Datasheet

CLOMEX-20MS | UHD Hybrid Modular Matrix Switcher 4:4:4 20 Slotes



Key features

- UHD 4K Hybrid Modular Matrix Switcher with 20 Card Slote input/output configuration for professional AV systems.
- Modular design enables flexible configuration of HDMI, DVI, HDBaseT, 3G-SDI, VGA, CVBS, YPbPr, HDCI, and fiber signal types.
- Seamless AV over IP streaming, IP surveillance, video conferencing, and recording system support.
- RS-232 passthrough control for centralized management of all connected AV devices.
- Glitch-free seamless switching with intelligent EDID management and HDCP compliance.
- 4K @ 60Hz video resolution support with advanced color, brightness, scaling, and image adjustments.
- Dual redundant power supply for 24/7 continuous operation in critical environments.
- Supports HDMI 2.0, DP 1.1, and HDCP 2.2 standards for high-definition video compatibility.
- Seamless backup modes including channel backup, board backup, and matrix-level backup.
- Deep Color support (48/36/30/24-bit) with YUV 4:2:2 / 4:4:4, plus 16 fixed output resolutions per channel.
- Fully compatible with TCP/IP, UDP, HTTP, NTP, RTP, IGMP, RTSP, and RTCP network protocols.
- Advanced H.264 video compression and MBAFF pre-processing algorithm for high-quality video output.
- Long-distance optical fiber transmission up to 80 km for large-scale AV installations.
- Smart signal fail-safe backup ensures uninterrupted video and audio delivery.
- POC (Power over Cable) support for HDBaseT transmitters and receivers.
- Real-time equipment monitoring for temperature and video port status.
- Software-based port discovery and adjustments for easy system setup.
- Front-panel 7-inch HD touchscreen with dual RS-232 and dual TCP/IP controls for intuitive operation

Product Overview

The Macsys CLOMEX-20MS is a high-performance UHD 4K60 4:4:4 hybrid modular matrix switcher, designed for control rooms, broadcast studios, conference halls, and large-scale AV-over-IP deployments. Its flexible modular design allows configurable input/output slots, supporting HDMI, DVI, HDBaseT, 3G-SDI, VGA, CVBS, YPbPr, HDCI, fiber, and IP streaming, making it ideal for multi-format AV routing and complex installations.

Engineered for seamless 4K video and audio performance, the CLOMEX-20MS delivers glitch-free switching, advanced image processing, Deep Color support, and multi-window video management. Dual redundant power and control systems, along with channel, board, and matrix-level backups, ensure 24/7 reliability, while smart signal failover guarantees uninterrupted AV operation.

The matrix switcher features a 7-inch HD touchscreen, dual RS-232, and dual TCP/IP control for intuitive local and remote management. Long-distance transmission via HDBaseT, fiber, and H.264 over CAT6 supports scalable, high-performance AV deployments across large and complex environments.

Technical Specification

Feature	Details
Slot Configuration	20 × card slots; hot-swappable input/output modules; modular design for scalable expansion
Supported Signal Types	CVBS, YPbPr, VGA, HDMI, DVI, Audio (Analog/Digital), 3G-SDI, HDBaseT, HDCI, Optical Fiber, IP Streaming (H.264)
Supported Video Resolutions	Up to UHD 4K @ 60 Hz, 4:4:4 chroma; backward compatible with 1080p, 720p, SD
Color Space / Bit Depth	RGB 4:4:4, YUV 4:4:4, YUV 4:2:2; Deep Color 48/36/30/24-bit; x.v.Color supported
Video Bandwidth	18 Gbps per channel
HDMI Standard	HDMI 2.0 (HDCP 2.2)
DisplayPort Standard	DP 1.1 input (compatible cards)
Audio Support	Multi-channel digital & analog audio embed/de-embed
Transmission (HDBaseT)	Up to 70 m over CAT6
Transmission (H.264 over CAT6)	> 200 m
Transmission (Optical Fiber)	≥ 80 km (single-core, single-mode)
Transmission (Digital Cable)	Up to 30 m HDMI/DVI
Video Processing	Seamless switching, scaling, color/brightness/contrast adjustment, windowing, multi-view, plan management
Control Interfaces	Front panel 7-inch HD touchscreen; Dual RS-232 ports; Dual TCP/IP ports; Software-based port discovery and adjustment
Serial Control Protocol	RS-232 (baud 115200; data bits 8; stop bits 1; parity none); passthrough supported
Serial Control Connector	9-pin D-sub (DE9F) socket (Pin 2: TX, 3: RX, 5: GND)
Network Protocols	TCP/IP, UDP, HTTP, NTP, RTP, IGMP, RTSP, RTCP
Network Connector	RJ45; 10/100Base-T Ethernet
Backup Modes	Channel backup, Board backup, Matrix-level backup; dual redundant control & power
Security / Protection	ESD ±8 kV air, ±4 kV contact; intelligent signal fail-safe backup
Power Supply	100–260 VAC, 50/60 Hz; dual redundant PSU
Power Consumption	23 W (max) / 0.5 W (standby)
Operating Temperature	0°C to 40°C
Storage Temperature	–20°C to 60°C

CLOMEX-20MS | UHD Hybrid Modular Matrix Switcher 4:4:4 20 Slots

Feature	Details
Humidity	10%–90% RH, non-condensing
Mounting	19″ Rack-mountable (standard)
Physical Dimensions (W×H×D)	440 × 355 × 374 mm
Certifications	CE, RoHS compliance

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