

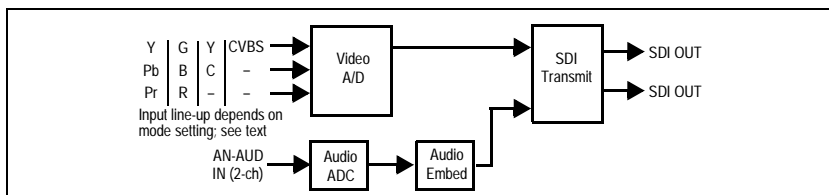
Analog-To-SDI Converter

HD/SD-Analog Video-to-SDI Video with Audio Embedder
BBG-A-TO-S

The **BlueBox™ Analog-To-SDI Converter** (hereinafter “BlueBox™ A-TO-S”) provides a small “throwdown” package that offers HD/SD analog video-to-SDI conversion. Component and composite inputs are supported, with support for NTSC/PAL CVBS, and PAL-M CVBS inputs. The processing provides 12-bit video ADC, and additionally 3D comb filtering for SD inputs. The supported analog input formats are listed below.

- 1920 x 1080i 50/5994/60
- 1920 x 1080psf 2398/24/25/2997/30
- 1920 x 1080p 2997/30
- 1280 x 720p50/5994/60
- 720 x 480i5994 (SD-NTSC)
- 720 x 576i50 (SD-PAL)

Note: BlueBox™ A-TO-S does not perform format cross, up, or down-conversions. Selected video input mode must be set to be compatible with input (e.g., CVBS modes are compatible only with SD CVBS input). The unit receives its DC power from either connecting its USB port to associated equipment, or by the supplied AC adapter.



Connecting BlueBox™ A-TO-S

1. Connect BlueBox™ A-TO-S to DC power using either or both the USB port or the supplied AC adapter. Dual source (simultaneous) use provides power redundancy.

Note: USB connection derives only DC operating power from USB port. This connection does not provide remote control or monitoring.

2. Connect SDI input and analog output. This provides the basic conversion connections. Other connections do not require termination if unused.

Video Input Modes

BlueBox™ A-TO-S provides highly flexible input mode selection using DIP switch positions SW1 thru SW4, offering the modes listed below. Refer to diagram on rear page or unit label for switch positions. All video inputs are differential and isolated from chassis ground. Connector port functions depend on mode selection (see unit label).

HD Modes	SD Modes	
<ul style="list-style-type: none"> • YPbPr • RGB 	<ul style="list-style-type: none"> • YPbPr, SMPTE levels • YPbPr, Betacam™ levels • YPbPr, MII levels 	<ul style="list-style-type: none"> • Y/C (NTSC/PAL and PAL-M) • CVBS (NTSC/PAL and PAL-M)
<p>Note: Selectable NTSC pedestal On/Off for CVBS modes.</p>		

Audio Embedding

BlueBox™ A-TO-S provides selectable enable/disable embedding of a stereo pair on analog audio inputs **AUDIO IN (L/R)** RCA connectors onto SDI embedded channel pair 1/2. Refer to diagram on rear page or unit label for switch positions.

Unbalanced Audio Levels and This Device

The unbalanced “RCA” audio inputs on this device will correspond to 0 dBFS when driven with a 2.2 Vrms input. Consumer audio is specified in dBV with a nominal (or recording) level of -10 dBV. The 2 Vrms maximum input level corresponds to +6 dBV. The unbalanced analog inputs on this device allow for 16 dB of headroom above the nominal -10 dBV consumer level (“headroom” is the range between the maximum and nominal audio levels).

If these inputs are driven by half of a balanced audio source (connections using the + and GND connections to the RCA jack), a **6 dB loss** should be expected. To compensate for this, the upstream gain should be increased by 6 dB where headroom is available.

