# H5

## Video Wall Splicer



Specifications

# Change History

| Document Version | Release Date | Description |
|---|---|---|
| V1.18.0 | 2026-10-30 | • Updated the features.<br>• Deleted the description of the H_4xfiber sending card. |
| V1.17.0 | 2026-05-30 | • Added the description for the matrix mode.<br>• Added the description for the network security configurations.<br>• Updated the description of the H_4xfiber input card. |
| V1.16.0 | 2025-12-15 | Added the descriptions of the following cards:<br>• H_2xDP1.2 input card<br>• H_4xfiber sending card (enhanced) |
| V1.15.0 | 2025-06-20 | • Added the descriptions of the following cards:<br>– H_4xfiber input card<br>– H_4xfiber input card-M<br>– H_1xHDMI2.1+1xDP1.4 input card<br>– H_4xfiber sending card-M<br>• Deleted the descriptions of the following cards:<br>– H_2xfiber input card-M<br>– H_2xfiber input card |
| V1.14.0 | 2024-09-14 | • Added the descriptions of the following cards:<br>– H_1xNDI input card<br>– H_2xHDMI2.0+2xDP1.2 input card<br>– H_2xHDMI2.0 input card |

# Introduction

The H5 is NovaStar's latest generation of video wall splicer, featuring excellent image quality and designed especially for fine-pitch LED screens. The H5 can work as splicing processors that integrate both video processing and video control capabilities, or work as pure splicing processors. The whole unit adopts a modular and plug-in design, and allows for flexible configuration and hot swapping of input and output cards. Thanks to excellent features and stable performance, the H5 can be widely used in a variety of applications, such as energy and power, water conservancy and hydrology, meteorologic and earthquake prediction, enterprise management, metallurgy of steel, banking and finance, public security traffic management, exhibitions and presentations, production scheduling, radio and television, educational and scientific research, as well as stage rental applications.

Based on the powerful hardware FPGA system architecture, with a modular and plug-in design, the H5 features a stable and efficient pure hardware architecture, and provides a variety of connector modules for flexible and personalized configuration, allowing for easy maintenance and low failure rate. The H5 provides the industry-standard input connectors, including HDMI, DVI, DP, VGA, CVBS, SDI and IP, and supports 10-bit video source input and processing, as well as 4K high-definition inputs and outputs. The H5 also provides three kinds of LED splicing sending cards, allowing for the backup between the OPT ports and Ethernet ports as well as ultra-long distance transmission. Moreover, the H5 supports multi-screen and multi-layer management, input and output EDID management and monitoring, input source renaming, BKG and OSD settings and more, bringing you a rich image construction experience.

In addition, the H5 adopts the B/S architecture and supports cross-platform, cross-system access and control without the need to install an application program. On a Windows, macOS, iOS, Android or Linux platform, online collaboration of multiple users is supported and the webpage response speed is fast, which greatly improves on-site setup efficiency. Moreover, the H5 supports online firmware update, allowing for easy hardware update on a PC.

# Certifications

CCC, CE, FCC, IC, KC, RCM, UKCA, UL, CB, CMIM, PSE

**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

## Modular and plug-in design, free combination at your will

- Three kinds of LED splicing sending cards
  - H_20xRJ45 sending card loads up to 13,000,000 pixels.
  - H_16xRJ45+2xfiber sending card loads up to 10,400,000 pixels and provides two OPT ports that copy the outputs on Ethernet ports.
  - H_4xfiber sending card (enhanced) loads up to 26,000,000 pixels and supports two working modes, including copy and backup.
  - The fiber sending card cannot be used together with the H_20xRJ45 sending card or H_16xRJ45+2xfiber sending card to load the same screen.
- Multi-capacity input on a single card slot
  - 4x 2K×1K@60Hz
  - 2x 4K×1K@60Hz
  - 2x 4K×2K@60Hz
  - 1x 4K×2K@120Hz/8K×4K@30Hz
- Online status monitoring of all input and output cards
- Hot-swappable input and output cards

- H_2xRJ45 IP input card supports up to 512 IP camera inputs and input mosaic.
- Auto decryption of HDCP-encrypted sources
- Decimal frame rates supported
- HDR10 and HLG processing

## Multi-screen management for centralized control

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

  Adopts the frame synchronization technology, which ensures all the output connectors output the image synchronously, and the image is complete and played smoothly, without any stuck, frame loss, tearing or piecing.
- Irregular screen configuration

  Supports irregular rectangle mosaic without any limitations.
- Input source grouping management
- Simple screen configuration using a single card and connector
- LCD bezel compensation
- Multi-screen management and operations

  Centralized management of multiple screens, such as preset group management, freezing, FTB, screen locking and brightness adjustment
- Configure signal source playback and use the source playback group as a layer source.
- Unified control of preset groups, one-click loading for high efficiency and convenience

  Save presets of multiple screen to one preset group, realizing synchronous switching across multiple screens. This facilitates centralized management with lag-free, and significantly improves the switching efficiency and stability.
- Screen peak brightness

  When paired with a dedicated TBS driver IC and after importing an NCP file configured with peak brightness, enabling the peak brightness function can effectively exceed the peak brightness limits of the screen's highlight areas. This significantly enhances the dynamic range of the image, allowing standard video sources to deliver a more realistic and natural high-dynamic display effect.
- Matrix mode, enabling convenient input/output switching.
  - Flexible input/output switching, with no blur, tearing, or noise during switching
  - Multiple switching methods, including manual mapping, automatic mapping, and switching all.
  - Customized presets and preset playlists, allowing for quick switching and loading
  - Automatic saving upon power failure. After power cycle, the system will automatically save all settings.
  - Image mosaic by using adjacent output connectors in the matrix

## Diverse display possibilities for flexible configuration

- Multi-layer display

  A single card supports up to 16x 2K layers, 8x DL layers, 4x 4K layers or 2x 8K layers.

  All layers support cross-connector output and the layer quantity is not reduced for cross-connector output.

- Various OSD options, suitable for diverse application scenarios
  - Multiple OSD types: Supports the static text OSD, dynamic text OSD, time OSD and weather OSD, meeting diverse information display requirements
  - Customizable dynamic OSD text: Customize the scrolling text content, scrolling direction, speed and font style.
  - Independent screen management: OSD content and parameters can be set individually for each screen, preventing display interference.
  - Adjustable OSD transparency: All OSD components support transparency adjustment, allowing for harmonious integration with the background image and avoiding obstruction of main view content.
- BKG settings

  BKG layers do not occupy the layer resources.

  Max width: 15K, max height: 8K

  Max width×height of a BKG image ≤ 64KK
- XR scenario control
- Up to 2,000 presets

  Fade effect and seamless switching supported, less than 60 ms 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.
- 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.
- HDR and 10-bit video processing, allowing for a more exquisite and clear image
- Color adjustment

  Output connector color and screen color adjustable, including the brightness, contrast, saturation, hue and gamma
- 3D function

  Work with NovaStar's 3D emitter – EMT200 Pro to enjoy the 3D visual effect.
- Low latency

  Reduce the latency from the input source to the receiving card to as low as 1 frame.

## Web-page control, easy, friendly and convenient

- Web control

  Real-time response and 1000 Mbps/100 Mbps self-adaptive network control, allowing for multi-user collaboration
- Monitoring of inputs and outputs on webpage
- Firmware update on webpage
- Eye saver mode

  Display the image in a warmer but less bright way to relieve eye strain.
- Visual Intelligent Control Platform (VICP) app control on pad device
- LCD menu control
- Device control via professional control processor, OpenAPI, Stream Deck, Q-SYS and SNMP protocols

## End-to-end monitoring and backup for better security protection

- 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.
- Supports an optional power supply for higher system reliability.
- Backup design
  - Backup between devices
  - Backup between input sources
  - Backup between LED splicing sending cards
- Device sleep and wake-up modes switching, providing both stable standby and an instant response experience
- 7-inch LCD touchscreen for easy device control
  - Real-time display of connector connection status using different colors
  - Real-time viewing of fan, voltage, and temperature data
  - Viewing of the screen monitoring image
  - Support for manual touch operations
- Network security configuration
  - The application security supports normal, secure, and custom modes. Users can configure parameters such as password rules, login rules, and login failure validation.
  - The firewall supports the blacklist feature, allowing the addition of IPs, IP ranges, MAC addresses and port restrictions.
  - The firewall supports Ping packet blocking and protection against half-open connection.
  - Enable or disable system service functions, such as HTTPS, SSH, NTP, and device discovery.

