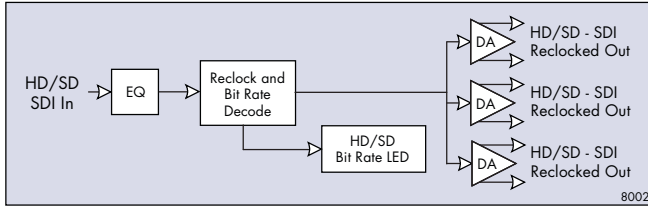


8002

HD/SD Reclocking Distribution Amplifier with Bit-Rate Status



The 8002 is a HD/SD multi-rate distribution amplifier that features HD/SD status LEDs for quick identification of the input bit rate. The 8002 is fully automatic and supports SMPTE 292 and 259M signals. The unit is equipped with one input and six relocked HD/SD-SDI outputs.



8002 Block Diagram

Features

- Six HD/SD equalized and relocked outputs
- Signal type (HD/SD) status display
- Auto standard detect and configuration SMPTE 292/259M
- Five year warranty

* Reclocking on 292 and 259M-C inputs, all other bit rates are non-reclocking

Specifications

Input

1.485 Gbit SMPTE 292 or 143-540 Mbit SMPTE 259M

Output

Six relocked HD/SD-SDI

Return Loss

> 15 dB

Power

5-18 VDC @ 3.5 watts
Requires Power Supply PS11 or PS12

Size

5.5" x 3"x 1" (139x77x26mm)

Ordering Information

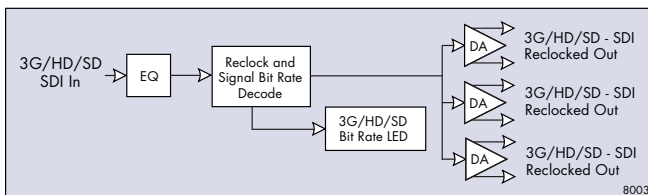
- 8002** HD/SD Dual-Rate Reclocking Distribution Amplifier with Bit Rate and Signal Format
- PS11** Universal Power Supply, UL/CSA, Input: 100-240 60/50 Hz, Output: 5V 1.5A
- PS12** Universal Power Supply, IEC Connector, CE/UL/CSA, Input: 100-240 60/50 Hz, Output: 5V 2A (PS12 International Power Supply. Specify country of destination.)

8003

3G/HD/SD Reclocking Distribution Amplifier with Bit-Rate Status



The 8003 is a HD/SD multi-rate distribution amplifier that features HD/SD status LEDs for quick identification of the input bit rate. The 8003 is fully automatic and supports 424 (3 Gbit), 292 and 259M signals. The unit is equipped with 1 input and 6 relocked* SDI outputs.



8003 Block Diagram

Features

- Six 3G/HD/SD equalized and relocked outputs
- Signal type (3G/HD/SD) status display
- Auto standard detect and configuration SMPTE 424M/292/259M
- Five year warranty

* Reclocking on 424M, 292 and 259M-C inputs, all other bit rates are non-reclocking.

Specifications

Input

SMPTE 424M 3 Gbit
SMPTE 292 1.485 Gbit
SMPTE 259M 143-540 Mbit

Output

6 relocked HD/SD-SDI

Return loss

> 15 dB

Power

5-18 VDC @ 3.5 watts
Requires Power Supply PS11 or PS12

Size

5.5" x 3"x 1" (139x77x26mm)

Ordering Information

- 8003** 3G/HD/SD Reclocking Distribution Amplifier with Bit-Rate Status (Supports SMPTE 424M - 3 Gbit)
- PS11** Universal Power Supply, UL/CSA, Input: 100-240 60/50 Hz, Output: 5V 1.5A
- PS12** Universal Power Supply, IEC Connector, CE/UL/CSA, Input: 100-240 60/50 Hz, Output: 5V 2A (PS12 International Power Supply. Specify country of destination.)



