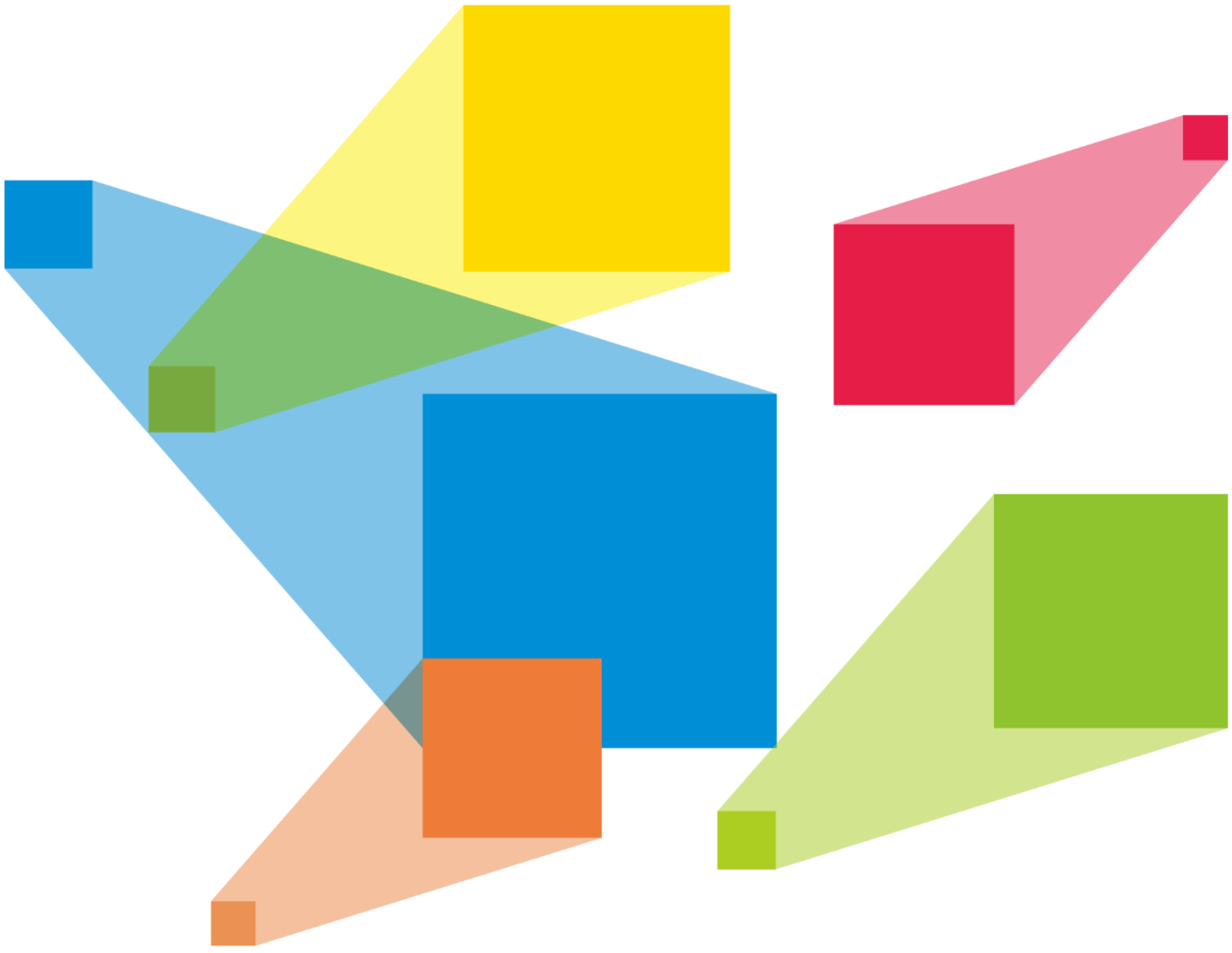
ET4000

Media Server



Specifications

Change History

Release Version	Release Date	Description
V1.12.0	2024-06-17	• Updated the storage specifications. • Updated the descriptions for the recommended video coding formats.
V1.11.0	2024-04-30	• Updated the number of supported layers. • Updated the cables in the accessories.
V1.10.0	2023-12-15	• Updated the rear panel picture. • Deleted the descriptions for the graphics card HPGA4000.
V1.9.0	2023-08-15	• Updated the rear panel picture. • Updated the packing list. • Updated the recommended video bitrates for SDR uploads.
V1.8.0	2022-09-28	Updated the device rear panel.
V1.7.0	2022-07-27	• Added the descriptions for graphics cards HPGA4000 and HPGA5000. • Deleted the descriptions for the graphics card HPG5000. • Updated the control App name. • Updated the accessories.
V1.6.0	2022-03-16	• Updated the certifications. • Added the section of Notes and Cautions. • Updated the memory parameter. • Updated the device rear panel. • Update the configuration rules for the graphic cards.

