

BC323 Series Fibre video interfaces



Thank you for purchasing this Bluebell Opticom professional broadcast video product. The BC323 Series of interfaces are very simple to install and this Quick Start Guide should provide sufficient information to get you up and running in the vast majority of cases.

Should you need additional information, an Operation Guide with full technical information is available on request.

Quick Start Guide

Safety Warning - Important Precautions

To reduce the risk of fire or electric shock, do not expose this equipment to rain, moisture, or wet conditions.

General Safety Guidelines

- Always **disconnect the entire system from the AC mains** before cleaning or servicing.
- The following product frames - **BC100, BC100i, BC101, BC102, BC120, BC160i** - must be connected using a **three-conductor AC mains power cord with an earth ground**. All three conductors must be used at all times to prevent electric shock.
- Do **not** bypass or disable any fuse.
- Only replace fuses with those of the **specified type and rating**.
- Do **not** use flammable or combustible chemicals for cleaning.
- Do **not** pour or spill liquids directly onto the unit.
- Do **not** allow any liquid to enter the unit or wet the internal components.
- Do **not** operate the unit with any cover or panel removed.
- Do **not** obstruct the ventilation slots—**adequate airflow must be maintained**.
- Do **not** operate the unit in environments with **extreme temperatures**.
- Do **not** use or store the unit in **explosive atmospheres**.
- Do **not** attempt to repair the unit yourself. If servicing is required, please contact your local **Bluebell Opticom** distributor.

○ Product Warranty

- **Bluebell Opticom Ltd** provides warranty coverage as detailed in our general terms and conditions.

Please note that warranty support is only valid **if product serial numbers remain intact and legible**. Tampering with or removing serial numbers may void your warranty.

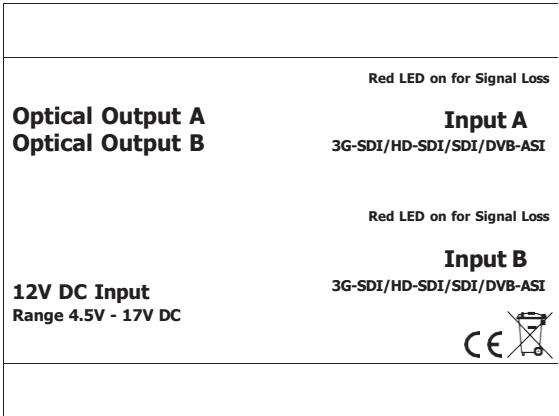
Overview:

The BC323 Series is a range of compact, stand-alone fibre interface modules intended for OB applications, which allow SDI video to be transmitted over fibre-optic cable.

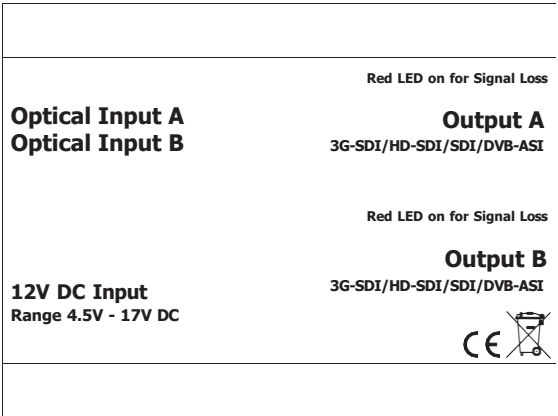
This Quick Start Guide covers three models comprising the range:

- BC323T dual channel transmitter - two independent channels, SDI inputs, dual fibre outputs
- BC323R dual channel receiver - two independent channels, dual fibre inputs, SDI outputs
- BC323TR single channel transceiver - one channel, dual fibre connector for transmit and receive, plus SDI input and SDI output

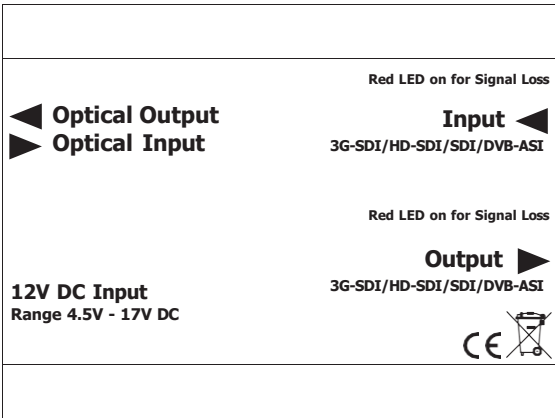
The three models are of identical construction, and in outward appearance differ only in the silk-screened labelling on the module:



BC323T



BC323R



BC323TR

Power supply:

All BC323 models require an external power supply voltage between 4.5 and 17 V. A Bluebell Model PS12 PSU (12 V) will be packed with the interface if one was ordered. The power supply connector is a Neutrik® XLR4M, and a locking mating connector is pre-fitted to the PS12 DC cable.

Pin	
1	0 V
2	n/c
3	n/c
4	+V DC

If using an alternative PSU,
wire the connector as above.

