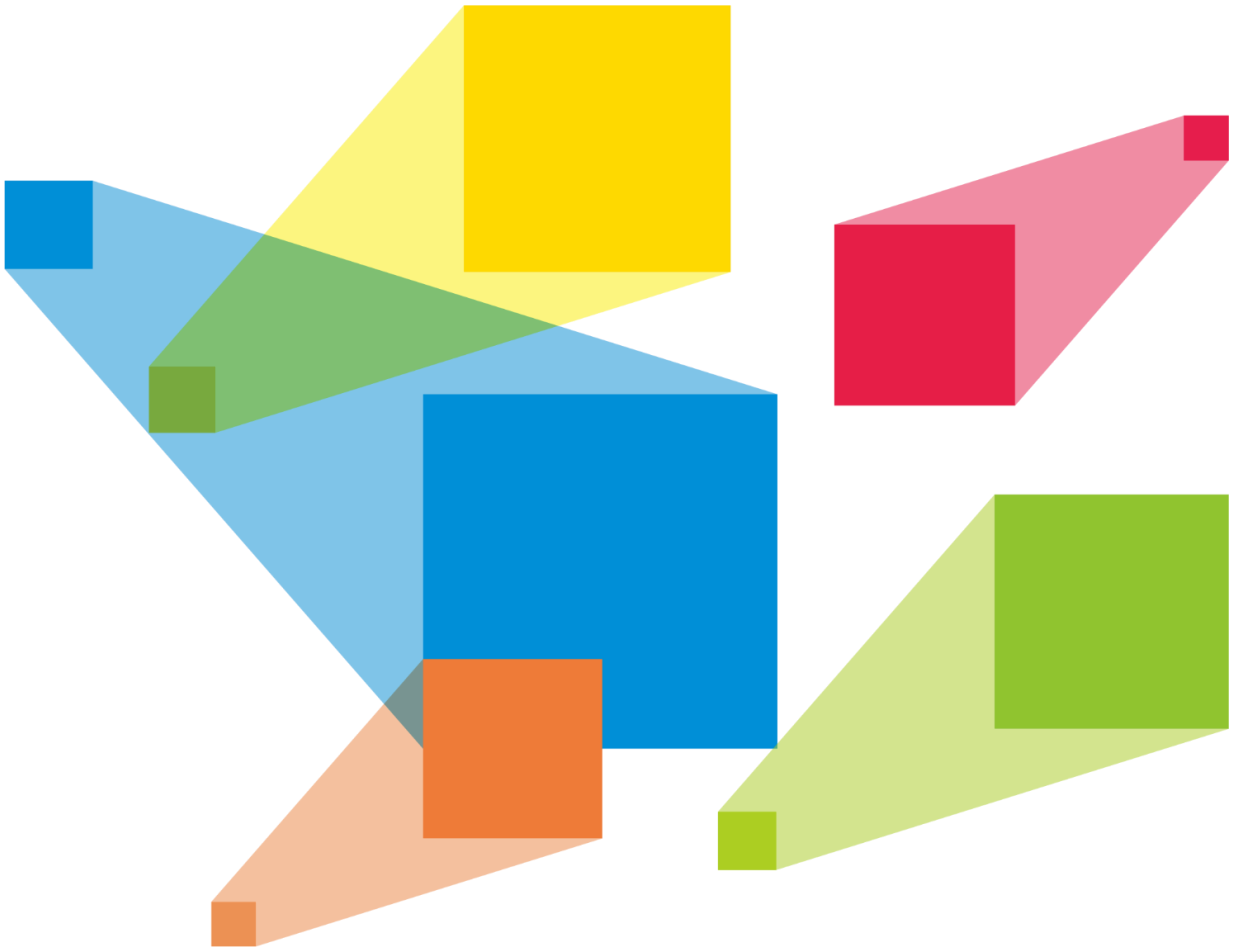
ET8000

Professional Media Server



Specifications

Change History

Version	Release Date	Description
V1.3.0	2024-06-17	• Updated the storage specifications in Product Selection. • Updated the descriptions for the recommended video coding formats.
V1.2.0	2024-04-30	• Added the description of supported layers. • Added the description of the HPGA6000 graphics card. • Updated the cables in the accessories.
V1.1.0	2023-12-14	• Updated the rear panel picture. • Updated the optional graphics cards.
V1.0.0	2023-05-31	First release

