



The **AI-VSW-SS12 VME Bus Video Cross-Point Switch** is a VMEbus form-factor compliant 12-channel-input to 12-channel-output video cross-point switch. The AI-VSW-SS12 Video Cross-Point Switch enables the connection of any of 12 video input channels to any of 12 video output ports through a 12 by 12 cross-point switch. The operation of the cross-point switch is through a micro-controller which provides all of the operational functions of the system. An EEPROM is used to provide non-volatile storage of cross-point configuration information which is used to restore the operational state of the system at power-on.

Features:

- > 12 Video Channels Input
- > 75-ohm Input Impedance
- > 12 Channels Output,
Will Drive Two 75-ohm Loads
- > Intelligent Micro-Controller Interface
- > VMEbus Slave Interface,
Two Locations in Short I/O Space
- > Non-volatile EEPROM Storage of
Default Start-up Configuration
- > Manual Front-Panel Switch Operation
- > 6U Euro-Card Format
- > Back-up Operation Using
+12Volt Standby Power Supply

With no power from the VMEbus, the AI-VSW-SS12 Video Cross-Point Switch can be operated in manual mode with +12 volt standby power supplied in the P2 user pins. The board is isolated from all VMEbus power and signal line in this mode. A manual user-interface provides remote front-panel operation of the AI-VSW-SS12 Video Cross-Point Switch. This interface consists of two 16-position thumbwheel switches, a momentary pushbutton switch, a green LED and a red LED.

Specifications:

Video Interface:

Input Buffers Characteristics:

- > 75-ohm Input Impedance
- > High Common-Mode Rejection
- > High Power Supply Rejection
- > Gain Product Bandwidth: 60 Mhz

Cross-Point Switch:

The cross-point switch is made up of an array of 12-each 16-input CMOS analog switches providing -72 dB isolation between channels.

Output Buffer:

- > Bandwidth: 180 Mhz
- > Differential Phase: 0.01°
- > Differential Gain: 0.03%
- > Non-Linearity: 0.1%
- > Output Impedance: 0.01 Ohm
- > Output Drive: +/- 2.25V into 36 Ohms
- > All video outputs will tolerate a continuous short to ground.

Environment:

- > Operating Temp.: -10° C to +60° C
- > Maximum Operating Humidity: 90%
- > Maximum Altitude: 10,000 feet
- > Shock and Vibration: 30 G's, 1/2 sinewave of 11 milliseconds duration each axis. 0.025 inch peak-to-peak, 10 Hz to 55 Hz to 10 Hz, in one minute cycle, one axis.

Distortion:

- > Total Distortion: < 1%

Video Gain:

- > Gain From Any Video Input to Any Video Output: 1 +/- 0.5%

Bandwidth:

- > At rated Distortion and Gain: 15 Mhz

Crosstalk:

- > Between Any Two Channels: < 60 dB

CMRR:

- > Common-Mode Rejection: < 80 dB

VMEbus Interface:

A VMEbus Slave addressed in Short I/O Space (AM code XX). The Slave Address Range includes two consecutive addresses which are selected with dip switches.

Power Supply:

- > +5 Volts DC @ 1.8 amps
- > Power filtering and decoupling techniques allow the AI-VSW-SS12 Video Cross-Point Switch to be immune to back-plane power regulation and noise.



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