

BC SERIES MODULAR FIBRE OPTIC INTERFACE SYSTEM

The BC369 and BC369D are dual channel, multi-format interfaces for use in Outside Broadcast (OB) and studio applications, and are able to handle many different formats of broadcast video, audio and data signals. Both units are supplied with four empty SFP carriers, allowing users to fit their own choice of optical or coaxial SFP cartridges to suit particular operational requirements. The interfaces can typically be used to convert signals between optical and electrical formats, for wavelength management (conversion between wavelengths) and signal monitoring. They can also be used for regenerating multimode optical signals as singlemode (or vice-versa) within existing fibre systems. A wide range of signal types is supported, including 12G-SDI, DVI, HDMI, composite video, MADI and Ethernet at various bitrates up to 11.88 Gb/s.

The “empty cage” format makes them extremely versatile as their functionality is defined by the user’s choice of SFP cartridges: they can be configured for a different application simply by changing cartridges. Although they can form part of a fixed installation, broadcast engineers will find them a practical “toolkit”, to convert between the many different signal formats now in use.

The BC369 is intended for use with transceiver cartridges: internally it comprises two independent, bi-directional signal paths, each of which interconnects a pair of SFP carriers in both directions (Rx to Tx, Tx to Rx). Each SFP has a bicolour LED confirming valid signal input. The BC369D is intended for use with two dual transmitter and two dual receiver cartridges: again two independent signal paths are available, permitting four separate signals to be passed from input to output. Single-channel cartridges may be installed in either module type if only one signal path is required.

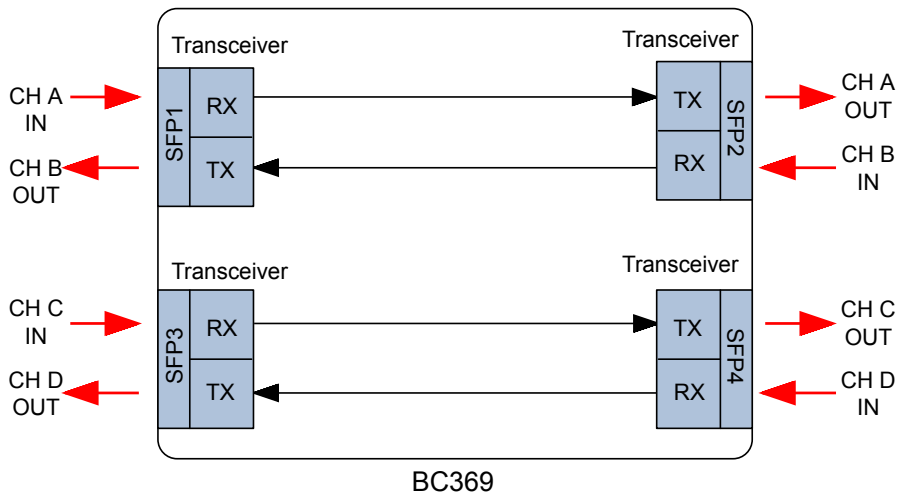
The cards are part of the Bluebell Opticom BC Series and are compatible with all BC Series racks and enclosures, including the 3RU BC100 (15 cards) and the 1RU BC160 (6 cards): the BC101 and BC102 are also available to accommodate one or two cards respectively. SNMP monitoring is available with the 19” racks when a BM102 network card is fitted.



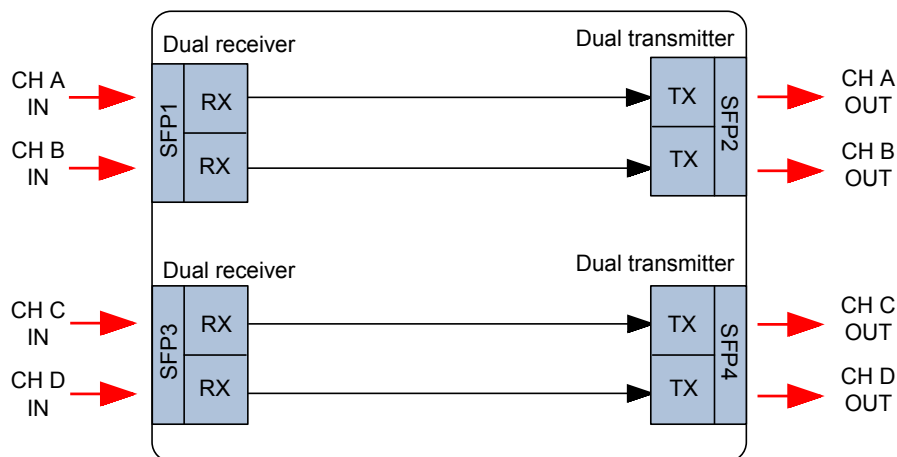
BC369
Dual Bidirectional
Multi-format interface