Introduction

The ET8000 media server is the latest offering from NovaStar, boasting a 16K ultra-high resolution, pixel-to-pixel screen loading, and multiple high-performance graphics cards.

Equipped with a powerful workstation motherboard, Intel Xeon processor, and ECC high-speed memory, the ET8000 enables flawless frame-synchronized output of four graphics cards. A single ET8000 media server can replace four traditional media servers with single graphics card configurations, while also having the ability to link multiple servers for frame-synchronized mosaic and backup, perfect for meeting the requirements of ultra-high resolution displays exceeding 16K.

Incorporating the latest version of Kompass FX3 multimedia playback software, the ET8000 showcases its ability to hardware decode up to four channels of 8K60fps high-definition video content simultaneously, giving full play to the decoding and rendering capabilities of all available GPUs. Furthermore, it offers a range of functionalities, including multi-channel audio and video playback and processing, visual media management and program arrangement, as well as output partitioning and reorganization, enabling seamless control and creative display in mosaic configurations using multiple graphics cards.

With all these advanced features, the ET8000 is well-suited for various fixed installation scenarios requiring exceptional resolution and powerful playback control, such as large-scale outdoor advertising displays, naked-eye 3D, immersive experiences, data centers, and exhibition showcases.

Certifications

CCC

If the product does not have the relevant certifications required by the countries or regions where it is to be sold, please contact NovaStar to confirm or address the problem. Otherwise, the customer shall be responsible for the legal risks caused or NovaStar has the right to claim compensation.