# Appearance

## Front Panel



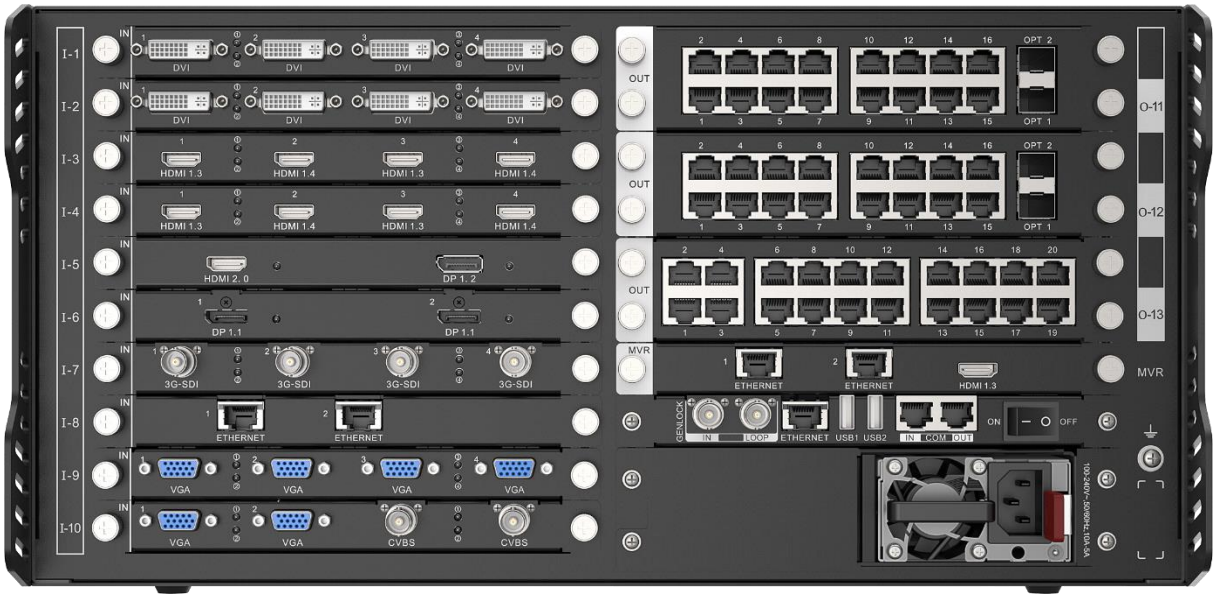

*Product images are for reference only. The actual product may vary.

**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. Eight M5 screws should be used to fix the product.

| Name | Description |
| --- | --- |
| LCD screen | Touchscreen displays the menus, submenus and messages, as well as device status and monitoring information, and allows you to perform all the operations at your fingertips. |

## Rear Panel




*Product images are for reference only. The actual product may vary.

**Notes:**

- The silkscreen marking "I-x" indicates the slot is dedicated to the input card. "I" stands for input and "x" stands for the slot number. For example, "I-1" indicates this slot is the 1st input slot and for installing an input card only.
- The silkscreen marking "O-x" indicates the slot is dedicated to the output card. "O" stands for output and "x" stands for the slot number. For example, "O-11" indicates this slot is the 11th output slot and for installing an output card only.
- The silkscreen marking "MVR" indicates the slot is dedicated to the preview card only.

| Available Input Cards | Available Output Cards |
|---|---|
| • H_1xHDMI2.1+1xDP1.4 input card<br>• H_2xDP1.2 input card<br>• H_1xHDMI2.0+1xDP1.2 input card<br>• H_2xHDMI2.0+2xDP1.2 input card<br>• H_1xDP1.2 input card<br>• H_1xST2110 input card<br>• H_1x12G SDI input card<br>• H_2xHDMI2.0 input card<br>• H_1xHDMI2.0 input card<br>• H_4xfiber input card<br>• H_2xDP1.1 input card<br>• H_4xDVI input card | • H_16xRJ45+2xfiber sending card<br>• H_20xRJ45 sending card<br>• H_4xfiber sending card (enhanced)<br>• H_1xHDMI2.0 output card<br>• H_1x12G SDI output card<br>• H_4xDVI output card<br>• H_4xHDMI output card<br>• H_4x3G SDI output card<br>• H_4xHDBaseT output card |
| | **Preview Card** |
| | H_2xRJ45+1xHDMI1.3 preview card |
| | **Control Card** |

| | |
|---|---|
| • H_4xHDMI input card<br>• H_2xRJ45 IP input card<br>• H_4x3G SDI input card<br>• H_2xCVBS+2xVGA input card<br>• H_4xVGA input card<br>• H_2xAudio input+2xAudio output card<br>• H_4xHDBaseT input card<br>• H_1xNDI input card<br>• H_STD I/O card | H_control card |
| | **Power Module** |
| | H_800W power |

## Limitation on Use

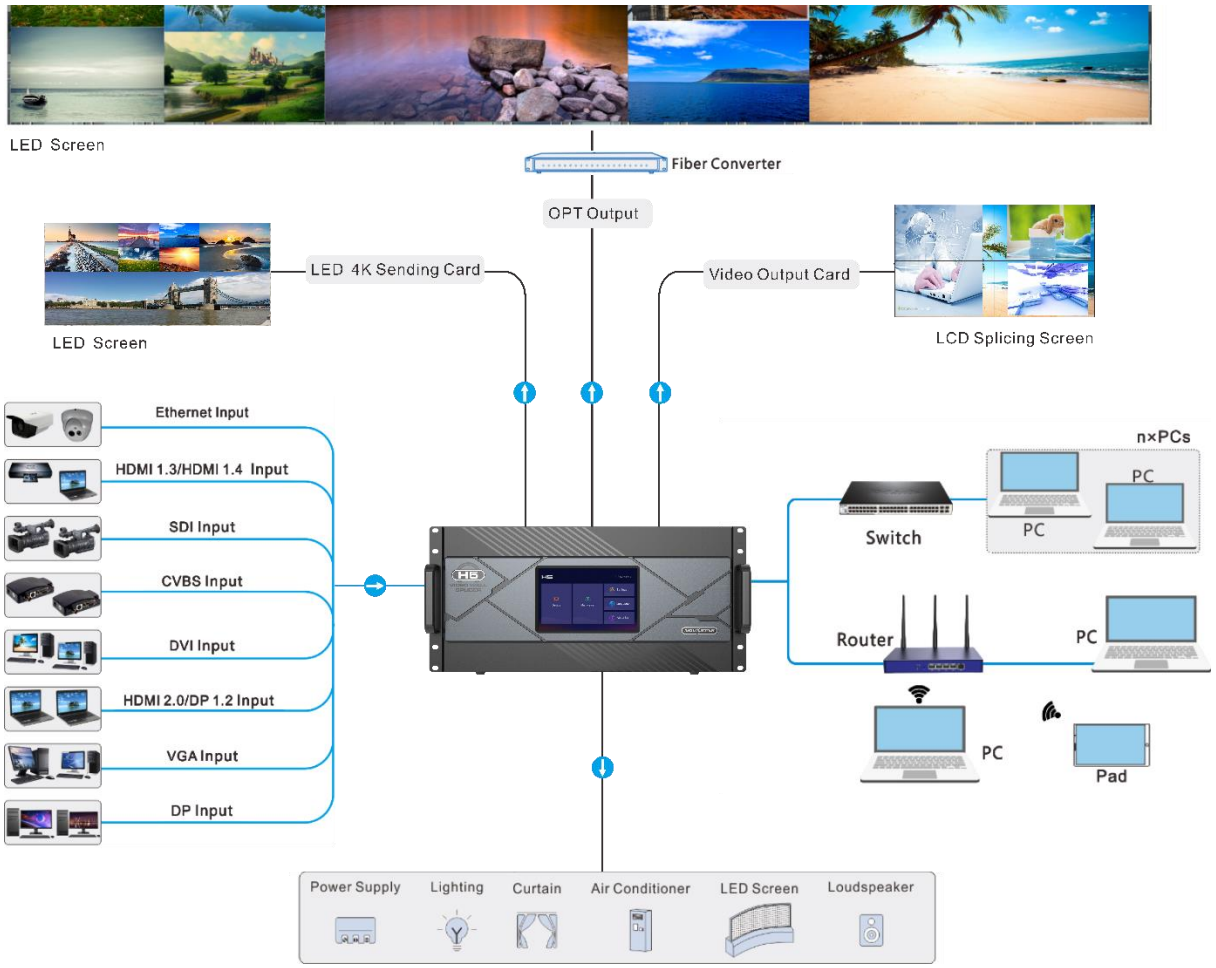
- During preset switching, the system automatically calculates the sum of the layer resources of the current preset and the target preset based on the loaded area of each output card. If the sum for the loaded area of any used output card exceeds the layer resource limit per card (16x SL layers, 8x DL layers, 4x 4K layers, or 2x 8K layers), fade transition effect is not supported, and the system will automatically use the cut transition effect.
- The layer capacity is matched with input connector capacity. If the specification of the connected input source is lower than the connector capacity, the latter shall prevail. You can change the connector capacity on the Device webpage.

