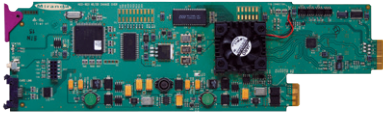
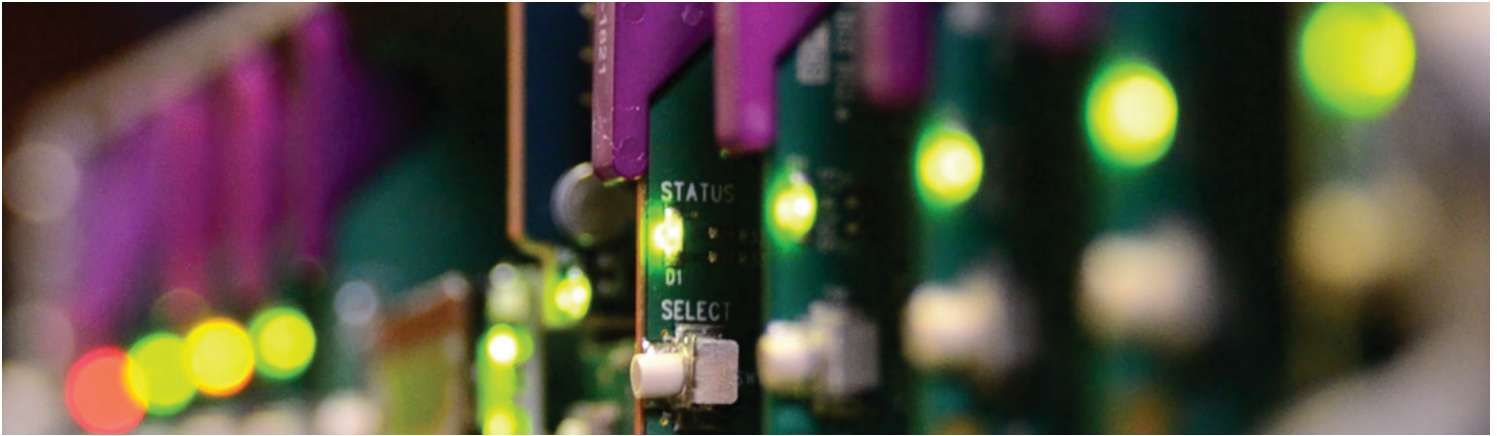


HCO-1822

HD/SD/ASI Change-Over with Clean Switch



Space-saving, modular platform for advanced signal processing.

The HCO-1822 from Grass Valley, a Belden Brand, is a 2x1 HD/SD/ASI change-over which supports 16 channels of embedded audio and metadata.

Change-overs are performed electronically by the HCO-1822's internal router. The module can perform a video and audio "Clean & Silent Switch" between sources using the CS option. In the event of a power failure, the signal is protected by relays fitted on the rear module, maintaining the integrity of the selected signal at the output. Relays are fully controllable via GPI.

Input selection can be performed automatically or manually. In automatic mode, the card will perform input selection based on internal signal analysis with alarm parameters, and the status of the inputs. In manual mode, channel selection can be undertaken from the Densité Controller, the iControl software, or simply by using a GPI. A GPI can be connected to an automation system or any simple GPI control panel. The GPI outputs give status of the selected source allowing tallies to be triggered.

The preview output is user selectable to follow the main program output or any of the video inputs.

The HCO-1822 generates audio/video fingerprints for each of the different inputs. In combination with other cards streaming fingerprints for the same signals, an optional module in iControl can measure and report lip sync errors through the entire chain of a broadcast facility.

