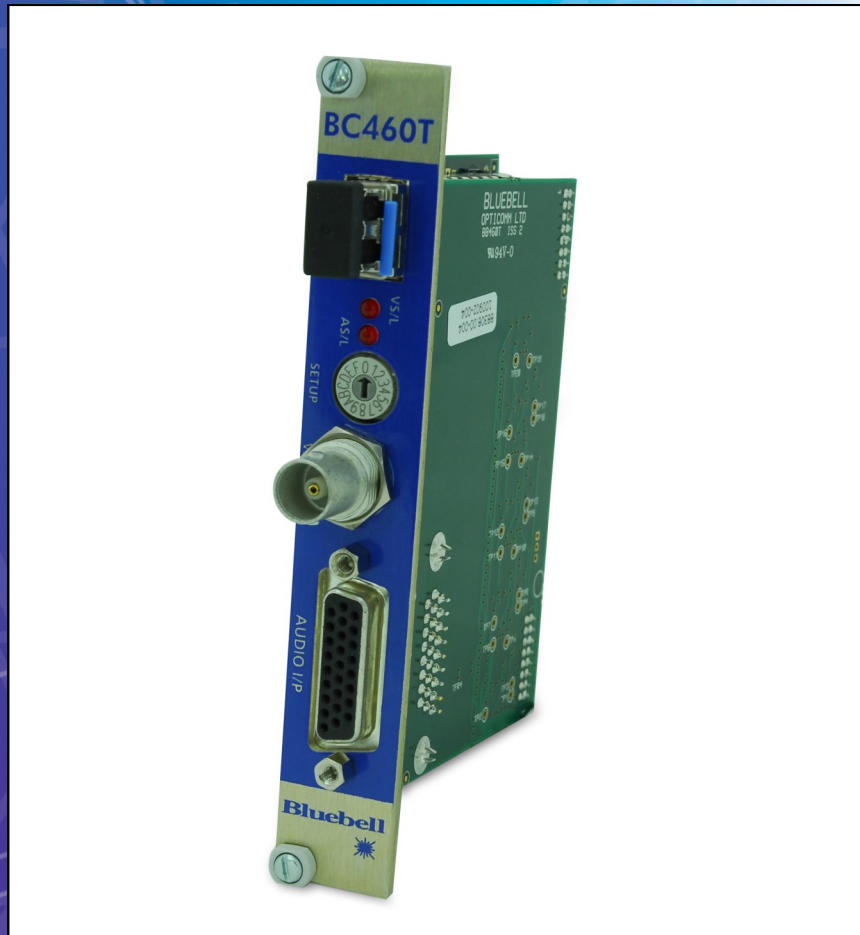# Bluebell ✳

BC Series Modular Fibre Optic Interface System

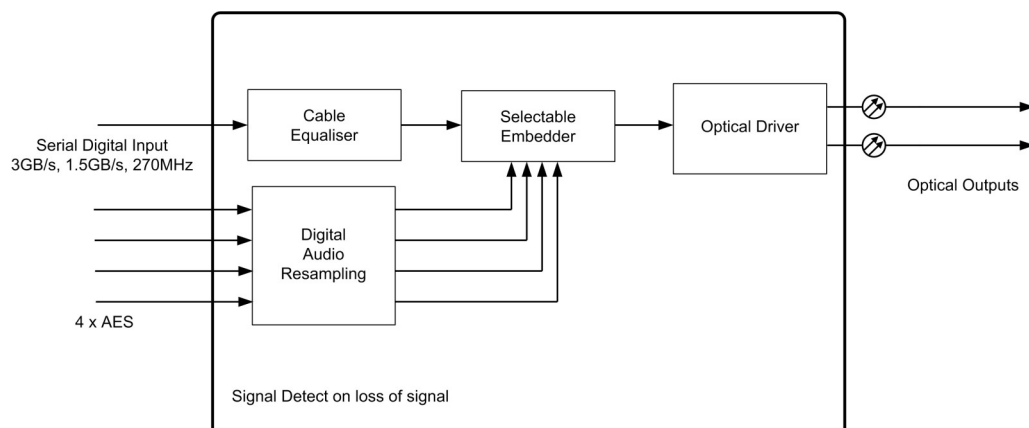## BC460T Single Channel Electrical to Optical Embedder   3G-SDI, HD-SDI, SD-SDI

The BC460T is a transmitter for the conversion of 3G/HD/SD-SDI into an optical signal with the ability to embed 4 channels of AES/EBU audio. The incoming signal is auto-sensed and then equalised prior to conversion and transmission down a single optical fibre. All Bluebell cards are designed to retain maximum integrity of the signal path offering excellent jitter free optical transport.

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

The BC460T 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 BC460T can be housed in an individual rugged enclosure.

www.bluebell.tv

Schematic Diagram BC460T

Cable Equaliser

Selectable Embedder

Optical Driver

Serial Digital Input
3GB/s, 1.5GB/s, 270MHz

Digital Audio Resampling

4 x AES

Optical Outputs

Signal Detect on loss of signal

Rear Panel

Specifications

Electrical Input Video
Standards	SMPTE 424M, SMPTE 292M, SMPTE 259M, SMPTE 297M
Equalisation	Automatic to 100 m @ 3 Gb/s
	Automatic to 200 m @ 1.485 Gb/s
	Automatic to 300 m @ 270 Mb/s
Connector	75 Ohm BNC per IEC 60169-8 Amendment 2
Return Loss	> 15 dB @ 1.485 Gb/s

Electrical Input Audio
Connector	26-way D connector
Impedance	110 Ohm
Format	AES 48 kHz AES3-1992
Number	4 x AES/EBU Digital Audio

Optical Output
Connector [1]	1 x female LC plus secondary optical output
Wavelength	850 nm, 1310 nm, 1550 nm, CWDM See Ordering Information
Optical Power	-2 dBm @ 1310 nm (typical)
	-2 dBm @ 1510 nm (typical)
	0 dBm @ CWDM (typical)

General card specifications
Depth	60 mm
Width	20 mm 4TE
Height	129 mm (3RU)
Weight	100 g
Operating Temp	-30 to +70 ^{0}C
Power	2.2 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

BC460T/M/SFP	Multimode 3G-SDI Optical Transmitter Card with 4 x AES Embedder with LC connector
BC460T/S/13/SFP	Singlemode 3G-SDI Optical Transmitter Card with 4 x AES Embedder (1310nm) with LC connector
BC460T/S/15/SFP	Singlemode 3G-SDI Optical Transmitter Card with 4 x AES Embedder (1550nm) with LC connector
BC460T/S/CWDM/SFP	Singlemode 3G-SDI Optical Transmitter Card with 4 x AES Embedder with LC connector (Dedicated CWDM Tuned Laser, Wavelength to suit ITU Grid Spacing). See "CWDM Ordering Matrix" for additional information on ordering.

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