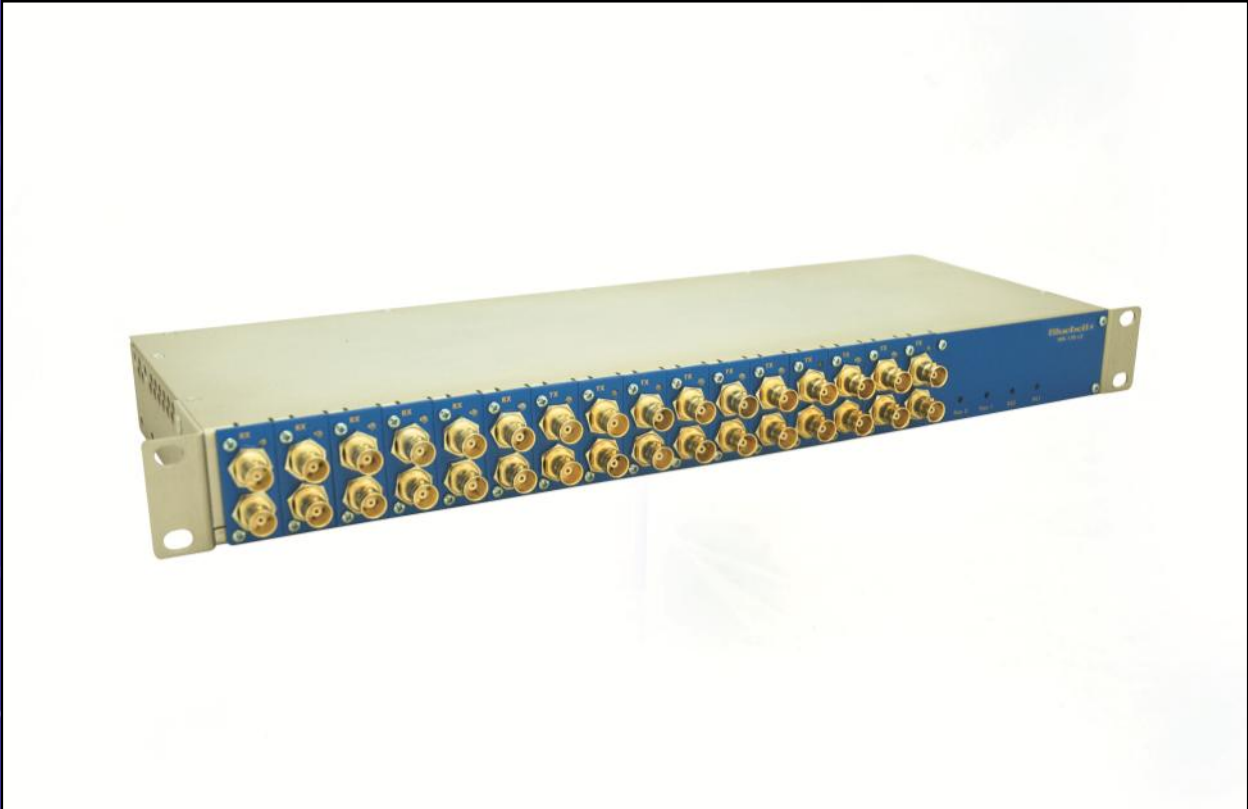


WB Series Modular Fibre Optic Interface System



WB170 Compact 3G 1RU Transport SDI and Multi Format Interface

The WB170 is designed as an ultra compact 19" rack-mount media converter for the conversion of up to 32 independent 3G-SDI, HD-SDI, SD-SDI and ASI signals into fibre optical cable. The WB170 fits applications where space is at a premium but no compromises on the broadcast performance can be accepted.