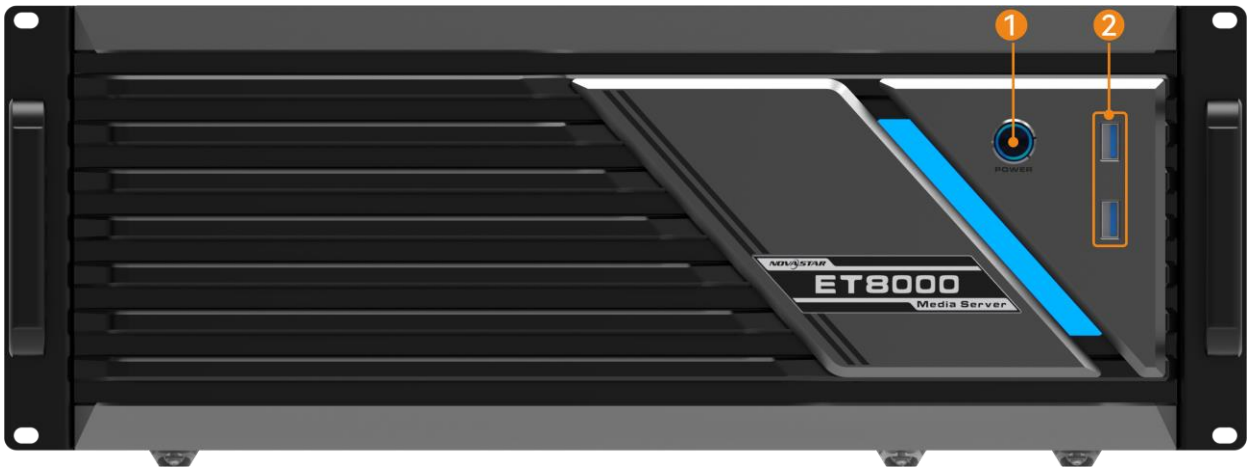
Features

- A single device supports up to 16K×8K output capacity, ultra-high resolution video decoding and pixel-to-pixel display
- Free partitioning, reorganizing and rotating of multiple outputs for irregular screen configuration, unleashing your creative mosaic ideas
- A single output can be split into up to 64 partitions, allowing for quick mapping settings and ultra-wide screen configuration
- Playback of up to 12 layers and 1 audio simultaneously
- Visualized program arrangement and management
- Live and pre-edit modes
  - The program editing and playback are in sync in live mode
  - Edit the programs before displaying them on the screen in pre-edit mode
- Media library management, including videos, images, PowerPoint slides and audio files
- Media file sorting
- Media file batch import
- NDI sources, website sources, sources from capture devices, streaming media sources, and text sources supported
- Media collection configurations
- PowerPoint slides, streaming media and web page playback
- Support using a laser pointer for moving between PowerPoint slides
- Playback progress management
- Shortcut key for program jumping and auto jumping settings
- Configurable layer size and priority
- Main KV and main KV jumping settings
- Main media based playback progress management
- Crossfade on program switching
- Layer mask, cropping, keying, blurring and opacity adjustment
- Hardware decoding supported
- One-click FTB

- Auto startup of built-in software on system power on, auto program playback on software startup
- Compatible with NovaStar's Visual Intelligent Control Platform, enabling a highly efficient and user-friendly control experience

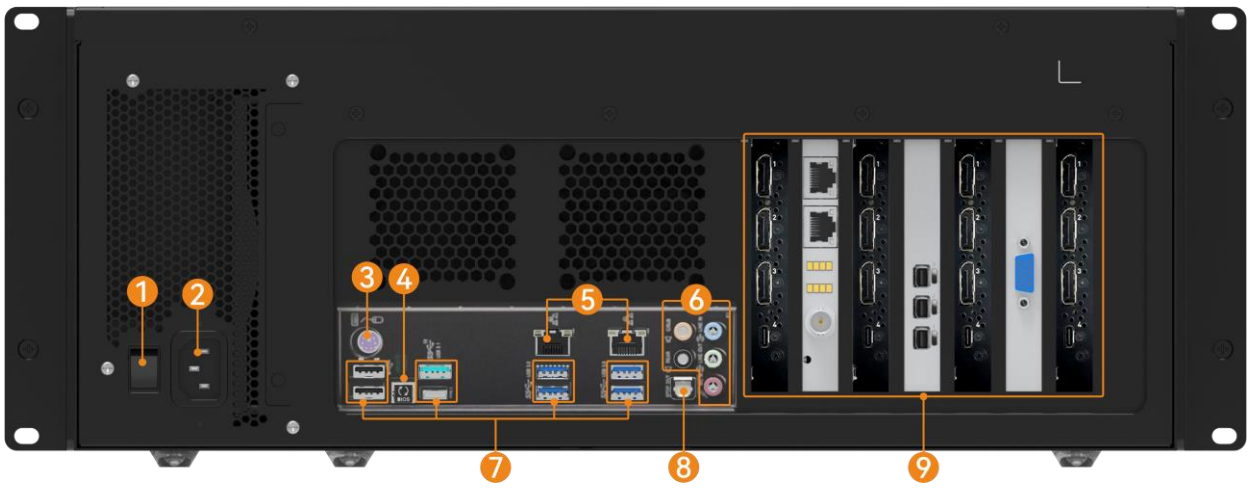
Appearance

Front Panel



No.	Area	Function
1	Power button	Turn on or turn off the device.
2	USB	2x USB 3.0 • Connect to the mouse and keyboard. • Insert a USB drive for importing media files.

Rear Panel



Note

All product pictures shown in this document are for illustration purpose only. Actual product may vary.