8020

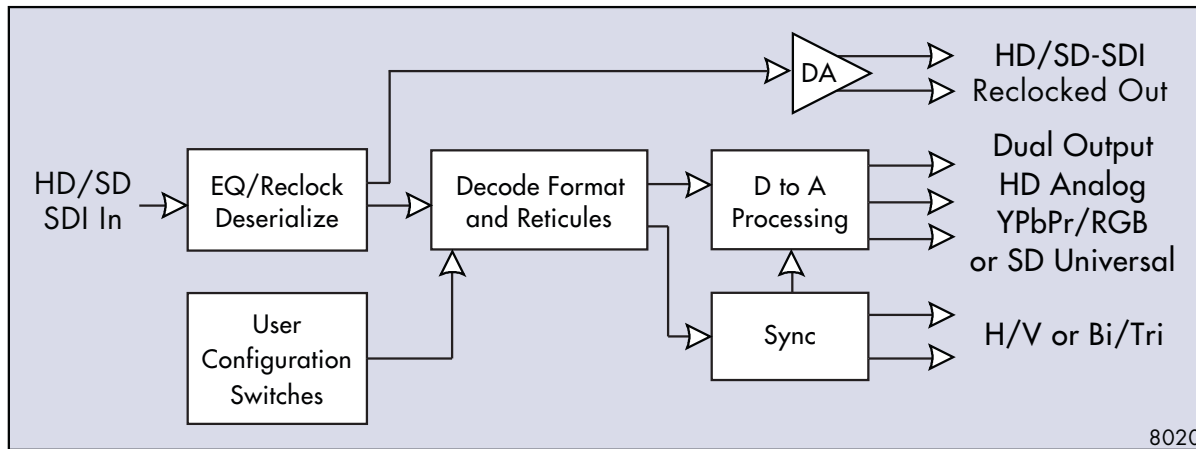
HD/SD Dual-Rate Digital to Analog Dual Output with Reticules



The 8020 is a HD/SD dual-rate digital to analog converter. The 8020 supports SMPTE-292 1080i, 720p and SMPTE 259M-C 525/625 SD signals. HD signals are converted to HD YPbPr or RGB wide band HD analog signals with H/V or embedded tri-level sync. SD signals are converted to SD analog component, composite and Y/C with embedded sync. User programmable overlay reticules are available on both HD and SD outputs. All conversions are 12-bit encoded from 10-bit input video resolution.

Features

- Dual analog outputs allowing dual monitoring
- Auto standard detect and configuration SMPTE 292/259M-C
- Outputs wideband analog YPbPr, RGB
- Four user programmable reticules
- High quality HD15 video outputs connectors with BNC cable adaptors
- Two HD-SDI equalized and relocked outputs
- Full 10-bit video path and 12-bit encoding DACs
- Tri-level, bi-level H/V HD sync
- External user configuration switches
- Adjustable output gain control
- Five year warranty



8020 Block Diagram

Specifications

Input

1.485 Gbit HD-SDI SMPTE 292 compliant
1080i 720p in the following rates:
60/59.94/50 /30/ 29.97/24 /23.98 (p/sf)
720p 50/30/29.97/24/23.98 & SD 525/625

Output

Two equalized and relocked HD-SDI input copies and two analog HD outputs (YPbPr or RGB) or

SD outputs (YPbPr, RGB, composite, Y/C) on HD15 connectors

Frequency Response

Y:30 MHz +/- 0.25 dB, Pb/Pr: 15 MHz +/- 0.25 dB

Overlay Reticules

Four presets types: center cross, 4x3 safe area, 4x3 full aperture, and 16x9 safe area with user programmable size and thickness. Colors: black, white, red, blue or user defined color

Sync Output

HD: tri-level, bi-level, H/V
SD: bi-level

Power

5-18 VDC @ 4 watts
Requires Power Supply PS11 or PS12

Size

5.5" x 3" x 1" (139x77x26mm)

Ordering Information

- 8020** D to A HD/SD Dual-Rate Dual Output 10-bit YPbPr/RGB w/Safe Area Reticules
- PS11** Universal Power Supply, UL/CSA, Input: 100-240 60/50 Hz, Output: 5V 1.5A
- PS12** Universal Power Supply, IEC Connector, CE/UL/CSA, Input: 100-240 60/50 Hz, Output: 5V 2A (PS12 International Power Supply. Specify country of destination.)

