

7800R2x2-ACS-4K

2x2 Quad-Link UHD, or 8x8 3G-SDI Advanced Clean Bypass Protection Switch, Frame Sync and Delay

The protection switch is a critical part of implementing fault tolerance through redundancy. When done well, the protection switch ensures the integrity of its output video even when faced with a catastrophic error. When video sources arrive on redundant paths, a protection switch chooses the best one as the source for the facility.

The 7800R2x2-ACS-4K is a protection switch that performs this task with excellence. A configurable set of advanced Audio Video Monitoring (AVM) parameters are used to determine an input's validity. The Advanced Clean Switch (ACS) uses this information to choose a valid input video source for the output. This determination is done on each frame and the ACS ensures a change between input sources is not detectable.

These monitoring capabilities include the ability to detect SDI errors. The AVM parameters include frozen picture detection, black picture detection, picture and audio level monitoring as well as Ancillary Data monitoring. Many of these AVM metrics have user-adjustable thresholds and time periods to suit any application.

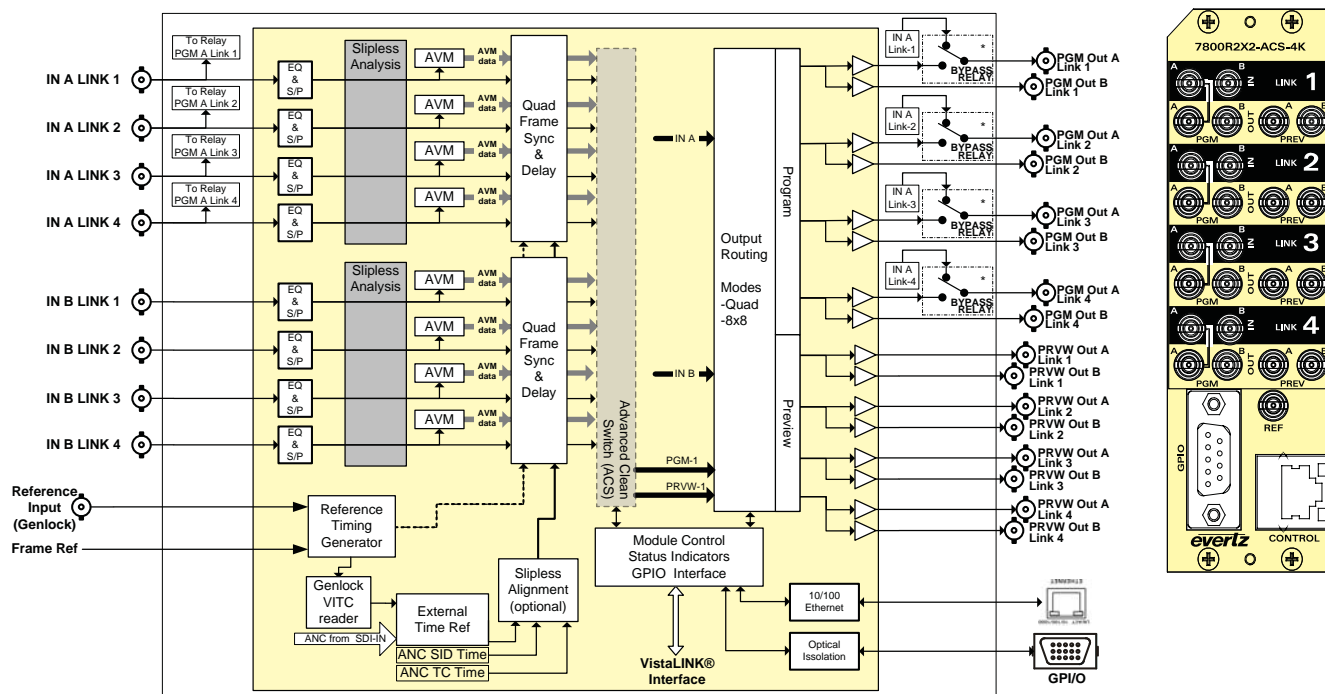
The 7800R2x2-ACS-4K's delay buffers make it possible to completely avoid allowing an error through. The delay for each input is also independent, allowing the video content to be temporally aligned before switching. Once

aligned, a change in the output video source will happen without a temporal "slip" in the content, making the switch visually undetectable. Additionally, Evertz SoftSwitch technology ensures "popless" switching of embedded audio, making the switch audibly undetectable.

In many of today's systems, main and backup paths could go through different networks and communication technologies, and so the skew between signals cannot be assumed to be fixed. The +TCA option enables the module to use the embedded time code information (ATC) to automatically adjust internal delay buffers so that there is no skew between the inputs to the 7800R2x2-ACS-4K's crosspoint. With this powerful feature, all input video signals are both synchronized in phase and aligned in time.

The 7800R2x2-ACS-4K can also pass time-sensitive GPI information across the switch. The GPIs are delayed and aligned to ensure that the GPO state during a particular output frame matches the state of the GPI when that frame arrived at the input.

Advanced features like these allow for the ultimate in protection for important content. When downtime is costly, the 7800R2x2-ACS-4K ensures maximum uptime and uninterrupted delivery of revenue generating content.