Introduction

The ET4000 is a brand new media server developed by NovaStar, which is specifically designed for multimedia exhibition halls, banquet halls, stage performances and other creative fixed installation scenarios. The ET4000 provides an excellent pixel-to-pixel display with ultra-high definition, diversified mosaic creativity and outstanding media arrangements for professional stage performances. Built-in with intuitive and user-friendly media playback and control software, the ET4000 enables simplified stage display management and best-in-class human-machine interaction.

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 unit supports up to 8K×4K 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

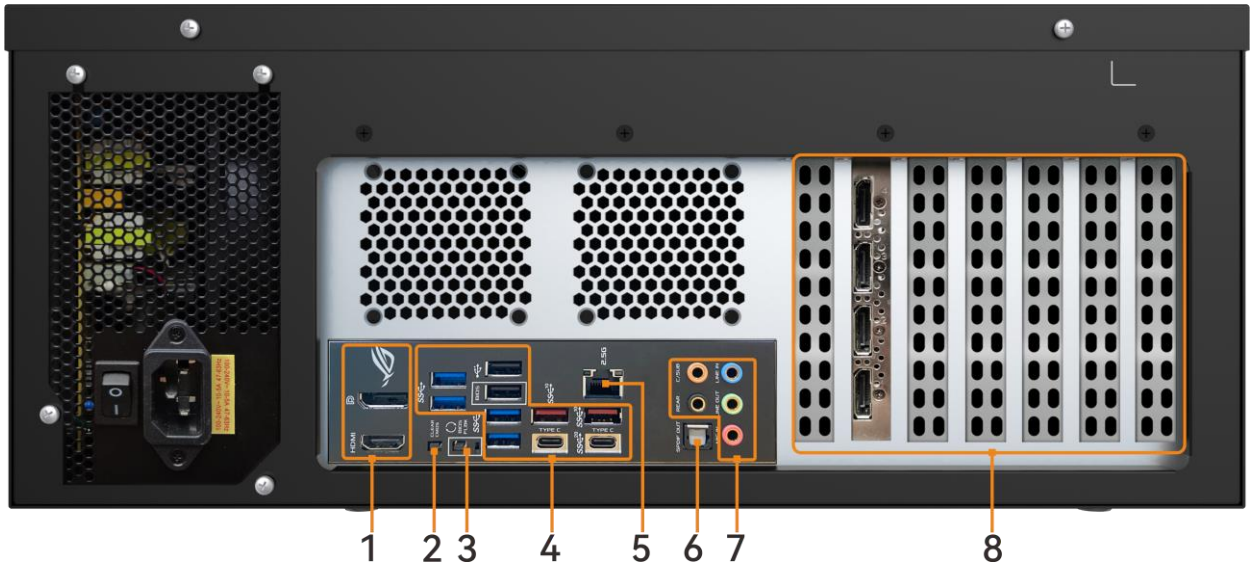
- A single output can be split into up to 64 partitions, allowing for quick mapping settings and ultra-wide screen configuration
- Playback of up to 12 layers and 1 audio simultaneously
- Visualized program arrangement and management
- Live and pre-edit modes
  - The program editing and playback are in sync in live mode
  - Edit the programs first before displaying them on the screen in pre-edit mode
- Media library management, including videos, pictures, PowerPoint files and audios
- 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
- Up to 1080p PowerPoint files supported
- Using a laser pointer for moving between slides in PowerPoint
- Playback progress management
- Shortcut key for program jumping and auto jumping settings
- Configurable layer size and priority
- 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
- Control software VICP (Visual Intelligent Control Platform), enabling a highly efficient and user-friendly control experience

Appearance

Front Panel

No.	Area	Description
1	Power button	Power on or power off the device.
2	USB ports	2x USB3.0 • Connect to the mouse and keyboard. • Insert the USB drive for importing media files.

