

## BC Series Modular Fibre Optic Interface System



### BC313R/D Optical to Electrical Receiver

### 3G-SDI, HD-SDI, SD-SDI, ASI

The BC313R/D is a receiver for the conversion of an optical signal into electrical 3G-SDI, HD-SDI, SD-SDI and ASI. The incoming optical signal is fed to a trans-impedance and limiting amplifier before being electrically reclocked on the output. A second output is provided for monitoring or distribution.

Each BC313R/D is housed in a compact robust enclosure and is designed for Outside Broadcast and special events as well as Studios.

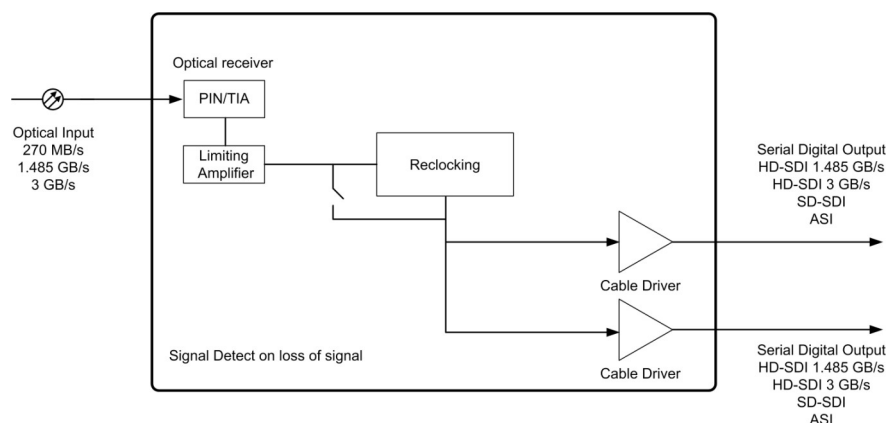
Power is provided via the optional PS10/XLR unit. The PS10/XLR has an IEC mains inlet allowing easy adoption into standard equipment bays. The BC313R/D has a 4 pin XLR allowing power from a variety of external DC sources in the range 4.5 to 17 V.

The BC313s are extremely compact single channel fibre optic converters that are perfectly suited to provide interference free transmission and for extending the range of electrical signals, particularly HD-SDI and 3G-SDI signals.

Each channel can operate in non-reclocking mode and handles data rates from 50 Mb/s to 3 Gb/s.

The BC313R/D is available in singlemode, WDM and CWDM variants to suit any fibre application. The BC313R/D can also be used to interface to any of the standard Bluebell cards and enclosures.

## Schematic Diagram BC313R/D



## Specifications for each channel

## Optical Input

Connector	1 x female LC as standard
Wavelength	See Ordering Information
	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	50 Mb/s to 3 Gb/s

## Electrical Output

Standards	SMPTE 424M, SMPTE 292M, SMPTE 259M, SMPTE297M, DVB-ASI Automatic rate selection for 3G-SDI, HD-SDI and SD-SDI data rates.
Connector	2 x 75 Ohm BNC per IEC 60169-8 Amendment 2
Return Loss	> 15 dB @ 1.485 Gb/s
Polarity	1 x Non inverting, 1 x inverting output
Signal Level	800 mV +/- 10%
DC Offset	0 +/- 0.5 V
Jitter	<0.15 UI line equalised
Format	Reclocked (with bypass to support data rates down to 10 Mb/s) Please note that the factory default unless specified is for units to be supplied in reclocking mode. Non-reclocking settings are accessed via module pcb.

## General module specifications

Length	92 mm
Width	64 mm
Height	30 mm
	Excluding connectors
Weight	100 g
Operating Temp	-30 to +70 °C
Power	2 W
Voltage	4.5 to 17 V dc
Signal detect	LED on for loss of signal

## 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

BC313R/D/M	Multimode Single Channel 3G/SDI, HD/SDI Fibre Optic Receiver Module with Dual Outputs, Auto-Sensing for SDI, ASI, HD/SDI and 3G/SDI. Fitted with LC connectors. PS12 power supply ordered separately.
BC313R/D/S	Singlemode Single Channel 3G/SDI, HD/SDI Fibre Optic Receiver Module with Dual Outputs, Auto-Sensing for SDI, ASI, HD/SDI and 3G/SDI. Fitted with LC connectors. PS12 power supply ordered separately.
PS12	10 watt Plugtop PSU for the BC313/323/550 Product Range. Fitted with 4 pin XLR.