

## BC SERIES MODULAR FIBRE OPTIC INTERFACE SYSTEM

The BC780 card is an optical-electrical transceiver, designed to provide bidirectional transport of control signals of various types over a dual fibre optic link, a typical application being control and adjustment of video cameras installed in remote positions at major sporting events, festivals, large venues and similar situations.

Based on the BC780, the BC785T and BC785R cards have all the functionality of the BC780, with the addition of either a genlock transmitter subcard (on the BC785T) or a genlock receiver subcard (on the BC785R). These two card versions will normally be used as a send/receive pair: the BC785T with a genlock input will be installed at the controller end of the fibre link while the BC785R with an electrical genlock output will be installed at the camera end, so that the remote camera can be locked to the master system genlock reference.

All three card versions have a standard RJ45 10/100base-T Ethernet port for IP control data, an RS-232 I/O and a switchable RS-422/RS-485 balanced I/O port for control commands in serial data form. A GPI input and a GPI output are also provided. The fibre link is bidirectional, allowing command acknowledgements and other data generated by the camera to be received by the controller. The optical I/O is a dual female LC connector in a standard SFP carrier. A bicolour LED on the card faceplate confirms "valid data present" at the fibre receiver input.

CWDM optical wavelengths in the range 1270 to 1610 nm may be specified for the transmitter section of the SFP transceiver; the receivers are wideband.

The cards are part of the Bluebell Opticom BC Series and are compatible with all BC Series racks and enclosures, which provide all necessary DC power. The cards will report their status to the built-in monitoring system in the BC100, BC160, BC100i or BC160i 19" frames: enhanced reporting is available via SNMP if a network card is fitted to the frame (a BM102 in a BC100 or BC160 frame, a BM102i or BM103 in a BC100i or BC160i frame).

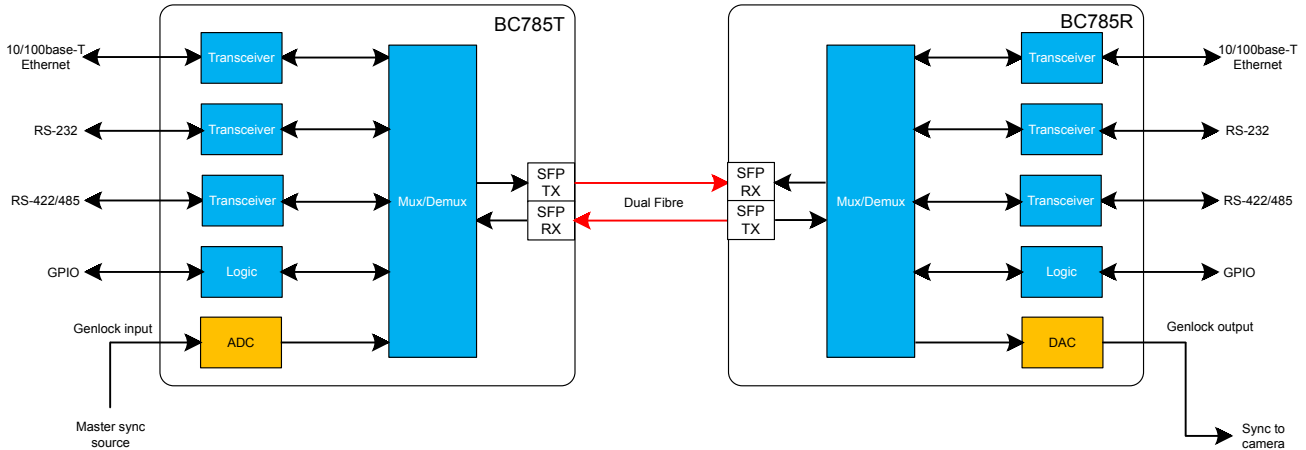
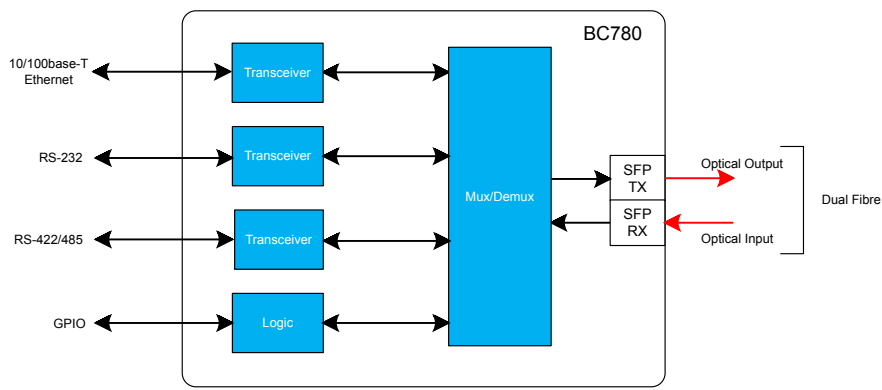


**BC780**  
Bidirectional control data interface



**BC785T**  
Bidirectional control data interface with genlock Tx

**BC785R**  
Bidirectional control data interface with genlock Rx



## Specifications

|  |  |                                |
|--|--|--------------------------------|
| BC780, BC785T, BC785R  |  |                                |
| <b>Electrical Inputs and Outputs</b>                             |  |                                |
| RS-232   | Rx & Tx (unbalanced), max. 250 kbaud   |                                |
| RS-422/RS-485  | Rx & Tx (balanced), full duplex, max. 10 Mbaud                                   | 15-pin Dsub connector (shared) |
| GPIO   | 1 x input, 1 x output  |                                |
| Ethernet   | 10/100base-T   | RJ45                           |
| Genlock input (BC785T only)                                      | Analogue composite video, black & burst, tri-level sync                          | BNC (75 ohms)                  |
| Genlock output (BC785R only)                                     |  |                                |
| <b>Optical Inputs and Outputs</b>                                |  |                                |
| Most specs determined by SFP fitted. Typical values given below. |  |                                |
| Connector  | 2 x female LC  |                                |
| Wavelength   | 1270 – 1610 nm   |                                |
| Optical power output   | -15 dBm @1310 nm multimode<br>-6 dBm @ 1310 nm singlemode                        |                                |
| <b>Conformities</b>  |  |                                |
| EMI/RFI  | Complies with 89/336/EEC, EN55032B, EN61000-4-2                                  |                                |
| Electrical   | Complies with EN61000-4-4FTB, EN61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-6-4 |                                |
| Laser Safety   | Complies with Class 1 laser product  |                                |
| RoHS & WEEE  | Complies with Directive 2002/95/EC   |                                |

|  |   |
|--|---|
| <b>Monitoring</b>  |   |
| Front panel  | S/L: bi-colour LED indicating a valid and locked signal at optical receiver |
| External via BC100/BC160 frame   | Bi-colour LED indicating lock status of optical input                       |
| External via BC100i/BC160i frame   | On-screen lock status indication of optical input                           |
| External via BC100/BC100i/BC160/BC160i frame with network card fitted          | Bi-colour virtual LED per channel indicating lock status of optical input   |
| SNMP monitoring (via BC100/BC100i/BC160/BC160i frame with network card fitted) | Lock status of each optical input   |
| <b>General</b>   |   |
| Input Voltage  | 4 – 17 V  |
| Power consumption  | 5 W   |
| Depth  | 75 mm (60 mm excluding connectors)  |
| Width  | 20 mm (4HP)   |
| Height   | 129 mm (3RU)  |
| Weight   | 100 g   |
| Operating Temperature  | -30 to +70 °C   |

# Bluebell

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