ET4S-G

Media Server

Specifications

Change History

Release Version	Release Date	Description
V1.1.0	2024-11-30	• Updated the product selection section. • Added the optional items section.
V1.0.0	2024-10-31	First release

Introduction

The ET4S-G 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 ET4S-G 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 ET4S-G enables simplified stage display management and best-in-class human-machine interaction.

Certifications

CE, FCC, IC, CB, KC, RoHS

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
- Multi-screen management and control support
- Sequence frame configuration and playback in BMP, TIFF, TGA, JPG, and PNG formats
- External LTC and MTC timecode input for precise and synchronized playback control
- 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 support
- 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	Description
1	Power button	• ON: Power on the device. • OFF: Power off the device.
2	Power	Connect to a power source. 100—240V~, 50/60Hz
3	CONTROL	• 1x RJ45 Realtek 2.5Gb Ethernet port for networking • 1x HDMI – CONTROL UI port for connecting a monitor to display the software interface – Max output resolution: 2K×1K@60Hz
4	USB	4x USB 3.0 Connect to the mouse, keyboard or USB drive.
5	AUDIO	XLR audio output connector • 1x AUDIO L: XLR audio left channel output • 1x AUDIO R: XLR audio right channel output
6	AUDIO	3.5 mm external audio connector • 1x C/SUB: Center/Subwoofer, for center channel and subwoofer audio output • 1x LINE IN: Line input for connecting the line output of external audio device, and inputting to an audio system or amplifier • 1x LINE OUT: Line output for sending audio system signals to other

No.	Area	Description
		devices • 1x MIC: Microphone input for connecting microphones to capture sound for input into the audio system. • 1x REAR: Rear channel audio connector for rear or surround speakers
7	OUTPUT	4x DP 1.4 • Up to 4x 5120×2880@60Hz outputs • Four connector mosaic output, with a total mosaic width/height limit of 16384 pixels • Single connector width: 480 to 8192 pixels • Single connector height: 300 to 8192 pixels
8	SYNC	Reserved

Hardware/Software

Power Supply	Great Wall 750 W
CPU	Intel 12th Gen Core Processor (12700)
Memory	32 GB DDR5 high-speed memory
Motherboard	ASUS high-performance server grade motherboard (B760)
Storage	• System disk: 250 GB high-speed SSD • Storage disk: 1 TB high-speed SSD (default), with optional additional 1 TB or 4 TB drives
Cooling	Silent fan for high-frequency processors
Keyboard & Mouse	Keyboard and mouse suit
OS	Windows 10 Enterprise LTSC
Built-in software	Kompass FX3 software with licensing dongle

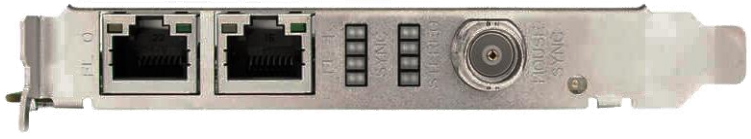
Product Selection

Model	Configuration
ET4S-G (P2)	Graphics card: 1x MPG2200 • Smooth playback of up to 1x hardware-decoded 8K×4K@30fps or 3x 4K×2K@60fps SDR video files • Video memory: 5 GB GDDR5X, 160 bit
ET4S-G (A4)	Graphics card: 1x HPG4000 • Smooth playback of 1x hardware-decoded 8K×4K@60fps SDR video files • Video memory: 8 GB GDDR6, 256 bit
ET4S-G	• Graphics card is optional, which can be selected from Optional Items. – MPG2200, select max 1 – HPG4000, select max 1 – HPGA5000, select max 1 • Server sync card, required for multi-server synchronization