Applications

- Studios requiring 3G/HD links to main CAR and with wall mounting capability
- Integration with existing routing/equipment infrastructure to provide multiple fibre I/O
- Low cost and high density distribution
- Remote ingest points and tie-lines between OB vans and Studios

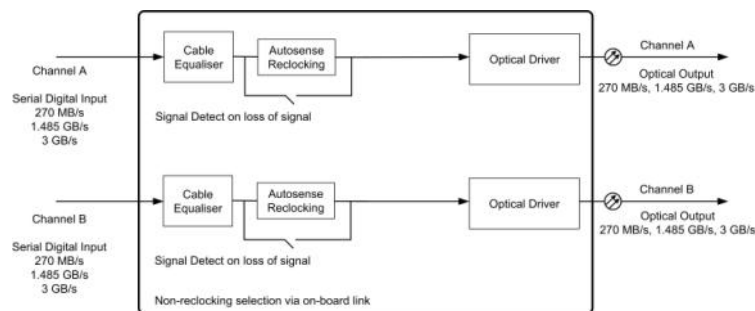
The WB170 can be populated with WB172 transmitter or receiver cards or the Multi Format WB172-63 SFP cards. All cards are inserted from the front of the frame.

Each incoming signal on a WB172T is auto-sensed, equalised and then reclocked prior to conversion and transmission down a separate single optical fibre. The WB172R is the corresponding receiver for the conversion of two independent optical signals 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 outputs. The WB172 is available in multimode, singlemode, WDM and CWDM variants to suit any fibre application.

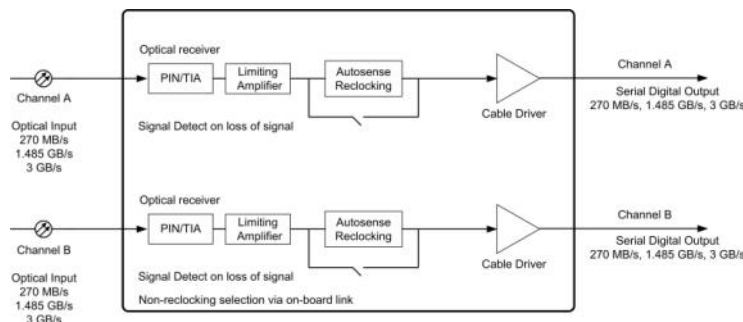
The WB172-63 and WB172-63TR provide a base unit that comprises two SFP cages. By using different SFP converter modules the functionality of the unit can be adapted to suit different applications. Multi format SFPs include conversion to and from Composite, HDMI, DVI, optical and SDI.

Units can also be used for regenerating optical signals from multimode to singlemode or

Schematic Diagram WB172T



Schematic Diagram WB172R



Specifications for each channel

Transmitters WB172T

Electrical Input

Standards	SMPTE 424M, SMPTE 292M, SMPTE 259M, SMPTE 297M, DVB-ASI
Equalisation	Automatic to 100 m @ 3 Gb/s Automatic to 200 m @ 1.485 Gb/s Automatic to 300 m @ 270 Mb/s Equaliser and reclocking can be bypassed to support data rates down to 50 Mb/s
Connector	1 x 75 Ohm BNC per IEC 60169-8 Amendment 2 per channel
Return Loss	> 15 dB @ 1.485 Gb/s
Format	Reclocked (with bypass to support data rates down to 50 Mb/s) NB: factory default unless specified is set to reclocking.

Optical Output

Connector	1 x female LC as standard per channel
Wavelength	1310 nm, 1550 nm, CWDM See Ordering Information
Optical Power	-2 dBm @ 1310 nm (typical) -2 dBm @ 1510 nm (typical) 0 dBm @ CWDM (typical)

General WB170 frame specifications

Depth	150 mm
Width	445 mm
Height	44.5 mm (1RU)
Weight	2.5kg fully loaded
Operating Temp	-30 to +70 °C
Voltage Range	90 to 260 V ac 50/60 Hz
Power	2.5 W per card
Signal detect	LED on for loss of signal
No. of slots	16 slots, 1 per WB172

Receivers WB172R

Optical Input

Connector	1 x female LC as standard per channel
Wavelength	1270-1610 nm See Ordering Information for multimode and singlemode variants
Sensitivity	> -25.0 dBm @ 3 Gb/s > -25.5 dBm @ 1.485 Gb/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, 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 per channel
Return Loss	> 15 dB @ 1.485 Gb/s
Polarity	1 x Non inverting per channel
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 50 Mb/s) NB: factory default unless specified is set to reclocking.

