# ET4S-G

## Media Server

Specifications

# Change History

| Release Version | Release Date | Description |
|---|---|---|
| V1.1.0 | 2024-11-30 | • Updated the product selection section.<br>• 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

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
- 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<br>• Connect to the mouse and keyboard.<br>• Insert the USB drive for importing media files. |

## Rear Panel


| No. | Area | Description |
|---|---|---|
| 1 | Power button | • ON: Power on the device.<br>• OFF: Power off the device. |
| 2 | Power | Connect to a power source.<br>100—240V~, 50/60Hz |
| 3 | CONTROL | • 1x RJ45<br>Realtek 2.5Gb Ethernet port for networking<br>• 1x HDMI<br>– CONTROL UI port for connecting a monitor to display the software interface<br>– Max output resolution: 2K×1K@60Hz |
| 4 | USB | 4x USB 3.0<br>Connect to the mouse, keyboard or USB drive. |
| 5 | AUDIO | XLR audio output connector<br>• 1x AUDIO L: XLR audio left channel output<br>• 1x AUDIO R: XLR audio right channel output |
| 6 | AUDIO | 3.5 mm external audio connector<br>• 1x C/SUB: Center/Subwoofer, for center channel and subwoofer audio output<br>• 1x LINE IN: Line input for connecting the line output of external audio device, and inputting to an audio system or amplifier<br>• 1x LINE OUT: Line output for sending audio system signals to other |

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

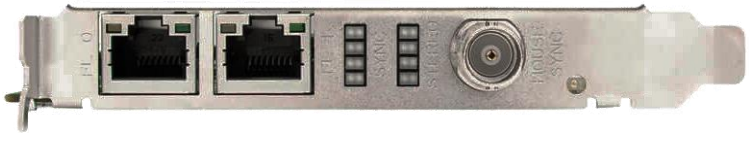
# Product Selection

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

# Optional Items

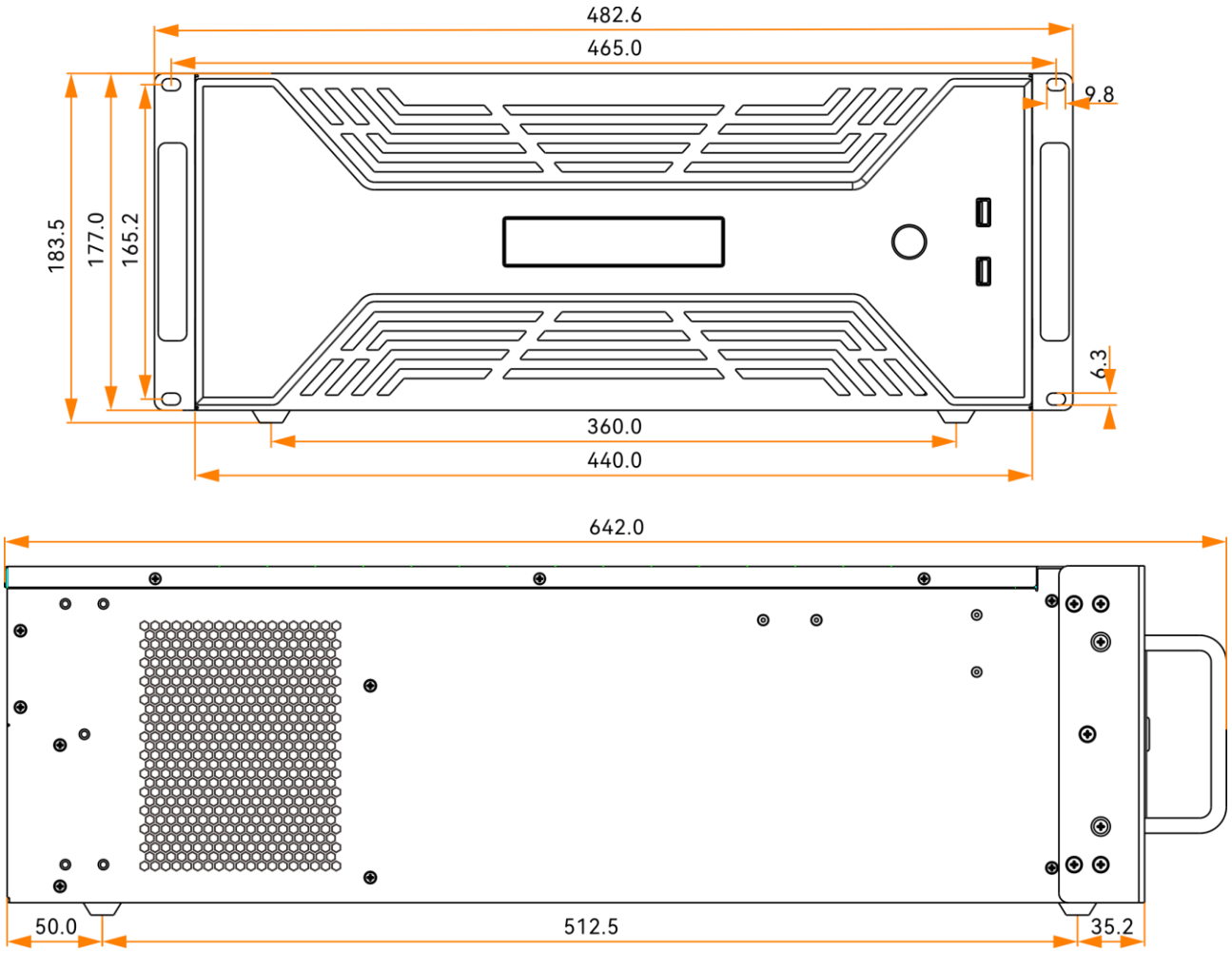
The following table lists the optional items that you need to purchase from NovaStar separately.

