

# TB2000-HD Series

## HD/SD Digital Video Frame Synchronizer & Time Base Corrector

TB2000-HD has two models for different users' requirements — SDI x1 or SDI x2.

With SDI x1, the unit is acting as a regular one channel HD/SD-SDI frame synchronizer. With SDI x2, it could be used as two independent channels frame Sync. or a one channel HD dual-link (SMPTE 372M) frame Sync. A broadcasting quality down scaler with continuous anti-aliasing filter is built-in so either model could be configured as down converter.

## Features

- ✔ Supports HD/SD SDI video formats, compatible with single link and dual link (SMPTE 292M, 259M, 372M)
- ✔ Auto timing is 1 frame for dual-link inputs
- ✔ Built-in down scaler with continuous anti-aliasing filter
- ✔ Additional internal digital Alpha key option as the MD800-K model
- ✔ Full Proc Amp control for both video and embedded uncompressed audio
- ✔ Bypass protected for on-air applications
- ✔ Internal 1080p processing architecture allow 1/2 frame drop/repeat
- ✔ Internal sample rate converter for audio could be disabled for non-PCM audio like Dolby® E



# Specifications

Inputs	
<b>Connectors</b>	BNC x 5, Analog, RGBHV or RGB with Sync-on-green, Up to 1920x1200x60Hz

Serial Digital Video Input	
<b>Standard</b>	SMPTE 292M - 1.485Gb/s, 1080i/60/59.94/50, 1080p/24/23.98(sF), 720p/60/59.94/50 SMPTE 372M - 1.285Gb/s, Dual-link, 1080p/60/59.94/50 SMPTE 259M-c 270Mb/s Digital component, 525i/60, 625i/50
<b>Number of Inputs</b>	3 Pairs - Module designed for HD/SD Program, HD/SD Alpha Key and HD/SD Fill (Each pair of BNCs has one for input and one for re-clocking loop-through output.)
<b>Equalization</b>	Automatic 100m @ 1.485Gb/s with Belden 1694, 25m when bypass relay is ON
<b>Impedance</b>	75Ω

Serial Digital Video Output	
<b>Standard</b>	Same as input
<b>Number of Outputs</b>	Up to 4 BNCs - 2 for Program, and 2 for Preview (Optional)
<b>Signal Level</b>	800mV ±10%
<b>DC Offset</b>	0V ± 0.5V
<b>Rise/Fall Time</b>	< 270ps @ 1.485Gb/s, < 800ps @ 270Mb/s
<b>Overshoot</b>	< 10% of amplitude
<b>Alignment Jitter</b>	< 0.2UI at both 1.485Gb/s and 270Mb/s
<b>Timing Jitter</b>	< 0.4UI @ 1.485Gb/s, < 0.2UI @ 270Mb/s
<b>Impedance</b>	75Ω

Gen Lock	
<b>Type</b>	HD Tri - Level Sync, or NTSC/PAL Bi-Level Sync (300mV) or color black (1Vpp)
<b>Connectors</b>	BNC x 2 (One BNC for input, one BNC for passive loop-through output.)
<b>Impedance</b>	75Ω

Electrical & others	
<b>Serial Control</b>	RS-232 or RS-422 selectable, all front panel functions controllable Stand alone remote control unit as the option
<b>Power</b>	100 ~ 240VAC, 50/60Hz, < 80W
<b>Safety &amp; EMI</b>	Complies with FCC Part 15 Class A / UL / CE

All features, specifications, pricing are subject to change without notice.

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