

# ADC210

Analogue RGB/YUV to SDI converter

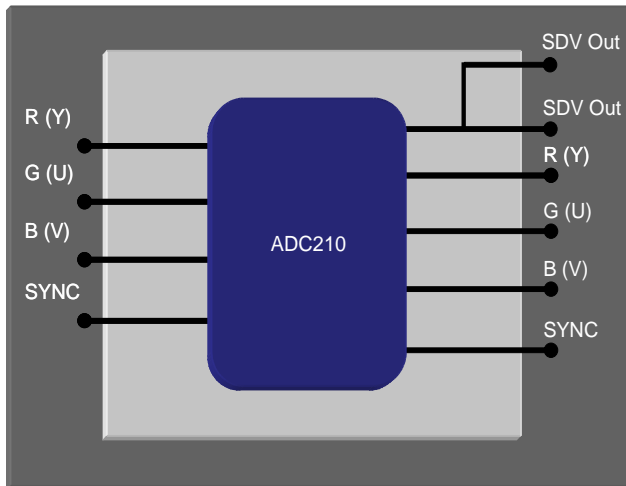
INSERTERS

SWITCHES

CONVERSION

KEYERS

MIXERS



10 bit broadcast quality performance

Optional loop through of input

Internal test signal generator



The ADC210 modules are part of our Series 200 range and are intended for broadcast quality applications. They use high performance 10 bit signal processing circuitry. Their input is switchable between RGB and YUV to allow them to be used with a wide range of sources. They have a separate sync input but can be switched to accept sync on Y (green) channel. There is an optional loop through of analogue inputs and two SDV outputs.

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## Technical Information

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- Inputs:** Analogue Component Video, 1V p-p into 75R with YUVS/RGBS input for standard EBU or Betacam levels.  
PAL (625) or NTSC (525) line standards.  
External sync input, 2V into 75R or extract from Y or green.  
Input Common mode rejection 5 Volts max -56dB at 50 / 60 Hz, -46dB at 15KHz
- Outputs:** 270Mb/s serial digital video to EBU Tech. 3267-E & SMPTE 259M.  
Optional passive loop through analogue video, RGB or YUV and Sync.
- Control:** Select YUV/RGB analogue input.  
Built in Test Signal Generator with split screen view for alignment.  
Automatic or manual select of 625/525 (with provision for setup in 525).  
External sync input or extract from Y or green.  
Horizontal Position Adjustment.
- Specification:** 10 bit conversion. Full Broadcast specification anti-aliasing filters.  
Pass Band Ripple within 0.05dB up to 5.5MHz, 0.1dB up to 5.75MHz  
Frequency Response of Y is within 0.1dB up to 5.5MHz  
Frequency Response of Cb,Cr is within 0.1 up to 2.75MHz  
Differential Phase YUV in <0.04 deg RGB in <0.05 deg  
Differential Gain YUV in <0.03% RGB in <0.05%  
RGB/YUV Matrix Error <1%  
Crosstalk <-54dB 1 lsb at 10 bit  
Noise <-54dB 1 lsb at 10 bit  
Yr-Cr-Cb delay +/-5nS  
Group delay inequality <10nS to 5.5MHz
- Physical:** Eurocard size module for mounting in our 1U or 3U frames.
- Power usage:** 8W
- Frames:** Up to 6 modules will fit in a Microvideo 1U frame and 15 in a 3U frame.
- Ordering:**
- |         |   |
|---------|---|
| ADC210  | A to D for RGB/YUV, 10 bit, full 601 filtering, 1 x SDV output          |
| ADC212  | A to D for RGB/YUV, 10 bit, full 601 filtering, 2 x SDV output          |
| ADC212L | A to D for RGB/YUV, 10 bit, full 601 filtering, 2 x SDV, looped RGB/YUV |
| FR1U-20 | 1U rack mounting frame for series 200 cards (dual PSU)                  |
| FR3U-10 | 3U rack mounting frame for series 200 cards (single PSU)                |
| FR3U-20 | 3U rack mounting frame for series 200 cards (dual PSU)                  |
| -CB     | Control Bus wiring for 3U frame   |

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