

Bluebell

Intelligent Signal Transport Solutions

2019 Product Highlights



Bluebell

Bluebell Opticom has designed and manufactured high quality fibre optic products for the broadcast, telecommunications and satellite industries for over 25 years. We have a solid pedigree and an enviable reputation for producing robust and extremely reliable solutions.

We are an award winning world leading specialist in electrical to optical and IP conversion for all formats of signals present in today's media arena.

We have over three hundred thousand fibre optic links providing critical on-air content delivery on every continent around the world.

Our equipment is used for delivery of video, audio and data services on all premier live world-class sporting events.

The applications range from point to point rugged, harsh environment outside broadcast links to large scale complex optical infrastructure systems.

Bluebell products are supplied with a Five Year Factory Warranty and we can offer this with total confidence as our products are manufactured in the UK to ISO9001 standards.

EMC, CE, FCC and Safety compliance is also guaranteed.

We work with a global network of Dealers, Distributors and Systems Integrators who provide local sales, installation and engineering support wherever our customers are based.



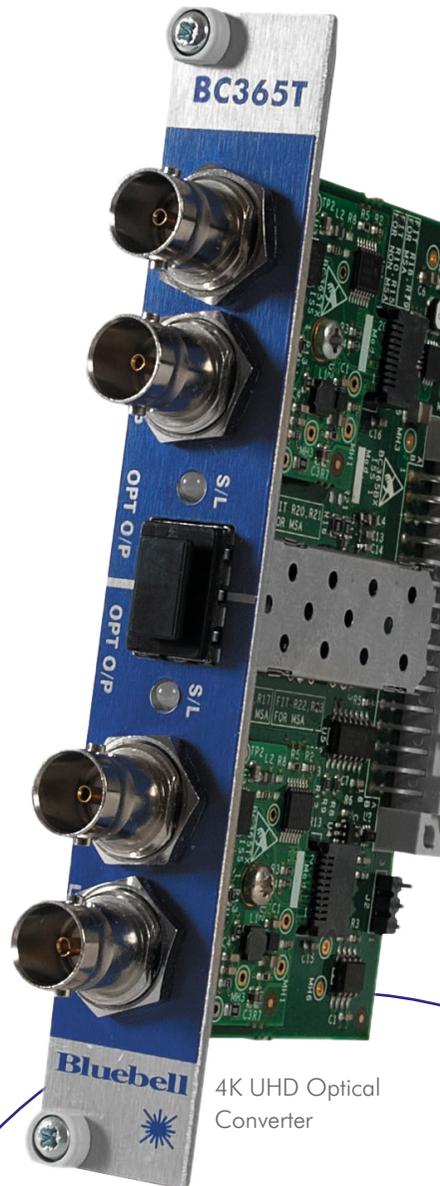
BB450-IP Encapsulator

Product Overview

We are focused on 4K UHD transport, camera-back products, IP network edge systems and remote production solutions.

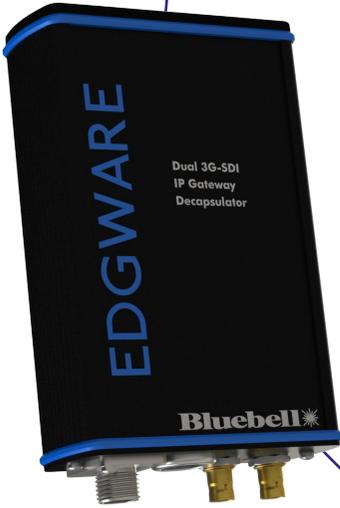
We have a comprehensive range of fibre optic network products designed for broadcast applications. Rack-mount, fixed infrastructure, harsh environment, rugged throwdown, flypack and bespoke enclosures. We are renowned for transport of mission critical signals for all broadcast formats including but not restricted to...

