Bluebell

BC Series Modular Fibre Optic Interface System

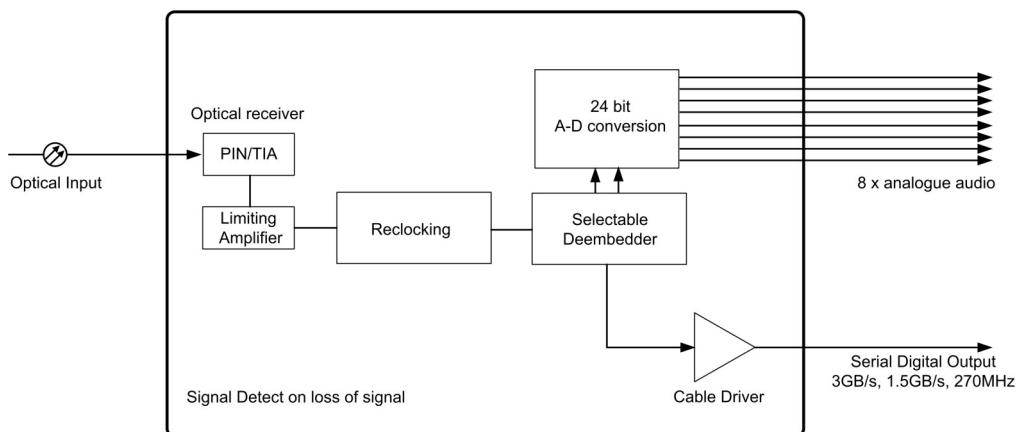## BC450R Single Channel Electrical to Optical De-Embedder 3G-SDI, HD-SDI, SD-SDI

The BC450R is a receiver for the conversion of an optical signal into 3G/HD/SD-SDI with the ability to de-embed 8 channels of analogue audio. The incoming optical signal is fed to a trans-impedance and limiting amplifier before being electrically reclocked on the outputs.
An internal de-embedder drives the 8 analogue outputs via a 24 bit D/A converter.
All Bluebell cards are designed to retain maximum integrity of the signal path offering excellent jitter free optical transport.

The BC450R de-embedder can be used with a BC460T embedder allowing AES inputs to feed analogue outputs. The BC450R is available in multimode, singlemode, WDM and CWDM variants to suit any fibre application.

The BC450R occupies a single slot in the BC100-3RU 19" rack-mounting frame which can hold up to 15 single slot cards. Some BC Series processing cards have dual functionality allowing up to 30 channels of video to be transmitted or received from a single 3RU frame.
Signal and card monitoring is achieved through SNMP monitoring in the BM101 network card.
Alternatively GP-Output alarms can be triggered via the BM100 module.

For stand alone applications the BC450R can be housed in an individual rugged enclosure.

www.bluebell.tv

Schematic Diagram BC450R

Rear Panel

Specifications

Optical Input

Connector [1]	1 x female LC
Wavelength	1200-1610 nm
	See Ordering Information for multimode and singlemode variants
Sensitivity	> -25.0 dBm @ 3 Gb/s
	> -25.5 dBm @ 1.485 Mb/s
	> -26.0 dBm @ 270 Mb/s
Max I/P power	> -1 dBm
Data rate	270 Mb/s, 1.485 Gb/s, 3 Gb/s

Electrical Output Video

Connector	75 Ohm BNC per IEC 60169-8 Amendment 2
Return Loss	> 15 dB @ 1.485 Gb/s
Polarity	Non inverting
Signal Level	800 mV +/- 10%
DC Offset	0 +/- 0.5 V
Jitter	<0.2 UI line equalised

Electrical Output Audio

Connector	26-way D connector
Impedance	44 Ohm differential output
Format	20 Hz to 20 kHz +/- 0.25 dB
	0 dB system gain,
	-18 dBFS = 0 dBu (Europe) or
	-20 dBFS (USA) ref 1 mW into 600 Ohm
	Selectable for 0 dBu = -18 dBFS (Europe) or
	+4 dBu = -20 dBFS (USA)
	Variable via on board potentiometer +/- 1 dB
Number	8 x Balanced Line Level Analogue Audio (4 stereo pairs)

General card specifications

Depth	60 mm
Width	20 mm 4TE
Height	100 mm (3RU)
Weight	100 g
Operating Temp	-30 to +70 ^{0}C
Power	6 W
Signal detect	LED on for loss of signal
No. of slots	1

Conformance

EMI/RFI	Complies with 89/336/EEC
Electrical	Complies with EN 61000-6-1, EN61000-6-2
Laser Safety	Complies with Class 1 laser product
	24 CFR 1040.10 & 1040.11
RoHS	Complies with Directive 2002/95/EC
Warranty	5 years

Ordering Information

BC450R/M/SFP	Multimode 3G-SDI Optical Receiver Card with 8 x Analogue Audio De-embedder with LC connector.
BC450R/S/SFP	Singlemode 3G-SDI Optical Receiver Card with 8 x Analogue Audio De-embedder with LC connector.

Universal Chassis and Power Supplies

BC100-3RU	19" 3RU Chassis for up to 15 BCxxx Cards with optional Network Monitoring and facility for Dual Redundant Power Supplies (not supplied).
BC100-3RU/48V	19" 3RU Chassis for up to 15 BCxxx Cards with optional Network Monitoring and facility for Dual Redundant Power Supplies (not supplied). Fitted with 48V dc input.
BM100	Network Monitoring Card with GPI Output on a SCSI Connector for Slot-16
BM101	Network Monitoring Card with Ethernet connection for Slot-16
BC140	Extender Card for BC100 3RU Chassis
PS65	90-250VAC Power Supply for BC100-3RU or BB100-3RU Chassis
BC160	19" 1RU Chassis for up to 6 BCxxx Cards. Includes Dual Redundant Power Supplies. Optional Network Monitoring.
BC110	Single Slot Chassis with Universal Mains Power Supply
BC120	Triple Slot Chassis with Universal Mains Power Supply