EL2000

Video Wall Splicer

Specifications

Change History

Document Version	Release Date	Description
V1.0.0	2023-09-05	First release

Introduction

The EL2000 is a high-performance video wall splicer with a pure hardware architecture. Based on the powerful hardware FPGA system architecture and modular design, the EL2000 features a stable and highly efficient pure hardware architecture, and supports the access of multiple input sources. Thanks to excellent features and stable performance, the EL2000 can be widely used in a variety of applications, such as energy and power, judicial departments and prisons, military command, water conservancy and hydrology, meteorologic earthquake prediction, enterprise management, metallurgy of steel, banking and finance, national defense, public security traffic management, exhibitions and presentations, production scheduling, radio and television, educational and scientific research.

The EL2000 supports 4K ultra HD inputs and outputs, multi-screen and multi-layer management, input and output EDID management and high-definition scrolling OSD text and more, meeting various visual scene requirements in conference rooms.

In addition, the EL2000 adopts the B/S architecture and can be accessed and controlled via tablets, kiosks, and PCs and more, without the need to install an application program. Moreover, online collaboration of multiple users is supported and the Web page response speed is very fast, which greatly improves on-site setup efficiency.

Features

Multi-screen management for centralized control

- Each screen can have its output resolution.
- Output mosaic

  Adopts the frame synchronization technology, ensuring all the output connectors output the image synchronously. The image is complete and played smoothly, without any stuck, frame loss, tearing or piecing.
- Simple screen configuration using a single card and connector or using multiple connectors on different cards
- LCD bezel compensation

Diverse display possibilities for flexible configuration

- Multi-layer display
  - Up to 4x 2K layers, 2x DL layers or 1x 4K layer supported
  - All layers support cross-connector output and the layer quantity is not reduced for cross-connector output.
- High-definition scrolling text

  - Customize the scrolling text content, such as slogans or notification messages, and set the text style, scrolling direction and speed.
  - Multi-language and multi-font display supported
- OSD settings on a single screen
- Channel logo management

  Set a text or image logo for identifying the input source.
- Input source cropping and renaming after cropping

  Crop any input source image and form a new input source after cropping.
- Auto decryption of HDCP-encrypted sources
- Decimal frame rates supported
- Input source grouping management
- Up to 2,000 presets

  Fade effect and seamless switching supported, less than 60ms preset switching duration
- Scheduled playback of preset playlist

  Set whether to add the presets to playlist, which is ideal for monitoring, exhibitions, presentations, and other applications.

Web-page control, easy, friendly and convenient

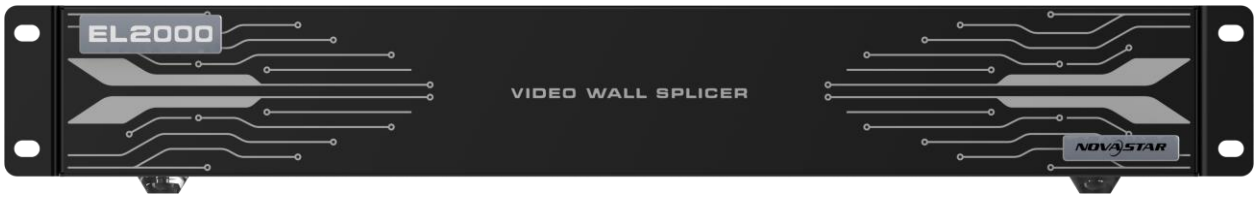
- Web control

  Real-time response and 1000M/100M self-adaptive network control, allowing for multi-user collaboration
- Firmware update on Web page
- Self-test for fault detection
- Auto monitoring and alarms

  Supports hardware monitoring, such as fan rotation speed, module temperature and voltage, running status, and sends fault alarms if necessary.

Appearance

Front Panel



*The picture shown is for illustration purpose only. Actual product may vary due to product enhancement.

Rear Panel

*The picture shown is for illustration purpose only. Actual product may vary due to product enhancement.

Notes:

- The silkscreen marking "O-1" indicates the slot is dedicated to the output card. "O" stands for output. For example, "O-1" indicates this slot is the 1st output slot and for installing an output card only.
- The silkscreen marking "I-2" indicates the slot is dedicated to the input card. "I" stands for input. For example, "I-2" indicates this slot is the 2nd input slot and for installing an input card only.
- The silkscreen marking "CTRL" indicates the slot is dedicated to the control card only.

Input Card

Does not support interlaced signal input.