  For example, an input source with the resolution of 1080p is connected to an HDMI 2.0 connector, and use this connector to add a layer. The layer capacity is 4K instead of SL.
- Only the H_4xfiber input card supports input mosaic on a single card, while the mosaic source does not support cropping and cannot be set as the backup input source.
- The backup relationship cannot be set for NDI or IPC sources.
- Instructions for the sending card with OPT ports

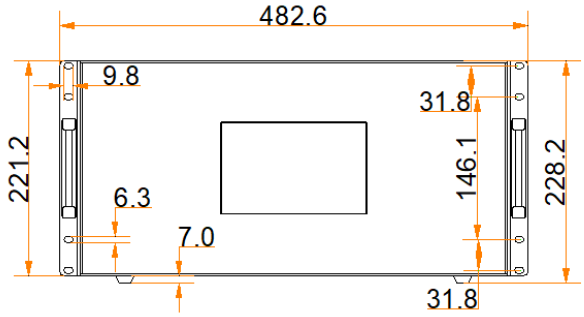
  The optical module features a dual-core port. Each OPT port has both the TX (transmission) and RX (receiving) ends.

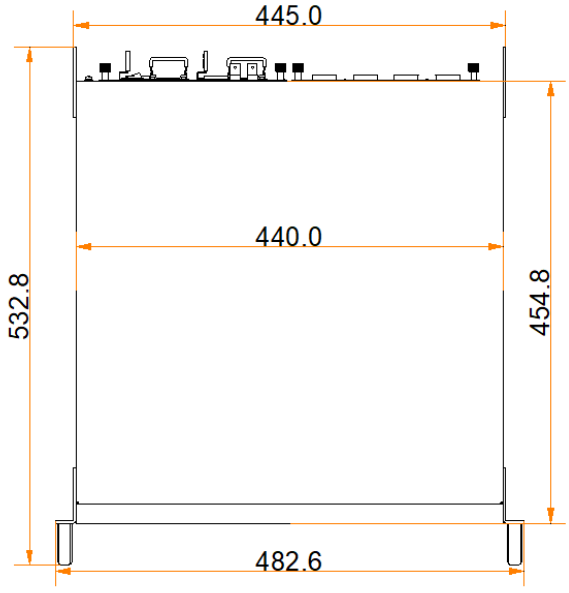
  - Normal TX, abnormal RX, normal display: The OPT port shown on the webpage is in gray.
  - Abnormal TX, normal RX, screen blackout: The OPT port shown on the webpage is in green.
  - Normal TX and RX, normal display: The OPT port shown on the webpage is in green.
- For the OpenAPI instructions of the H series, please copy and paste the link (https://openapi.novastar.tech/en/h/) into your browser.

# Applications




# Dimensions




Tolerance: ±0.5 Unit: mm

# Specifications

| | | |
|---|---|---|
| **Model** | | H5 |
| **Rack Unit** | | 5U |
| **Max. Input Cards** | | 10 |
| **Max. Input Channels** | | 40 |
| **Max. Output Cards** | | 3 |
| **Max. Output Channels** | | 12 |
| **Max. Loading Capacity** | **H_16xRJ45+2xfiber sending card** | 31.2 million pixels |
| | **H_20xRJ45 sending card** | 39 million pixels |
| | **H_4xfiber sending card (enhanced)** | 78 million pixels |
| **Max. Layers** | | 48 |
| **Electrical Specifications** | **Power connector** | 100 to 240 V~, 50/60 Hz, 10 A to 5 A<br>**Note:**<br>The H5 comes with a single power supply. A redundant power supply is optional. |
| | **Power consumption** | 400 W |
| **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** | 482.6 mm × 532.8 mm × 228.2 mm |
| | **Net weight** | 17 kg (chassis) |
| | **Gross weight** | 21.3 kg (chassis) |
| **Noise Level (typical at 25°C /77°F)** | | <45 dB(A) |
| **Packing** | **Packing box** | 785 mm × 590 mm × 355 mm |

| | | |
|---|---|---|
| **Information** | **Accessories** | 1x Power cord<br>1x RJ45 Ethernet cable<br>1x Grounding cable<br>1x HDMI cable<br>1x Quick Start Guide<br>1x Certificate of Approval<br>1x Safety Manual<br>1x Custom Letter |

## Video Source Features

| Input Connector | Color Depth | | Max. Input Resolution |
|---|---|---|---|
| ST 2110 (25G OPT port) | 8-bit | RGB 4:4:4 | 4096×2160@60Hz |
| | | YCbCr 4:4:4 | |
| | | YCbCr 4:2:2 | |
| | 10-bit | RGB 4:4:4 | |
| | | YCbCr 4:4:4 | |
| | | YCbCr 4:2:2 | |
| HDMI 2.1 | 8-bit | RGB 4:4:4 | 8192×4320@30Hz |
| | | YCbCr 4:4:4 | |
| | | YCbCr 4:2:2 | |
| | | YCbCr 4:2:0 | |
| | 10-bit | RGB 4:4:4 | |
| | | YCbCr 4:4:4 | |
| | | YCbCr 4:2:2 | |
| | | YCbCr 4:2:0 | |
| HDMI 2.0 | 8-bit | RGB 4:4:4 | 4096×2160@60Hz<br>8192×1080@60Hz |
| | | YCbCr 4:4:4 | |
| | | YCbCr 4:2:2 | |

| | | | |
|---|---|---|---|
| | 10-bit | RGB 4:4:4 | 4096×2160@30Hz<br>4096×1080@60Hz |
| | | YCbCr 4:4:4 | |
| | | YCbCr 4:2:2 | 4096×2160@60Hz |
| DP 1.4 | 8-bit | RGB 4:4:4 | 7680×4320@30Hz |
| | | YCbCr 4:4:4 | |
| | | YCbCr 4:2:2 | 8192×4320@30Hz |
| | | YCbCr 4:2:0 | |
| | 10-bit | RGB 4:4:4 | 7680×4320@24Hz |
| | | YCbCr 4:4:4 | |
| | | YCbCr 4:2:2 | 8192×4320@30Hz |
| | | YCbCr 4:2:0 | |
| DP 1.2 | 8-bit | RGB 4:4:4 | 4096×2160@60Hz<br>8192×1080@60Hz |
| | | YCbCr 4:4:4 | |
| | | YCbCr 4:2:2 | |
| | 10-bit | RGB 4:4:4 | 4096×2160@30Hz<br>4096×1080@60Hz |
| | | YCbCr 4:4:4 | |
| | | YCbCr 4:2:2 | 4096×2160@60Hz |
| HDMI 1.4<br>DP 1.1 | 8-bit | RGB 4:4:4 | 4096×1080@60Hz |
| | | YCbCr 4:4:4 | |
| | | YCbCr 4:2:2 | |
| | 10-bit | RGB 4:4:4 | 2048×1152@60Hz |
| | | YCbCr 4:4:4 | |
| | | YCbCr 4:2:2 | 4096×1080@60Hz |
| HDMI 1.3 | 8-bit | RGB 4:4:4 | 2048×1152@60Hz |
| | | YCbCr 4:4:4 | |

| | | | |
|---|---|---|---|
| | | YCbCr 4:2:2 | |
| | 10-bit | RGB 4:4:4 | 2048×1152@60Hz |
| | | YCbCr 4:4:4 | |
| | | YCbCr 4:2:2 | |
| NDI | 8-bit | YCbCr 4:2:2 | 4096×2160@60Hz |
| | | YCbCr 4:2:0 | |
| SL-DVI | 8-bit | RGB 4:4:4 | 2048×1152@60Hz |
| DL-DVI | 8-bit | RGB 4:4:4 | 3840×1080@60Hz |
| VGA<br>CVBS | - | RGB 4:4:4 | 1920×1080@60Hz |
| 3G-SDI | • Supports up to 1920×1080@60Hz video inputs.<br>• Input resolution and bit depth settings are not allowed.<br>• Supports ST-424 (3G) and ST-292 (HD). | | |
| 12G-SDI | • Supports up to 4096×2160@60Hz video inputs.<br>• Input resolution and bit depth settings are not allowed.<br>• Supports ST-2082-1 (12G), ST-2081-1 (6G), ST-424 (3G) and ST-292 (HD). | | |

# 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.

## Notes for Installation

When the product needs to be installed on the rack, 8 screws at least M5×8 should be used to fix it. The rack for installation shall bear at least four times the total weight of the mounted equipment.

A. Elevated Operating Ambient - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (Tma) specified by the manufacturer.

B. Reduced Air Flow - Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.

C. Mechanical Loading - Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.

D. Circuit Overloading - Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

E. Reliable Earthing - Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g. use of power strips).

## 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.
- Please read the specifications thoroughly and use the product in accordance with the requirements. If you have any questions about the specifications, please contact us immediately. If you use the product improperly, not following the requirements, or for illegal purposes, you shall be solely responsible for any consequences arising therefrom.

# Input Cards

## H_1xHDMI2.1+1xDP1.4 Input Card




- Only one connector can be used each time.
- Set to use which connector on the webpage. The default option is DP 1.4 connector.
- Support for connector capacity configuration, including SL, DL, 4K and 8K
- Does not support interlaced signal input.

