

HD Protection Switch

The 7450 module is a fail-safe, bypass protection switch for critical digital paths for broadcast or satellite applications. When a fault is detected in the primary input, and the secondary input is verified as good, the switch will activate, causing the secondary input to be switched to the module's output. The 7450 includes a passive, fail-safe path that ensures there is an output even in the event of a total power failure.

The 7450 supports HD SDI signals. Different types of signal testing (vetting) can be enabled on the 7450 and it will apply the tests automatically and independently for the Primary and Secondary inputs.

The health of a high definition video signal is determined by monitoring crucial parameters in order of increasing complexity; Timing Reference Signal (TRS), or a persistent loss of digital sync is tested first. Black, Embedded Audio and Freeze are also evaluated. Each test can be configured by the user. For example, the sophisticated Black Detector includes configurable parameters for black level threshold, pixel count, and duration time.

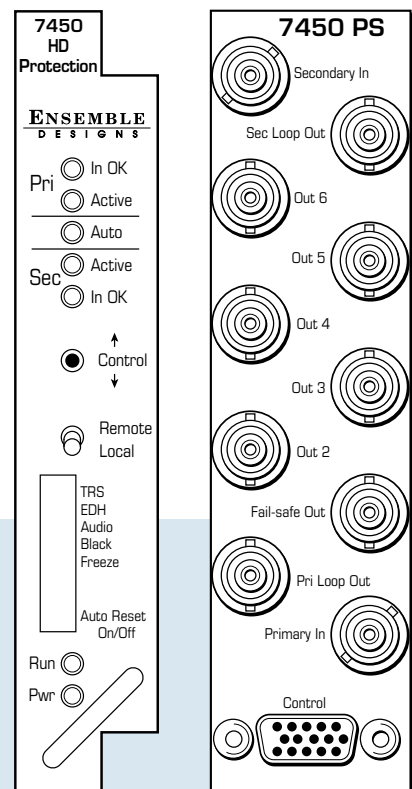
The Freeze detection system can be set to detect a clean or noisy source. Freeze Time sets the number of seconds for the 7450 to switch to the secondary input after a video freeze condition is detected in the primary input.

The switch can operate in two modes: automatic or non-resetting. In fully automatic mode, the 7450 will automatically switch back to the primary signal once it's been restored. In the non-resetting mode, the secondary input remains routed to the output, even after the primary input has recovered.

Controls are easily accessed through an Avenue Control Panel, Avenue PC software, GPIs, or front edge module controls. GPI inputs allow faults detected in upstream equipment to contribute to the switching logic.

Features

- » Fail-safe Bypass Protection Switch for Critical Signal Paths
- » Use with HD SDI signals
- » Detects Closed Caption Data, TRS, Black, Silence, Freeze
- » Detection specifics are user programmable
- » Passes embedded audio
- » Alarm generation
- » Remote control and monitoring



Serial Digital Input
Number Type Two
 HD Serial Digital 1.485 Gb/s
 SMPTE 274M, 292M or 296M

Max Cable Length 100 Meters
 Belden 1694A

Automatic Cable Input Equalization

HD Standards Supported:
 1080i (SMPTE 274M -4, 5, 6) 50, 59.94 or 60 Hz
 720p (SMPTE 296M -1, 2, 3) 59.94 or 60 Hz
 1080p (SMPTE 274M -9, 10, 11) 23.98, 24, 25 Hz
 1080sF (RP211 -14, 15, 16) 23.98, 24, 25 Hz

Serial Digital Loopback
Number Two total
 One primary
 One secondary

Impedance 75 Ω

Serial Output Signal
Number Six total
 One Fail-safe bypass output
 Five DA outputs
 HD Serial Digital
 Follows input

Signal Type HD Serial Digital

Impedance 75 Ω

General Specifications
Power Consumption <7.0 watts
Temperature Range 0 to 40° C ambient
 (all specs met)
Relative Humidity 0 to 95% noncondensing
Altitude 0 to 10,000 ft.
Fusing 4 each 0.75 Amp PTC
 resettable fuse with
 each domain of the module
 independently regulated.