Video	4K UHD HDR, 4K, 8K, SD/HD/3G-SDI, Composite, HDMI,DVB-ASI RGB, YUV, SMPTE2022-6/7 SMPTE2110
Audio	Analogue Audio, Line Level, Balanced Mic Level, MADI, AES/EBU, AES3, AES67, Dante, Ravenna, IFB Talkback, 2/4Wire Comms, Digital Audio
Data	RS232, RS422, RS485, 2/4Wire Bit Rate Independent NRZI, GPI/O Tally
Ethernet	10/100/1000BaseT, 10G Ethernet, 40G Ethernet, IP
Techniques Deployed	Wave Division Multiplexing, Coarse Wave Division Multiplexing, Dense Wave Division Multiplexing, Time Division Multiplexing, IP Encapsulation, IP Decapsulation



4K UHD Optical Converter

IP Network Edge Equipment. 3G-SDI and Audio Encapsulation



Edgware IP Encap/Decap

Our IP Network Edge Equipment acts as a bridge between the world of broadcast and IP network systems. The Edgware 3G-SDI encapsulator is designed to be mounted on a camera between the camera body and the battery, wrapping two 3G-SDI signals up in either SMPTE2022-6/7 or SMPTE2110. An in-band GUI helps with the configuration.

The BB450-IP Network Edge product encapsulates 3G-SDI and eight channels of Analogue Audio.

If SMPTE2110 is used, the audio in the IP domain is compliant with Dante and can be networked as Dante. Further, the BB450-IP system can be used as a Dante Edge device. If no SDI is present, the BB450 generates its own carrier that allows it to be used as a purely audio interface. This is a very efficient way of getting your broadcast signals into the IP world. The BB450 uses singlemode fibre so it can be sited several miles from the network switch, making it perfect for outside broadcast, stadiums and theatres.

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BC160i Modular 1RU Rack Mounting System

The BC160i and BC100i are 19" chassis for mounting Bluebell BC Series cards. Any of the standard BCxxx cards can be fitted and mixed within each frame type. The BC160i can hold up to 6 single slot cards and the BC100i can hold up to 15 single slot cards. Some BC Series processing cards have quad functionality allowing up to 24 channels of video to be transmitted or received from a single 1RU frame or 60 channels to be transmitted or received from a single 3RU frame. Signal and card monitoring is achieved through SNMP with the addition of the BM102i network card. The BM102i also serves its own webpage to monitor the cards within the frame.