No.	Area	Qty	Description
1	Power switch	1	Power on or power off the device.
2	Power connector	1	Connect to an external power source.
3	PS/2	1	Connect to the mouse and keyboard.
4	-	1	USB BIOS Flashback button, for the BIOS program update of the motherboard
5	RJ45	1	2x RJ45 connectors for Ethernet networking
6	3.5 mm audio connector	5	• 1x MIC IN: 3.5 mm microphone input connector • 1x Line IN: 3.5 mm external audio input connector • 3x Line OUT: 3.5 mm audio output connectors for 6 channel connections
7	USB	8	• 2x Type-A USB 2.0 • 1x Type-A USB 3.1 Gen2 • 1x Type-C USB 3.1 Gen2 • 4x Type-A USB 3.1 Gen1 Connect to the mouse and keyboard or insert a USB drive.
8	Optical port	1	S/PDIF digital audio output
9	Graphics card and sync card	-	Graphics card and sync card slots At most FOUR graphics cards can be configured. The VGA port is only used to display the software interface and install OS during the production process. Please go to Optional Items to select the desired graphics card. **Note** • The graphics card does not support irregular mosaic layouts. The mosaic layout must be 1×2, 1×3, 1×4, 2×2, 2×1, 3×1 or 4×1. • The output resolutions of the graphics card connectors that are used for mosaic must be the same.

Optional Items

The following table lists the optional items that you need to purchase from NovaStar separately.

Graphics Card and Sync Card	Specifications
Graphics card MPGT400	 3x miniDP for displaying the software interface only, not for output
Graphics card HPG4000	 3x DP 1.2 and 1x Type-C • Single connector resolution: Up to 4096×2160@60Hz • Four connector mosaic output: – The mosaic width or height can be up to 16384 pixels. – The loading capacity can be up to 8192×4320@60Hz. • Single connector width: 480–8192 pixels • Single connector height: 300–8192 pixels • Playback of 1 layer of 8K×4K@60fps SDR video (hardware-decoding) • Memory: 8 GB • Type: GDDR6 • Bit width: 256 bit **Note** If this card is selected, a Type-C to DP cable is included in the package.
Graphics card HPGA5000	 4x DP 1.2 • Single connector resolution: Up to 4096×2160@60Hz

Graphics Card and Sync Card	Specifications
	• Four connector mosaic output: – The mosaic width or height can be up to 16384 pixels. – The loading capacity can be up to 8192×4320@60Hz. • Single connector width: 480–8192 pixels • Single connector height: 300–8192 pixels • Playback of 1 layer of 8K×4K@60fps or 4K×2K@60fps SDR video (hardware-decoding) • Memory: 24 GB • Type: GDDR6 • Bit width: 384 bit
Graphics card HPGA6000	 4x DP 1.4a • Single connector resolution: Up to 4096×2160@120Hz • Four connector mosaic output: – The mosaic width or height can be up to 16384 pixels. – The loading capacity can be up to 15360×4320@60Hz. • Single connector width: 480–8192 pixels • Single connector height: 300–8192 pixels • Playback of 2 layers of 8K×4K@60fps or 4K×2K@60fps SDR video (hardware-decoding) • Memory: 48 GB • Type: GDDR6 • Bit width: 384 bit **Note** • The graphics card does not support irregular mosaic layouts. The mosaic layout must be 1×2, 1×3, 1×4, 2×2, 2×1, 3×1 or 4×1. • The output resolutions of the graphics card connectors that are used for mosaic must be the same.