Optional Items

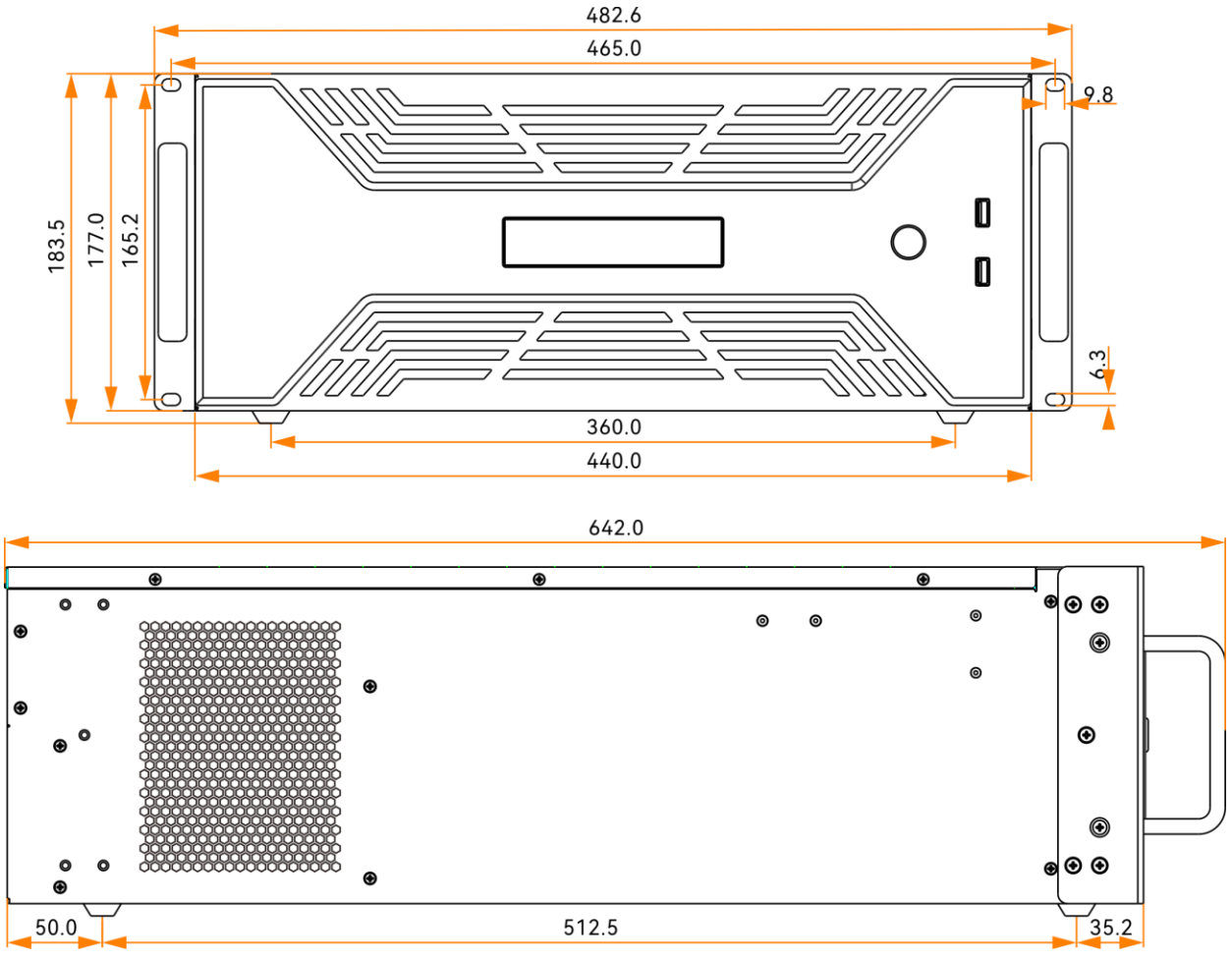
The following table lists the optional items that you need to purchase from NovaStar separately.

Graphics Card and Sync Card	Description
Graphics Card MPG2200	 4x DP 1.4 • Up to 4x 5120×2880@60Hz outputs • Four connector mosaic output, with a mosaic width or height of up to 8192 pixels • Single connector width: 480–8192 pixels • Single connector height: 300–8192 pixels • Playback of 1 layer of 8K×4K@30fps or 3 layers of 4K×2K@60fps SDR video (hardware-decoding) • Memory: 5 GB • Type: GDDR 5X

Graphics Card and Sync Card	Description
	• Bit width: 160 bit
Graphics Card HPG4000	 3x DP 1.4, 1x Type-C • Up to 4x 5120×2880@60Hz outputs • Four connector mosaic output, with a mosaic width or height of up to 16384 pixels • 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
Graphics Card HPGA5000	 4x DP 1.4 • Up to 4x 5120×2880@60Hz outputs • Four connector mosaic output, with a mosaic width or height of up to 16384 pixels • Single connector width: 480–8192 pixels • Single connector height: 300–8192 pixels • Playback of 2 layers of 8K×4K@60fps SDR video (hardware-decoding) • Memory: 24 GB • Type: GDDR6 • Bit width: 384 bit
Sync Card 2	

