

7730ADC, 7730ADC-A4

Component Analog Video to SDI Converter



The 7730ADC line of component analog video to serial digital converters is broadcast quality A to Ds with an extensive list of additional features. High quality analog to digital conversion of audio inputs can be packaged with the video to create an A to D frame synchronizer with audio embedder.

In addition, Evertz® fault monitoring processing will analyze and report video and audio problems via an On-Screen Display, or remotely via VistaLINK® SNMP. The 7730ADC (one slot module) and the 7730ADC-A4 (two slot module) are housed in the 7800FR (15 slots) or in the 7801FR Multiframe (houses four modules).

► Features & Benefits

A to D process

- 10 bit, 54MHz sampling of input video
- Internal processing to maintain 10-bit digital video quality
- Y, Pb, Pr or G, B, R input support
- Black level clamp on all components
- User-adjustable input video processing functions: black level control on all three components, gain control on all three components, inter-channel delay control in 18ns increments
- Sync on green or separate sync input
- 300mV or 4V separate sync support

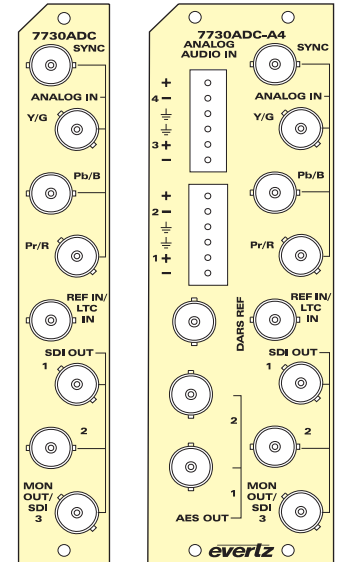
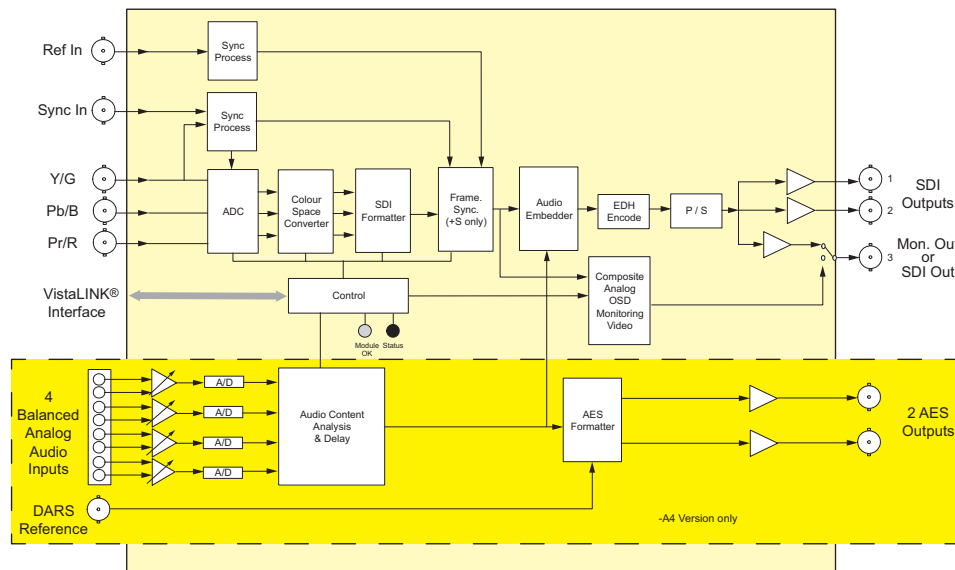
Features of all 7730ADCs are:

- Three input BNCs for YPbPr or RGB input
- One sync input BNC for separate sync
- Two SDI 525 or 625, 270Mb/s component digital video output Without OSD text or audio bar graphs
- One combination output that can either be an extra SDI output or composite analog video output
- When configured as a composite analog output it can either be a clean output (no OSD) or have the OSD text and bar graph graphics for monitoring
- EDH encoding on SDI output
- One combination input BNC that can either be an LTC input or a composite analog reference input (NTSC or PAL-B)
- 75Ω or Hi-Z, jumper configurable input impedance
- One frame video synchronizer (with +S option)
- Infinitely variable output phase (27MHz clock increments)
- Freeze modes: black, freeze, pass
- Menu adjustable free running frequency

- VU/PPM bar graph level Indicators
- Decodes vertical interval time code (VITC) and “burns” the time code into the OSD Monitoring output
- A comprehensive on-screen display is available to configure the various features of the module
- Flexible configuration of the text and audio bar graph information displays
- An extensive list of error conditions can be monitored and fault conditions can be configured from these conditions
- On-screen messages can be triggered by the configured fault conditions
- Fault conditions are reported via VistaLINK® SNMP
- VistaLINK® -capable for remote monitoring and control via SNMP (using VistaLINK® PRO) when installed in 7800FR frame with 7700FC VistaLINK® Frame Controller