8021



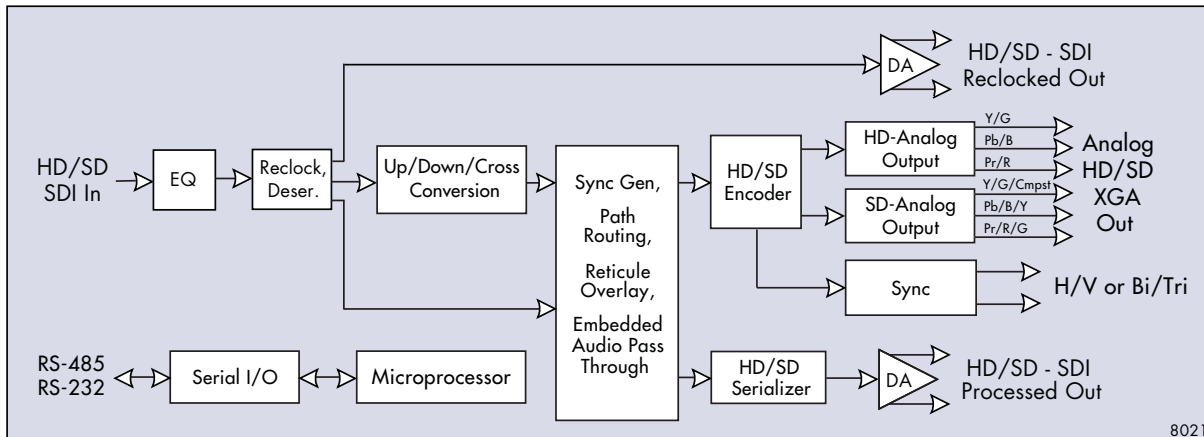
HD/SD Up/Down and Cross Converter with Digital and Analog Outputs



The 8021 is an extremely versatile HD/SD tool. The 8021 accepts dual rate HD/SD SMPTE-292/259M-C digital inputs and can UP or DOWN convert incoming signals and re-aspect to 4x3 or 16x9. In addition, the 8021 can cross convert HD signals between 1080 and 720. Both digital and analog HD/SD and XGA outputs are available. The 8021 can rate convert 24 frame video to 60 frames and move interlace to progressive and back. The unit also has user configurable reticle overlays. The 8021 has full 10-bit video processing with 12-bit analog encoding. The 8021 allows you to pick your monitor or scope, HD or SD (analog or digital) or XGA analog and view HD-SDI or SDI. User setups are by external switch controls or a serial PC interface. The unit can be controlled remotely for monitoring wall applications.

Features

- High quality down and monitoring quality up conversion
- Three outputs: HD/SD digital or analog HD and SD
- Auto standard detect and configuration SMPTE 292/259M-C
- Full aspect ratio conversion (two axis)
- Outputs wideband analog YPbPr, RGB or XGA
- Four user programmable reticules
- PC remote control available
- 3:2 pull-down
- Two dual rate HD/SD relocked input copies
- 10-bit video path and 12-bit analog encoding
- Supports 16 channels of embedded audio in all conversion formats
- Automatic audio delay tracking with user offset
- External configuration switches and remote port
- Adjustable output gain control
- Five year warranty



8021 Block Diagram

Specifications

Input

HD-SDI SMPTE-292 and SD-SDI SMPTE-259M-C

Output

Two relocked HD/SD input copies
 HD: YPbPr, RGB or XGA w/tri/bi or H&V sync
 SD: composite, component and Y/C
 Two up or down converted HD/SD outputs

Frequency Response

HD: Y: 28 MHz +/-0.25 dB, Pb/Pr: 13 MHz +/- 0.25 dB
 SD: 0-5.25 MHz +/- 0.25 dB

Overlay Reticules

Four presets types: center cross, 4x3 safe area, 4x3 full aperture, and 16x9 safe area with user programmable size and thickness.
 Colors: black, white or user defined color.