Model	Power
BC323T	2.5 W
BC323R	2 W
BC323TR	2.5 W

Power consumption of the BC323 models.

Inputs and outputs:

Video:

BC323 interfaces are intended for use with serial digital video signals with data rates up to 3 Gb/s. Standards supported are SD-SDI (SMPTE 259M-compliant), HD-SDI (SMPTE 292M-compliant) and 3G-SDI (SMPTE 424M-compliant); ASI baseband streams are also compatible.

Video inputs and outputs are on 75 ohm BNC sockets. All models have two connectors: inputs on the BC323T and outputs on the BC323R; the BC323TR has one input and one output.

Optical:

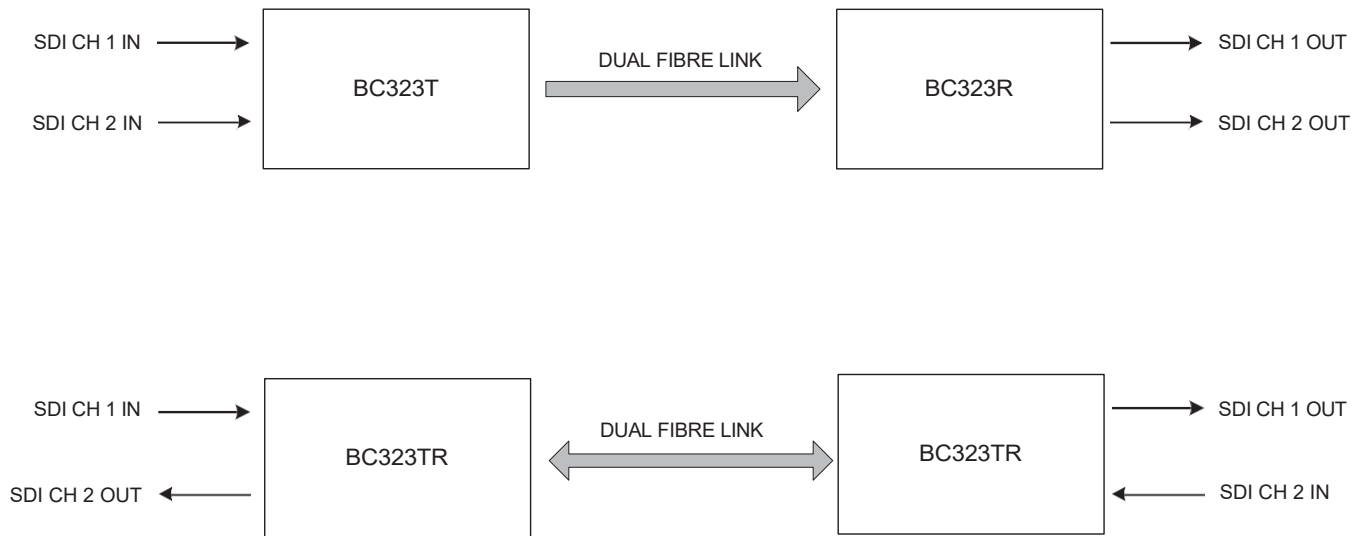
A dual LC optical SFP connector is fitted as standard; each SDI channel uses one of the two optical fibre ports. If specified at the time of ordering, ST optical connectors may be fitted instead.

Single-mode operation is standard; alternative multi-mode versions of each model are available. The standard transmission wavelength for single-mode versions is 1310 nm; a dual-wavelength version (1310 and 1510 nm) is also available. Multi-mode versions transmit at 850 nm. Transmitters fitted with lasers tuned to specific CWDM wavelengths are also available. Any of the alternative options will have been specified at the time of order.

Note that the optical receivers in the BC323R and BC323TR are wideband, and can be used with all wavelengths in the range 1270 – 1610 nm.

Using the BC323:

Normally, BC323 units will be used in pairs, either with a BC323T and a BC323R at either ends of the fibre run, or using a pair of BC323TR interfaces for bi-directional operation.



LEDs:

On all models, bi-colour LEDs are fitted adjacent to each of the BNC connectors. These illuminate green to confirm a valid input signal, or red to indicate either no signal or a signal which is in some way invalid. On a BC323T, the LEDs monitor the incoming SDI video signal (but see note re jumpers below), on a BC323R, they confirm the receipt of a valid optical signal. The LEDs on a BC323TR monitor the video input on the transmit channel and the optical input on the receive channel.

Reclocking:

The factory default is for the data at all the inputs (SDI or optical) to be internally reclocked. This will generally be desirable for the majority of operational situations. The reclocking circuitry may be bypassed on a per-channel basis by moving internal PCB jumpers; this may be desirable when low data rates or asynchronous operation are in use. Please consult the Operation Guide for details of how to do this.

SDI LED detection source:

Each transmission channel (i.e., two in the BC323T and one in the BC323TR) has an additional jumper that sets the source signal for triggering the bi-colour LED. The default setting is for the LED to confirm a valid SDI stream, but this may be altered to monitor the amplitude of the incoming signal, in which case a red illumination indicates that the signal level is too low for data recovery to be made.

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