

FINE-PITCH LED · CONTROL ROOMS · BROADCAST · RENTAL

Modular Video Wall Splicer

4K in & out · hot-swappable cards · FPGA hardware · B/S web control

BX-3000

The BX-3000 is a new-generation video wall splicer engineered for fine-pitch LED screens, combining video processing and video control in a single unit or working as a pure splicing processor. Built on a powerful FPGA hardware architecture with a fully modular, plug-in design, it allows flexible configuration and hot-swapping of input and output cards for easy maintenance and a low failure rate. Industry-standard inputs — HDMI, DVI, DP, VGA, CVBS, SDI and IP — support 10-bit video and 4K processing, while four kinds of LED 4K sending cards allow backup between OPT and Ethernet ports and ultra-long-distance transmission. Multi-screen and multi-layer management, EDID management, input renaming, BKG and OSD settings deliver a rich image-construction experience. Adopting a B/S architecture, it supports cross-platform browser access and control with no software to install, fast multi-user collaboration and online firmware update.



4K IN
& OUT



MODULAR
PLUG-IN



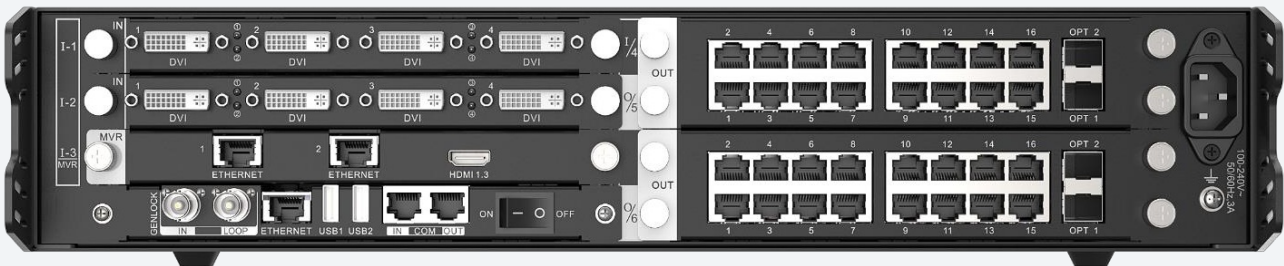
HOT-SWAP
CARDS



B/S WEB
CONTROL



HDR10
& HLG



BX-3000 - 2U MODULAR CHASSIS, REAR I/O / INPUT CARDS · OUTPUT CARDS · CONTROL · MAINS

AT A GLANCE /

Chassis	2U, up to 4 input + 2 output cards	Architecture	Pure hardware FPGA
Channels	Up to 16 input, 8 output	Max. layers	32
Max. loading	Up to 52 million pixels	Control	B/S web, LCD, app, OpenAPI, SNMP

FEATURES /

01 Modular plug-in design

- Four kinds of LED 4K sending cards for free combination.
- Multi-capacity input per card slot: 4× 2K×1K@60, 2× 4K×1K@60, 2× 4K×2K@60, 1× 4K×2K@120 / 8K×4K@30.
- Online status monitoring of all input and output cards.
- Hot-swappable input and output cards.
- IP input card supports up to 512 IP-camera inputs and input mosaic.
- Auto decryption of HDCP-encrypted sources; decimal frame rates; HDR10 and HLG processing.

02 Multi-screen management

- Independent output resolution per screen; frame-synchronised output mosaic with no stutter, frame loss or tearing.
- Irregular rectangle mosaic without limitation; LCD bezel compensation.
- Preset groups with one-click loading for synchronous switching across screens.
- Matrix mode for convenient input/output switching — manual, automatic and switch-all methods, presets and playlists, auto-save on power failure.

03 Diverse display & layers

- A single card supports up to 16× 2K, 8× DL, 4× 4K or 2× 8K layers; cross-connector output with no reduction in layer count.
- Static / dynamic / time / weather OSD with adjustable transparency; per-screen OSD.
- BKG settings that do not occupy layer resources (max 15K×8K, area ≤ 64 MP).
- Up to 2,000 presets, fade & seamless switching under 60 ms; scheduled playlist playback.
- HDR & 10-bit processing, colour adjustment, 3D function, low latency down to 1 frame.

04 Control, monitoring & security

- Web control with 1000M/100M self-adaptive network and multi-user collaboration; firmware update on web.
- LCD menu, mobile app, and control via professional processor, OpenAPI, Stream Deck and SNMP.
- Self-test, auto monitoring & alarms (fan, temperature, voltage); backup between devices, sources and sending cards.
- Network-security config: normal / secure / custom modes, firewall blacklist, ping-blocking, and service toggles (HTTPS, SSH, NTP, discovery).