Proc. Control

Digital control of gain, DC, saturation and hue with user values saved and factory presets

Power

5-18 VDC @ 9 watts
 Requires Power Supply PS24

Size

10.3" x 5.9" x 1" (260x150x25mm)

Ordering Information

8021 10-bit Digital Up/Down/Cross Converter with HD/SD Analog and HD/SD Digital Outputs

PS24 Universal Power Supply, IEC Connector, CE/UL/CSA, Input: 100-240 60/50 Hz, Output: 12V 2.5A

8022

HD/SD Up/Down and Cross Converter with Digital and Analog Outputs

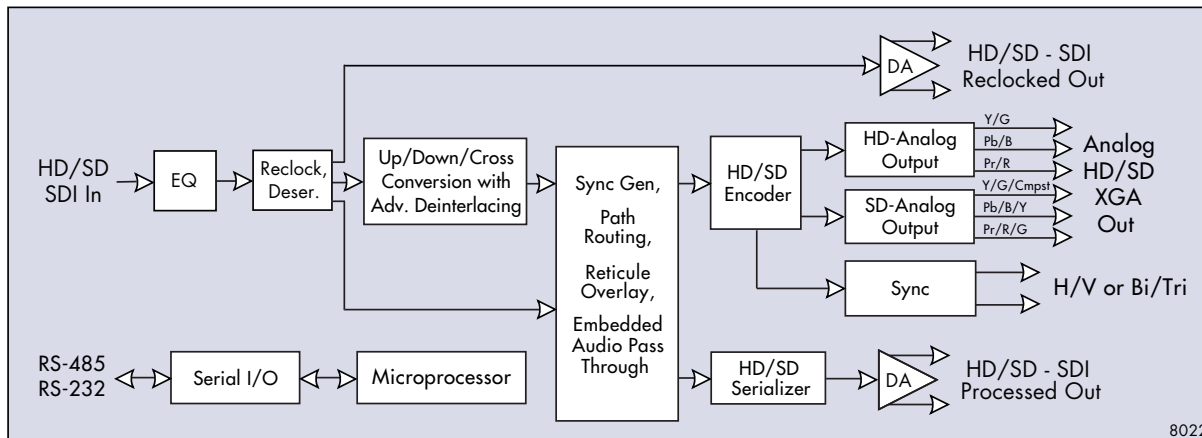


The 8022 is an HD/SD converter featuring advanced 10-bit format conversion. The 8022 accepts HD/SD SMPTE-292/259M SDI and can up or down convert incoming signals and re-aspect to 4x3, 16x9 or user programmable aspect ratios. In addition, the 8022 can cross-convert HD signals between 1080 and 720. Both digital and analog HD/SD and XGA outputs are available. The 8022 can frame-rate convert 24 frame video to 60 frames, move interlaced to progressive, and progressive to interlaced. The unit also has extensive user-configurable reticule overlays.

The 8022 uses 10-bit video processing, advanced de-interlacing and motion adaptation with 12-bit analog encoding. The 8022 includes embedded audio passthrough with delay correction. The unit can be configured via DIP switches or remote controlled.

Features

- High quality up, down and cross format conversion
- Three outputs: HD/SD digital or analog HD and SD
- Auto standard detect and configuration SMPTE 292/259M
- Full aspect ratio conversion and pan controls
- Wideband analog YPbPr, RGB or XGA output
- Four user programmable reticules
- PC remote control available
- 3:2 frame rate and HD standards conversion
- Two dual rate HD/SD relocked input copies
- 10-bit video path and 12-bit analog encoding
- Supports 16 channels of embedded audio in all conversion formats
- Automatic audio delay tracking with user offset
- External configuration switches and remote port
- Adjustable output gain control
- Five year warranty



8022 Block Diagram

Specifications

Input

HD-SDI SMPTE-292 and SD-SDI SMPTE-259M

Output

2 relocked HD/SD input copies
2 up/down/cross converted HD/SD outputs
HD: YPbPr, RGB or XGA w/tri/bi or H&V sync
SD: composite, component and Y/C

Frequency Response

HD: Y: 28 MHz +/- 0.25 dB,
Pb/Pr: 13 MHz +/- 0.25 dB
SD: 0-5.25 MHz +/- 0.25 dB

Sync Output

Bi or tri-level and XGA H/V

Overlay Reticules

4 presets types: center cross, 4x3 safe area, 4x3 full aperture, and 16x9 safe area with user programmable size and thickness.
Colors: black, white, red, blue or user defined color

Proc. Control

Digital control of gain, DC, saturation and hue with user values saved and factory presets

Power

5-18 VDC @ 12 watts
Requires Power Supply PS24

Size

10.3" x 5.9" x 1" (260x150x25mm)