**Connector**

**1x HDMI 2.1**

- Backward compatible with HDMI 2.0, HDMI 1.4 and HDMI 1.3
- Supports the maximum resolution of 8192×4320@30Hz and the minimum resolution of 800×600@59.94Hz.
- HDCP 2.3 compliant
- Supports embedded audio input, with audio sampling rate of 48 kHz.
- Supported frame rates: 23.98 / 24 / 25 / 29.97 / 30 / 47.95 / 48 / 50 / 56 / 59.94 / 60 / 70 / 71.93 / 72 / 75 / 85 / 100 / 119.88 / 120 / 143.86 / 144 Hz
- Custom resolutions:
  - Max. width: 8192 pixels (8192×2304@60Hz)
  - Max. height: 8192 pixels (2188×8192@60Hz)

**1x DP 1.4**

- Backward compatible with DP 1.2 and DP 1.1
- Supports the maximum resolution of 8192×4320@30Hz and the minimum resolution of 800×600@59.94Hz
- Supports embedded audio input, with audio sampling rate of 48 kHz.
- HDCP 2.3 compliant
- Supported frame rates: 23.98 / 24 / 25 / 29.97 / 30 / 47.95 / 48 / 50 / 56 / 59.94 / 60 / 70 / 71.93 / 72 / 75 / 85 / 100 / 119.88 / 120 / 143.86 / 144 Hz
- Custom resolutions:
  - Max. width: 8192 pixels (8192×2304@60Hz)
  - Max. height: 8192 pixels (2188×8192@60Hz)

**Status LEDs**

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

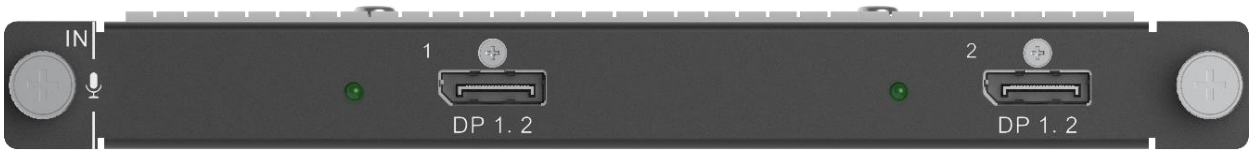
**Specifications**

- Weight: 550 g
- Dimensions: 193 mm × 247.12 mm × 21.15 mm
- Power consumption: 17 W

**Note:**

To ensure stable transmission of 8K ultra HD images, it is recommended to use HDMI 2.1/DP 1.4 certified video cables.

# H_2xDP1.2 Input Card




| Connector |
| --- |
| **2x DP 1.2**<br>• Backward compatible with DP 1.1<br>• Supports the maximum resolution of 4096×2160@60Hz/8192×1080@60Hz and the minimum resolution of 800×600@59.94Hz.<br>• Custom resolutions:<br>– Max. width: 8192 pixels (8192×1152@60Hz)<br>– Max. height: 8188 pixels (1012×8188@60Hz)<br>• HDCP 2.2 compliant<br>• Supports embedded audio input.<br>• Supported frame rates: 23.98 / 24 / 25 / 29.97 / 30 / 47.95 / 48 / 50 / 56 / 59.94 / 60 / 70 / 71.93 / 72 / 75 / 85 / 100 / 119.88 / 120 / 143.86 / 144 Hz<br>• Support for connector capacity configuration, including SL, DL and 4K.<br>• Does not support interlaced signal input. |

| Status LEDs | Specifications |
| --- | --- |
| • On: The input source is accessed normally.<br>• Off: No input source is accessed or the input source is abnormal. | • Weight: 550 g<br>• Dimensions: 193 mm × 247.12 mm × 21.15 mm<br>• Power consumption: 9.6 W |

# H_1xHDMI2.0+1xDP1.2 Input Card




- Only one connector can be used each time.
- Set to use which connector on the webpage. The default option is HDMI 2.0 connector.
- Support for connector capacity configuration, including SL, DL and 4K.
- Does not support interlaced signal input.

## Connector

### 1x HDMI 2.0

- Backward compatible with HDMI 1.4 and HDMI 1.3
- Supports the maximum resolution of 4096×2160@60Hz and the minimum resolution of 800×600@59.94Hz.
- HDCP 2.2 compliant
- Supported frame rates: 23.98 / 24 / 25 / 29.97 / 30 / 47.95 / 48 / 50 / 56 / 59.94 / 60 / 70 / 71.93 / 72 / 75 / 85 / 100 / 119.88 / 120 / 143.86 / 144 Hz
- Custom resolutions:
  - Max. width: 8192 pixels (8192×1152@60Hz)
  - Max. height: 8188 pixels (1012×8188@60Hz)

### 1x DP 1.2

- Backward compatible with DP 1.1
- Supports the maximum resolution of 4096×2160@60Hz or 8192×1080@60Hz and the minimum resolution of 800×600@59.94Hz.
- HDCP 2.2 compliant
- Supported frame rates: 23.98 / 24 / 25 / 29.97 / 30 / 47.95 / 48 / 50 / 56 / 59.94 / 60 / 70 / 71.93 / 72 / 75 / 85 / 100 / 119.88 / 120 / 143.86 / 144 Hz
- Custom resolutions:
  - Max. width: 8192 pixels (8192×1152@60Hz)
  - Max. height: 8188 pixels (1012×8188@60Hz)

## Status LEDs

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

## Specifications

- Weight: 550 g
- Dimensions: 193 mm × 247.12 mm × 21.15 mm
- Power consumption: 9.6 W

# H_2xHDMI2.0+2xDP1.2 Input Card




- Two groups of inputs, each group with 1x HDMI 2.0 and 1x DP 1.2 connector
- Only one connector of each group can be used each time.
- Set to use which connector on the webpage. The default option is HDMI 2.0 connector.
- Support for connector capacity configuration, including SL, DL and 4K.
- Does not support interlaced signal input.

## Connector

### 2x HDMI 2.0

- Backward compatible with HDMI 1.4 and HDMI 1.3
- Supports the maximum resolution of 4096×2160@60Hz and the minimum resolution of 800×600@59.94Hz.
- HDCP 2.2 compliant
- Supports embedded audio.
- Supported frame rates: 23.98 / 24 / 25 / 29.97 / 30 / 47.95 / 48 / 50 / 56 / 59.94 / 60 / 70 / 71.93 / 72 / 75 / 85 / 100 / 119.88 / 120 / 143.86 / 144 Hz
- Custom resolutions:
  - Max. width: 8192 pixels (8192×1152@60Hz)
  - Max. height: 8188 pixels (1012×8188@60Hz)

### 2x DP 1.2

- Backward compatible with DP 1.1
- Supports the maximum resolution of 4096×2160@60Hz or 8192×1080@60Hz and the minimum resolution of 800×600@59.94Hz.
- HDCP 2.2 compliant
- Supports embedded audio.
- Supported frame rates: 23.98 / 24 / 25 / 29.97 / 30 / 47.95 / 48 / 50 / 56 / 59.94 / 60 / 70 / 71.93 / 72 / 75 / 85 / 100 / 119.88 / 120 / 143.86 / 144 Hz
- Custom resolutions:
  - Max. width: 8192 pixels (8192×1152@60Hz)
  - Max. height: 8188 pixels (1012×8188@60Hz)

## Status LEDs

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

## Specifications

- Weight: 550 g
- Dimensions: 193 mm × 247.12 mm × 21.15 mm
- Power consumption: 9.8 W

# H_1xDP1.2 Input Card




| Connector |
| --- |
| **1x DP 1.2**<br>• Backward compatible with DP 1.1<br>• Each connector supports the maximum resolution of 4096×2160@60Hz or 8192×1080@60Hz and the minimum resolution of 800×600@59.94Hz.<br>• Custom resolutions:<br>– Max. width: 8192 pixels (8192×1152@60Hz)<br>– Max. height: 8188 pixels (1012×8188@60Hz)<br>• HDCP 2.2 compliant.<br>• Supports embedded audio.<br>• Supported frame rates: 23.98 / 24 / 25 / 29.97 / 30 / 47.95 / 48 / 50 / 56 / 59.94 / 60 / 70 / 71.93 / 72 / 75 / 85 / 100 / 119.88 / 120 / 143.86 / 144 Hz<br>• Support for connector capacity configuration, including SL, DL and 4K.<br>• Does not support interlaced signal input. |

| Status LEDs | Specifications |
| --- | --- |
| • On: The input source is accessed normally.<br>• Off: No input source is accessed or the input source is abnormal. | • Weight: 550 g<br>• Dimensions: 193 mm × 247.12 mm × 21.15 mm<br>• Power consumption: 9.4 W |

# H_1xST2110 Input Card




| Connector |
| --- |
| **2x 25G OPT ports**<br>• OPT 1 is used for primary input.<br>• OPT 2 serves as the backup of OPT 1.<br>• The primary input supports SMPTE ST 2110 (-10, 20) and SMPTE 2059 (-1, -2) standards.<br>• The backup input supports SMPTE 2022-7 standard.<br>• Supports VESA standard video inputs with up to 1x 4096×2160@60Hz input or 4x 2K inputs per card.<br>• Supports 8-bit/10-bit 4:4:4/4:2:2 inputs.<br>• Supported frame rates: 23.98 / 24 / 25 / 29.97 / 30 / 47.95 / 48 / 50 / 56 / 59.94 / 60 / 70 / 71.93 / 72 / 75 / 85 / 100 / 119.88 / 120 / 143.86 / 144 Hz<br>• Supports automatic identification of input source resolution and color space.<br>• Supports loading video stream configuration by SDP file or directly inputting.<br>• Supports BT.601/BT.709/BT.2020 inputs.<br>• Supports data transmission via 25 GbE IEEE 802.3cc (25GBASE-LR) and 25 GbE IEEE 802.3by (25GBASE-SR) standards.<br>• Supports IGMPv2 and IGMPv3 multicast protocols.<br>• Supports IPv4 dynamic addressing of the connector IP address and transmission of the static IP address.<br>• Input resolution settings are not allowed.<br>• Does not support interlaced signal inputs. |

| Status LEDs | Specifications |
| --- | --- |
| • On: The corresponding port has a signal.<br>• Off: The corresponding port has no signal. | • Weight: 500 g<br>• Dimensions: 193 mm × 247.12 mm × 21.15 mm<br>• Power consumption: 42 W |

**Notes:**

- As it takes time for the connector to obtain the image, please do not repeatedly plug and unplug the connector in a short period of time.
- Two 25G optical modules are included with the card and are already installed into the OPT ports.