Status Indicator

BlueBox™ A-TO-S has a **Status** LED on the side of the unit which functions as follows:

- **Solid ON** – Input lock OK.
- **Slow Flash** – Unlocked to input video; input video not present

Specifications

Item	Description/Specification
Standards supported:	SMPTE 259M, 292M
Inputs:	<ul style="list-style-type: none"> - Component YPbPr, Composite Y/C; CVBS, 75Ω BNCs - Analog audio in L/R pair, unbalanced “consumer” level RCA, 6 Vp-p max. - DC Power (+5 VDC via USB or adapter)
Outputs:	- 2x HD/SD-SDI, 75Ω BNCs
Video conversion format:	12-bit ADC; 3D comb filter for SD inputs
Audio conversion format:	48 kHz sampling, 24-bit
Power source:	5-16 VDC, 4.5 W. Power-sourced directly from host equipment USB port. Can also be powered using corded AC adapter (included).
Dimensions (WxHxD):	5.5" x 3" x 1" (including connector projections) (139 x 77 x 26 mm)

Warranty and Service Information

Cobalt Digital Inc. Limited Warranty

This product is warranted to be free from defects in material and workmanship for a period of five (5) years from the date of shipment to the original purchaser, except that 4000, 5000, 6000, 8000, and Blue Box series power supplies, and Dolby® modules (where applicable) are warranted to be free from defects in material and workmanship for a period of one (1) year.

Cobalt Digital Inc.'s ("Cobalt") sole obligation under this warranty shall be limited to, at its option, (i) the repair or (ii) replacement of the product, and the determination of whether a defect is covered under this limited warranty shall be made at the sole discretion of Cobalt.

This limited warranty applies only to the original end-purchaser of the product, and is not assignable or transferable therefrom. This warranty is limited to defects in material and workmanship, and shall not apply to acts of God, accidents, or negligence on behalf of the purchaser, and shall be voided upon the misuse, abuse, alteration, or modification of the product. Only Cobalt authorized factory representatives are authorized to make repairs to the product, and any unauthorized attempt to repair this product shall immediately void the warranty. Please contact Cobalt Technical Support for more information.

To facilitate the resolution of warranty related issues, Cobalt recommends registering the product by completing and returning a product registration form. In the event of a warrantable defect, the purchaser shall notify Cobalt with a description of the problem, and Cobalt shall provide the purchaser with a Return Material Authorization ("RMA"). For return, defective products should be double boxed, and sufficiently protected, in the original packaging, or equivalent, and shipped to the Cobalt Factory Service Center, postage prepaid and insured for the purchase price. The purchaser should include the RMA number, description of the problem encountered, date purchased, name of dealer purchased from, and serial number with the shipment.

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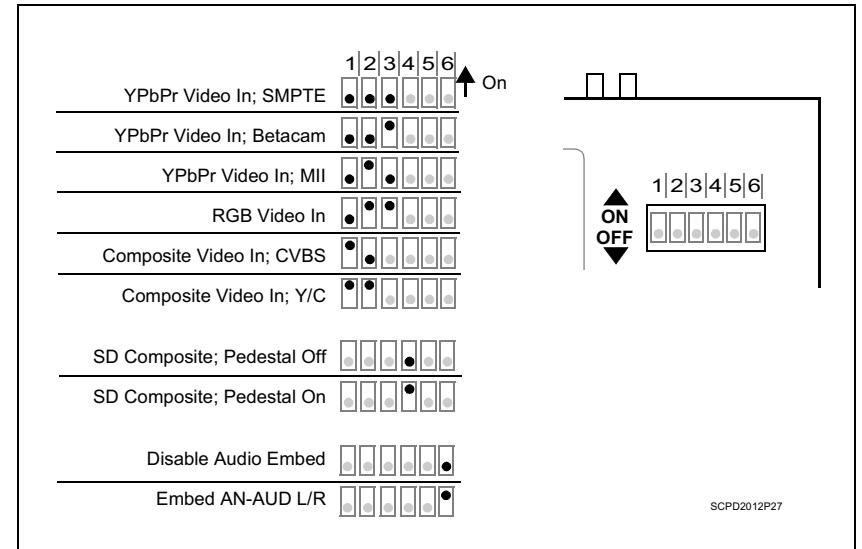
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