4x HDMI 1.3 mode

- 2x HMDI1.3, 2x HDMI 1.4
- Four connectors are all used for input.
- Custom resolutions:

  Max. width: 2048 pixels

  Max. height: 2048 pixels
- HDCP 1.4 compliant
- Common resolutions:
  - 1920×1080@30/48/50/59.94/60Hz
  - 1600×900@48/50/59.94/60Hz
  - 1366×768@50/59.94/60Hz
  - 1280×720@48/50/59.94/60Hz

2x HDMI 1.4 mode

- Two HDMI 1.4 connectors are used for input, but two HDMI 1.3 connectors are unavailable.
- Common resolutions:
  - 3840×2160@30Hz
  - 3840×1080@50/59.94/60Hz
  - 1920×1080@30/48/50/59.94/60Hz
- Custom resolutions:

  Max. width: 3840 pixels

  Max. height: 3840 pixels

- HDCP 1.4 compliant

Status LEDs:

- On: The input source is accessed normally.
- Off: No input source is accessed or the input source is abnormal.

Output Card

9x HDMI 1.3

Only this card can be installed into the slot.

- Nine connectors are all used for output.
- Common resolutions:
  - 1920×1080@30/48/50/59.94/60Hz
  - 1600×900@48/50/59.94/60Hz
  - 1366×768@50/59.94/60Hz
  - 1280×720@48/50/59.94/60Hz
- Custom resolutions:

  Max. width: 2560 pixels

  Max. height: 2560 pixels
- Supports 8-bit RGB 4:4:4/YCbCr 4:4:4/YCbCr 4:2:2 output.

Status LEDs:

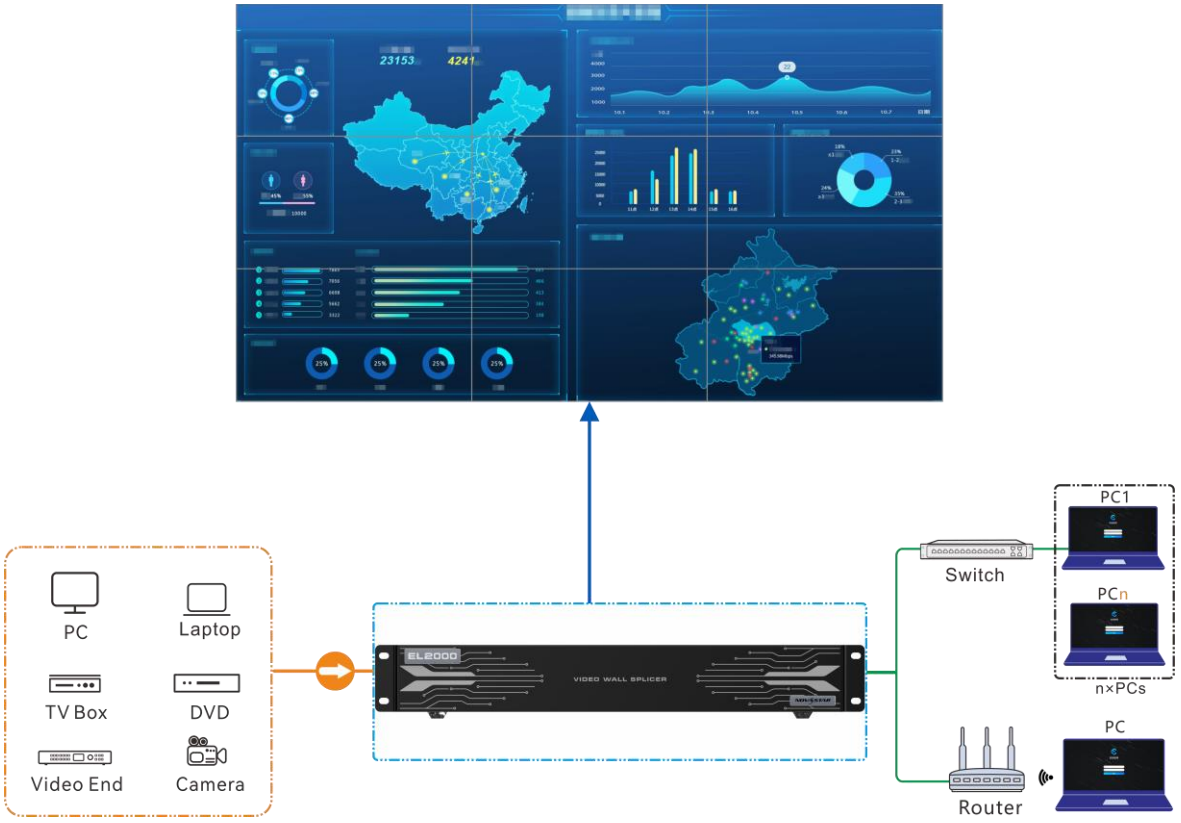
- On: The output connector is connected normally.
- Off: The output connector is not connected.