Ordering Information

- 8022** Up/Down/Cross Converter with 8021 features and Advanced Deinterlace with Motion Adaptation
PS24 Universal Power Supply, IEC Connector, CE/UL/CSA, Input: 100-240 60/50 Hz, Output: 12V 2.5A

Sales 800.669.1691 ■ Office 217.344.1243 ■ Fax 217.344.1245 ■ www.cobaltdigital.com

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8024

HD/SD Up/Down and Cross Converter with Digital and Analog Outputs

The 8024 is an HD/SD converter featuring advanced 10-bit format conversion. The 8024 accepts HD/SD SMPTE-292/259M SDI inputs and can up or down convert incoming signals and re-aspect to 4x3, 16x9 or user programmable aspect ratios. In addition, the 8024 can cross-convert HD signals between 1080 and 720. Both digital and analog HD/SD and XGA outputs are available. The 8024 can frame rate convert 24 frame video to 60 frames, move interlaced to progressive, and progressive to interlaced. The unit also has extensive user-configurable reticule overlays. The 8024 uses 10-bit video processing, advanced de-interlacing and motion adaptation with 12-bit analog encoding. The 8024 includes embedded audio passthrough with delay correction. The unit is controlled by the front control switches and LCD screen or is controlled remotely via a PC interface. Options: PC remote control, Anton Bauer™ Gold Mount battery connector, and rack mount kit (holds 2 units).



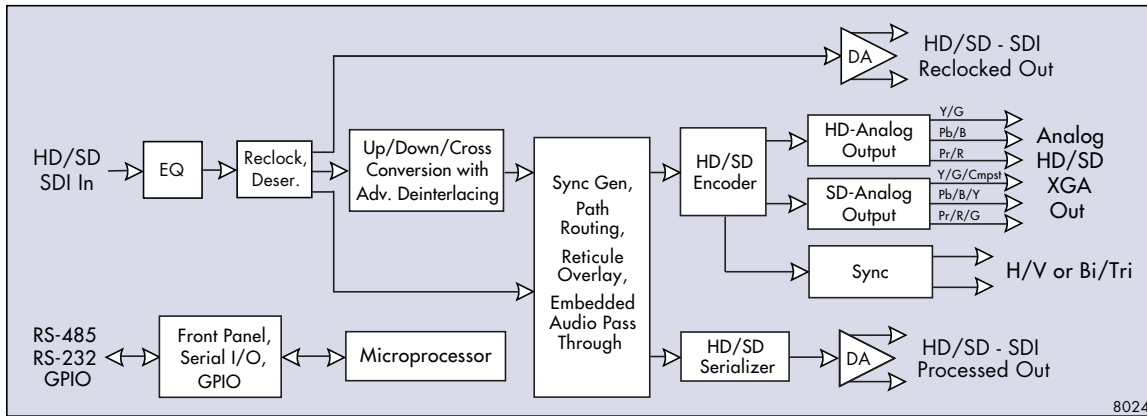
Front View



Rear View

Features

- High quality up, down and cross format conversion
- Single input auto standards detect SMPTE 292/259M
- Two dual rate HD/SD relocked input copies
- Two digital outputs: HD/SD-SDI
- Two analog outputs: HD/SD-YPbPr, RGB or XGA output
- 10-bit video path and 12-bit analog encoding
- Full aspect ratio conversion and pan controls
- Four user programmable reticules
- 3:2 frame rate and HD conversion
- 100 user definable presets
- Supports 16 channels of embedded audio in all conversion formats
- Automatic audio delay tracking with user offset
- PC remote control software provided
- Adjustable output gain control
- Redundant power option
- Five year warranty



8024 Block Diagram

Specifications

Input

HD-SDI SMPTE-292 and SD-SDI SMPTE-259M

Output

2 relocked dual rate HD/SD input copies
 2 up/down/cross converted HD/SD outputs
 HD: YPbPr, RGB or XGA w/tri/bi or H&V sync
 SD: composite, component and Y/C

Frequency Response

HD: Y: 28 MHz +/- 0.25 dB, Pb/Pr: 13 MHz +/- 0.25 dB
 SD: 0-5.25 MHz +/- 0.25 dB

Overlay Reticules

4 presets types: center cross, 4x3 safe area, 4x3 full aperture, and 16x9 safe area with user programmable size and thickness.
 Colors: black, white, red, blue or user defined color

