



# V1623, V1623K, V1623/L

YPbPr/RGBS to SDI - 12 Bit Conversion

## FEATURES

- YPbPr or Beta or RGB input
- 12 bit conversion and signal processing
- 2 x oversampling
- Component gain controls
- 4 SDI outputs
- Looping reference
- Luminance only version (V1623K)
- Looping input version (V1623/L)

CONVERTS AN RGB OR YPBPR ANALOGUE COMPONENT INPUT SIGNAL TO FOUR SERIAL DIGITAL COMPONENT OUTPUTS



The V1623 Precision ADC module provides conversion of an RGB or YPbPr analogue component input signal to four serial digital component outputs which can be set for SMPTE/EBU N10 component or Betacam levels. The module will automatically detect the incoming reference standard and convert using the selected settings. Superior conversion performance is attained using 8:8:8 digital over-sampling at 27MHz with 12 bit resolution. Additional features include independent component gain controls, EDH checksum generation and an integral Test Pattern Generator providing 75% CCIR Colour Bars, digital Black and others signals. Adjustment of Y/C timing, picture delay and output delay is also provided.

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## YPbPr/RGBS to SDI - 12 Bit Conversion

### Technical Specification

**Sampling** 12 bit precision 8:8:8 to ITU-R BT.601

#### Analogue Inputs

Formats	Y, Pb, Pr RGB, RGB + Setup Beta, Beta + Setup MII + Setup
Levels	Nominal (terminated) Y = 1.0V p-p; Pb, Pr, R, G, B 0.7 = V p-p Maximum 1.4V p-p (all inputs - 6dB Headroom)
Standards	625 50Hz, 525 60Hz
Impedance	75 BNC
Input return loss	>37dB to 6.0MHz (all inputs)
Reference Input:	
Sync from Y/G input	300mV
Composite sync	300mV - 2V or 600mV - 4V selectable
Reference fail modes	Output free run, picture black or mute

#### Serial Outputs (4)

Standard	ITU R BT.601
Format	SMPTE 259M-C, EBU 3267-E
Connectors	BNC
Impedance	75
Return loss	>15dB, 5-270MHz
Amplitude	800mV p-p (terminated)
Rise and fall times	0.75 - 1.5ns
Drive capability	Up to 250m (Belden 8281)
Data jitter	±250ps
Data rate	270Mb/s

#### Video Reference

Gain stability	±0.05dB
S/N ratio	>67dB unweighted (all channels)
Cb/Cr differential delay	<±5ns
Y/C differential delay	<±5ns
Sampling jitter	<3ns p-p
ADC linearity	<0.5%
Frequency response:	
Y	-0.1dB to 5.5MHz
Pb/Pr	-0.1dB to 2.5MHz
Processing delay	6.3µs

#### Test Patterns

Colour bars - Full field	Full field or split screen 100/75% selectable
Picture black	SDI RTS only
Horizontal edge of picture + centre markers	* Available in 'Engineering Mode' only
Split screen horizontal edge of picture + centre markers	* Available in 'Engineering Mode' only
SDI ramp	* Available in 'Engineering Mode' only
Split screen SDI ramp	* Available in 'Engineering Mode' only

Note: \* Engineering mode can be accessed from the front panel of the module. Full instructions are given in the Operator Manual.

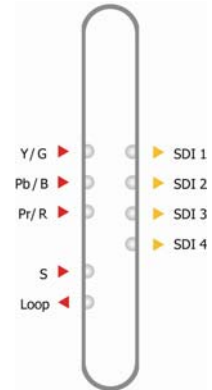
#### Ordering Information

V1623	YPbPr/RGBS to SDI - 12 bit conversion
V1623K	Y + S to SDI - 12 bit conversion
V1623/L	YPbPr/RGBS to SDI - 12 bit conversion with looping inputs

All Pro-Bel's quoted prices for interface modules include the supply of one suitable rear module. Please specify type required when placing order.

V16VR3H	3RU
V16VR1H	1RU

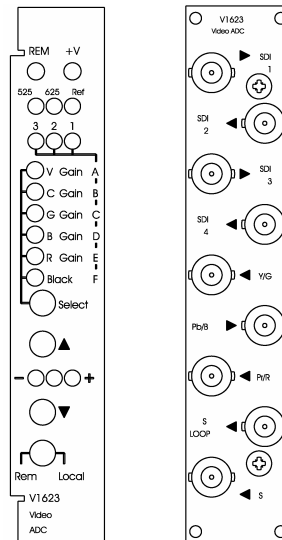
Note: Special versions of rear module are available on request.



#### Controls

##### VIDEO CONTROL

Video Gain	±6dB
Chroma Gain	±6dB
R, G, B (RGB mode only)	±6dB independent controls
Black Level	±100mV
Output Standard modes	Auto 625/525 with Default 625 or 525, Forced 625/525
Vertical Interval Blanking (Adjustable in one line steps)	625 System 6 - 22 (F1), 318 - 335 (F2) 525 System 10 - 19 (F1), 273 - 282 (F2) ±2.3µs in 37ns steps
Picture Position	0 - 37.9µs in 37ns steps
Output Delay	(+ insertion delay 6.3µs)



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