* Standard connectors are DIN. HD-BNCs may be ordered with the +HDBNC option

► Features & Benefits

- Support for dual quad-link 3G UHD inputs as main/backup
- Can operate as a single UHD 2x1 switch, dual channel 3G-SDI 4x1 switch or quad channel 3G-SDI 2x1 switch
- Automatic temporal alignment of signals with optional +TCA or +SID options
- Comes standard with bypass relays on all four main inputs
- Support for 2SI and Square Division signal types
- Visually and audibly seamless switching between inputs
- Integral frame synchronizers
- Adjustable input signal delay allows for temporal alignment of input signals and "slipless" switching
- Evertz' advanced Audio & Video Monitoring is provided for thorough signal analysis and switching criteria based on signal and content metrics
- VistaLINK® capable for remote monitoring, control and configuration capabilities via SNMP; using VistaLINK® PRO, CP-2116E or CP-2232E Control Panels. VistaLINK® is available when modules are used with the 7800FR or 7801FR with 7800/7801FC frame controller installed
- Web GUI for remote monitoring, control and configuration capabilities when modules are used with the 7800FR or 7801FR with 7800/7801FC frame controller installed

The Complete Solution Provider



Specifications

Serial Digital Video Input	Serial Digital Video Output	Electrical	Physical
Standard: 270 Mb/s SMPTE 259M 10-bit 4:2:2 (525i/59.94, 625/50) 1.485 Gb/s SMPTE ST 292-1 10-bit 4:2:2 (1080i/60, 1080i/50, 1080p/30, 1080p/30sF, 1080p/25, 1080p/25sF, 1080p/24, 1080p/24sF, 720p/60, 720p/50, 720p/30, 720p/25, 2048x1080p/30, 2048x1080p/30sF, 2048x1080p/25, 2048x1080p/25sF, 2048x1080p/24, 2048x1080p/24sF)* 2.970 Gb/s SMPTE ST 425-1 Level A and Level B — 10-bit 4:2:2 (1080p/60, 1080p/50, 2048x1080p/60, 2048x1080p/50)* Quad-Link 2.970 Gb/s SMPTE ST 425-5 Level A and Level B, 2SI and Square Division — 10-bit 4:2:2 (2160p/60, 2160p/50)*	Standard: 270 Mb/s SMPTE 259M 10-bit 4:2:2 (525i/59.94, 625/50) 1.485 Gb/s SMPTE ST 292-1 10-bit 4:2:2 (1080i/60, 1080i/50, 1080p/30, 1080p/30sF, 1080p/25, 1080p/25sF, 1080p/24, 1080p/24sF, 720p/60, 720p/50, 720p/30, 720p/25, 2048x1080p/30, 2048x1080p/30sF, 2048x1080p/25, 2048x1080p/25sF, 2048x1080p/24, 2048x1080p/24sF)* 2.970 Gb/s SMPTE ST 425-1 Level A and Level B — 10-bit 4:2:2 (1080p/60, 1080p/50, 2048x1080p/60, 2048x1080p/50)* Quad-Link 2.970 Gb/s SMPTE ST 425-5 Level A and Level B, 2SI and Square Division — 10-bit 4:2:2 (2160p/60, 2160p/50)*	Voltage: +12VDC Power: 30 Watts EMI/RFI: Complies with FCC regulations for class A devices Complies with EU EMC directive	Number of slots: 7800FR: 2 7801FR: 2 7700FR: 3 (slot blocker must be installed for proper operation)
* Includes the 1/1.001 rates where applicable Number of Inputs: 8 Connector: DIN 1.0/2.3 or HD-BNC with the +HDBNC option Signal Level: 800mV Nominal Input Equalization: Automatic to 85m @ 2.970 Gb/s with Belden 1694 or equivalent Automatic to 130m @ 1.485 Gb/s with Belden 1694 or equivalent Automatic to 300m @ 270 Mb/s with Belden 1694 or equivalent Return Loss: >15 dB to 1.5 GHz >10 dB to 3.0 GHz	* Includes the 1/1.001 rates where applicable Number of Outputs: 16 Connector: DIN 1.0/2.3 or HD-BNC with the +HDBNC option Signal Level: 800mV Nominal SD Rise/Fall Times: 740ps nominal HD Rise/Fall Times: 200ps nominal Return Loss: >15 dB to 1.5 GHz >10 dB to 3.0 GHz		

Ordering Information

7800R2x2-ACS-4K 8x8 3G-SDI or 2x2 UHD (quad-link 3G) Protection Clean Switch with Advanced Audio/Video

Rear Plate Suffix
+3RU 3RU Rear Plate

Ordering Options

+HDBNC HDBNC coaxial connectors on rear plate
+TCA Temporal auto-alignment of input signals based on embedded timecode
+SID Temporal auto-alignment of input signals based on Source ID

Enclosures

7800FR 3RU Multiframe which holds up to 15 single slot modules
7800FR-QT 3RU Multiframe which holds up to 15 single slot modules, low noise
7801FR 1RU Multiframe which holds up to 4 single slot modules or two dual slot modules