ACO6800+4X2+ICQST

Intelligent 4X2 Clean/Quiet Automatic Changeover

The ACO6800+4X2+ICQST is an intelligent 4X2 Clean/Quiet Automatic Changeover for HD/SD/ASI sources. This product has been added to the ACO6800+ product line, expanding the solution to combine the clean switch functionality from the ACO6800+ISCST module with the 4x2 functionality from the ACO6800+4X2D module, along with some additional features.

This new module is suitable for any application where up to four inputs are required together with a Clean/Quiet switching functionality. It is designed to compete in the higher feature set ACO segment with the added inputs and clean switch capability.

The ACO6800+4X2+ICQST provides Q-SEE-driven 4X1 signal protection with a clean video switch and quiet audio fade between sources. The module also provides frame sync/audio sync capability and switches between redundant signals at the point of ingest, and enables ingest timing into a satellite DTH, mobile TV or IPTV facility.

These intelligent ACO modules allow for the setting of customizable parameters for each level being monitored and perform an automatic switchover when any level changes or disruptions are detected.

Features

- Intelligent 4X2 clean/quiet automatic changeover for HD/SD/ASI sources
- Single ACO, with nine BNC ports (one genlock in, four inputs and four outputs)
- One clean/quiet switch between selected sources
- Relay bypass for primary and secondary inputs
- Additional independent line sync feature before frame synchronizer per channel
- Three configurable switch priority: GPI, Manual and Alarm Switching (ACO)
- Automatically switch between four inputs driving by Q-SEE alarms
- Single or Combination trigger modes for alarm switching
- Selectable switch to test signal generator (TSG) or trouble slide when all four inputs are lost
- Video and Audio processing (Video ProcAmp, Audio Gain Control, Routing, etc...)
- Frame/audio synchronizer
- Frame or external reference input to drive frame synchronization
- Supports Dolby Audio pass-through
- PST (AUX) output configurable as "Follow PGM" or directly routed from all 4 inputs
- Independent Q-SEE alarm sets for four inputs
- Supports for Q-SEE compliant thumbnails

Ordering Information

ACO6800+4X2+ICQST	Single (4x2) Advanced Intelligent Clean Quiet Switching SD/HD/ASI ACO, with QSEE Smart Alarms and Thumbnails. Basic ASI ACO

Specifications

Specifications and designs are subject to change without notice

SD-SDI VIDEO INPUT (270 MB/S)	
Standard	SMPTE 259M-C, 270 Mb/s, 525/625 component
Connector	BNC (IEC 169-8)
Impedance	75 ohms
Return Loss	>15 dB from 5 to 270 MHz
Equalization	Up to 918 ft (280 m) for Belden 8218B

HD-SDI VIDEO INPUT (1.5 GB/S)

Standard (+ICQST/ISCST)	SMPTE 274M: 1080i/59.94, 1080i/50, 1080p/25, 1080p/23.98 SMPTE 296M: 720p/59.94, 720p/50
Connector	BNC (IEC 169-8)
Impedance	75 ohms
Return Loss	>15 dB, typical, from 5 to 1485 MHz
Equalization	<=393 ft (120 m) for Belden 1694A

SD-SDI OUTPUT (270 MB/S)

Standard	SMPTE 259M-C, 270 Mb/s, 525/625 component
Connector	BNC (IEC 169-8)
Impedance	75 ohms
Return Loss	>15 dB, typical, from 5 to 270 MHz
Signal Level	800 mV $\pm$10%
D.C. Offset	0.0 V $\pm$0.5 V
Rise and Fall Time	400 to 1500 ps (20% to 80%)
Overshoot	<10% of amplitude
Jitter	Timing: <0.2 UI pk-pk Alignment: <0.2 UI pk-pk

HD-SDI VIDEO OUTPUT (1.5 GB/S)

Standard	The same as supported input standard
Connector	BNC (IEC 169-8)
Impedance	75 ohms
Return Loss	>15 dB, typical, from 5 to 1485 MHz
Signal Level	800 mV $\pm$10%
D.C. Offset	0.0 V $\pm$0.5 V
Rise and Fall Time	<270 ps (20% to 80%)
Overshoot	<10% of amplitude
Jitter	Timing: <1 UI (673 ps pk-pk) Alignment: <0.2 UI (135 ps pk-pk)

ASI TRANSPORT STREAM INPUT

Number of inputs	2
Standards	DVB-ASI, 270 Mb/s
Connector	BNC per IEC 169-8
Impedance	75 ohsm
Return loss	>15 dB (typical) from 5 to 270 MHz
Signal level	800 mV $\pm$ 10%
D.C. offset	0.0 V $\pm$0.5 V
Rise and fall time	400 to 1500 ps (20% to 80%)
Overshoot	<10% of amplitude
Jitter	<0.2 UI (pk-pk)

ASI TRANSPORT STREAM OUTPUT

Number of Outputs	4 (1 primary relay bypass)
Standards	DVB-ASI, 270 MB/sec
Connector	BNC per IEC 169-8
Impedance	75
Return loss	>15 dB (typical) from 5 to 270 MHz
Signal level	800 mV ±10%
D.C. offset	0.0 V ±0.5 V
Rise and fall time	400 to 1500 ps (20% to 80%)
Overshoot	<10% of amplitude
Jitter	<0.2 UI (pk-pk)

GENLOCK INPUT

Connector	Frame genlock
Return Loss	>40 dB, 0.1 to 6 MHz
Input Level	1 V pk-pk, -5 to +6 dB for NTSC/PAL-B 1 V pk-pk, -3.5 to +6 dB for tri-level sync (1080i/720p)
Signal Type	NTSC/PAL-B analog composite ±300 mV tri-level sync (1080i59.94/1080i50/720p59.94/720p50)
Impedance	75 ohms

GPIO INTERFACES

GPI Inputs	Number 6 Internally pulled high Configurable trigger level
GPO Outputs	Number 6 Configurable trigger level TTL compatible Sink 64 mA, source 32 mA
Connector	Mini mate header

POWER CONSUMPTION

ACO6800+4X2D	<12 W
ACO6800+4X2+ICQST	<14 W
ACO6800+ASID	<12 W
ACO6800+DSD	<12 W
ACO6800+IDSD	<12 W
ACO6800+ISCST	<13 W
ACO6800+ISD	<12 W
Operating Temperature	41° to 113° F (5° to 45° C)
Propagation Delay	1 Frame 59.94 Hz (525, 1080i, 720p); 50 Hz (625, 1080i, 720p); 23.98 Hz (1080p); 25 Hz (1080p)

Images/Diagrams

Selenio 6800+™

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