# H_1x12G SDI Input Card




| Connector | |
|---|---|
| **1x 12G-SDI IN**<br>• Backward compatible with 6G-SDI, 3G-SDI, HD-SDI and SD-SDI<br>• Supports ST-2082-1 (12G), ST-2081-1 (6G), ST-424 (3G), ST-292 (HD) and SMPTE 259 SD.<br>• Each connector supports the maximum resolution of 4096×2160@60Hz.<br>• Supports 1080i/576i/480i de-interlacing processing.<br>• Supports embedded audio input.<br>• Does not support input resolution and bit depth settings. | **1x 12G-SDI LOOP**<br>Loop out the 12G-SDI signal. |
| **Status LEDs** | **Specifications** |
| • On: The input or loop output is connected normally.<br>• Off: No input or loop output is connected or the input or loop output is abnormal. | • Weight: 550 g<br>• Dimensions: 193 mm × 247.12 mm × 21.15 mm<br>• Power consumption: 12 W |

# H_2xHDMI2.0 Input Card




| Connector |
| --- |
| **2x HDMI 2.0**<br>• Backward compatible with HDMI 1.4 and HDMI 1.3<br>• Each connector supports the maximum resolution of 4096×2160@60Hz and the minimum resolution of 800×600@59.94Hz.<br>• Two 4K inputs can be connected at the same time.<br>• Support for connector capacity configuration, including SL, DL and 4K.<br>• HDCP 2.2 compliant.<br>• Supports embedded audio.<br>• Supported frame rates: 23.98 / 24 / 25 / 29.97 / 30 / 47.95 / 48 / 50 / 56 / 59.94 / 60 / 70 / 71.93 / 72 / 75 / 85 / 100 / 119.88 / 120 / 143.86 / 144 Hz<br>• Custom resolutions:<br>– Max. width: 8192 pixels (8192×1152@60Hz)<br>– Max. height: 8188 pixels (1012×8188@60Hz)<br>• Does not support interlaced signal input. |

| Status LEDs | Specifications |
| --- | --- |
| • On: The input source is accessed normally.<br>• Off: No input source is accessed or the input source is abnormal. | • Weight: 550 g<br>• Dimensions: 193 mm × 247.12 mm × 21.15 mm<br>• Power consumption: 9.6 W |

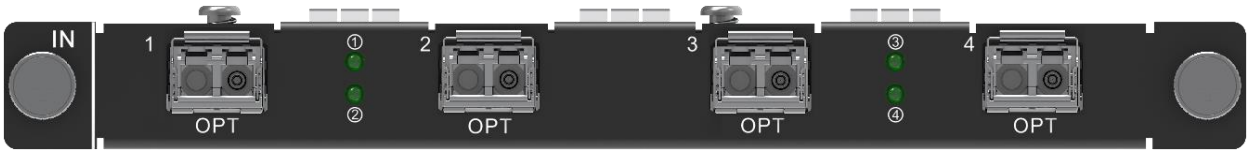
# H_1xHDMI2.0 Input Card




| Connector |
| --- |
| **1x HDMI 2.0**<br>• Backward compatible with HDMI 1.4 and HDMI 1.3<br>• Each connector supports the maximum resolution of 4096×2160@60Hz and the minimum resolution of 800×600@59.94Hz.<br>• HDCP 2.2 compliant.<br>• Supports embedded audio.<br>• Supported frame rates: 23.98 / 24 / 25 / 29.97 / 30 / 47.95 / 48 / 50 / 56 / 59.94 / 60 / 70 / 71.93 / 72 / 75 / 85 / 100 / 119.88 / 120 / 143.86 / 144 Hz<br>• Support for connector capacity configuration, including SL, DL and 4K.<br>• Custom resolutions:<br>– Max. width: 8192 pixels (8192×1152@60Hz)<br>– Max. height: 8188 pixels (1012×8188@60Hz)<br>• Does not support interlaced signal input. |

| Status LEDs | Specifications |
| --- | --- |
| • On: The input source is accessed normally.<br>• Off: No input source is accessed or the input source is abnormal. | • Weight: 550 g<br>• Dimensions: 193 mm × 247.12 mm × 21.15 mm<br>• Power consumption: 9.3 W |

# H_4xFiber Input Card




| Input Card Type | |
|---|---|
| • H_4xfiber input card<br>Four 10G SFP+ LR single-mode optical modules are included with the card and are already installed into the OPT ports. | • H_4xfiber input card-M<br>Four 10G SFP+ SR multi-mode optical modules are included with the card and are already installed into the OPT ports. |

**Connector**

**4x 10G OPT ports**

- Each connector supports the maximum resolution of 4096×2160@30Hz.
- Each connector supports up to 2x SL inputs or 1x DL input.
- Supports input mosaic, while the mosaic source cannot be used as a backup source.
- Supports two input modes: independent and mosaic modes.
- Supports automatic identification of input source resolution and color space.
- Supported frame rates: 23.98 / 24 / 25 / 29.97 / 30 / 47.95 / 48 / 50 / 59.94 / 60 / 71.93 / 72 / 75 / 85 / 100 / 119.88 / 120 / 143.86 / 144 Hz
- The optical module supports SFP+ encapsulation. The supported module specifications include the following:
  - Multi-mode optical module: 10G SFP+ SR optical module
  - Single-mode optical module: 10G SFP+ LR optical module
- In independent mode, SL, DL or 4K input is supported.
  - For an SL input source, only two OPT ports (either OPT 1-2 or OPT 3-4) can be used for input, while the four ports cannot be used together for input.
  - For a DL input source, the four ports can be used together for input.
  - For a 4K input source, only two OPT ports (either OPT 1-2 or OPT 3-4) can be used for input.
- In mosaic mode, SL or DL input is supported.
  - Only two OPT ports (either OPT 1-2 or OPT 3-4) support setting of the input source specifications.
  - For an SL input source, the mosaic layout supports 1x1, 1x2, 1x3, 1x4, 2x1, 2x2, 3x1 or 4x1.
  - For a DL input source, the mosaic layout supports 1x1, 1x2 or 2x1.
- Input resolution settings are not allowed.

| Status LEDs | Specifications |
|---|---|
| • On: The corresponding port has a signal.<br>• Off: The corresponding port has no signal. | • Weight: 500 g<br>• Dimensions: 193 mm × 247.12 mm × 21.15 mm<br>• Power consumption: 42 W |

# H_2xDP1.1 Input Card




| Connector |
| --- |
| **2x DP 1.1**<br>• Each connector supports the maximum resolution of 3840×1080@60Hz or 3840×2160@30Hz and the minimum resolution of 800×600@59.94Hz.<br>• Custom resolutions:<br>– Max. width: 4096 pixels (4096×1130@60Hz)<br>– Max. height: 4096 pixels (1014×4096@60Hz)<br>• Supports 8-bit and 10-bit inputs.<br>• HDCP 1.3 compliant.<br>• Supports embedded audio.<br>• Supported frame rates: 23.98 / 24 / 25 / 29.97 / 30 / 47.95 / 48 / 50 / 56 / 59.94 / 60 / 70 / 71.93 / 72 / 75 / 85 / 100 / 119.88 / 120 / 143.86 / 144 Hz<br>• Support for connector capacity configuration, including SL and DL.<br>• Does not support interlaced signal input. |

| Status LEDs | Specifications |
| --- | --- |
| • On: The input source is accessed normally.<br>• Off: No input source is accessed or the input source is abnormal. | • Weight: 550 g<br>• Dimensions: 193 mm × 247.12 mm × 21.15 mm<br>• Power consumption: 11.5 W |

# H_4xDVI Input Card




- Support for single link and dual link input modes as well as 10-bit input source
- HDCP 1.4 compliant
- Does not support interlaced signal input.

