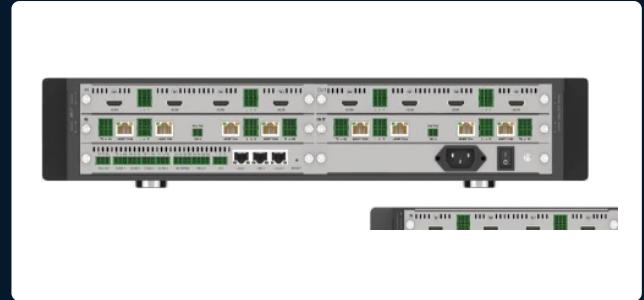


MODULAR MATRIX SWITCHER · SEAMLESS MATRIX

BLU-HDM-MX91616

A modular matrix that routes anything, anywhere.

A professional modular seamless-switching matrix: a card-based chassis that switches and distributes HDMI, DVI-U, VGA, SDI, HDBaseT and fibre signals with an integrated video-wall engine and control system. Pure-hardware switching — no compression, loss or delay — up to 4K2K@60Hz YCbCr 4:4:4. The 16×16 model in a family scaling 8~72 in and 8~72 out.



16 × 16 MODULAR MATRIX	18Gbps 600 MHZ CLOCK	4K60 4:4:4 24-BIT	Seamless VIDEO WALL	Redundant DUAL PSU
---------------------------	-------------------------	----------------------	------------------------	-----------------------

SPECIFICATION SUMMARY

Type	Modular seamless matrix
Configuration	16 × 16 (4 in + 4 out cards)
HDMI Compliance	HDMI 2.0b (4K card)
HDCP	HDCP 2.2 (4K card)
Video Bandwidth	600 MHz / 18Gbps
Max Resolution	3840×2160p60 (4:4:4)
Card structure	Pluggable, 4 channels / card
Video wall	Seamless, Gen-Lock <0.1ms
Power	DC 12V, dual redundant
Consumption (16×16)	70W ~ 170W

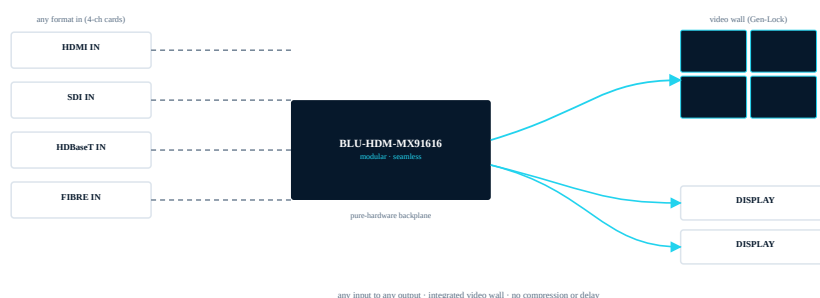
CONTENTS

01	Overview & features	02
02	Specifications	03
03	Cards & power	04
04	Application example	05

KEY FEATURES

- HDMI 2.0b / HDCP 2.2, 18Gbps, 4K60 4:4:4 24-bit
- Pluggable cards: HDMI, DVI-U, VGA, SDI, HDBaseT, fibre
- Seamless switching + Gen-Lock video wall (<0.1ms)
- Dual hot-swap redundant power supplies

One chassis, any signal. A pluggable-card backplane routes any input to any output with no compression or delay, scales from 8×8 to 72×72, and drives LCD/LED video walls with sub-0.1ms inter-channel latency.



MODULAR ROUTING · MIXED SIGNAL FORMATS IN, ANY OUTPUT, INTEGRATED VIDEO WALL

01 Overview & features

What the modular matrix does, and the full feature set.

