Datasheet

# VWP-SP-LE400 | 4K LED Multi View Video Wall Controller with Seamless Splicing and Multiple Video Signals Support 36 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-LE400 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 DisplayPort, 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-LE400 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, 36 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 | 16U standard industrial chassis |
| Size | 483x405x445 mm (10U) |
| Certifications | CE, RoHS compliance |



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