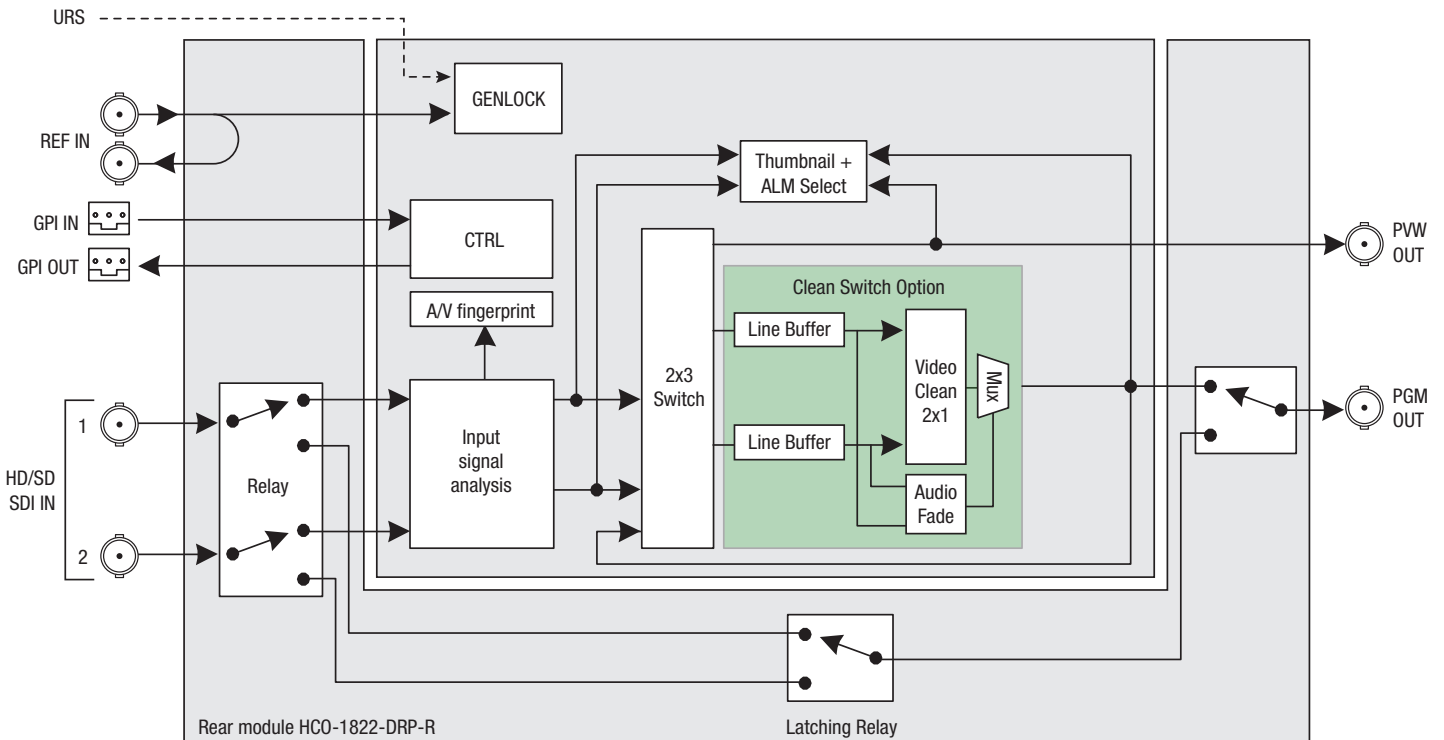
The module provides streaming video and audio level metering so an operator can remotely and effectively monitor the signal path using Grass Valley's iControl facility monitoring and control system.

The HCO-1822 is a 2 RU card that fits a 2-slot rear module. Up to 10 modules can fit in a 2 RU Densité frame.

