Datasheet

SPLICEX-80 | 4K 30 Seamless Multi-Screen Splicing VIdeo wall Controller 12SLT



Key features

- FPGA Hardware Architecture – OS-free, ultra-stable, <10s startup.
- Matrix & Multi-Layer Support – Single source, multiple windows; 8 layers per card.
- Custom Scenes – 128 user-defined scenes, one-key quick recall.
- Group Display Management – Up to 4 display groups, flexible layouts, seamless signal sharing.
- Pre-Operation Mode – Preview changes before applying to avoid errors.
- Third-Party Control – Custom protocol compatibility and secondary development support.
- Fast & Seamless Switching – Scene call, screen cropping, black border removal.
- Audio Decoding & Embedding – Embedded audio input/output with independent channel support.
- Cross-Platform Web Control – Compatible with Windows, Linux, iOS, Android.

Product Overview

The Macsys SPLICEX-80 is a high-performance video wall controller designed to deliver ultra-stable, seamless multi-screen displays for professional and mission-critical applications. Built on a pure hardware FPGA array backplane architecture, this controller eliminates the need for an operating system, ensuring fast startup in under 10 seconds, continuous 24/7 operation, and complete immunity to crashes or black screen interruptions.

Supporting up to 32 combined display screens with flexible splicing modes and multiple display groups, the SPLICEX-80 provides unmatched visual management and operational efficiency. Its matrix switching capabilities allow a single signal to be displayed across multiple windows simultaneously, while advanced multi-layer and multi-window support enables up to 8 layers per card for complex content layouts.

The controller also supports 128 custom user-defined scenes with one-key quick recall, pre-operation mode to preview all changes before applying, and group management for up to 4 display walls with different resolutions and splicing layouts. Additionally, it offers audio decoding and embedding, independent audio output, and seamless integration with third-party devices through custom protocol support and secondary development interfaces.

With cross-platform web control compatible with Windows, Linux, iOS, Android, Kirin, and Hongmeng systems, the SPLICEX-80 ensures flexible, remote, and user-friendly management. This makes it an ideal solution for security monitoring, command and control centers, exhibitions, video conferencing, commercial displays, and government or military applications, delivering a reliable, high-quality 4K display experience every time.

Technical Specification

Feature	Details
Hardware Architecture	Pure hardware FPGA array backplane computing and switching, CrossPoint digital multi-bus routing technology, no operating system required
Startup	<10 seconds, fast boot, highly stable, crash-free operation
Input Channels	16-way inputs
Output Channels	32-way outputs
Maximum Splicing Capacity	Up to 32 display screens combined display
Maximum Layers/Windows	Single card: 4 ports / 8 windows (up to 8 layers on a single screen)
Resolution	Maximum support 4K @ 30Hz (backward compatible)
Master Control	1 × 10/100M Ethernet port input, 1 × RS232 input, 1 × RS232 output, 1 × 3.5mm headphone port
Single Port Load	Total bandwidth 210W; max width 2048, max height 1920
Web Control	Supported, standard cross-platform control (Windows, Linux, Android, iOS)
Loop Out Control	Yes
Audio Function	Embedded audio input/output, independent audio output support
Matrix Switching	Integrated matrix functionality, supports opening multiple windows from a single source
Custom User Scenes	128 user-defined scenes, one-key scene recall, quick switching supported
Group Management	Supports management of 4 display wall groups with independent resolution/splicing layouts; signal sharing between groups
Pre-Operation Mode	Operation changes are applied only after confirmation, reducing live interruptions
Custom Protocol Control	Supported, secondary development, custom protocol, third-party serial device control
Fast & Seamless Switching	Scene call, screen cropping, black border removal
Scene & Control Functions	Fast seamless switching, scene recall, hierarchical partition management, window cropping, black border removal
Cross-Platform Control	Windows, Linux, iOS, Android
Reliability	24/7 continuous operation, stable under high-demand environments

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Feature	Details
Software Customization	Supports customizing logo and software name; includes automatic device patrol function
Chassis Specification	2.5U, 19-inch standard rack-mount chassis
Certifications	CE, RoHS compliance

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