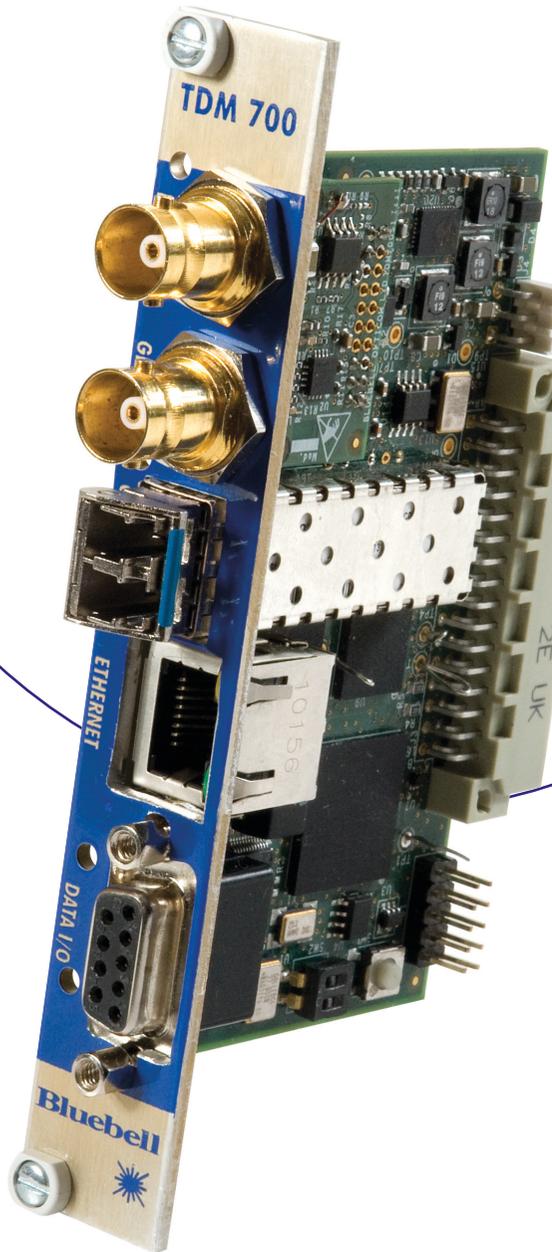


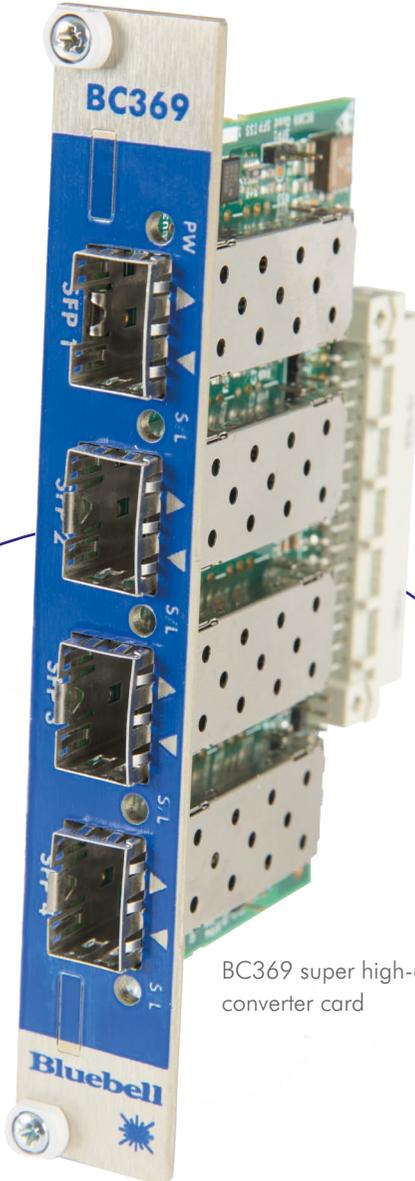
BC160i Modular 1RU Rack Mounting System

TDM700-4K Robotic Camera Pedestal Adaptor

New for 2019 is our Robotic Camera Head Fibre Optic Pedestal Adaptor. This unit compliments our well established solutions for the Panasonic AW-HExx series. With an outer body designed to fit the camera it supports, the clean lines blend in with the shape of the camera body.

The new launch is our adaptor for the Sony BRC-x1000 4K UHD camera head. Featuring Dual 3G-SDI 4K video transport over fibre, Genlock and PoE+ insertion, this unit is a very simple upgrade for these very popular cameras. The body is manufactured from robust aluminium reinforced ABS construction - ideal for field use.





BC369 Super High-density 12G-SDI I/O Card

The Bluebell BC369 card is a high-density converter card that enables 12G UHD 4K HDR optical conversion with no less than eight I/O's on board. When the BC369 is deployed in Bluebells standard 3RU rack frame, users can achieve 120 ports of 12G-SDI in the space of 3 Rack Units for extra dense, reliable broadcast transport. The same card in our 1RU frame yields 48 ports of 12G-SDI.

BC369 super high-density converter card

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Silhouette Series

The Bluebell Silhouette range of enclosures allows bespoke solutions to be housed in one of three body styles depending on the number of electrical, optical and power input/outputs required. The basis of Silhouette is to facilitate a custom design in a compact weatherproof enclosure whether it be for a camera-back adaptor or a unit housed in a rugged flight case.

One application for these units is for robotic camera heads that provide power and control to the remote end. We have a number of options available for this application as camera heads have differing control data and genlock requirements.