| Graphics Card and Sync Card | Description |
| --- | --- |
| Graphics Card MPG2200 |  <br>4x DP 1.2<br>• Up to 4x 5120×2880@60Hz outputs<br>• Four connector mosaic output, with a mosaic width or height of up to 8192 pixels<br>• Single connector width: 480–8192 pixels<br>• Single connector height: 300–8192 pixels<br>• Playback of 1 layer of 8K×4K@30fps or 3 layers of 4K×2K@60fps SDR video (hardware-decoding)<br>• Memory: 5 GB<br>• Type: GDDR 5X |

| Graphics Card and Sync Card | Description |
| --- | --- |
| | • Bit width: 160 bit |
| Graphics Card HPG4000 |  <br>3x DP 1.2, 1x Type-C<br>• Up to 4x 5120×2880@60Hz outputs<br>• Four connector mosaic output, with a mosaic width or height of up to 16384 pixels<br>• Single connector width: 480–8192 pixels<br>• Single connector height: 300–8192 pixels<br>• Playback of 1 layer of 8K×4K@60fps SDR video (hardware-decoding)<br>• Memory: 8 GB<br>• Type: GDDR6<br>• Bit width: 256 bit |
| Graphics Card HPGA5000 |  <br>4x DP 1.2<br>• Up to 4x 5120×2880@60Hz outputs<br>• Four connector mosaic output, with a mosaic width or height of up to 16384 pixels<br>• Single connector width: 480–8192 pixels<br>• Single connector height: 300–8192 pixels<br>• Playback of 2 layers of 8K×4K@60fps SDR video (hardware-decoding)<br>• Memory: 24 GB<br>• Type: GDDR6<br>• Bit width: 384 bit |
| Sync Card |  |