## Connector

### Single Link Mode

- Four DVI connectors are all used for input.
- Each connector supports the maximum resolution of 2048×1152@60Hz and the minimum resolution of 800×600@59.94Hz.
- Supported frame rates: 23.98 / 24 / 25 / 29.97 / 30 / 47.95 / 48 / 50 / 56 / 59.94 / 60 / 70 / 71.93 / 72 / 75 / 85 / 100 / 119.88 / 120 / 143.86 / 144 Hz
- Custom resolutions:
  - Max. width: 2560 pixels (2560×983@60Hz)
  - Max. height: 2560 pixels (884×2560@60Hz)

### Dual Link Mode

- Connectors 2 and 4 are used for input, and connectors 1 and 3 are unavailable.
- Each connector supports the maximum resolution of 3840×1080@60Hz and the minimum resolution of 800×600@59.94Hz.
- Supported frame rates: 23.98 / 24 / 25 / 29.97 / 30 / 47.95 / 48 / 50 / 56 / 59.94 / 60 / 70 / 71.93 / 72 / 75 / 85 / 100 / 119.88 / 120 / 143.86 / 144 Hz
- Custom resolutions:
  - Max. width: 4096 pixels (4096×1130@60Hz)
  - Max. height: 4096 pixels (1014×4096@60Hz)

## Status LEDs

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

## Specifications

- Weight: 550 g
- Dimensions: 193 mm × 247.12 mm × 21.15 mm
- Power consumption: 9.4 W

# H_4xHDMI Input Card




- Support for 10-bit input source and embedded audio
- Does not support interlaced signal input.

## Connector

### HDMI 1.3 Inputs

- Four connectors are all used for input.
- Each connector supports the maximum resolution of 2048×1152@60Hz, and the minimum resolution of 800×600@59.94Hz.
- Supported frame rates: 23.98 / 24 / 25 / 29.97 / 30 / 47.95 / 48 / 50 / 56 / 59.94 / 60 / 70 / 71.93 / 72 / 75 / 85 / 100 / 119.88 / 120 / 143.86 / 144 Hz
- Custom resolutions:
  - Max. width: 2560 pixels (2560×983@60Hz)
  - Max. height: 2560 pixels (884×2560@60Hz)
- HDCP 1.4 compliant

### HDMI 1.4 Inputs

- Two HDMI 1.4 connectors are used for input, but two HDMI 1.3 connectors are unavailable.
- Each connector supports the maximum resolution of 3840×1080@60Hz and the minimum resolution of 800×600@59.94Hz.
- Supported frame rates: 23.98 / 24 / 25 / 29.97 / 30 / 47.95 / 48 / 50 / 56 / 59.94 / 60 / 70 / 71.93 / 72 / 75 / 85 / 100 / 119.88 / 120 / 143.86 / 144 Hz
- Custom resolutions:
  - Max. width: 4096 pixels (4096×1130@60Hz)
  - Max. height: 4096 pixels (1014×4096@60Hz)
- HDCP 1.4 compliant

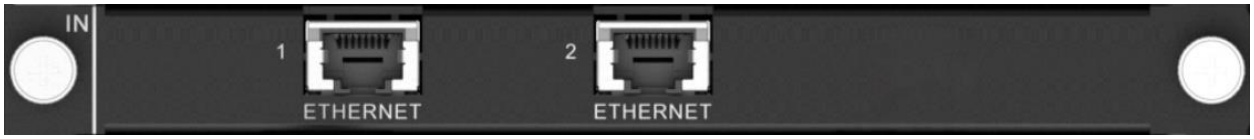
## Status LEDs

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

## Specifications

- Weight: 550 g
- Dimensions: 193 mm × 247.12 mm × 21.15 mm
- Power consumption: 9.3 W

## H_2xRJ45 IP Input Card




| Connector | Specifications |
| --- | --- |
| **2x RJ45 Gigabit Ethernet Ports**<br>• Supported protocols: RTSP, GB28181 and ONVIF<br>• Supported coding formats for IPC videos: H.264 and H.265<br>• Supports decoding of video streaming provided by the encoder.<br>– Supports decoding of unicast video streaming.<br>– Supports decoding of 8-bit H.264/H.265 YUV420 videos of I-frames and P-frames.<br>• Single card decoding capability:<br>– 1x or 2x 12 MP<br>– 4x 8 MP<br>– 8x 4 MP<br>– 16x 2 MP<br>– 64x D1<br>• DHCP compliant | • Weight: 550 g<br>• Dimensions: 193 mm × 247.12 mm × 21.15 mm<br>• Power consumption: 11.5 W |
| | **Note:**<br>• When the hardware version of the H_2xRJ45 IP input card is V1.0, 1x 12 MP decoding is supported.<br>• When the hardware version of the H_2xRJ45 IP input card is V2.0, 2x 12 MP decoding is supported. |

## H_4xVGA Input Card




| Connector | |
| --- | --- |
| **4x VGA**<br>• Each connector supports the maximum resolution of 1920×1200@60Hz.<br>• Does not support interlaced signal input. | |
| **Status LEDs** | **Specifications** |
| • On: The input source is accessed normally.<br>• Off: No input source is accessed or the input source is abnormal. | • Weight: 550 g<br>• Dimensions: 193 mm × 247.12 mm × 21.15 mm<br>• Power consumption: 16.2 W |

## H_4x3G SDI Input Card




| Connector |
| --- |
| 4x 3G-SDI<br>• Backward compatible with HD-SDI and SD-SDI<br>• Supports ST-424 (3G), ST-292 (HD) and SMPTE 259 SD.<br>• Each connector supports the maximum resolution of 1920×1080@60Hz.<br>• Supports 1080i/576i/480i de-interlacing processing.<br>• Supports embedded audio input. |

| Status LEDs | Specifications |
| --- | --- |
| • On: The input source is accessed normally.<br>• Off: No input source is accessed or the input source is abnormal. | • Weight: 550 g<br>• Dimensions: 193 mm × 247.12 mm × 21.15 mm<br>• Power consumption: 12.6 W |

## H_2xCVBS+2xVGA Input Card




| Connector |
| --- |
| • 2x VGA<br>– Each connector supports the maximum resolution of 1920×1200@60Hz.<br>– Does not support interlaced signal input.<br>• 2x CVBS<br>– Supports PAL and NTSC.<br>– Supports interlaced signal input. |

| Status LEDs | Specifications |
| --- | --- |
| • On: The input source is accessed normally.<br>• Off: No input source is accessed or the input source is abnormal. | • Weight: 550 g<br>• Dimensions: 193 mm × 247.12 mm × 21.15 mm<br>• Power consumption: 9.3 W |

# H_2xAudio Input+2xAudio Output Card

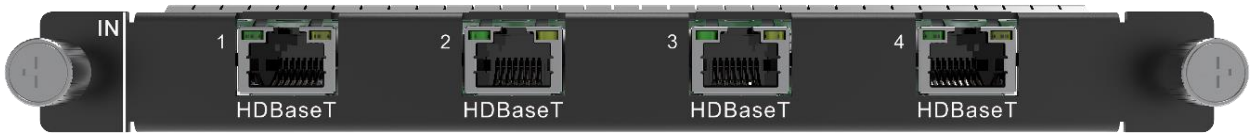



| Connector | Specifications |
| --- | --- |
| Single channel: 4x phoenix audio inputs, 4x phoenix audio outputs<br>Dual channel: 2x phoenix audio inputs, 2x phoenix audio outputs<br>• Audio sampling rate: 48 kHz<br>• When the single channel balanced audio is used as the audio source, both the input and output audio channels are four.<br>• When the stereo balanced audio is used as the audio source, both the input and output channels will be downmixed.<br>• Output the embedded audio of the video input connector and the audio of the audio input card.<br>• Output volume adjustment and one-click mute function supported<br>• Switching between the single channel and dual channel<br>• Audio output delay supported | • Weight: 550 g<br>• Dimensions: 193 mm × 247.12 mm × 21.15 mm<br>• Power consumption: 6 W |

**Note:**

If you want to output the embedded audio, please select the layer opened by the input card with the silkscreen marking or the input card supporting embedded audio input.

# H_4xHDBaseT Input Card




4x RJ45 Gigabit Ethernet ports

Support for single link and dual link input modes, and embedded audio

## Connector

### Single Link Input

- Four connectors are all available for input.
- Each connector supports the maximum resolution of 1920×1080@60Hz and the minimum resolution of 800×600@59.94Hz.
- Supported frame rates: 23.98 / 24 / 25 / 29.97 / 30 / 47.95 / 48 / 50 / 56 / 59.94 / 60 / 70 / 71.93 / 72 / 75 / 85 / 100 / 119.88 / 120 / 143.86 / 144 Hz
- Custom resolution:
  - Max. width: 2560 pixels (2560×983@60Hz)
  - Max. height: 2560 pixels (884×2560@60Hz)
- HDCP 1.4 compliant

### Dual Link Input

- Connector 2 and 4 are available for input.
- Each connector supports the maximum resolution of 3840×2160@30Hz and the minimum resolution of 800×600@59.94Hz.
- Supported frame rates: 23.98 / 24 / 25 / 29.97 / 30 / 47.95 / 48 / 50 / 56 / 59.94 / 60 / 70 / 71.93 / 72 / 75 / 85 / 100 / 119.88 / 120 / 143.86 / 144 Hz
- Custom resolution:
  - Max. width: 4096 pixels (4096×1130@60Hz)
  - Max. height: 4096 pixels (1014×4096@60Hz)
- HDCP 1.4 compliant

## Status LEDs

- Green: Indicating the input source access status
  - On: The input source is accessed normally.
  - Off: No input source is accessed.
- Yellow: Indicating the input source status
  - On: The input source is normal.
  - Off: The input source has no signal or the input source is abnormal.
  - Flashing: The connector is in communication.