This **Modular Seamless Switching Matrix** is a professional all-in-one machine supporting various audio/video signal switching and distribution, an integrated video-wall function and a control system. It supports up to **8~72 signal inputs and 8~72 signal outputs**. The audio/video matrix adopts a pure-hardware high-speed switching chip — high integration, stable, with no compression, loss or delay of signal. Supported by a high-bandwidth backplane, it provides up to **4K2K@60Hz YCbCr 4:4:4 24-bit** input/output and arbitrary routing. HDMI 2.0b, 18Gbps, colour depth to 12-bit. The pluggable card structure (four channels per card) accepts HDMI, DVI-U, VGA, 3G/HD/SDI, HDBaseT and optical-fibre cards, in both 2K and 4K series. Input cards embed audio; output cards de-embed audio. Control is via front-panel buttons (LCD), IR, RS-232, LAN, PC tool or Web GUI, and the built-in video-wall engine realises any splicing within 8/16/36/72 output channels.

FEATURES

- HDMI 2.0b and HDCP 2.2 compliant
- 18Gbps video bandwidth, up to 4K60 YCbCr 4:4:4 24-bit
- Pluggable card structure (one card = four channels)
- 8 / 16 / 36 / 72 channel video inputs and outputs
- Input/output cards: HDMI, DVI-U (DVI/YPbPr/CVBS), VGA, 3G/HD/SD-SDI, HDBaseT and optical fibre
- Up to 1920×1200p60 (2K card) / 4096×2160p60 (4K card)
- Seamless switching — no image tear, black screen or flicker
- Gen-Lock video-wall splicing, inter-channel latency < 0.1ms
- Any splicing mode within 8×8 ~ 72×72, ideal for LCD/LED walls
- Multiple output resolutions for different display types
- Pure-hardware high-speed matrix switching chip, high integration
- Built-in signal equalization, recovery and re-drive
- Built-in video quality enhancement (adjustable output)
- Built-in HDCP processing to avoid compatibility issues
- Input cards embed audio; output cards de-embed audio
- Analog audio embed/de-embed LPCM 2.0CH, synchronous with video
- Power-down memory function
- Up to 64 scene presets recallable
- Advanced EDID management (internal or copy from any output)
- Control: front panel (LCD), IR, RS-232, network port, TCP/IP, Web GUI or PC program
- 2 hot-swappable, load-sharing redundant power supplies
- HDR, Deep Color up to 12-bit, 3D and HD lossless audio
- Max 600MHz pixel clock
- Certifications: CE, FCC, RoHS, BIS
- Audio: LPCM up to 7.1, Dolby TrueHD, Dolby Atmos, DTS:X, DTS-HD Master

02 Specifications

Technical performance and system connections.

TECHNICAL

HDMI Compliance	HDMI 1.4 (2K card), HDMI 2.0b (4K card)
HDCP Compliance	HDCP 1.4 (2K card), HDCP 2.2 (4K card)
Video Bandwidth	600 MHz / 18Gbps
Video Resolution	1920×1200p60 (2K card) 3840×2160p60 4:4:4 (4K card)
Color Space	RGB 4:4:4, YCbCr 4:4:4 / 4:2:2 / 4:2:0
Color Depth	2K card: 8/10/12-bit (1080P60) 4K card: 8/10/12-bit (4K30), 8-bit (4K60 4:4:4)
Audio Formats	HDMI: LPCM 2.0 / 5.1 / 7.1CH Analog: LPCM 2.0CH
Transmission Distance	HDMI: 1080P 15m, 4K30 10m, 4K60 5m HDBT: 1080P 70/100/150m 4K: 40/70/120m
ESD Protection	Human-body Model: ±8kV (Air-gap), ±4kV (Contact)

CONNECTIONS (16×16)

Input Ports	4 × input card (16×16 matrix) 2× (8×8), 9× (36×36)
Output Ports	4 × output card (16×16 matrix) 2× (8×8), 9× (36×36)
Control Ports	1 × Master control card, including: 1 × RS-232 [3-pin Phoenix] 4 × COM [3-pin Phoenix] 1 × IR-SERIAL [4-pin Phoenix] 1 × RELAY [4-pin Phoenix] 1 × I/O [3-pin Phoenix] 1 × RESET [central-control button] 3 × LAN [RJ45]

03 Cards & power

Mechanical, power, and the pluggable card range.