HCO-1822 HD/SD/ASI Change-Over with Clean Switch

KEY FEATURES

- Two source inputs and two outputs: program and preview
- Supports HD (1080i50/59.94, 720p50/59.94) and SD (525, 625)
- Electronic switching with relay backup (on rear module) maintains selected input with power loss
- Automatic mode using internal signal analysis with alarm parameters
- Manual change-over by local frame controller, iControl, iControl Solo or GPI
- Alarm reporting to iControl facility monitoring and control system
- Preview output selectable to follow PGM OUT or any of video inputs
- Compatible with iControl end-to-end A/V fingerprint analyzer for lip sync error detection and measurement
- GPI I/O (IN 1, IN 2, AUTO, BYPASS)
- Optional clean switch function (video and 16 channels of audio)
- GPI outputs give status of selected source for tallies
- Reference input with passive loop through
- Two line timing window with CS option
- Thumbnail and audio level meter streaming

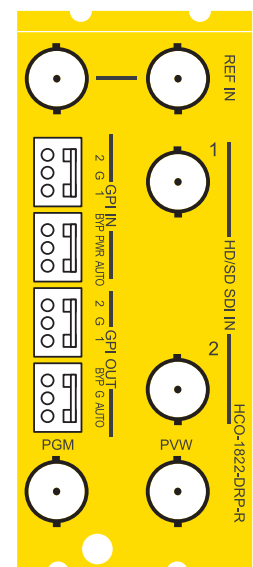


HCO-1822 Functional Block Diagram



Alarm Parameters

Video	HD	SD	ASI
Loss of video	X	X	X
Video error	X	X	
Black detect	X	X	
Freeze detect	X	X	
Video format	X	X	
Audio			
Audio presence (per group)	X	X	
Silence detect (per channel)	X	X	



HCO-1822-DRP-R

HCO-1822 HD/SD/ASI Change-Over with Clean Switch

SPECIFICATIONS

Video Inputs (2)

Signal:

SMPTE ST 259-C (270 Mb/s)
SMPTE ST 292 (1.485, 1.485/1.001 Gb/s)
DVB-ASI, EN50083-9

Supported formats:

SD: 480i59.94, 576i50
HD: SMPTE ST 274: 1080i59.94, 1080i50
HD: SMPTE ST 296: 720p59.94, 720p50

Cable length:

200m (656 ft.) Belden 8281 at 270 Mb/s
90m (295 ft.) Belden 1694A at 1.485 Gb/s

Return loss: >15 dB up to 1.5 GHz

Video Output

SD mode

Signal (2): SMPTE ST 259-C (270 Mb/s)
Supported formats: SD: 480i59.94, 576i50
Return loss: >15 dB up to 270 MHz

HD mode

Signal (2): SMPTE ST 292 (1.485, 1.485/1.001 Gb/s)
Supported formats:
HD: SMPTE ST 274: 1080i59.94, 1080i50
HD: SMPTE ST 296: 720p59.94, 720p50

Return loss:

>15 dB up to 1.0 GHz (PGM out)
>12 dB up to 1.5 GHz (PVW out)

Jitter: <0.2 UI as per SMPTE ST 292

Reference Input

Signal (1):

SMPTE ST 170/SMPTE ST 318/ITU 624-4/
BUT 470-6 or comp. sync
SMPTE ST 274/SMPTE ST 296 tri-level sync

Return loss: >35 dB up to 5.75 MHz

GPI (8)

Connector: Weco, opto isolated

GPI in (4): Used to select input and card's mode of operation

GPI out (4): Used for tallies to gives status of selected input and card's mode of operation

Video Processing Performance

Signal path: 10 bits

Latency:

0.4 ns without CS option
Maximum of 2 lines with CS option

Audio Processing Performance

Quantization: 20-24 bits

Sampling: 48 kHz, synchronous

Number of channels: 16, 4 groups

Audio latency: 1 to 2 ms depending on processing options

Electrical

Power: 8W



ORDERING

Densité 2 frame

HCO-1822
HCO-1822-DRP-R

Options (Software)

HCO-1822-OPT-CS

Remote control

iControl, iControl Solo, RCP-200

Densité 3 frame

HCO-1822-3RU
HCO-1822-DRP-R-3RU

Description

Clean switch option

Description

HD/SD/ASI change-over with clean switch
Double rear connector panel with bypass relays



GVB-1-0383E-EN-DS

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