Rear Panel



No.	Area	Qty.	Description
1	HDMI 2.0 DP 1.2	1	Integrated graphics card output via DP 1.2 or HDMI 2.0 • Connect to a monitor for displaying the software interface. • Max. output resolution: 3840×2160@60Hz
2	Clear CMOS	1	Clear the BIOS setup information when the system crashes due to overclocking.
3	BIOS FlashBack™	1	Update the BIOS program for the motherboard.
4	USB ports	10	• 4x Type-A USB 3.2 Gen1 (blue) • 2x Type-A USB 2.0 • 2x Type-A USB 3.2 Gen2 (red) • 2x Type-C USB 3.2 Gen2 • Connect to the mouse and keyboard or insert the USB drive.
5	Ethernet port	1	1x RJ45 connector (Realtek 2.5G) for Ethernet networking
6	SPDIF OUT	1	1x S/PDIF digital audio output connector
7	Audio connectors	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 connector
8	Graphics card and sync card	-	Graphics card and sync card slots Please go to Optional Items to select the desired graphics card. **Notes** • At most two graphics cards can be configured. • 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.
Hardware/Software			

Power supply	750 W (GreatWall)
CPU	11th Generation Intel® Core™ Processor (I7_11700)
Memory	32GB DDR4 high-speed memory
Mainboard	ASUS Z590-F series motherboard
Storage	• System disk: 250 GB SSD • Storage disk: 500 GB SSD
Fan	Quiet fans (PCCOOLER), dedicated to high-frequency processors
Keyboard & Mouse	Keyboard and mouse suit (Logitech)
OS	Windows 10 Enterprise LTSC
Built-in software	Kompass FX3 (dongle included)

