Datasheet

AVNEX-16MS | UHD HDMI AV Over IP Matrix Switcher 16 Slots





Key features

- 16-Channel Modular Design: Flexible input/output configuration with independent plug-and-play cards.
- 4K UHD Resolution: Seamless HDMI switching up to 4K@60Hz.
- EDID & HDCP Support: Ensures full protocol compatibility.
- Integrated AV Control: Centralized management via visual control APP.
- Multiple Interfaces: RS232/RS485, IO/IR, USB, network, and fiber connectivity.
- Visual Monitoring: Real-time preview and card monitoring.
- Flexible Channel Combination: Asymmetric card design for versatile I/O distribution.
- Central Control: Manage external devices like screens, projectors, and AC.
- IP Camera Support: Decode up to 16 IP cameras per channel.
- Subtitle & Logo Display: Customizable scrolling text and logos.
- Video Wall Functions: Splicing, windowing, overlay, roaming, and split-screen support.

Product Overview

The Macsys AVNEX-16MS is a high-performance, modular UHD HDMI AV over IP matrix switcher designed for professional audio-visual applications. Featuring a 16-slot asymmetric card design, this matrix allows fully customizable input and output channel configurations, enabling seamless integration of multiple signal types within a single device. Its flexible design ensures that each card can be independently configured, maintained, or replaced, providing maximum scalability and ease of operation.

With 4K@60Hz UHD resolution support, the AVNEX-16MS delivers crystal-clear images for high-end video applications. The system features seamless switching technology, eliminating black screens, blue screens, tearing, and jitter during transitions. It is fully compatible with EDID and HDCP protocols, ensuring smooth interoperability with a wide range of HDMI/DVI devices.

The matrix integrates advanced AV control through a visual control APP, offering real-time monitoring, live source preview, and centralized management of audio, video, and user-defined scenes. Operators can easily manage complex AV setups in environments such as broadcast studios, command and control centers, large-scale conference rooms, and smart education systems.

The AVNEX-16MS supports rich peripheral connectivity, including RS232, RS485, IO/IR, USB, network, and fiber interfaces, allowing flexible integration with external devices and networked systems. Its visualized monitoring features, such as 16-screen split and preview echo, quad-screen preview and card-level diagnostics, simplify management and maintenance of large AV deployments.

Designed for professional environments, the AVNEX-16MS also supports IP camera decoding, subtitle and logo overlay, and advanced video wall functionalities like splicing, windowing, roaming, overlay, and split-screen displays. With its stackable expansion capability via fiber or network, this matrix is ideal for large-scale, cross-regional AV signal transmission, processing, and distribution.

In summary, the Macsys AVNEX-16MS is a robust, scalable, and versatile AV matrix switcher, combining high-definition performance, centralized control, and flexible modularity to meet the demands of modern professional audio-visual systems.

Technical Specification

Feature	Details
Card Slot	16 channels (any combination of input/output configurable within 16 slots)
Resolution	Up to 4K@60Hz (HDMI), backward compatible
Bandwidth	18 Gbps
Network	1 x RJ45 Lan Port
Network Control	TCP/IP protocol PC or tablet control & previewing via APP
Color Space	Supports RGB444, YUV444, YUV422, x.v.Color extended gamut
Peripheral Interfaces	RS232, RS485, IO/IR, USB (4 ports), Network, Fiber optic
Seamless Switching	Yes; no black screen, blue screen, tearing, jitter during switching
Visual Monitoring	Real-time preview, card-level diagnostics, quad-screen preview on one screen
IP Camera Support	Decodes up to 16 IP cameras per channel
Central Control Capabilities	Manage external devices (screens, projectors, AC), centralized AV control
Subtitle & Logo Display	Supports subtitle overlay and custom scrolling logos
Video Wall Functions	Multi-screen splicing, windowing, overlay, roaming, split-screen, arbitrary scaling and plan management
Stackable Expansion	Fiber and network interface stacking for scalability and cross-regional deployment
Input Voltage	100–260VAC, 50/60Hz; power consumption 23W (max), 0.5W (standby)
Dimensions (W×H×D)	440 × 221 × 374 mm (5U)
Electrostatic Protection	Body Discharge Mode: ±8kV (Air), ±4 kV (Contact)
Working Temperature	0°C — 40°C
Storage Temperature	-20°C — 60°C
Certifications	CE, RoHS compliance

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