CERTIFICATION /

BIS	CE	FCC	RoHS	UL	CB	RCM	UKCA	KC
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Note: Certification set to be confirmed for the target market. If the product does not carry the certifications required in the country or region of sale, please contact Bronx to confirm before deployment.

SPECIFICATIONS /

SYSTEM

Model	BX-3000
Rack unit	2U
Max. input cards	4
Max. input channels	16
Max. output cards	2
Max. output channels	8
Max. layers	32

MAX. LOADING CAPACITY

16×RJ45 + 2×fiber card	20.8 million pixels
20×RJ45 sending card	26 million pixels
4×fiber sending card	41.6 million pixels
4×fiber card (enhanced)	52 million pixels

ELECTRICAL & ENVIRONMENT

Power connector	100–240 V~, 50/60 Hz, 4.0 A
Power consumption	210 W
Operating temp.	0 °C to 45 °C
Operating humidity	0% – 80% RH, non-condensing
Storage temp.	–10 °C to +60 °C
Storage humidity	0% – 95% RH, non-condensing

PHYSICAL

Dimensions	482.6 × 529.8 × 88.1 mm
Net weight	11 kg (chassis)
Gross weight	12.2 kg (chassis)
Noise level	< 45 dB(A), typical at 25 °C
Packing box	660 × 570 × 210 mm

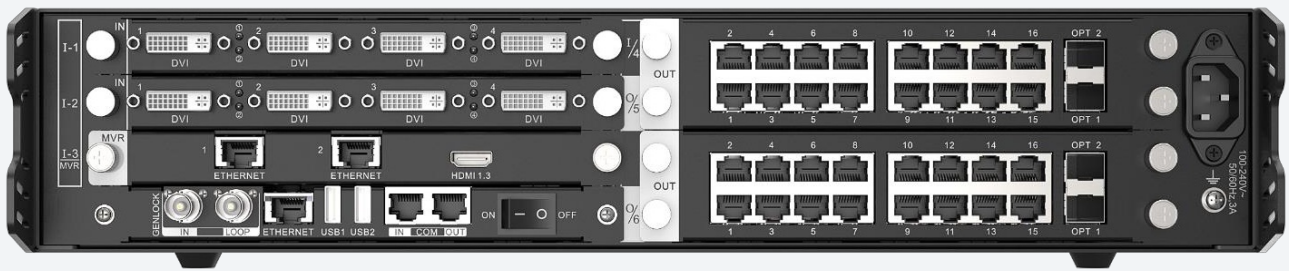
ACCESSORIES

1× Power cord · 1× RJ45 Ethernet cable · 1× grounding cable · 1× HDMI cable · 1× quick start guide · 1× certificate of approval · 1× safety manual

VIDEO SOURCE – MAX. INPUT RESOLUTION

Input connector	Max. resolution
HDMI 2.1	8192×4320@30Hz
HDMI 2.0	4096×2160@60 / 8192×1080@60
DP 1.4	8192×4320@30Hz
DP 1.2	4096×2160@60 / 8192×1080@60
ST 2110 (25G OPT)	4096×2160@60Hz
NDI	4096×2160@60Hz
DL-DVI	3840×1080@60Hz
SL-DVI / HDMI 1.3	2048×1152@60Hz
VGA / CVBS	1920×1080@60Hz
12G-SDI	4096×2160@60Hz
3G-SDI	1920×1080@60Hz

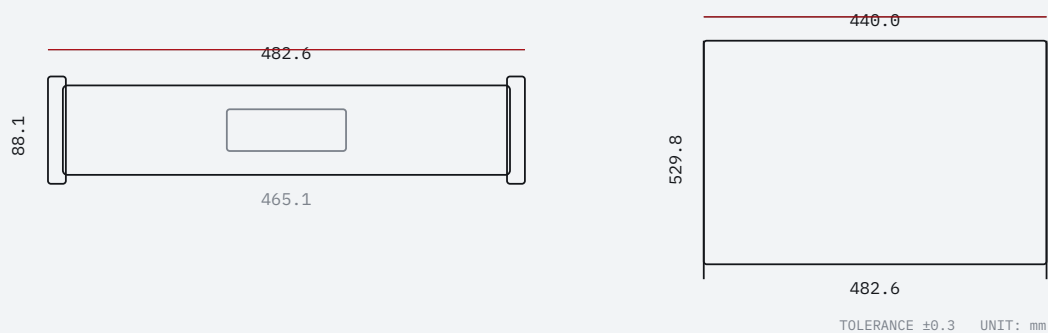
REAR PANEL /



REAR PANEL — I-x INPUT SLOTS · MVR · O-x OUTPUT SLOTS (RJ45 & OPT) · CONTROL · GENLOCK · USB · MAINS

Slot marking: “I-x” = input slot x (input cards only); “O-x” = output slot x (output cards only); “MVR” accepts an input card or preview card. Product image is for illustration; actual product may vary due to enhancement.

