Datasheet

VWP-SP-LE50 | 4K LED Multi View Video Wall Controller with Seamless Splicing and Multiple Video Signals Support 8 SLT



Key features

- Pure hardware FPGA architecture for high stability, rapid startup, and crash-free operation
- Supports large-scale sources: up to 144 inputs and 144 outputs with 224 total channels
- Wide compatibility with multiple signal types, including 4K HDMI, DP, SDI, HDBaseT, IP streaming
- Real-time seamless switching with zero delay, no black/blue screen transitions
- Multi-window display with 128 customizable user scenarios and one-key quick switching
- Modular, hot-swappable input/output cards for easy scalability and maintenance
- True 60Hz RGB444 lossless processing ensuring perfect color and image fidelity
- Comprehensive control via App Presenter software supporting iOS, Android, PC interfaces
- Advanced image processing: black edge removal, masking, area enlargement, cropping
- Flexible industrial chassis design with wide power and environmental operating ranges

Product Overview

The Macsys VWP-SP-LE50 is an exceptionally powerful 4K LED multiview videowall controller designed for seamless splicing and versatile multi-signal display applications. Built entirely on a pure hardware FPGA architecture, the controller delivers unparalleled reliability and ultra-fast startup without requiring an operating system, eliminating common system crashes and display interruptions. It supports up to 144 input sources and 144 output channels with a total of 224 video channels, making it ideal for large-scale LED walls, control rooms, exhibition halls, and auditoriums.

This controller effortlessly handles a wide array of video sources, including VGA, DVI, HDMI, SDI, HDBaseT, 4K Display Port, IP streams, and more, accommodating ultra-high and custom resolutions. Real-time image processing capabilities like black edge removal, edge masking, and area enlargement offer precise image customization. The device supports multi-window displays with flexible layouts and up to 128 user-defined scenarios, allowing quick switching and optimized content management.

Advanced matrix switching and seamless switching technology guarantee flicker-free, delay-free outputs, ensuring a smooth visual experience with true 60Hz RGB444 processing to preserve absolute color fidelity and image clarity. The modular design with hot-swappable input/output cards enables easy maintenance and scalability. Comprehensive software support through the dedicated App Presenter system allows intuitive control from PCs, tablets, and smartphones, enhancing operational efficiency across diverse environments.

Designed with robust industrial chassis options and wide environmental tolerance (-10°C to 60°C, 10–90% humidity), the Macsys VWP-SP-LE50 delivers exceptional performance, reliability, and versatility for professional videowall solutions.

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Technical Specification

Feature	Details
Product	4K LED Multiview Videowall Controller with Seamless Splicing, Multi-Video Signal, 8 SLT
Chassis Type	Industrial modular plug-in chassis; supports expansion and easy maintenance
Input Signal (Optional)	VGA, DVI, HDMI, SDI, 4K-HDMI, Dual-Link DVI, 4K-DP, DP, LC, IP, IP-4K, HDBaseT, CVBS, YPbPr, audio
Input Resolution	XGA, SXGA, UXGA, WUXGA, 1080p, 4K×2K, custom ultra-high & Dual-Link DVI resolutions
Output Signal	HDMI, VGA, DVI, HDBaseT, LC, 4K HD, CVBS, AV, SDI, audio
Output Resolution	Up to 3840×2160 @ 60 Hz; supports 1920×1080, 1366×768, 1280×720, 1024×768, and custom (W≤2048, H≤1920)
Window / Layer	Arbitrary windowing; per card: 8×2K or 2×4K layers; up to 8×2K per screen
Matrix / Splicing	Matrix switching, multi-window, multi-layout; 128 user scenarios; quick recall
Signal Switching	True seamless, zero delay, no black/blue screen; RGB 4:4:4 lossless; 60 Hz I/O
Image Processing	Real-time cropping, edge masking, zoom, overlay, roaming, output mapping
Signal Monitoring	Real-time per-port status; hardware & software indicators
Group Management	Controls up to 4 wall groups; supports signal sharing and multiple layouts
System Control Software	Dedicated control software (iOS/Android support)
Ethernet Control Interface	RJ-45, TCP/IP protocol, Adaptive 10M/100M, full/half duplex
Serial Control Interface	RS-232, 9-pin D-type, Baud Rate 115200
Expansion	Modular cards for quick maintenance and upgrades
Power Supply	100–240 VAC, 50/60 Hz
Power Consumption	12W per channel
Operating Temperature	-10°C ~ +60°C
Humidity	10 %–90 % RH (non-condensing)
Startup Time	< 10 s
Chassis Specifications	2U standard industrial chassis
Size	483×300×119 mm (2.5U)
Certifications	CE, RoHS compliance

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