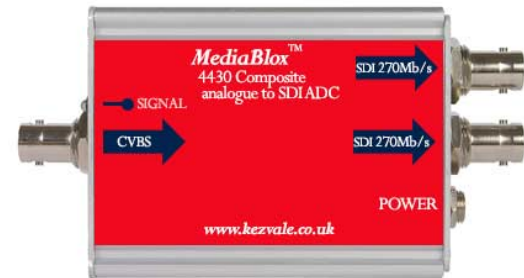


Specification

Analogue input	
Standards	Composite 525 or 625
Composite	PAL, NTSC & SECAM
Connectors	75Ω BNC
Signal level	1V p-p ±10%
Return loss	>40dB to 5.5MHz
SDI outputs	
Standards	SMPTE 259M 270Mb/s 525/625
Connector	75Ω BNC
Number	2
Signal level	800mVp-p ±10%
Return loss	>20dB to 270MHz
Performance	
Differential gain	<0.4%
Differential phase	<1.5°
Delay	<10ns
Quantization	10-bit
Power	
Voltage	6-12V DC
Current	350mA at 6V
Power connector	Locking 2.5mm jack connector (centre +ve)
Other	
LED	Shows power and signal presence
Temperature range	0°C to 40°C
Dimensions	63.5mm x 84mm x 30mm (excluding connectors)
Weight	150g
<i>We reserve the right to change technical specifications without prior notice. E&OE.</i>	



User Guide



4430 Composite analogue to SDI ADC

Composite analogue input with two SDI outputs

www.kezvale.co.uk

EU declaration of conformity

We certify that this apparatus conforms to the requirements of the EMC and Low Voltage Directives. Emissions EN55103-1, susceptibility EN55103-2 and safety EN60950-1 2002.

15 July 2005



Warranty

Kezvale Ltd warrants this unit against defects in materials and workmanship for a period of one year from the date of shipment. At its option, the company will repair or replace products that prove to be defective during the warranty period, provided they are returned to the company with advance notification and with freight prepaid. Repairs may only be conducted by an authorised representative of the company. As a result any unauthorised repair or attempted repair will automatically void the warranty.

When a distributor supplies the company's products, that distributor should be approached initially if there are any warranty problems.

The company makes no other warranties, express or implied, as to the merchantability, fitness for a particular purpose, or otherwise. The company's liability for any cause, including breach of contract, breach of warranty, or negligence, with respect to products sold by it, is limited to repair or replacement by the company, at its sole discretion. This remedy is exclusive. In no event shall the company be liable for any incidental or consequential damages, including loss of profits.

General description

The 4430 is a broadcast quality composite analogue to SDI converter.

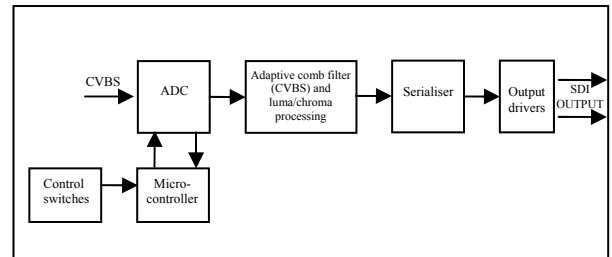
It uses a 10 bit 2x over sampling ADC with four line adaptive comb filtering. The unit accepts and automatically selects between different types PAL, NTSC and SECAM composite inputs. Input quality is automatically detected between VCR / CCTV and broadcast sources.

It is housed in an extremely compact and rugged aluminium case ideally suited to both studio and portable applications.

Main features

- Composite analogue to SDI ADC
- Auto select multi-standard input – PAL, NTSC & SECAM
- Two SDI 270Mb/s 525/625 outputs
- Dual high-speed over sampling 10-bit A/D converters
- 4 line adaptive comb filter
- Auto select multi-standard input – PAL, NTSC & SECAM
- Handles a wide range of video input qualities
- Automatic gain control
- Compact and rugged design
- Locking connector for PSU

Functional block diagram



Installation and operation

The unit is simple to use and install.

- Set the dipswitches by referring to the table and description below or the table on the rear of the unit.
- Connect a valid analogue composite input.
- Connect one or both of the 270Mb/s SDI outputs.
- Apply power to the unit either via the locking power connector from the external power supply or 1U rack frame, or by sliding into the 2U rack mounting frame with central power supplies.
- The LED will be green when there is power and a valid analogue signal present.
- The switch settings can be altered whilst the unit is powered and the changes are implemented immediately.
- The mounting bracket supplied can be used to install the unit. The bracket should first be fixed vertically to any surface. The MediaBlox can then be lowered onto the dovetail part of the bracket with the front endplate uppermost to retain it.

Switch settings

Switch	OFF	ON
1	Pedestal	
2	Pass VBI	Blank VBI
3-5	Not used	
6	Disable automatic gain control	

The default switch setting on delivery is all switches in the off position.

- Switch 1 defines if there is a 7.5 IRE pedestal on the input analogue video source. When this switch is in the off position the unit does not expect a pedestal, when in the on position the unit expects a 7.5 IRE pedestal to be present on the input analogue video source.
- Switch 2 controls the vertical blanking information (VBI) on the SDI video output. When the switch is off all VBI data in the analogue video signal is passed through to the SDI output. When enabled the VBI data is removed from the analogue input and not passed to the SDI output.
- Switch 3-5 are unused on the 4430 unit.
- Switch 6 disables the automatic gain control (AGC). The AGC amplifies/attenuates the signal so that the sync tip is exactly 0.3V. This is useful for restoring signals which have been subject to cable attenuation, or pre-amplification. Disabling the AGC when the unit is in use has the effect of freezing the gain to a constant value (worked out from the input signal at the time). To completely remove the AGC, ensure that it is disabled before powering the unit.

Technical information and specifications

The unit utilises a four line adaptive comb filter to separate the luminance and chrominance information from the input video source. This feature reduces artefacts such as hanging dots at colour boundaries and detects and handles false colours in high frequency luminance images.

The unit automatically detects the input composite video format between different types of PAL, NTSC and SECAM.