DIMENSIONS /



TYPICAL APPLICATIONS /

Energy & power · water conservancy & hydrology · meteorologic & earthquake prediction · enterprise management · metallurgy · banking & finance · public-security & traffic management · exhibitions & presentations · production scheduling · radio & television · education & research · stage rental.

AVAILABLE CARDS /

INPUT CARDS		OUTPUT CARDS	
Card	Key spec	Card	Key spec
1×HDMI2.1 + 1×DP1.4	Up to 8K30 / 8K×4K	16×RJ45 + 2×fiber sending	10.4 M px, 2× OPT
2×DP1.2	4K60 per port	20×RJ45 sending	13 M px
1×HDMI2.0 + 1×DP1.2	4K60	4×fiber sending	20.8 M px, 4× 10G OPT
2×HDMI2.0 + 2×DP1.2	Two 4K60 groups	4×fiber sending (enhanced)	26 M px, 8× 10G OPT
1×DP1.2	4K60	1×HDMI2.0 output	8K×1080 / 4K60, copy
1×ST2110	2× 25G OPT, 4K60 / 4× 2K	1×12G-SDI output	4K60, copy
1×12G-SDI	4K60, loop out	4×DVI output	SL/DL, rotation, mirror
2×HDMI2.0 / 1×HDMI2.0	4K60	4×HDMI output	HDMI 1.4, SL/DL, rotation
4×fiber / 4×fiber-M	4× 10G OPT, input mosaic	4×3G-SDI output	1080p60, 10-bit
2×DP1.1	4K30 / 3840×1080@60	4×HDBaseT output	SL/DL, up to 100 m
4×DVI	SL & DL, 10-bit		
4×HDMI	HDMI 1.3 / 1.4		
2×RJ45 IP	Up to 512 IP cameras, mosaic		
4×3G-SDI	1080p60, embedded audio		
2×CVBS + 2×VGA	PAL/NTSC + 1920×1200		
4×VGA	1920×1200@60		
2×Audio in + 2×Audio out	Phoenix, 48 kHz		
4×HDBaseT	SL & DL, up to 4K30		
1×NDI	Full NDI, 4K60		
STD I/O	COM ×2, I/O, relay, IR		

PREVIEW / CONTROL / POWER	
Module	Detail
Preview card	2×RJ45 + 1×HDMI 1.3
Control card	Genlock, Ethernet, USB, COM in/out
Power module	800 W, 100–240 V~, hot-swap

Notes: Fiber sending cards cannot share a screen with the RJ45 sending cards. The enhanced fiber card cannot share a screen with the standard fiber card. Each OPT port is dual-core with both TX and RX ends. Card availability and detailed per-card specifications available on request.

INSTALLATION & SAFETY /

- **Horizontal only.** Place the unit horizontally; do not mount vertically or upside-down.
- Install in a standard 19-inch rack able to bear at least four times the mounted weight; fix with at least four (rack: eight) M5 screws.
- **Elevated ambient** — in a closed or multi-unit rack the internal temperature may exceed room ambient; install within the rated maximum ambient temperature.
- **Reduced air flow** — ensure rack installation does not compromise the airflow needed for safe operation.
- **Mechanical loading** — mount so uneven loading does not create a hazard.
- **Circuit overloading** — consider the effect on supply circuits and overcurrent protection; observe nameplate ratings.
- **Reliable earthing** — maintain reliable earthing of rack-mounted equipment, with attention to supply connections other than direct branch-circuit connections.
- Operate only within the rated 100–240 V~, 50/60 Hz supply.
- Refer servicing to qualified personnel; the unit contains no user-serviceable parts.

BATTERY & COMPLIANCE NOTES /

- The internal battery is not intended to be replaced. Do not dispose of a battery in fire or a hot oven, or mechanically crush or cut it — risk of explosion.
- Do not leave a battery in extremely high temperature or extremely low air pressure — risk of explosion or leakage of flammable liquid or gas.
- This is a Class A product. In a domestic environment it may cause radio interference, in which case the user may be required to take adequate measures.
- Read the specifications thoroughly and use the product accordingly. Improper use, or use not following the requirements or for illegal purposes, is the user's sole responsibility.

Disclaimer: This datasheet is provided for general guidance and does not replace the full installation and user manual supplied with the product. Product specifications and appearance may change due to continuous product research and development without prior notice. Please contact Bronx or registered partners for confirmation before deployment, and follow all local electrical and building codes during installation.

Bronx Systems India Pvt. Ltd.

VIDEO WALL PROCESSORS · PROFESSIONAL AV · INTEGRATION

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