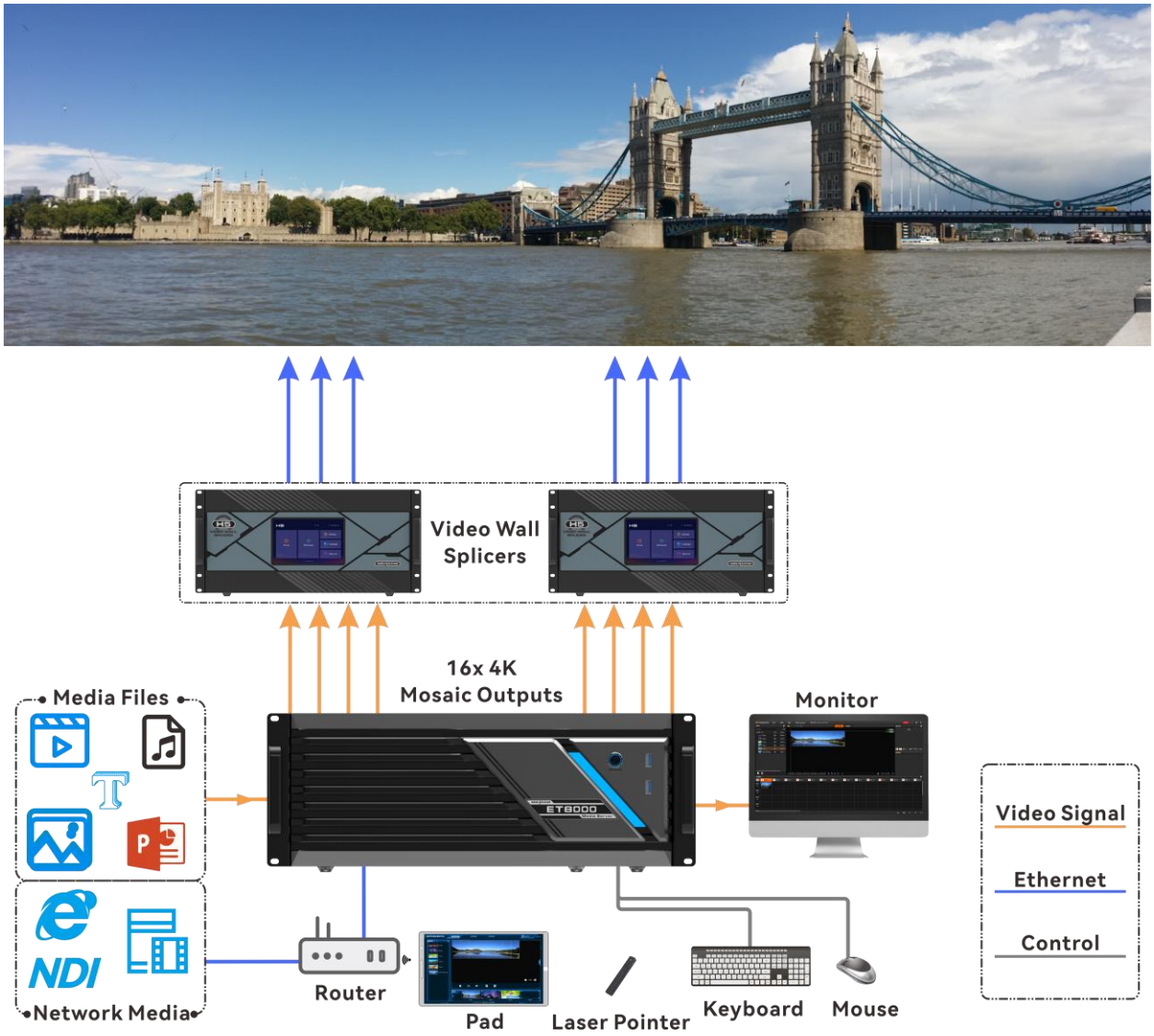
Graphics Card and Sync Card	Specifications
Sync card	 The sync card must work with the HPG4000, HPGA5000 and other high-end graphics cards. • 2x RJ45 Accept a frame lock signal and output the signal. • 1x BNC Accept an external sync signal. • LED lights Indicate the statuses of the sync signal connections.
Control software	Visual Intelligent Control Platform