## Specifications

- Weight: 500 g
- Dimensions: 193 mm × 247.12 mm × 21.15 mm
- Power consumption: 39 W

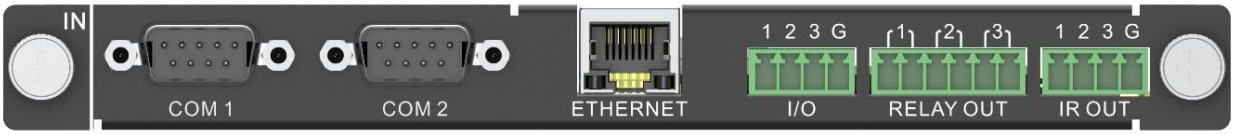
# H_1xNDI Input Card




| Connector | Status LEDs |
| --- | --- |
| **1x RJ45 Gigabit Ethernet Input**<br>• Supports 8-bit YUV4:2:2 or YUV4:2:0 input decoding.<br>• Single card decoding capability:<br>– 4x 2K×1K@60Hz<br>– 2x 4K×1K@60Hz<br>– 1x 4K×2K@60Hz<br>• DHCP supported<br>• Supports video decoding in Full NDI format.<br>• The NDI input source resolution must meet the following requirements:<br>– Horizontal width: An integer multiple of 64<br>– Vertical height: An integer multiple of 2<br>• Does not support standard and custom resolution settings for the input source. | • Green: Indicating the input source access status<br>– On: The input source is accessed normally.<br>– Off: No input source is accessed.<br>• Yellow: Indicating the input source status<br>– On: The input source is normal.<br>– Off: The input source has no signal or the input source is abnormal.<br>– Flashing: The connector is in communication. |

| Specifications |
| --- |
| • Weight: 500 g<br>• Dimensions: 193 mm × 247.12 mm × 21.15 mm<br>• Power consumption: 42 W |

# H_STD I/O Card



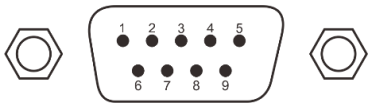

This card can be installed into the input card slots.

## Connector

### 2x COM

Programmable RS422/RS485/RS232 ports that are used to control the devices that adopt RS422/RS485/RS232 protocol

- COM port pins are shown as below:




- The pin wiring is shown as below:

| PIN | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| RS-232 | | RXD | | TXD | | GND | | | |
| RS-422 | RXD− | | | TXD+ | GND | RXD+ | | TXD− | |
| RS-485 | | | | | A | | | | B |

### 1x ETHERNET

- Control the device connected to this card.
- 10/100 Mbps self-adaptive, default IP address: 192.168.0.10
- TCP/IP protocol and UDP/IP protocol supported

### 3x I/O

- Trigger the execution of the function requirements via programming.
- Input and output modes supported
- Pins 1, 2 and 3 can be set to either the input or output, and pin G is the common grounding pin for pins 1, 2 and 3.

### 3x RELAY OUT

- Connect to the relay to control the power on and off the connected device.
- Forward voltage: 30 V DC, forward current: 3 A at maximum
- Six pins are divided into three groups, which can be connected or disconnected via programming.

### 3x IR OUT

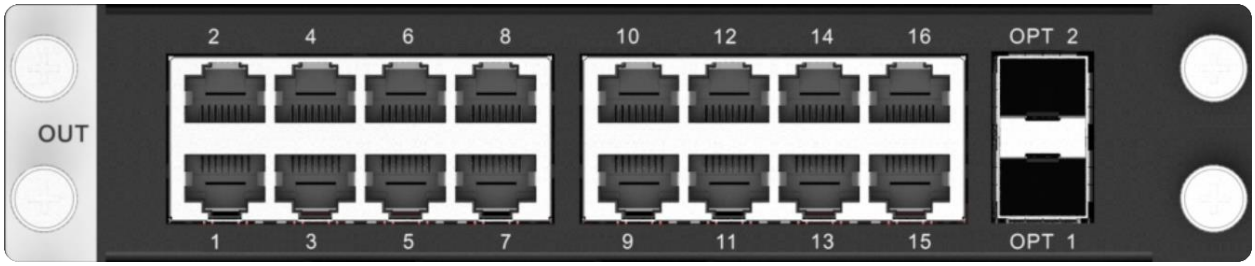
- Programmable infrared control supported
- Pins 1, 2 and 3 are used for infrared emission, and pin G is the common grounding pin for pins 1, 2 and 3.

## Specifications

- Weight: 400 g
- Dimensions: 193 mm × 247.12 mm × 21.15 mm
- Power consumption: 1.2 W

# Output Cards

## H_16xRJ45+2xFiber Sending Card




LED splicing sending card can load up to 10,400,000 pixels (max. width: 10,240 pixels, max. height: 10,240 pixels).

This card occupies two slots.

### Connector

#### 16x RJ45 Gigabit Ethernet Outputs

- Bit depth: 8-bit

  A single Ethernet port loads up to 650,000 pixels.

- Bit depth: 10-bit

  A single Ethernet port loads up to 325,000 pixels.

- Card version: V1.9.9.0 or later, with the dynamic sub-pixels function enabled
  - Flexible screen configuration without rectangle restriction on a single Ethernet port (Specific receiving cards are required. Please contact our technical support staff to obtain details.)
  - When the output bit depth is 10-bit, the maximum loading capacity of a single Ethernet port is 480,000 pixels. (Specific receiving cards are required. Please contact our technical support staff to obtain details.)
- Backup between Ethernet ports
- Supports 144 Hz output.

#### 2x OPT Outputs

- Support both SMF and MMF transmission.
- OPT 1 copies and outputs the data on Ethernet ports 1–8.
- OPT 2 copies and outputs the data on Ethernet ports 9–16.
- Supports 144 Hz output.

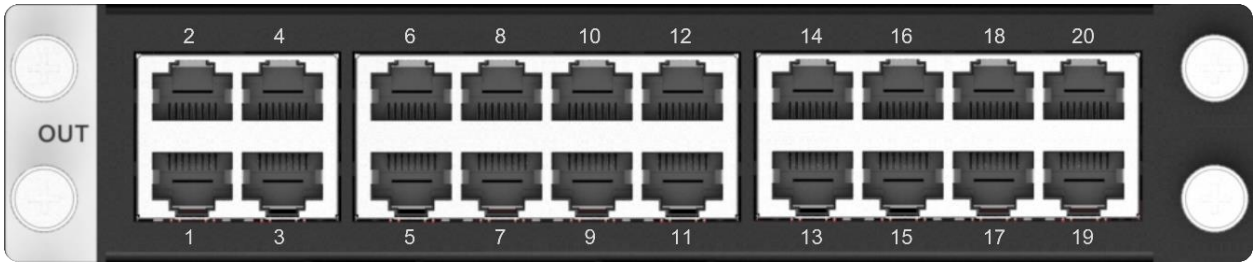
### Specifications

- Weight: 600 g
- Dimensions: 193 mm × 247.12 mm × 41.25 mm
- Power consumption: 34.2 W

**Notes:**

- For the optical module connected to the OPT port, you need to order or purchase separately.
- It is recommended to connect a CVT series fiber converter to the OPT port.

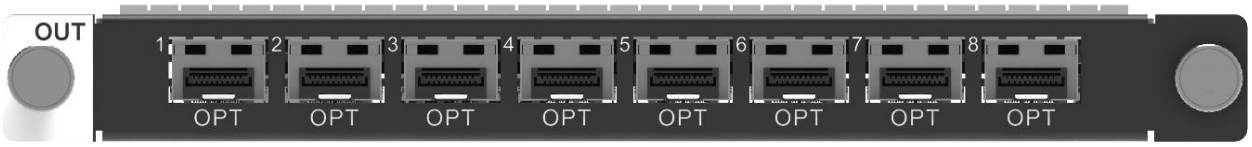
# H_20xRJ45 Sending Card




- LED splicing sending card can load up to 13,000,000 pixels (max. width: 10,752 pixels, max. height: 10,752 pixels).
- This card occupies two slots.

| Connector | Specifications |
| --- | --- |
| **20x RJ45 Gigabit Ethernet Outputs**<br>• Bit depth: 8-bit<br>A single Ethernet port loads up to 650,000 pixels.<br>• Bit depth: 10-bit<br>A single Ethernet port loads up to 325,000 pixels.<br>• Backup between Ethernet ports<br>• Supports 144 Hz output. | • Weight: 600 g<br>• Dimensions: 193 mm × 247.12 mm × 41.25 mm<br>• Power consumption: 40.1 W |

# H_4xFiber Sending Card (Enhanced)




| Connector |
| --- |

**8x 10G OPT Ports**

- OPT 1 to OPT 4 serve as the primary ports, and OPT 5 to OPT 8 serve as the backup ones.
  - OPT 5 backs up or copies the output on OPT 1.
  - OPT 6 backs up or copies the output on OPT 2.
  - OPT 7 backs up or copies the output on OPT 3.
  - OPT 8 backs up or copies the output on OPT 4.
- The loading capacity of one OPT port is equal to that of 10 Ethernet ports.
- Free topology supported.