Features of -A4 option are:

- Four balanced analog audio inputs on two removable barrier strips
- High impedance inputs (user supplies termination resistors for other impedances)
- Analog audio input levels are adjustable
- Jumpers set coarse input levels, fine input levels are set by software control
- Audio delay equivalent video delay (with +S option)
- Additional audio delay of up to five seconds
- Audio advance of up to one frame less three microseconds
- One group (four channels of audio) is multiplexed on the outgoing digital video
- Two unbalanced AES audio outputs delayed equivalently to the video delay
- 75Ω coaxial (unbalanced) DARS reference input on BNC
- Loss of video modes: pass audio, mute audio



The Complete Solution Provider





► Specifications

Analog Video Input:

Standard: Y, Pb, Pr or G, B, R : SMPTE/EBU N10, Betacam™, MII, and other NTSC related
 Number of Inputs: 1
 Connector: BNC per IEC 61169-8 Annex A
 Signal Level: 1V nominal
 Frequency Lock Range: ±75ppm from nominal
 Input level control range: ±15%
 Black level control range: ±5 IRE
 Input Impedance: 75Ω
 Return Loss: > 30dB to 30MHz

Reference Video Input:

Standard: NTSC (SMPTE ST 170), PAL (ITU624-4)
 Number of Inputs: 1
 Connector: BNC per IEC 61169-8 Annex A
 Signal Level: 1V nominal
 Frequency Lock Range: ±75ppm from nominal
 Input Impedance: 75Ω or High impedance (jumper selectable)
 Return Loss: > 35dB to 10MHz

Analog Video Output:

Standard: NTSC (SMPTE ST 170), PAL (ITU624-4)
 Number of Outputs: 1
 Connector: BNC per IEC 61169-8 Annex A
 Signal Level: 1V nominal
 Output Impedance: 75Ω
 Return Loss: > 35dB to 10MHz

Serial Video Output:

Standard: SMPTE ST 259-C - 525 or 625 line component
 Number of Outputs: 3
 Connector: BNC per IEC 61169-8 Annex A
 Signal Level: 800mV nominal
 DC Offset: 0V ±0.5V
 Rise and Fall Time: 900ps nominal
 Overshoot: < 10% of amplitude
 Return Loss: > 15dB to 270MHz
 Embedded Audio: SMPTE ST 272-A

Video Performance (SDI outputs only):

Inter-channel Delay: < ±9ns
 Minimum Delay: 3ms
 Maximum Delay: 1 frame plus 3ms

Analog Audio Input (-A4 only):

Number of Inputs: 4
 Type: Balanced analog audio
 Connector: Removable terminal strip
 Input Impedance: 20kΩ minimum (differential)
 Sampling Freq: 48kHz
 Signal Level: 0dB FS a 18 or 24dBu (jumper selectable)
 Level Control Range: ±10dB
 Frequency Response: ±0.1dB (20Hz to 20kHz) (broadcast quality)
 SNR: 100dB with input at -0.5dBFS
 THD+N: < 0.001% (> 100dB) @ 20Hz to 20kHz, -0.5dB FS (input video locked to genlock video)
 CMRR: > 100dB @ 1kHz

AES Outputs (-A4 only):

Number of Outputs: 2
 Output Standard: SMPTE 276M, single-ended synchronous AES 48kHz
 Connectors: BNC per IEC 61169-8 Annex A
 Resolution: 24 bits
 Sampling Rate: Synchronous 48kHz
 User Bits: Transferred to output in a non-real-time, non-block-contiguous manner
 Minimum I/O Delay: 2.1ms
 Maximum I/O Delay: 5 seconds

Electrical:

Voltage: +12V DC
 Power: 11W ADC +9W (-A4 option) = 20W total
 Complies with FCC Part 15, Class A
 EU EMC Directive

Physical (number of slots):

350FR, 7700FR-C, 7800FR:
 Non-audio versions: 1
 Audio versions (-A4): 2

Stand Alone Enclosure:

Dimensions: 14" L x 4.5" W x 1.9" H (355mm L x 114mm W x 48mm H)
 Weight: Approx. 1.5lbs (0.7kg)

► Ordering Information

7730ADC	Component Analog Video to SDI Converter
7730ADC-A4	Component Analog Video to SDI Converter with a four-channel Analog Audio Converter/Embedder

Ordering Options Rear Plate must be specified at time of order (Eg: Model +3RU)

+S Optional frame synchronizer

Rear Plate Suffix

+3RU 3RU Rear Plate for use with 350FR, 7700FR-C or 7800FR Multiframe
+SA Standalone Enclosure Rear Plate

Enclosures

350FR 3RU Portable Multiframe which holds up to 7 single slot modules
7700FR-C 3RU Multiframe which holds up to 15 single slot modules
7800FR 3RU Multiframe which holds up to 15 single slot modules
7801FR 1RU Multiframe which holds up to 4 single or 2 dual slot modules
S7701FR Standalone Enclosure