Conformance

EMI/RFI:	Complies with 89/336/EEC, EN55022B, EN61000-4-2, EN61000-4-4-(Level 2), EN61000-4-4FTB, EN61000-4-5, EN61000-4-11
Electrical:	Complies with EN61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-6-4
Laser Safety:	Dependent on SFP fitted. Complies with Class 1 laser product
RoHS:	Complies with Directive 2002/95/EC
Warranty	5 years

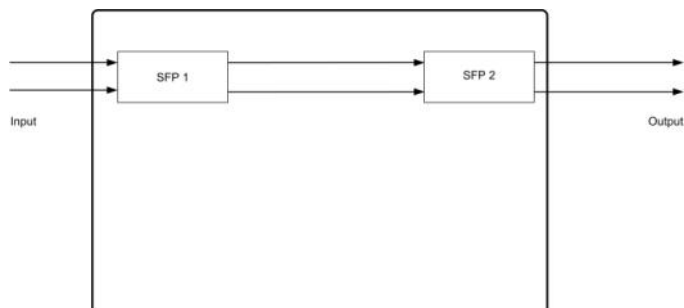
Ordering Information

WB172T/S/13/13	Singlemode Dual Channel 3G/SDI, HD/SDI Fibre Optic Transmitter Card, Auto-Sensing for SDI, ASI, HD/SDI and 3G/SDI (1310nm). Fitted with LC connectors.
WB172T/S/13/15	Singlemode Dual Channel 3G/SDI, HD/SDI Fibre Optic Transmitter Card, Auto-Sensing for SDI, ASI, HD/SDI and 3G/SDI (1310nm and 1550nm). Fitted with LC connectors.
WB172T/S/CWDM	Singlemode Dual Channel 3G/SDI, HD/SDI Fibre Optic Transmitter Card, Auto-Sensing for SDI, ASI, HD/SDI and 3G/SDI. (Dedicated CWDM Tuned Laser, Wavelength to suit ITU Grid Spacing - see CWDM Ordering Matrix). LC connectors as standard.
WB172T/M	Multimode Dual Channel 3G/HD/SD-SDI Fibre Optic Transmitter Card, Auto-Sensing for SD-SDI, ASI, HD-SDI and 3G-SDI. Fitted with LC connectors.
WB172R/S	Singlemode Dual Channel 3G/SDI, HD/SDI Fibre Optic Receiver Card, Auto-Sensing for SDI, ASI, HD/SDI and 3G/SDI. Fitted with LC connectors.
WB172R/M	Multimode Dual Channel 3G/HD/SD-SDI Fibre Optic Receiver Card, Auto-Sensing for SD-SDI, ASI, HD-SDI and 3G-SDI. Fitted with LC connectors.