Silhouette Series



We have options for different power ratings and up to three different power sources. This gives the user a robust, resilient system that can be controlled kilometres away from the action making ingest a less painful experience.

We build these with either SMPTE 311 Hybrid cable or Neutrik Hybrid Opticalconn cable. These can deliver up to 75watts to the camera end.

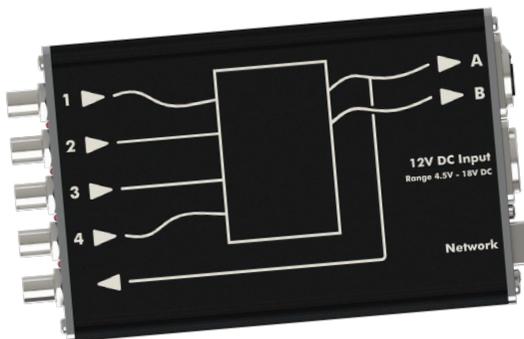
Options for control data are RS323, RS 422/485, GigE and tally. We can provide RTS or Clearcom talkback extensions, line-level analogue audio channels, genlock, tri-level sync and even jumbo packetised ethernet transport. All this is in a very small weatherproof enclosure that is rugged and robust and carries the Bluebell standard of reliability and quality.



4 x 3G-SDI to 12G-SDI Converter with optical I/O

This clever unit uses the latest in chip technology to convert four 3G-SDI signals to one 12G-SDI optical signal on a single wavelength. The BN390R does the reverse and converts 12G-SDI into four separate 3G-SDI signals. Instead of hanging four coax cables off the side of a 4K Camera, this will do it all on one single fibre. Because we use only one wavelength, it is possible to multiplex up to 18 off 4K channels on to one fibre or, put it a different way, 72 off 3G-SDI channels on one fibre. Now that's a lot...

It is also available in a Rack based card (BC390) that slots into our 1RU or 3RU Card Frame with full Network Monitoring.



BN390 4 x 3G-SDI to 12G-SDI Converter



ShaxX-Lite

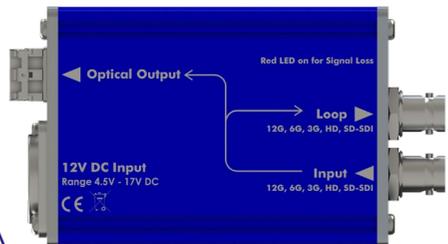
The ShaxX Hybrid Power System

Bluebell's ShaxX system has grown to incorporate several new camera models and manufacturers. Now in its ninth year and thousands of units worldwide the ShaxX power inserter goes from strength to strength. We now quote **Sony, Ikegami, Hitachi, Panasonic and Grass Valley** as compliant with our ShaxX. From passive low cost fibre infrastructure interconnect up to 600VA toroidal power insertion, we can offer the full suite.

12G-SDI 4K UHD Optical Converter

The BN365 12G-SDI 4K UHD Optical Converter enhances the Bluebell Nano range.

It is a small very robust electrical to optical converter with a driven Loop Output that will transport SD-SDI, HD-SDI, 3G-SDI, 6G-SDI and 12G-SDI over singlemode fibres for up to 40km. Available as a transmitter and a receiver in a tough 3mm thick aluminium enclosure or as the BC365 Dual Channel Rack based card that slots into our 3RU or 1RU Card frame. This will provide twelve channels in a 1RU or thirty channels of 4K 12G-SDI in a 3RU Rack Frame.



BN365 4K UHD Optical Converter



Intelligent Signal Transport Solutions

With a Five Year Factory Warranty, ISO9001 build standards, FCC, EMC, CE and Safety Compliance, and built in the United Kingdom your confidence is guaranteed.

Our Global Network of Dealers, Distributors and Systems Integrators are local to where you are.

Your nearest Bluebell Support Contact is:



Please see our website at www.bluebell.tv for full details.

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