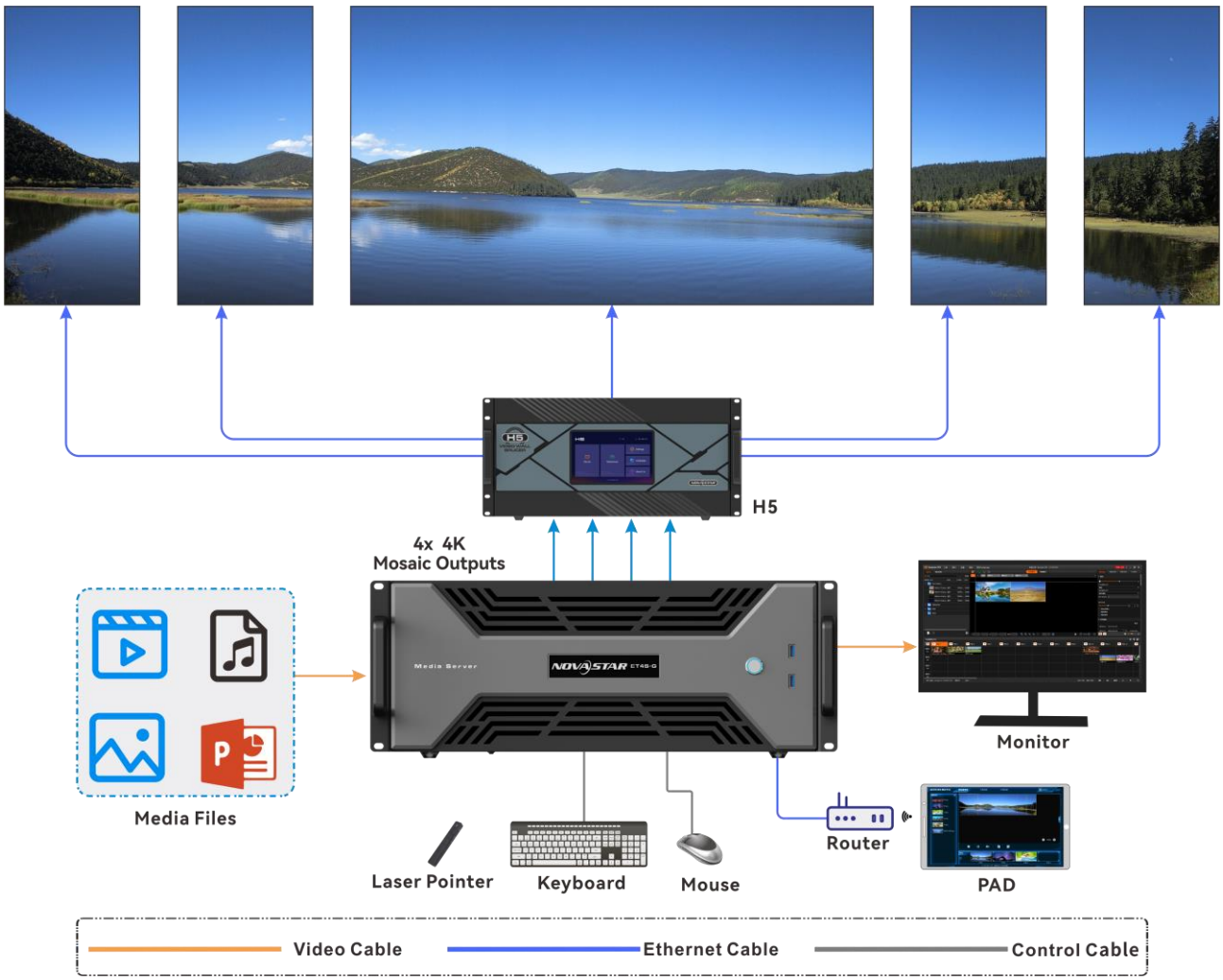
| Graphics Card and Sync Card | Description |
| --- | --- |
| | The sync card must work with the HPG4000 and HPGA5000 graphics cards.<br>• 2x RJ45<br>Accept a frame lock signal and output the signal.<br>• 1x BNC<br>Accept an external sync signal.<br>• LED indicators<br>Indicate the statuses of the sync 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<br>4x DP cables<br>1x HDMI cable<br>1x Keyboard and mouse suit<br>1x Safety Manual<br>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

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**

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