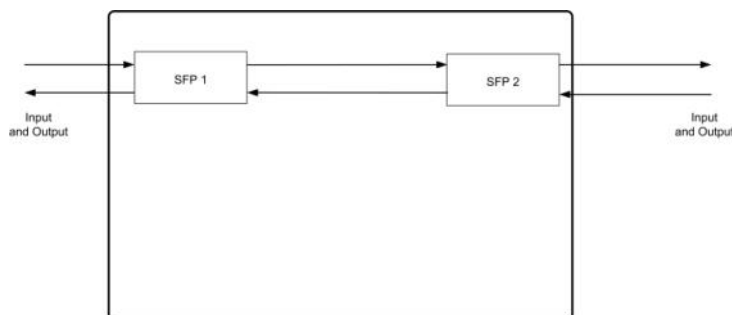
Universal Chassis and Power Supplies

WB170-v2	19" 1RU Chassis for up to 16 WB172 Cards and supplied with dual redundant power supplies as standard. Configured with 1 x internal PSU connected via IEC input and 1 x external PS60 12V supply via 4 pin XLR inlet. 1 x PS60 external in-line unit supplied as standard - connects to 4 pin XLR inlet. IEC Mains Leads not supplied.
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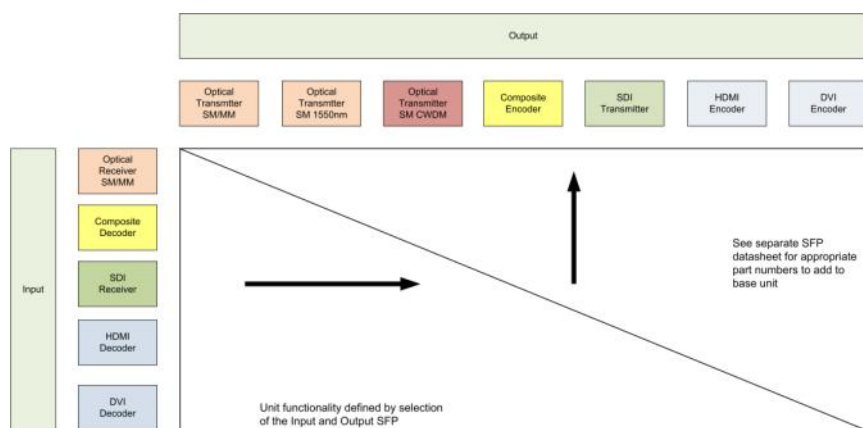
Schematic Diagram WB172-63



Schematic Diagram WB172-63TR



Specifications



Unit functionality defined by the selection of SFP modules fitted. See chart above for currently available combinations.

SDI video SFP (optical & coax)
3G-SDI, HD-SDI, SD-SDI, DVB-ASI
Rates supported from 50 Mbps up to 3 Gbps

HDMI SFP
HDMI v1.4 and DVI 1.0 supported
Up to 1920x1080p input format
Video data rate supported: 3G-SDI, HD-SDI, SD-SDI

Gigabit Ethernet SFP
Compliant with the standards as specified in IEEE 802. 3-2002
10/100/1000BASE-T speed
Data Transfer rate up to 1Gbps

Optical SFP
CWDM 18 Wavelength (λ): 1270 nm to 1610 nm ,

Conformance

EMI/RFI: Complies with 89/336/EEC, EN55022B, EN61000-4-2, EN61000-4-4-(Level 2), EN61000-4-4FTB, EN61000-4-5, EN61000-4-11
Electrical: Complies with EN61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-6-4
Laser Safety: Dependent on SFP fitted.
Complies with Class 1 laser product
RoHS: Complies with Directive 2002/95/EC
Warranty: 5 years

General WB170 frame specifications

Depth 150 mm
Width 445 mm
Height 44.5 mm (1RU)
Weight 2.5kg fully loaded
Operating Temp -30 to +70 °C
Voltage Range 90 to 260 V ac 50/60 Hz
Power 2.5 W per card
No. of slots 16 slots, 1 per WB172

Ordering Information

WB172-63 Multi-format **Dual Channel** Interface.
Base unit only - requires an input and output **Video non-MSA SFP** from recommended list.
Base Units - No Optics Fitted

WB172-63TR Multi-format Transceiver Interface.
Base unit only - requires an input and output **MSA or non-MSA SFP** from recommended list.
Base Units - No Optics Fitted

Universal Chassis and Power Supplies

WB170-v2 19" 1RU Chassis for up to 16 WB172 Cards and supplied with dual redundant power supplies as standard. Configured with 1 x internal PSU connected via IEC input and 1 x external PS60 12V supply via 4 pin XLR inlet. 1 x PS60 external in-line unit supplied as standard - connects to 4 pin XLR inlet. IEC Mains Leads not supplied.