



## XT-CAEM010 Composite Video & Analogue Audio to SDI with Embedded Audio Encoder

The XT-CAEM010 Analogue Audio Embedder converts analogue composite video into serial digital video. In addition two mono analogue channels (or one stereo pair) can be embedded into the serial video data stream via one of four audio groups (see SMPTE 272)

### Power

The XT-CAEM010 is powered from a universal input of 90V to 250V AC. Connection is made via an IEC socket. THE UNIT MUST BE EARTHED THROUGH THE POWER CORD.

### Installation

The XT-CAEM010 is designed for immediate use. The unit will provide a serial video output with embedded audio as soon as a suitable composite video and analogue audio input is applied. Video and audio input/output connections are as shown below:



### Control Functions

Functionality of the XT-Caem010 is controlled via a DIP switch and a rotary switch located at the front of the unit as shown above. Functionality of the DIP switches is as follows:

**Switch 1:** Allows the user to bypass the embedding of audio. In the down position the embedded audio is bypassed. In the up position the embedded audio is present.

**Switch 2:** Allows the user to output a video test pattern. (Luminance ramp) When in the up position, the unit passes normal video through the unit. In the down position the unit outputs a luminance ramp test pattern. Embedded audio is unaffected.

**Switch 3:** Allows the user to embed an audio test pattern. In the up position the analogue audio is embedded. In the down position the audio test tone is embedded.

**Switch 4:** No Function.

**Switch 5:** Allows the user to choose whether to pass VITC video data. In the up position the unit passes VITC data. In the down position the unit blanks VITC data.

The rotary switch is used to select which audio group is embedded into the serial video output. The relationship between the rotary switch position and the embedded audio group is detailed below:

- Switch position 0: Audio embedded into group 1.
- Switch position 1: Audio embedded into group 2.
- Switch position 2: Audio embedded into group 3.
- Switch position 3: Audio embedded into group 4.
- All other switch positions: Audio embedded into group 1.



## Specification

Details of the input and output specifications of the CAEM010 are detailed below.

### INPUT CHARACTERISTICS

#### Video Analogue Inputs

Input Signal:	Analogue composite: PAL or NTSC
Line standard:	625/50 or 525/60 automatically detected
Level:	1.0Vp-p nom. terminated
Input impedance:	75 ohm
Input corrector:	1 x BNC

#### Audio Analogue Inputs

Input signal:	2 balanced mono audio or 1 stereo pair
Connectors:	2 XLR style sockets
Input level for Full Scale:	+18dBu
A to D conversion:	20-bit, 48kHz, sampling locked to video

### OUTPUT CHARACTERISTICS

Output Signal:	10 bit 4:2:2 component 270 Mb/s NRZI serial digital video with audio embedded to SMPTE RP272M-A
Signal amplitude:	800 mV+/- 10%
Output impedance:	75 ohm
Output return loss:	>15 dB, 5 MHz to 270 MHz
Number of outputs/connectors:	3 x BNC

### CONTROLS

User control of VITS/VBI processing and group selection by DIP Switch and Rotary Hexadecimal Switch

### INDICATORS

LED 1 :	Green	PAL/625
	Yellow	NTSC/525
LED 2:	Green	Colour lock
	Red	Colour error

### INSTALLATION DATA

Package:	Standard X-Tool housing, with six 75 ohm BNC signal connectors
Dimensions:	184 x 103 x 42.4 mm
Weight:	950g
Mains Supply:	90 - 250 V AC
Consumption:	<15VA