TBCPlus Options Product Information

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Description

The TBCPlus 4:2:2 CCIR-601 infinite window time base corrector is loaded with features to increase its performance and flexibility. These additional options expand on that flexibility to offer even more performance and increase the professional applications that the TBCPlus can be used in.

The currently available options are:

- Additional FRAM SIMM that plugs into an existing SIMM socket on the TBCPlus for an extra frame of buffer memory to provide crisper, cleaner video using 4-field correction. It also provides a fast swap buffer when performing a stillstore or using the framebuffer for painting or display.
- Digital Comb Filter module that installs onto the TBCPlus providing true wide-band (5.5MHz) composite video performance for professional quality desktop video signal processing and enhancement.

ITEM	FEATURE	BENEFIT
FRAM SIMM	Adds an additional 1MB of Frame RAM to the TBCPlus.	Enables the use of the Two Frame mode (Live or Frozen) which allows for full 4-field frame captures and outstanding full frame repeating/ dropping correction without interfield artifacts (common with only a single frame of correction window). The Expansion FRAM SIMM can also be used as a swap buffer memory for image processing software to use.
Digital Comb Filter	Digital Filtering of Composite video into SVHS (Y/C) video	Using adaptive multi-dimensional signal processing, the Digital Comb Filter filters the selected composite video (CVBS1 or 2) into digital luminance (Y) and chrominance (C) signals, providing cleaner, crisper digital video.
	Operates in Multi-Standard environments	The Digital Comb Filter can handle both PAL and NTSC video signals to provide international video professionals with the flexibility to handle the two most popular video standards.
	Filters out unwanted artifacts	The Digital Comb Filter greatly reduces the "hanging dots" and "chroma crawl" effects common to composite video and enhances it to Y/C (S-Video) quality performance levels.
	Fully integrated into the TBCPlus environment	The Digital Comb Filter simply plugs into the TBCPlus and the already installed TBCPlus software gives you complete control using the Advanced User Control panel.

Applications

FRAM SIMM

The FRAM SIMM is useful in situations where poor video needs to be time base corrected, and a single frame at a time may not be enough. Likewise, it serves as a fast swap buffer when performing Stillstores or using the TBCPlus as a display device.

Digital Comb Filter

The Digital Comb Filter module is useful in a video production environment when the main source of video input is composite video and the highest level of signal quality and output is required. Some typical users of a Digital Comb Filter equipped TBCPlus include:

- Video Producer (professional or amateur), MultiMedia Professional, or Amiga Video Enthusiast
- Video Toaster User, G-Lock or OpalVision User

FRAM SIMM Technical Specifications

SIMM Size	One full frame (NTSC or PAL/SECAM) of FIFO memory	
Operational Modes	Two Frame mode (Live or Frozen) can be selected when this SIMM is installed. The Two Frame mode allows for full 4-field frame captures and outstanding full frame repeating/dropping correction without interfield artifacts (common with only a single frame of correction window) Effectively doubles the correction window to two frames for professional applications. The Expansion FRAM SIMM can also be used as a swap buffer memory for image processing software (ImageFX) to use.	
Mechanical	72-pin custom GVP SIMM for TBCPlus	
Environmental Information	Operating Temperature	+32°F (0°C) to +120°F (50°C)
	Operating Humidity	10% to 90% Non-Condensing
	Power Requirement	derived from TBCPlus

Digital Comb Filter Technical Specifications

Applicable Video Standards	NTSC-M, NTSC-N, NTSC-4.43 (50/60Hz) PAL-B/G, PAL-M, PAL-N, PAL-4.43 (60Hz) NOTE: The Digital Comb Filter must be in ByPass mode for SECAM input signals.	
Operational Modes	2-Line Comb (Standard NTSC) 4-Line Comb (Standard PAL) BandPass Chroma/LowPass Luma (Standard Y/C Signals) ByPass (Inactive, no filtering) NOTE: For Comb Filter Active modes (NTSC/PAL) the input composite video signal must have a constant phase relationship between the subcarrier and horizontal frequencies in order for the comb filtering function to operate correctly. Video sources that commonly meet this input quality requirement include laser disk players, video cameras, time-base-corrected video sources, remote video feeds, and others. In order for the TBCPlus software to allow the video source to be comb filtered, the sync mode selector must be set to 'TV' more; otherwise the Digital Comb Filter will only operate in BandPass/LowPass and ByPass modes (also applicable to either VTR or TV sync modes).	
Video Performance (-3dB Bandwidth)	5.5MHz in Comb Active (NTSC) Mode 6MHz in Comb Active (PAL) Mode 6MHz in BandPass/LowPass Mode No reduction in ByPass mode NOTE: Luma bandwidth is -50dB down at 13.5MHz	
Environmental Information	Operating Temperature	+32°F (0°C) to +120°F (50°C)
	Operating Humidity	10% to 90% Non-Condensing
	Power Requirement	100mA maximum @ 5VDC — derived from TBCPlus
	Board Type	Mini-Daughterboard, simple plug on board.