Proc. Control

Digital control of gain, DC, saturation and hue with user values saved and factory presets

Sync Output

Bi or tri-level and XGA H/V

Power

7-18 VDC @ 15 watts
 Requires Power Supply PS24

Size

13.9" x 8.7" x 1.7" (353x221x43mm)

Ordering Information

- 8024** Up/Down/Cross Converter with 8022 and Front Panel Control in a 1RU 1/2 rack width chassis
8024RMK 8024 Dual Chassis Rack Mount Kit
PS24 Universal Power Supply, IEC Connector, CE/UL/CSA, Input: 100-240 60/50 Hz, Output: 12V 2.5A

8090

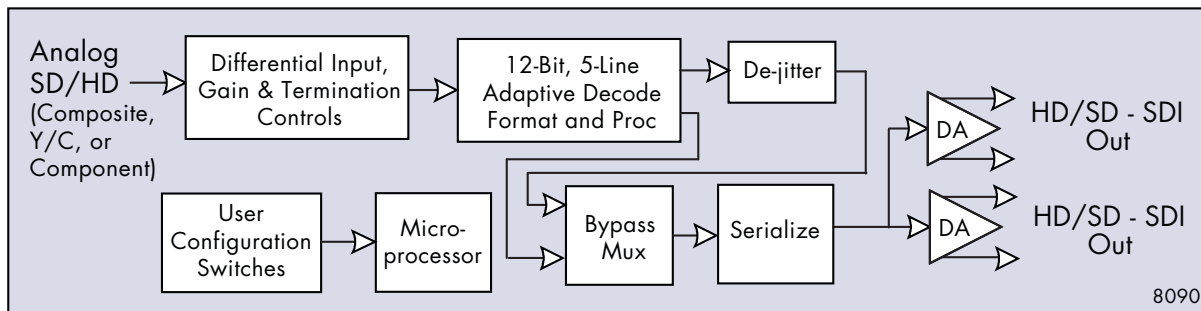


HD/SD 12-bit Analog to Digital Converter with Universal Inputs

The 8090 is a HD/SD universal input 12-bit analog-to-10-bit SDI converter. The 8090 accepts HD component and SD component, composite and Y/C. Differential analog inputs are used for common mode noise rejection. A 5-line adaptive comb or notch filter is used for Y/C separation in composite SD mode. SD inputs are oversampled to 54 MHz and the output circuitry includes a VCXO filter to reduce jitter. The unit offers full user proc control with user memory that provides adjustment of white level, black level, color gain, and color phase.

Features

- Dual rate universal analog inputs with 12-bit A/D
- Four HD/SD-SDI outputs
- Composite, component (YPbPr and RGB) and Y/C inputs
- Supports component BetaCam™, MII™ and SMPTE/N10
- Differential inputs for power hum rejection
- 5-line adaptive comb filter for SD-composite mode
- Internal color bar generator
- External user configuration switches
- Internal user proc. configuration control
- Manual or automatic input gain control
- Five year warranty



8090 Block Diagram

Specifications

Input HD component YPbPr/RGB SD component YPbPr/RGB, Y/C, composite	A/D Process HD: 4:4:4 SD:8:8:8	Proc. Control Digital control of gain, DC, saturation and hue with user values saved and factory presets
Analog Gain Auto or manual mode	Frequency Response HD: Y - 0-25 MHz +/- 0.3 dB Pb/B, Pr/R 0-13.5 MHz +/- 0.3 dB SD 5.2 MHz +/- 0.25 dB	Power 5-18 VDC @ 4 watts Requires Power Supply PS11 or PS12
Output 4 HD/SD-SDI	SNR > 52 dB	Size 5.5" x 3" x 1" (139x77x26mm)
Output Jitter < 0.16 UI measured with color bar input	SD Comb Filter 5-line adaptive	

Ordering Information

- 8090** A to D/Decoder HD/SD Dual-Rate 12-bit with Video Processing Controls and 5-line Comb for SD Inputs
- PS11** Universal Power Supply, UL/CSA, Input: 100-240 60/50 Hz, Output: 5V 1.5A
- PS12** Universal Power Supply, IEC Connector, CE/UL/CSA, Input: 100-240 60/50 Hz, Output: 5V 2A (PS12 International Power Supply. Specify country of destination.)