MECHANICAL

Housing	Metal Enclosure
Dimensions (36×36)	483mm (W) × 378mm (D) × 266mm (H)
Weight (36×36)	15.4 kg (no I/O cards)

POWER

Power Supply	Input: AC 100–240V 50/60Hz Output: DC 12V, dual redundant PSU
Consumption	8×8: 35W~90W 16×16: 70W~170W 36×36: 100W~350W (varies with card mix)

ENVIRONMENT

Operation Temp.	32°F–104°F / 0°C–40°C
Storage Temp.	-4°F–140°F / -20°C–60°C
Relative Humidity	20–90% RH (no condensation)

4K INPUT CARDS (4 CHANNELS)

BLU-HDM-4IN-HDMI	HDMI card, seamless, up to 4K60Hz
BLU-HDM-4IN-HBT70	HDBaseT 70m card, seamless, 4K60Hz
BLU-HDM-4IN-HBT100	HDBaseT 100m card, seamless, 4K60Hz
BLU-HDM-4IN-HBT150	HDBaseT 150m card, seamless, 4K60Hz

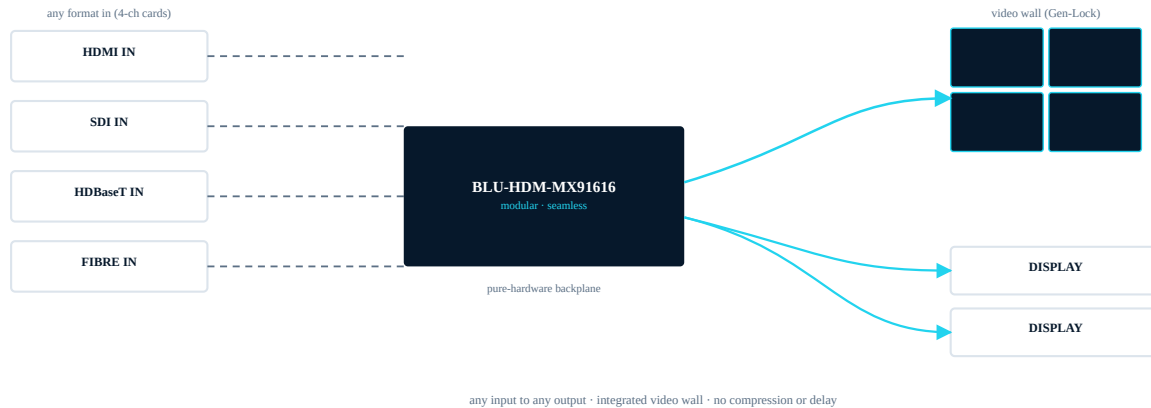
4K OUTPUT CARDS (4 CHANNELS)

BLU-HDM-4OUT-HDMI	HDMI card, seamless, up to 4K60Hz
BLU-HDM-4OUT-HBT70	HDBaseT 70m card, seamless, 4K60Hz
BLU-HDM-4OUT-HBT100	HDBaseT 100m card, seamless, 4K60Hz
BLU-HDM-4OUT-HBT150	HDBaseT 150m card, seamless, 4K60Hz

Also available: DVI-U (DVI/YPbPr/CVBS), VGA, 3G/HD/SD-SDI and optical-fibre cards, in 2K and 4K series.

04 Application example

Mixed-format sources into one chassis, any output, integrated video wall.



Any signal in, any screen out. HDMI, SDI, HDBaseT and fibre cards mix in one backplane and route with no compression or delay — and the built-in engine splices outputs into an LCD/LED video wall.

Built to stay up. Dual hot-swappable, load-sharing power supplies and power-down memory keep a command-centre or broadcast install running.

ORDERING

BLU-HDM-MX91616	Modular seamless-switching matrix, 16×16 chassis — HDMI 2.0b / HDCP 2.2, 18Gbps, 4K2K@60Hz 4:4:4 24-bit, pluggable 4-channel cards, seamless switching + Gen-Lock video wall, advanced EDID, dual redundant PSU. Populate with input/output cards to order.
BLU-HDM-MX988	8×8 modular matrix chassis (same family)
BLU-HDM-MX3636	36×36 modular matrix chassis (same family)

bluKnot

The terms HDMI, HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc. BluKnot is a registered trademark of Bronx Systems India Private Limited. www.bronx.co.in · admin@bronx.co.in · sales@bronx.co.in