m (424M)
DVI	DVI-D Digital GBR 8-bit
FORMAT	1920x1080i/1280x720P
CONNECTOR	DVI-D. Female
AUDIO	Digital AES-3 SPDIF
CONNECTOR:	Optical TOSLINK
FIBER (Optional):	Single-Receiver Single-Mode
CONNECTOR	SFP
CONTROL	IP: Resident Web Page in unit
(RJ45)	
ADDRESS:	DHCP Assigned (default) with static assignment of IP Address if required.
INDICATORS	POWER: OK (Green) Input A CRC Error (Red) Input B CRC Error (Red) HDCAM mode Detected (Green) EPROM Save (shared with VC-2 Detected) (Green)
POWER SUPPLY	12V DC at 1.25A
POWER CONSUMPTION	10 watts (max)
POWER CONNECTOR	locking 2.1mm jack
DIMENSIONS	144mm W x 130mm D x 37mm H
WEIGHT	425 grams
OPERATING	
TEMPERATURE:	0 TO 35 deg C

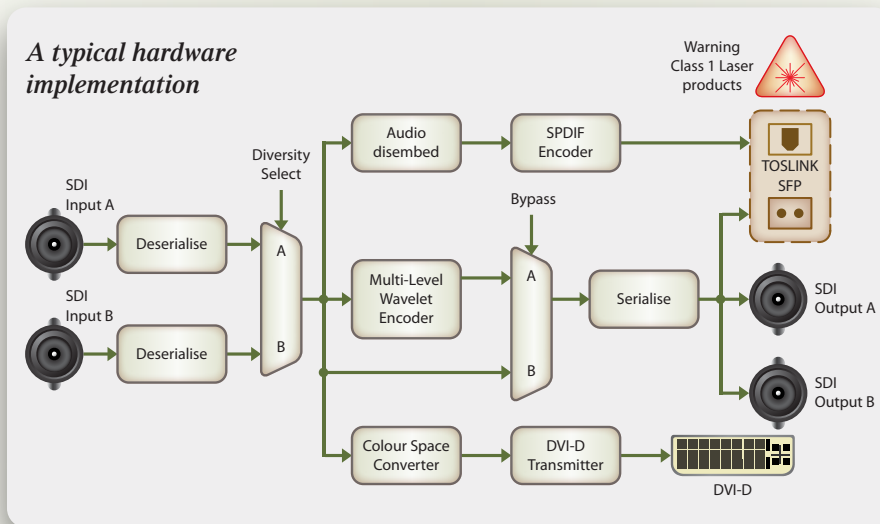
Note 1: Video formats other than 1080i & 720P be bypassed automatically.

Note 2: Non-VC-2 coded SD-SDI be bypassed automatically.

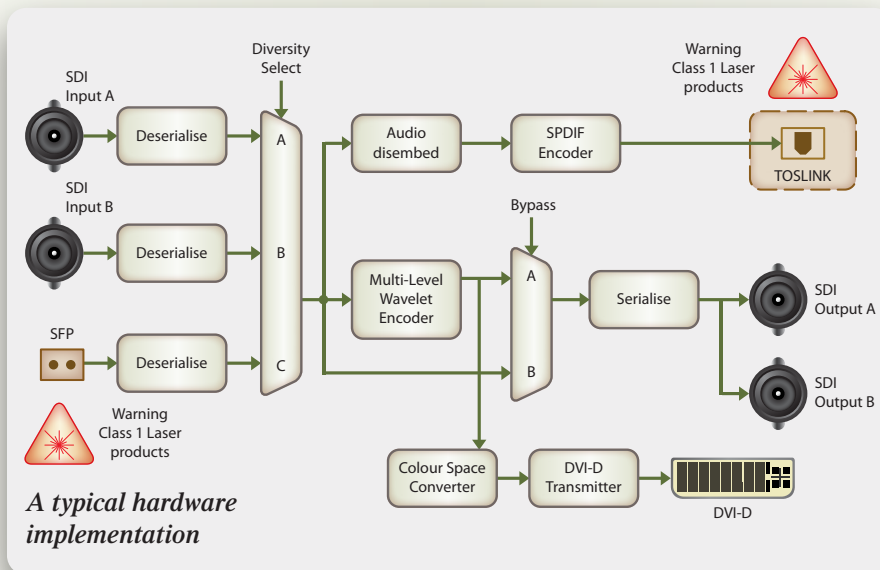
SPECIFICATIONS

EN100 (Transmitter)	DE100 (Receiver)	Data Rate	Link Distance (Min)
1310um	PIN	2.97Gbps	5km
		1485Mbps	10km
		270Mbps	15km
1550um	PIN	2.97Gbps	33km
		1485Mbps	55km
		270Mbps	65km
	APD	2.97Gbps	33km
		1485Mbps	75km
		270Mbps	100km

EN400



DE400



ORDERING INFORMATION

EN400 Dirac Pro encoder, supplied with PSU, but no video or audio monitoring
EN400S Dirac Pro encoder, supplied with PSU, Shower proof version
DE400 Dirac Pro Decoder, supplied with PSU, but no video or audio monitoring
DE400M Dirac Pro Decoder, supplied with PSU, with video and audio monitoring
TX SFP 1310nm, Optional Fibre transmitter module, 1310 nm for Dirac Pro bricks
TX SFP 1550nm, Optional Fibre transmitter module, 1550 nm for Dirac Pro bricks
RX SFP, Optional Fibre receiver module for Dirac Pro bricks

Please note, the SFP lasers and receivers are not included in any of the above products, please discuss fibre requirements with Chromatec.



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