

## General Description

The DCT 700i Analog Interface is a high quality modular, stand-alone device designed to provide a link from the analog component television environment to that of the DCT digital component environment. The product will convert analog R,G,B or Y, R-Y, B-Y component video signals to CCIR-601 digital component signals at the same time removing any setup level. The corresponding digital to analog conversion will add back any required setup level. The product provides parallel digital input/output as standard. An optional plug-on serial digital interface PWB is available to change any of the parallel inputs or outputs to a serial state.

## Features/Benefits

- Can be an analog to digital or a digital to analog converter, or both, allowing flexible installations
- Up to eight conversion modules fit in a single chassis providing affordable installations
- Converts analog R,G,B or Y, R-Y, B-Y signals to digital CCIR-601 signals, and vice-versa making it usable with Betacam as well as RGB devices
- Provides parallel digital input or output as standard for economical use in isolated islands
- Optional plug-on serial digital interface modules accommodates longer cable runs
- Automatically removes setup level from 525 Betacam input signal
- Automatically adds setup level to 525 Betacam output signal
- Can switch line standard (525/625) saving duplicate capital investment
- Each module locks to its input
- Three rack units in height
- CCIR-656 Component Digital Interface
- Modular, microprocessor-based electronics simplify both design and maintenance
- 350 watt maximum power consumption
- Automatic voltage sensing power supply with power factor correction

- Two times over-sampling
- Uses VLSI filter IC
- Fixed delay, no mis-adjustment possible

## Configuration

### Chassis

The DCT 700i chassis will accommodate up to eight converter modules (in addition to the CPU module). Opening the front door reveals that each module has a small number of configuration switches and indicators as detailed below.

These modules may be either an analog to digital convertor or a digital to analog convertor. Both of these cards have the provision to accommodate a plug-on PWB which, in addition to the standard parallel interconnection, provide serial interconnection to the device. All of the necessary connectors for the full complement of eight convertor modules are supplied on the rear of the chassis as standard requiring only the insertion of the appropriate module or PWB.

### CPU Module

This module is a standard part of every DCT 700i.

### Analog to Digital (A/D) Module

The input to this module is component analog video and the output is parallel digital component video with an option for serial digital component video. In addition, in RGB environments where the G signal has no sync, the PWA can be reconfigured to lock to a separate composite sync.

Controls (located on the card edge):

RGB / YUV / Betacam  
Line Rate (525/625)

Indicators (located on the card edge):

Input Present  
525  
VCO Lock Error  
Serial Unlocked

### Digital to Analog (D/A) Module

The output from this module is component analog video and the input is parallel digital component video with an option for serial digital component video. In addition, in RGB environments where the G signal should not have a sync, the PWA can be reconfigured to provide a separate sync output.

Controls (located on the card edge):

Serial/Parallel  
RGB / YUV / Betacam  
Line Rate (525/625)  
Edge Blanking On/Off

Indicators (located on the card edge):

Serial Input Present  
525  
Selected Video Present

### Serial In Sub-Module

Provides serial digital video input, in addition to parallel, for the D to A module.

### Serial Out Sub-Module

Provides serial digital video output in addition to parallel, for the A to D module.



**AMPEX**  
**DCT™**

## Technical Specifications

### General

Power Requirements	90 to 264 volts, 48 to 63 Hz 300 watts nominal, power factor corrected (with 8 modules installed)
Operating environment	
Temperature	5°C to 40°C
Humidity	10% to 90% noncondensing
Size	17½" W × 5¼"H × 18"D (40.0cm W × 13.3cm H × 44.0cm D)
Weight	33 lbs (15 kg)

### Signal Inputs

Digital Video	CCIR-656 parallel, 25-pin (1) subminiature D (conforms to CCIR-601)  (optional) proposed SMPTE T14.224, 75Ω serial (with active loop-through output)
Analog Video	RGB, Y, Cr, Cb, 75Ω BNC Three 75 Ohm BNC connectors per module

### Signal Outputs

Digital Video	CCIR-656 parallel, 25-pin (1) subminiature D (conforms to CCIR-601)  (optional) proposed SMPTE T14.224, (3) 75Ω serial
Analog Video	RGB, Y, Cr, Cb, 75Ω BNC Three 75 Ohm BNC connectors per module

### Analog Video

Encoding standard	CCIR Rec. 601
Sampling frequency	Y           13.5 MHz Cr, Cb       6.75 MHz
Processing Delay	Approximately 4.5 microseconds

Specifications subject to change without notice or obligation.