

HCO-1821

HD/SD/ASI change-over with clean switch



The HCO-1821 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-1821'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 the GPI interface.

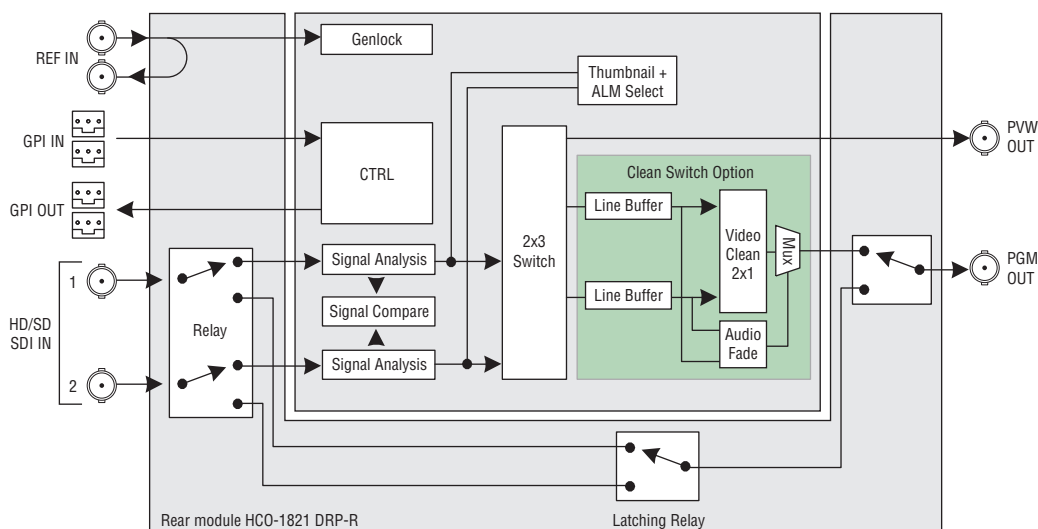
Input selection can be performed automatically or manually. In automatic mode, the card will perform input selection based on internal signal

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

KEY FEATURES AND BENEFITS

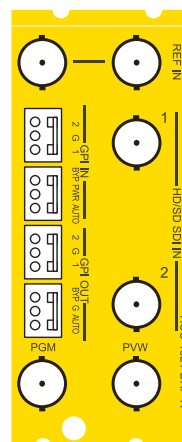
- > Two source inputs and two outputs: program and preview
- > Supports HD (1080i50/59.94, 720p50/59.94), SD (525,625) or ASI input
- > Electronic switching with relay back up (on rear module) maintains selected input with power loss
- > Automatic mode using internal signal analysis with alarm parameters
- > Manual change over by local frame controller, iControl, iControl Solo or GPI
- > Alarm reporting to iControl facility monitoring and control system
- > GPI in & out (IN 1, IN 2, AUTO, BYPASS)
- > Optional clean switch function (video and 16 channels of audio)
- > Reference input with passive loop-through
- > Two line timing window with CS option
- > Thumbnail and audio level meter streaming



HCO-1821 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-1821-DRP-R

TECHNICAL SPECIFICATIONS

VIDEO INPUTS (2)

Signal:	SMPTE-259M-C (270 Mbps) SMPTE-292M (1.485, 1.485/1.001 Gbps) DVB-ASI, EN50083-9
Supported formats:	SD: 480i59.94, 576i50 HD: SMPTE-274M: 1080i59.94, 1080i50 HD: SMPTE-296M: 720p59.94, 720p50
Cable length:	200 m (700') Belden 8281 at 270 Mbps 90 m (300') Belden 1694A at 1.485 Gbps
Return loss:	>15 dB up to 1.5 GHz

VIDEO OUTPUT

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

HD mode

Signal (2):	SMPTE 292M (1.485, 1.485/1.001 Gbps)
Supported formats:	HD: SMPTE 274M: 1080i59.94, 1080i50 HD: SMPTE 296M: 720p59.94, 720p50
Return loss:	>15 dB up to 1.5 GHz (PGM out) >15 dB up to 1.0 GHz >12 dB up to 1.5 GHz (PVW out)
Jitter:	<0.2UI as per SMPTE-292M

REFERENCE INPUT

Signal (1):	SMPTE 170M/SMPTE 318M/ ITU 624-4/ BUT 470-6 or comp. sync SMPTE 274M / SMPTE 296M 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 (optional)

Quantization:	20-24 bits
Sampling:	48 kHz, synchronous
Number of channels:	16, 4 groups

ELECTRICAL

Power:	8 W
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ORDERING INFORMATION

Densité 2 frame

HCO-1821	HD/SD/ASI change over
HCO-1821-DRP-R	Double rear connector panel with bypass relays

Densité 3 frame

HCO-1821-3RU	HD/SD/ASI change over (including 3RU adaptor)
HCO-1821-DRP-R-3RU	Double rear connector panel with bypass relays (including 3RU adaptor)

Options

HCO-1821-OPT-CS	Clean switch option for HCO-1821
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Remote control

iControl, iControl Solo, RCP-200 *

* For full list of supported cards, visit <http://www.miranda.com/RCP-200>