7800R4x8–ACS–3G, 7800R4x8–ACS–HD

3G/HD/SD 4x2, Software Licensable to 4x8, SDI Protection Clean Switch with Advanced Audio/Video Monitoring

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 7800R4x8–ACS–HD/3G 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.

The 7800R4x8–ACS–3G starts out as a 4x2 configuration. The +6OP option unlocks the ability to individually select which input feeds each of eight individual outputs. Two copies of each signal are provided in this case. With a total of 4 inputs, the card can be operated as a single protection switch with quad inputs operating as primary, secondary and tertiary, or as dual 2x1 protection switches.

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.

With the optional +DLY feature, the 7800R4x8–ACS–3G'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.

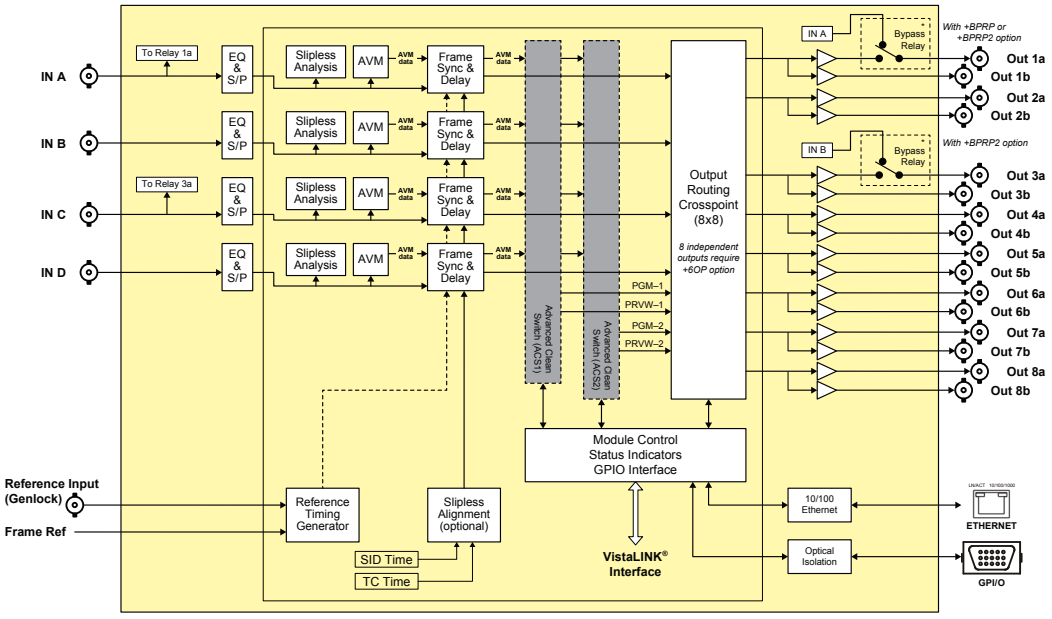
In many of today's systems, main and backup paths could go through different networks and communication technologies, and so the skew between signals cannot be assumed to be fixed. The +TCA option enables the module to use the embedded time code information (ATC) to automatically adjust internal delay buffers so that there is no skew between the inputs to the 7800R4x8–ACS–3G's crosspoint. With this powerful feature, all input video signals are both synchronized in phase and aligned in time.

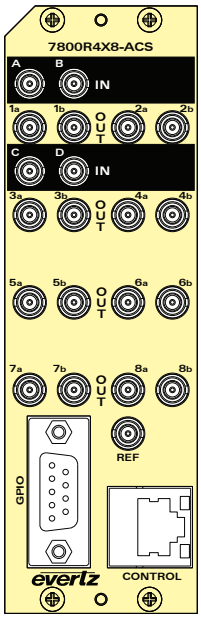
The 7800R4x8–ACS–3G can also pass time–sensitive GPI information across the switch. The GPIs are delayed and aligned to ensure that the GPO state during a particular output frame matches the state of the GPI when that frame arrived at the input.

Advanced features like these allow for the ultimate in protection for important content. When downtime is costly, the 7800R4x8–ACS–3G ensures maximum uptime and uninterrupted delivery of revenue generating content.

Features & Benefits

- Support for SD, HD and 3Gb/s SDI signals
- Visually and audibly seamless switching among inputs
- Integral frame synchronizers
- Can be operated as a single protection switch with quad inputs operating as primary, seconday and tertiary, or as a dual 2x1 protection switches
- Evertz advanced Audio & Video Monitoring is provided for thorough signal analysis and switching criteria based on signal and content metrics
- Optional bypass relay protection: +BPRP provides a single bypass relay, while +BPRP2 provides a dual bypass relay, ideal for use when the product is to be used in dual 2x1 mode
- 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
- Optional manually adjustable delay to temporally align skewed input signals
- Optional input signal auto–alignment using embedded timecode information





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

The Complete Solution Provider

Specifications

Serial Digital Video Input

Standard:	SMPTE ST 424 2.970 Gb/sec (1080p/59.94Hz level A&B) SMPTE ST 292–1 1.485 Gb/s (1080i/59.94Hz, 720p/59.94Hz) SMPTE ST 259–1 270 Mb/s (525i/59.94Hz)
Number of Inputs:	4
Connector:	DIN 1.0/2.3, HDBNC Optional
Input Equalization:	Automatic to 80m @ 2.970 Gb/s with Belden 1694 or equivalent Automatic to 100m @ 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

Serial Digital Video Output

Standard:	SMPTE ST 424 2.970 Gb/sec (1080p/59.94Hz level A&B) SMPTE ST 292–1 1.485 Gb/s (1080i/59.94Hz, 720p/59.94Hz) SMPTE ST 259–1 270 Mb/s (525i/59.94Hz)
Number of Outputs:	8
Connector:	DIN 1.0/2.3, HDBNC optional
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

Electrical

Voltage:	+12VDC
Power:	<30 Watts
EMI/RFI:	Complies with FCC regulations for class A devices Complies with EU EMC directive

Physical

Number of slots 7800/7801FR Frame: 2

Ordering Information

7800R4x8–ACS–3G	3G/HD/SD Protection Clean Switch with Advanced Audio/Video Monitoring
7800R4x8–ACS–HD	HD/SD Protection Clean Switch with Advanced Audio/Video Monitoring

Ordering Options

+BPRP	Single bypass relay
+BPRP2	Dual bypass relays
+DLY	Manually adjustable per–port input delay
+TCA	Temporal auto–alignment of input signals based on embedded timecode
+SID	Temporal auto–alignment of input sugnals based on embedded source
+6OP	Upgrade from 4x2 to 4x8 switch configuration
+HDBNC HDBNC	Coaxial connectors on rear plate

Rear Plate Suffix

+3RU	3RU Rear Plate

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