BC369D
Dual Unidirectional
Multi-format interface

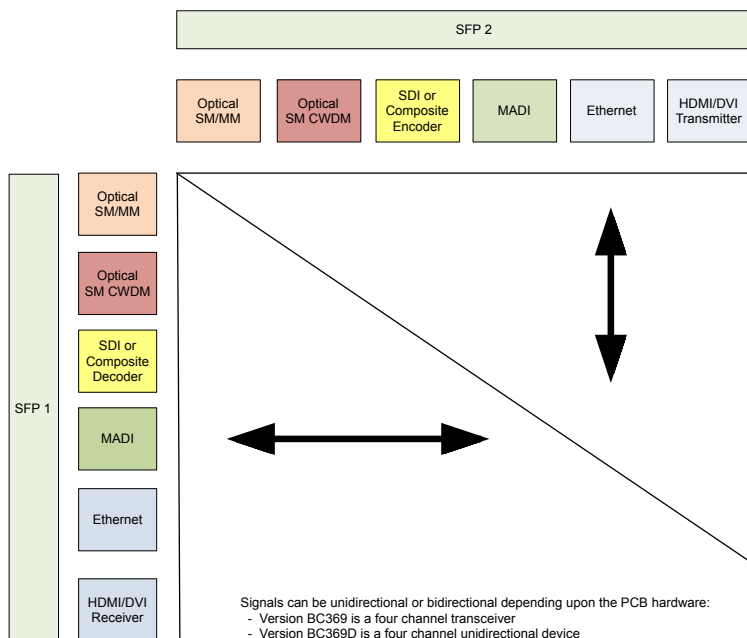
BC369 illustrated;
BC369D is similar in appearance”



BC369



BC369D



Specifications

Unit functionality is defined by SFP cartridge selection. The diagram opposite (below) summarises the format conversion possibilities. The two channels are identical and may be configured differently.

Output & Input

Physical	SFP Module	
Connector	SFP Module dependent	
Signal detection (Note: BC369 only)	Bicolour LED (green = valid signal, red = no valid signal)	
Data rate	Up to 11.88 GHz (12G)	
SDI video	Connectors	Optical or coaxial
	Standards	12G-SDI, 6G-SDI, 3G-SDI, HD-SDI, SD-SDI, DVB-ASI
	Compliance	SMPTE ST 2082, ST 2081, ST 424M, 292M, 259M, 297M
HDMI	Data rates	150 Mb/s to 11.88 Gb/s
	Standards	HDMI v1.4, DVI 1.0
	Resolution	Up to 1920 x 1080p
Gigabit Ethernet	Data rates	As per 3G-SDI, HD-SDI, SD-SDI
	Compliance	IEEE 802.3-2002
	Speeds	10/100/1000Base-T
MADI	Data Rate	Up to 1 Gb/s
	All common standards and sample rates	

Optical SFP characteristics

Wavelengths	CWDM: 1270 nm to 1610 nm
SFP+ data rate	Up to 11.3 Gb/s
SFP transceiver	Up to 2.97 Gb/s

Conformities

EMI/RFI	Complies with 89/336/EEC and EN55022B
EMC	Complies with EN61000-4-2, EN61000-4-4 (Level 2), EN61000-4-4FTB, EN61000-4-5 and EN61000-4-11
Electrical Immunity	Complies with EN 61000-6-1, EN61000-6-2, EN 61000-6-3 and EN 61000-6-4
Laser Safety	Class 1 Laser Safety compliant; for additional conformities see datasheets for SFP cartridges fitted.
RoHS	Complies with Directive 2002/95/EC

Physical

Depth	73 mm (exc. SFP cartridges)
Width	20 mm (4HP)
Height	129 mm (3RU)
Weight	100 g
Operating Temp	-30°C to +70°C
Power	4.5 to 17 V DC, 2.5 W



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