Product Selection

Configuration	Description
ET8000 (Single CPU)	• Processor: 1x Intel Xeon Gold Processor • Memory: 64 GB ECC DDR4 high-speed memory, with support for expandability (default) • Storage: 1 TB high-speed SSD • Power supply: Great Wall 1300 W • Motherboard: ASUS workstation motherboard • Keyboard and mouse: 1x Logitech keyboard and mouse suit • OS: Windows 10 Enterprise LTSC • Playback and control software: Kompass FX3 and dongle
ET8000 (Dual CPU)	• Processor: 2x Intel Xeon Gold Processors • Memory: 128 GB ECC DDR4 high-speed memory, with support for expandability (default) • Storage: 1 TB high-speed SSD and 960 GB high-speed SSD • Power supply: Great Wall 1300 W • Motherboard: ASUS workstation motherboard • Keyboard and mouse: 1x Logitech keyboard and mouse suit

Configuration	Description
	• OS: Windows 10 Enterprise LTSC • Playback and control software: Kompass FX3 and dongle

Applications



Notes

- This product can only be placed horizontally. Do not mount vertically or upside-down.
- When the product needs to be installed on the rack, 4 screws at least M5*4 should be used to fix it. The rack for installation shall bear at least 72 kg weight.

Specifications

Electrical Characteristics	Power connector	100–240V~ 10–5A 47–63Hz
	Max power consumption	1100 W
Operating Environment	Temperature	0℃ to +40℃
	Humidity	0% RH to 80% RH, non-condensing
Storage Environment	Temperature	-10℃ to +60℃
	Humidity	0% RH to 95% RH, non-condensing
Physical Specifications	Dimensions	482.6 mm × 177 mm × 508.6 mm
	Net weight	17.9 kg
	Gross weight	24.5 kg
Packing Information	Packing box	1x Power cable 4x DP cables 1x Type-C to DP cable* 1x Keyboard and mouse suit 1x VGA to HDMI cable 1x Label (Windows product key included) 1x Certificate of Approval 1x Quick Start Guide 1x Safety Manual **Note** *When the HPG4000 graphics card is selected, the accessories include a Type-C to DP cable.
	Accessories	735 mm × 660 mm × 300 mm

Media File Types and Formats

The ET8000 supports the decoding of various common video coding formats, such as H.264, H.265, MPGE-4/2 and WMV.

Type	Format
Video	H264, H265 (HEVC), MPEG-1/2/4, AV1, VC-1, ProRes, MJPEG, VP8/9, WMV7/8/9
Image	jpg, jpeg, bmp, png, gif, ico
Audio	mp3, aac, flac, amr, ape, wav, wma
Office	ppt, pptx

Notes

Recommended video coding formats:

- 4K < resolutions ≤ 8K, width ≤ 8192 pixels and height ≤ 8192 pixels: H.265 (HEVC) or VP9 recommended
- Resolutions ≤ 4K: H.264 (AVC) recommended
- When the video size exceeds 8K, it is recommended to split the video into multiple files for playback.

For a better image quality experience, the following video bitrates are recommended.

Recommended video bitrates for SDR uploads:

Type	Video Bitrate Standard Frame Rate (24 Hz, 25 Hz, 30 Hz)	Video Bitrate High Frame Rate (48 Hz, 50 Hz, 60 Hz)
4320 (8K)	75 to 90 Mbps	110 to 135 Mbps
2160 (4K)	35 to 45 Mbps	53 to 68 Mbps
1440 (2K)	16 Mbps	24 Mbps
1080p	8 Mbps	12 Mbps

Notes and Cautions

This is Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

Trademark

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Statement

Thank you for choosing NovaStar's product. This document is intended to help you understand and use the product. For accuracy and reliability, NovaStar may make improvements and/or changes to this document at any time and without notice. If you experience any problems in use or have any suggestions, please contact us via the contact information given in this document. We will do our best to solve any issues, as well as evaluate and implement any suggestions.

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