

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)

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.

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.

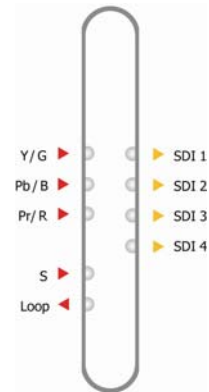
Ordering Information

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

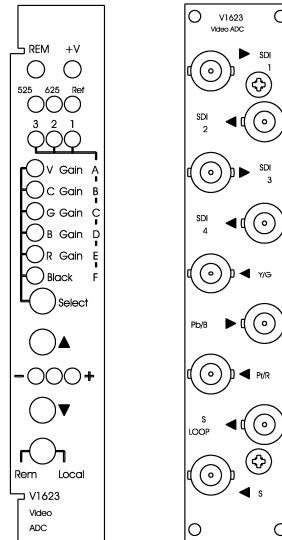
Note: Special versions of rear module are available on request.



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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