

Bluebell

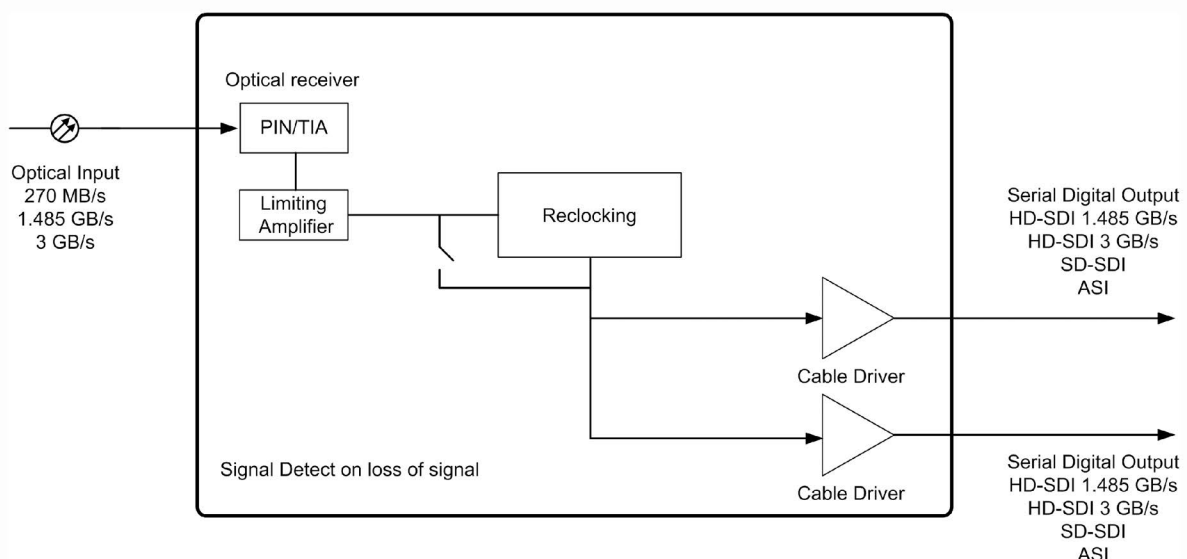
BC Series Modular Fibre Optic Interface System

Blue Nano



BC313R Optical to Electrical Receiver 3G-SDI, HD-SDI, SD-SDI, ASI

The BC313R 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. Each BC313R 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 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 is available in singlemode, WDM and CWDM variants to suit any fibre application. The BC313R can also be used to interface to any of the standard Bluebell cards and enclosures. The single channel BC313 receiver is also available with dual outputs - see separate datasheet for full technical information.



Optical Input

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|---------------|--|
| Connector | 1 x female LC as standard |
| Wavelength | See Ordering Information |
| | 1270-1610 nm |
| | 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 | >-1dBm |
| Data rate | 50 Mb/s to 3 Gb/s |

Electrical Output

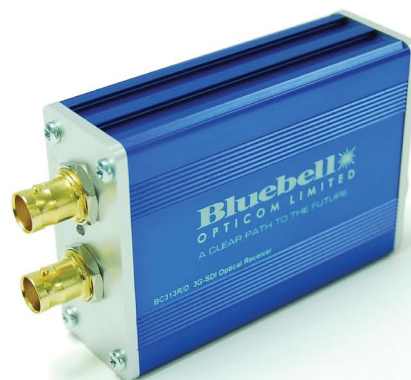
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|--------------|--|
| Standards | SMPTE 424M, SMPTE 292M, SMPTE 259M, SMPTE 297M, DVB-ASI Automatic rate selection for 3G-SDI, HD-SDI and SD-SDI data rates. |
| Connector | 1 x 75 Ohm BNC per IEC 60169-8 Amendment 2 |
| Return Loss | > 15 dB @ 1.485 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 142mm Extended enclosure |
| 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- |
| 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

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|----------|--|
| BC313R/M | Multimode Single Channel 3G/SDI, HD/SDI Fibre Optic Receiver Module, Auto-Sensing for SDI, ASI, HD/SDI and 3G/SDI. Fitted with LC connectors. PS12 power supply ordered separately. |
| BC313R/S | Singlemode Single Channel 3G/SDI, HD/SDI Fibre Optic Receiver Module, 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. |

The BC313 can also be supplied in an “extended” enclosure with ST connectors — add /ST to the end of the part numbers above.