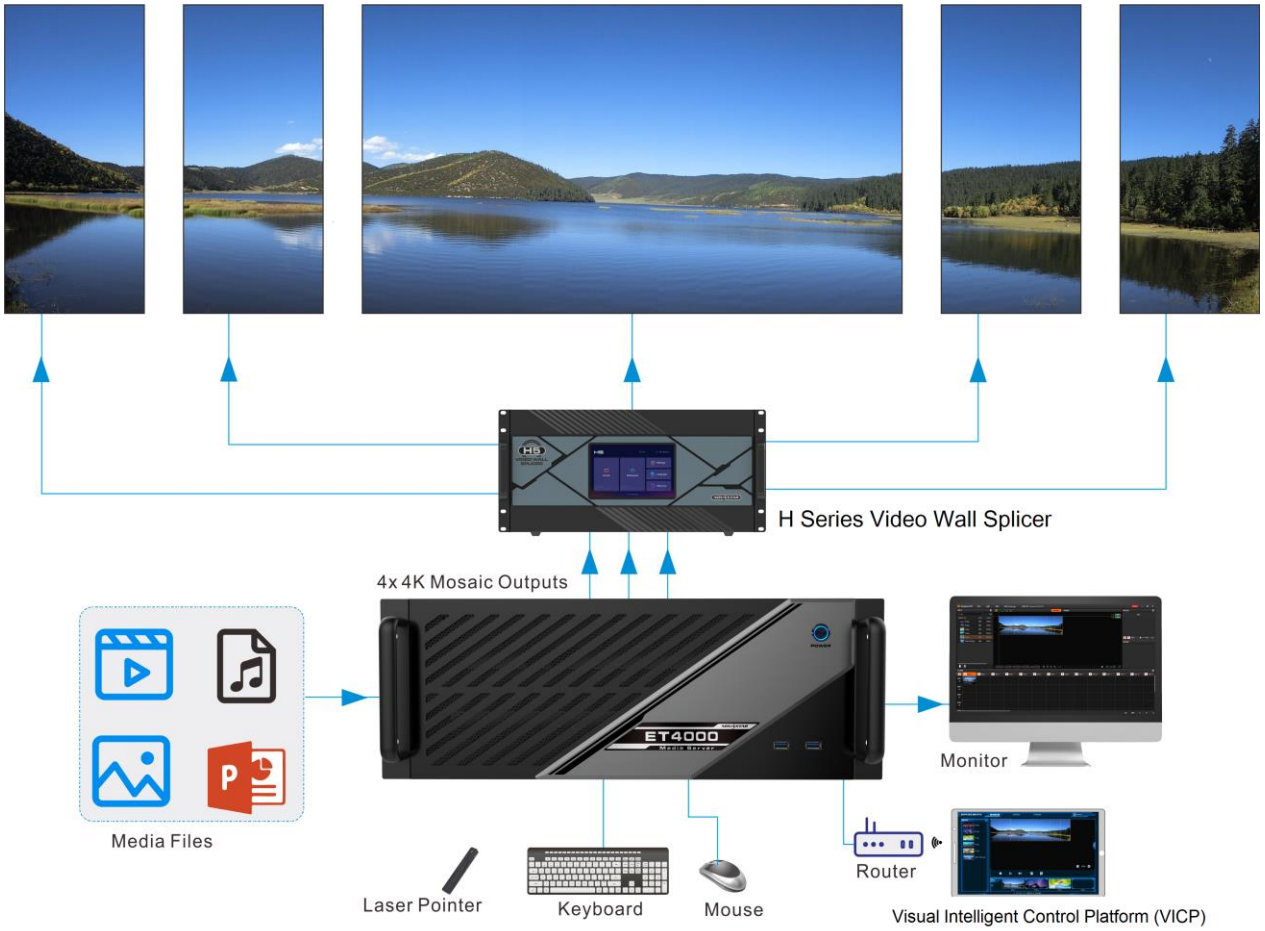
Optional Items

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

Graphics Card and Sync Card	Specifications
Graphics card MPG2200	 4x DP 1.2 • Single connector resolution: Up to 4096×2160@60Hz • Four connector mosaic output: – The mosaic width or height can be up to 8192 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@30fps SDR video (hardware-decoding) • Memory: 5 GB • Type: GDDR 5X • Bit width: 160 bit **Note** The MPG2200 graphics card cannot work with the sync card.
Graphics card HPG4000	 3x DP 1.2, 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.

Graphics Card and Sync Card	Specifications
	– 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: GDDR 6 • Bit width: 256 bit **Note** A Type-C to DP adapter cable is included in the packing list when this card is selected.
Graphics card HPGA5000	 4x DP 1.2 • 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 or 4K × 2K@60fps SDR video (hardware-decoding) • Memory: 24 GB • Type: GDDR 6 • Bit width: 384 bit
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 (VICP)

Applications



Notes

- This product can only be placed horizontally. Do not mount vertically or upside-down.
- The product can be mounted in a standard 19-inch rack capable of withstanding at least four times the total weight of the mounted equipment. Four M5 screws should be used to fix the product.

Specifications

Electrical Specifications	Power connector	100–240V~ 10–5A 47–63Hz
	Power consumption	500 W
Operating Environment	Temperature	0°C to 40°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	483 mm × 177 mm × 520 mm
	Net weight	25.9 kg
Packing Information	Packing box	690 mm × 570 mm × 300 mm
	Accessories	1x Power cable 4x DP cables 1x Type-C to DP cable* 1x Keyboard and mouse suit 1x Label (Windows product key included) 1x Quick Start Guide 1x Safety Manual 1x Certificate of Approval **Note** *When the HPG4000 graphics card is selected, the accessories include a Type-C to DP adapter cable.

Media File Types and Formats

The ET4000 supports the decoding of various common video coding formats, such as H.264, H.265, MPGE-4/2 and WMV.

Type	Format
Video	mp4, avi, mkv, flv, mov, wmv, mpeg, mpg, m4v
Picture	jpg, jpeg, bmp, png, gif, ico
Audio	mp3, aac, flac, amr, ape, wav, wma
Office files	PowerPoint files (1080p)

Note

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 – single media server and single graphics card:

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

- Recommended video bitrates for SDR uploads – multiple media servers and multiple graphics cards (frame synchronization required):

Type	Frame Rate	Video Bitrate	Video Coding
4320 (8K)	60 Hz	30 Mbps	H.265
2160 (4K)	60 Hz	30 Mbps	H.264

Note

If frame synchronization output is not required in the application scenario that has multiple media servers and multiple graphics cards, please refer to the recommended video bitrates for SDR uploads – single media server and single graphics card.

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.

Official website
www.novastar.tech

Technical support
support@novastar.tech