

HDC-1801 HD Downconverter and DA



The HDC-1801 is an HD downconverter as well as a distribution amplifier. The HDC series cards are dual rate for hybrid HD/SD facilities. The DA section provides up to 4 HD re-clocked outputs, and the HD downconverter supports multiple formats of signals, such as 1080i, 720p, 23.98 psf. All

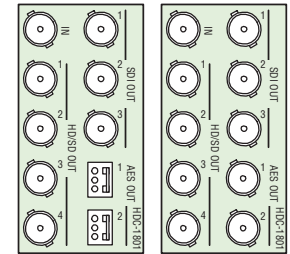
Metadata (TC, CC) and audio (2 groups) are processed in HD and SD. When SD is set at the input, the card offers ARC functionality with five presets. The SDI output can add on screen display of Time Code, input format as well as graticules and markers.

Key Features and Benefits

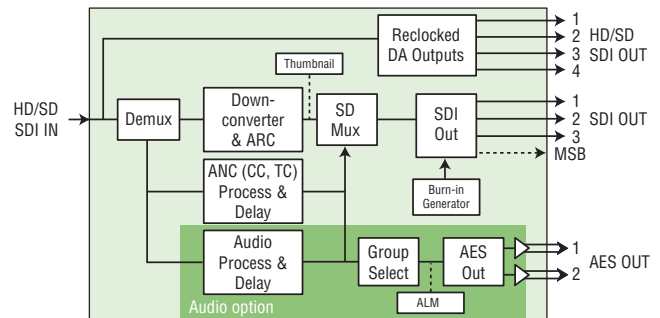
- ⊕ HD/SD dual rate auto-detect input with up to 4 re-clocked outputs
- ⊕ Up to 3 SDI down-converted/ARC outputs
- ⊕ Two AES digital audio outputs
- ⊕ HD 10-bit down-converter processing
- ⊕ SD 10-bit ARC process with 5 presets
- ⊕ Time Code processing and delay
- ⊕ Selectable OSD for input format and SD output Time Code
- ⊕ Selectable Graticules and Markers insertion
- ⊕ Audio de-embedding/embedding of 2 groups in HD to SD (option)
- ⊕ VBI by-pass in SD to SD mode
- ⊕ Thumbnails and audio level meters (ALM) (with audio option)
- ⊕ Signal presence detection and remote reporting
- ⊕ Provides output to Monitoring Switching Bridge option (MSB-1121)



Card streams video thumbnail and ALM via IP



HDC-1801-110-DRP HDC-1801-75-DRP



HDC-1801 Functional Block Diagram

Technical Specifications

INPUT

SIGNAL: SMPTE 292M (1.485, 1.485/1.001 Gbps)
SMPTE 259M (143, 177, 270 and 360 Mbps)

INPUT FORMATS: 1080i 59.94, 50, 23.98psf, 25psf
720p 59.94, 50

CABLE LENGTH:

HD: 110 m (350') for Belden 1694A

SD: 250 m (850')

RETURN LOSS: > 15 dB up to 1.5 GHz

DA OUTPUTS (4)

SIGNAL: SMPTE 292M (1.485, 1.485/1.001 Gbps)
SMPTE 259M (143, 177, 270 and 360 Mbps)

RETURN LOSS: > 15 dB up to 1.5 GHz

ADDED JITTER: < 0.2 UI p-p (wideband)

PROCESSING PERFORMANCE:

SIGNAL PATH: 10 bits

PROCESSING DELAY: < 6 ns

SDI OUTPUTS

SIGNAL (3): SMPTE 259M-C (270 Mbps)

RETURN LOSS: > 15 dB up to 270 MHz

ADDED JITTER: < 0.2 UI p-p (wideband)

DIGITAL AUDIO OUTPUTS

AES3

SIGNAL (2): AES-3

LEVEL: 3.8 Vp-p

IMPEDANCE: 110 Ω

JITTER: 0.008 UI Peak (50Hz to 100 kHz)

AES-3ID

SIGNAL (2): AES-3id (SMPTE 276M)

LEVEL: 1.0 Vp-p

IMPEDANCE: 75 Ω unbalanced

JITTER: 0.008 UI Peak (50Hz to 100 kHz)

DIGITAL VIDEO PROCESSING PERFORMANCE

SIGNAL PATH: 10 bits

PROCESSING DELAY:

HD INPUT TO HD

SDI OUTPUT: < 2μS

HD INPUT TO SD SDI OUTPUTS:

- Frame rate of 59.94Hz 34ms
- Frame rate of 50Hz 41ms
- Frame rate of 23.98Hz 83ms

DIGITAL AUDIO PROCESSING PERFORMANCE

QUANTIZATION: 20-24 bits

GROUPS: 1

SAMPLING: 48 kHz

POWER: 9 W

Ordering Information

HDC-1801 HD Downconverter & Distribution Amplifier

Rear Panels:

HDC-1801-75-DRP Double Rear Connector Panel with Audio Output (75 Ω)

HDC-1801-110-DRP Double Rear Connector Panel with Audio Output (110 Ω)

Options:

HDC-1801-OPT-AUD Optional audio (embed & AES outputs)

HDC-1801-OPT-LS

Housing Frame:

Remote Control:

iControl

iControl Solo

RCP-100

Line Scope Option for HDC-1801

Densité, Densité 2

Remote Control and Monitoring

Stand-alone Remote Control Software

Remote Control Panel

