

# HDC6800+AD

HD Utility Downconverter, Q-SEETM-Compliant



The HDC6800+AD is a reclocking high-definition/standard-definition serial digital video distribution amplifier and utility downconverter with SD-SDI and composite analog outputs for the 6800+™ core processing platform.

The HDC6800+AD can accept HD-SDI component video inputs with embedded audio and ANC data, with auto-detectable/user-selectable input standards.

The main output path provides downconversion to a user-selectable output standard. The HDC6800+AD can convert from HD-SDI 720p and 1080i component video to SD-SDI 525/625 component video. In the conversion process, the audio and ANC data are delayed to ensure synchronization with the output video. Additionally, the HDC6800+AD will provide a secondary path for reclocked HD/SD-SDI signals

## Features

- Auto-sensing HD-SDI or SD-SDI input capability
- Supports HD signals for 1080i/59.94, 1080i/50, 720p/59.94, 720p/50, 1080/23.98PsF
- Four equalized and reclocked outputs of the HD or SD input
- Two SD-SDI Program outputs
- Provides variable ARC with five user presets
- SDI output can add on screen display of graticules and safe area markers overlaid on the video; markers are generated in the output domain
- CEA708 to CEA608 transcoding for closed captioning
- HD to SD color space conversion
- 1080PsF/23.98 to 525/59.94 downconversion with 3:2 pulldown
- CCST™-enabled
- Passes two groups of embedded audio from HD-SDI to SD-SDI
- Two of the outputs can be configured for SD-SDI Program or composite video output with on-screen display

## Specifications

*Specifications and designs are subject to change without notice*

VIDEO INPUT	
Number of Inputs	1
Standard	SMPTE 259M-C (270 Mb/s, 525/625 component video) and SMPTE 292M (1.485, 1.485/1.001 Gb/s)
Connector	BNC (IEC 169-8)
Impedance	75 ohms
Return Loss	>15 dB to 1485
Equalization	885 ft (270 m) Belden 8281 cable at 270 Mb/s; adaptive cable equalization for up to 328 ft (120 m), typical, of Belden 1694A at 1.485 Gb/s

## SDI RE-CLOCKED OUTPUTS

Number of Outputs	4
Standard	SMPTE 259M-C (270 Mb/s, 525/625 component video) and SMPTE 292M (1.485, 1.485/1.001 Gb/s)
Connector	BNC (IEC 169-8)
Impedance	75 ohms
Return Loss	>15 dB to 1.485 GHz
Signal Level	800 mV $\pm$ 10%
DC Offset	0 V $\pm$ 0.5 V
Rise and Fall Time	<270 ps at 1.485 GHz; 400 to 1500 ps (20% to 80%) at 270 MHz
Overshoot	<10% of amplitude (all outputs terminated)
Jitter	<1 UI at 1.485 GHz <0.2 UI at 270 MHz

## SDI PROGRAM OUTPUTS

Number of Outputs	2 + 2
Standard	SMPTE 259M-C (270 Mb/s, 525/625 component video)
Connector	BNC (IEC 169-8)
Impedance	75 ohms
Return Loss	>18 dB 5 to 270 MHz
Signal Level	800 mV $\pm$ 10%
DC Offset	0 V $\pm$ 0.5 V
Rise and Fall Time	<0.75 to 1.5 ns (20% to 80%) at 270 MHz
Overshoot	<10% of amplitude (all outputs terminated)
Jitter	<0.2 UI at 270 MHz

## COMPOSITE ANALOG OUTPUTS

Number of Outputs	Up to 2
Standards	NTSC, PAL-B, PAL-M
Connector	BNC (IEC 169-8)
Impedance	75 ohms
Return Loss	>40 dB to 5.75 MHz
Quantization	10 bits (encoding inputs 8 bits)
Frequency Response	$\pm$ 0.5 dB to 5 MHz
Differential Gain	<1.5%
Differential Phase	<1.2°
DC Offset	0 V $\pm$ 14 mV
Signal to Noise	>54 dB RMS to 5 MHz

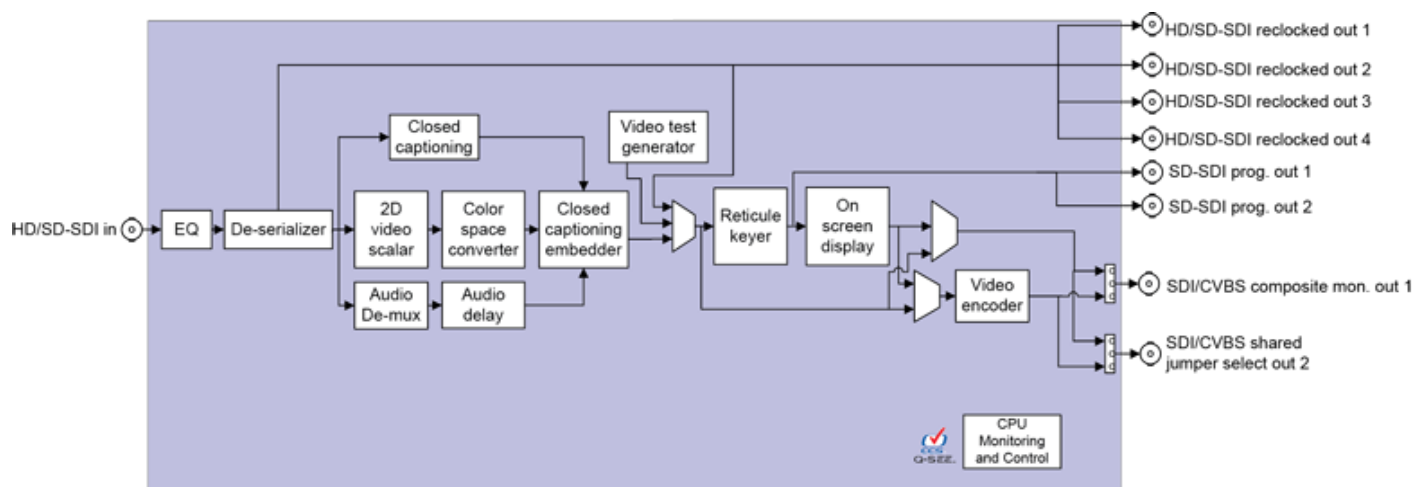
## Ordering Information

HDC6800+AD	Utility-quality downconverter with AES audio passing and composite analog conversion, includes front module and back module, requires 2 available 6800+ frame slots
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## Selenio 6800+™



### Block Diagram



### Back Module