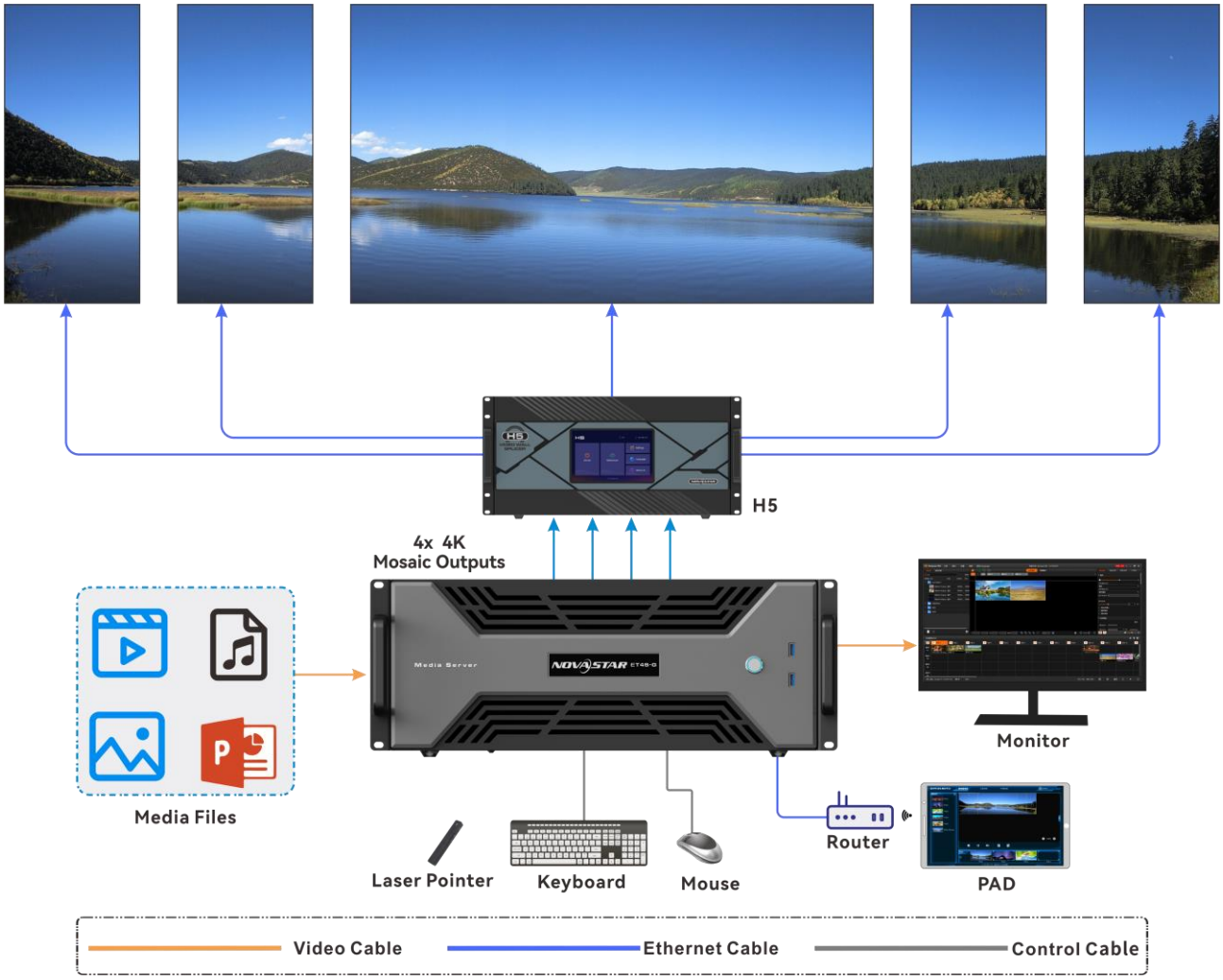
Graphics Card and Sync Card	Description
	The sync card must work with the HPG4000 and HPGA5000 graphics cards. • 2x RJ45 Accept a frame lock signal and output the signal. • 1x BNC Accept an external sync signal. • LED indicators Indicate the statuses of the sync signal connections.

Dimensions



Tolerance: ±1 Unit: mm

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	482.6 mm × 183.5 mm × 642.0 mm
	Net weight	17 kg
Packing Information	Packing box	805 mm × 625 mm × 300 mm
	Accessories	1x Power cable 4x DP cables 1x HDMI cable 1x Keyboard and mouse suit 1x Safety Manual 1x Certificate of Approval

Media File Types and Formats

The ET4S-G 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, Excel, Word, PDF

Note

Recommended video coding formats:

- 4K < resolutions ≤ 8K, width or height ≤ 8192 pixels: H.265 (HEVC) or VP9 recommended
- Resolutions ≤ 4K: H.264 (AVC) recommended

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

Notes For Battery

- The battery is not intended to be replaced.
- Disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery can result in an explosion.
- Leaving a battery in an extremely high temperature surrounding environment can result in an explosion or the leakage of flammable liquid or gas.
- A battery subjected to extremely low air pressure may result in an explosion or the leakage of flammable liquid or gas.

FCC Caution

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Others

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.

Copyright © 2024 Xi'an NovaStar Tech Co., Ltd. All Rights Reserved.

No part of this document may be copied, reproduced, extracted or transmitted in any form or by any means without the prior written consent of Xi'an NovaStar Tech Co., Ltd.

Trademark

NOVASTAR is a trademark of Xi'an NovaStar Tech Co., Ltd.

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