Control Card

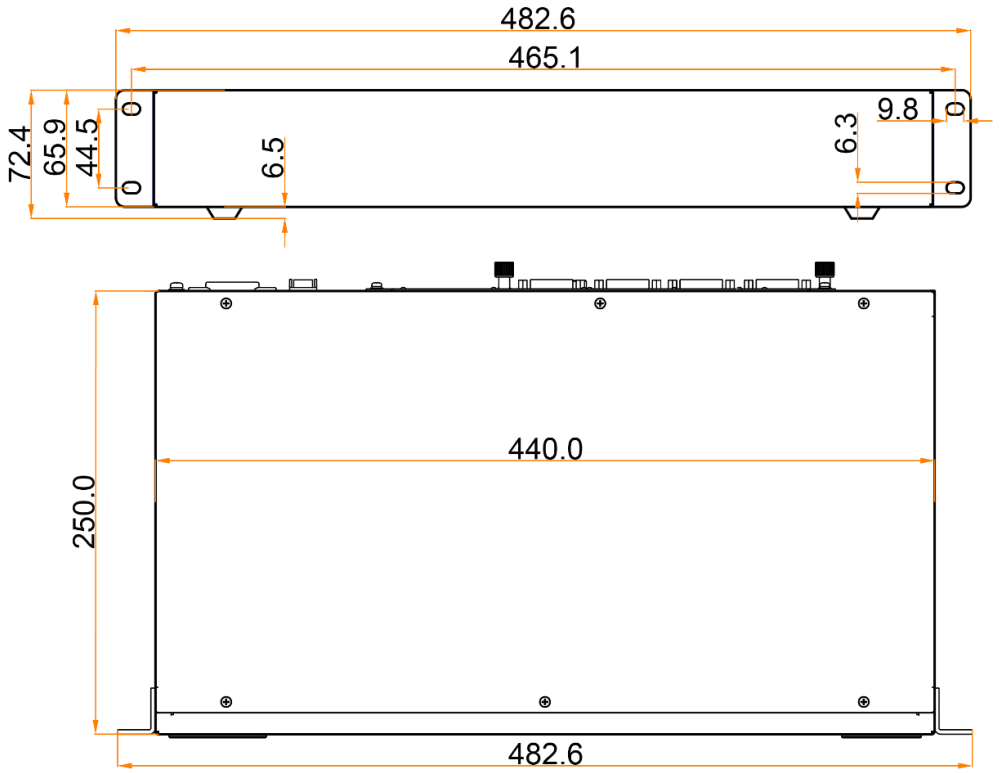
Control	• 1x IR IN connector Supports the infrared control over the devices. • 1x IR OUT connector Supports the programmable infrared control. • 1x I/O connector – Supports the programming to trigger the execution of various

	functional requirements. – Supports the input and output modes. – Input I/O voltage: 5V, output I/O voltage: 3.3V • 2x RELAY OUT connector – Connect to a relay. – Voltage: 30V DC; maximum current: 3A • 1x GND connector A grounding connector
COM	A serial port that adopts RS232 serial protocol Support for central control system • IN: Accept the signal from the central control system. • OUT: Loop the signal. **Note:** The COM port cannot be connected to the network (router or switch) or LED cabinet (receiving card).
USB	1x USB 2.0, Reserved **Note:** The USB connectors cannot provide power for the connected devices.
ETHERNET	A Gigabit Ethernet port • Connect to the control PC for communication. • Connect to the router, switch or PC. • For Web control

Applications



Dimensions



Tolerance: ±0.5 Unit: mm

Specifications

Model		EL2000
Rack Unit		1.5U
Max. Input Channels		4
Max. Output Cards		1 (9x HDMI 1.3 outputs)
Max. Output Channels		9
Max. Layers		4
Electrical Specifications	**Power connector**	100–240V~, 50/60Hz, 1.5A
	Power consumption	40W
Operating Environment	**Temperature**	0°C to 45°C
	Humidity	0% RH to 80% RH, non-condensing

Storage Environment	**Temperature**	–10°C to +60°C
	Humidity	0% RH to 95% RH, non-condensing
Physical Specifications	**Dimensions**	482.6mm × 72.4mm × 250mm
	Net weight	4.5kg
	Gross weight	6.6kg
Packing Information	**Packing box**	550mm × 175mm × 400mm
	Accessories	1x Power cord 1x RJ45 Ethernet cable 1x Grounding cable 1x HDMI cable 1x Certificate of Approval 1x Safety Manual

Video Source Features

Input Connector	Color Depth	Max. Input Resolution
HDMI 1.4	RGB4:4:4 8bit	4096×2160@30Hz
	YCbCr4:4:4 8bit	
	YCbCr4:2:2 8bit	
HDMI 1.3	RGB4:4:4 8bit	2048×1152@60Hz
	YCbCr4:4:4 8bit	
	YCbCr4:2:2 8bit	

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