  Flexible screen configuration without rectangle restriction on a single Ethernet port. The total resolution of the screen loaded by the device must be within the device loading capacity. (Specific receiving cards are required. Please contact our technical support staff to obtain details.)
- Max loading capacity: 26,000,000 pixels (max. width: 16,384 pixels, max. height: 16,384 pixels)
- Copy and backup modes are supported. Only the cards set in the same modes can be used together to load a screen.
- Supports 8-bit and 10-bit outputs. The output bit depth needs to be set in NovaLCT.
  - When the output bit depth is 8-bit, the maximum loading capacity of a single OPT port is 6,500,000 pixels.
  - When the output bit depth is 10-bit, the maximum loading capacity of a single OPT port is as follows:

    Common receiving card: 3,250,000 pixels

    Specified receiving card: 4,800,000 pixels (For specific receiving card models, please contact our technical support staff to obtain details.)
- Supports 144 Hz output.
- Both the single-mode and multi-mode optical modules are supported, with the transmission distance of up to 10 km and 300 m respectively.
- The optical module supports SFP+ encapsulation. The supported module specifications include the following:
  - Multi-mode optical module: 10G SFP+ SR optical module
  - Single-mode optical module: 10G SFP+ LR optical module
- This card cannot be used together with the H_20xRJ45 sending card or H_16xRJ45+2xfiber sending card to load the same screen.
- The cards of the same type with the same frame rate but different resolutions can be used together to load a

screen.

- The screen loaded by this card supports the fade transition effect.

**Specifications**

- Weight: 500 g
- Dimensions: 193 mm × 247.12 mm × 21.15 mm
- Power consumption: 36 W

**Notes:**

- For the H_4xfiber sending card (enhanced), four 10G SFP+ LR optical modules are included with the card and are already installed into the OPT 1 to OPT 4 ports.
- When the screen is loaded by the H_4xfiber sending card (enhanced), NovaLCT V5.8.0 or above is required for screen configurations.
- It is recommended to connect a CVT series fiber converter to the OPT port.

# H_1xHDMI2.0 Output Card




| Connector |
| --- |
| **2x HDMI 2.0**<br>• Connector 2 copies the output on connector 1.<br>• The connector supports the maximum resolution of 8192×1080@60Hz/4096×2160@60Hz.<br>• Custom resolutions:<br>– Max. width: 8192 pixels (8192×1146@60Hz)<br>– Max. height: 8188 pixels (1012×8188@60Hz)<br>• Supports 8-bit or 10-bit RGB 4:4:4/YCbCr 4:4:4/YCbCr 4:2:2 output.<br>• Supports 144 Hz output. |

| Status LEDs | Specifications |
| --- | --- |
| • On: The output connector is connected normally.<br>• Off: The output connector is not connected. | • Weight: 500 g<br>• Dimensions: 193 mm × 247.12 mm × 21.15 mm<br>• Power consumption: 21 W |

# H_4xDVI Output Card




4x SL-DVI

Support for single output, dual link output and 144 Hz output

## Connector

### Single Link Output

- Four connectors are all available for output.
- Each connector supports the maximum resolution of 2048×1152@60Hz.
- Custom resolutions:
  - Max. width: 2560 pixels (2560×972@60Hz)
  - Max. height: 2560 pixels (884×2560@60Hz)
- Supports 8-bit RGB 4:4:4/YCbCr 4:4:4/YCbCr 4:2:2 output.
- Supports 10-bit YCbCr 4:4:4 output.
- Supports output rotation by multiples of 90°.
  - In rotation mode, dual link output cannot be set and the layer quantity is halved with up to 8x SL layers supported.
  - In rotation mode, the loaded screen does not support the image OSD function.
  - In rotation mode, the loaded screen does not support the fade transition effect.
  - The cards supporting the rotation function cannot be used together with the cards of other types to load a screen. Even for the cards of the same type, the cards of the versions that support the rotation function and do not support this function cannot be used together to load a screen.
- Supports output image mirroring.

### Dual Link Output

- Connectors 2 and 4 are available for output.
- Connector 1 copies the output on connector 2, and connector 3 copies the output on connector 4.
- Adopts HDMI 1.4 protocol.
- Each connector supports the maximum resolution of 4096×2160@30Hz/3840×1080@60Hz.
- Custom resolutions:
  - Max. width: 4096 pixels (4096×1124@60Hz)
  - Max. height: 4096 pixels (1014×4096@60Hz)
- Supports 8-bit RGB 4:4:4/YCbCr 4:4:4/YCbCr 4:2:2 output.
- Supports 10-bit YCbCr 4:4:4 output.

## Status LEDs

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

## Specifications

- Weight: 500 g
- Dimensions: 193 mm × 247.12 mm × 21.15 mm
- Power consumption: 22.9 W

# H_4xHDMI Output Card




4x HDMI 1.4

Support for single output, dual link output and 144 Hz output

## Connector

### Single Link Output

- Four connectors are all available for output.
- Each connector supports the maximum resolution of 2048×1152@60Hz.
- Custom resolutions
  - Max. width: 2560 pixels (2560×972@60Hz)
  - Max. height: 2560 pixels (884×2560@60Hz)
- Supports 8-bit RGB 4:4:4/YCbCr 4:4:4/YCbCr 4:2:2 output.
- Supports 10-bit RGB 4:4:4/YCbCr 4:4:4 output.
- Supports output rotation by multiples of 90°.
  - In rotation mode, dual link output cannot be set and the layer quantity is halved with up to 8x SL layers supported.
  - In rotation mode, the loaded screen does not support the image OSD function.
  - In rotation mode, the loaded screen does not support the fade transition effect.
  - The cards supporting the rotation function cannot be used together with the cards of other types to load a screen. Even for the cards of the same type, the cards of the versions that support the rotation function and do not support this function cannot be used together to load a screen.
- Supports output image mirroring.

### Dual Link Output

- Connectors 2 and 4 are available for output.
- Connector 1 copies the output on connector 2, and connector 3 copies the output on connector 4.
- Each connector supports the maximum resolution of 4096×2160@30Hz/3840×1080@60Hz.
- Custom resolutions
  - Max. width: 4096 pixels (4096×1124@60Hz)
  - Max. height: 4096 pixels (1014×4096@60Hz)
- Supports 8-bit RGB 4:4:4/YCbCr 4:4:4/YCbCr 4:2:2 output.
- Supports 10-bit RGB 4:4:4/YCbCr 4:4:4 output.

## Status LEDs

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

## Specifications

- Weight: 500 g
- Dimensions: 193 mm × 247.12 mm × 21.15 mm
- Power consumption: 22.1 W

# H_4x3G SDI Output Card




## Connector

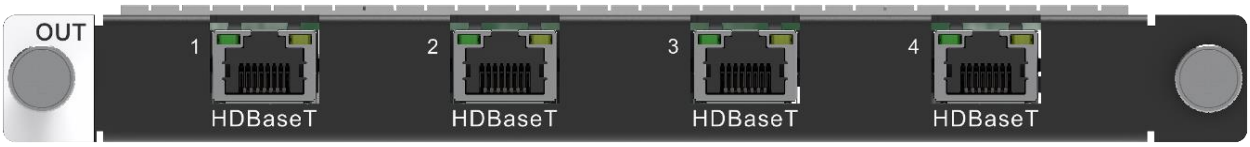
**4x 3G-SDI**

- Backward compatible with HD-SDI and SD-SDI output
- Each connector supports the maximum resolution of 1920×1080@60Hz.
- Supports 10-bit YCbCr 4:2:2 output.
- Supports Level A format only.
- The screen loaded by this card does not support the fade transition effect.
- Supports output rotation by multiples of 90°.
  - In rotation mode, dual link output cannot be set and the layer quantity is halved with up to 8x SL layers supported.
  - In rotation mode, the loaded screen does not support the image OSD function.
  - In rotation mode, the loaded screen does not support the fade transition effect.
  - The cards supporting the rotation function cannot be used together with the cards of other types to load a screen. Even for the cards of the same type, the cards of the versions that support the rotation function and do not support this function cannot be used together to load a screen.
- Supports output image mirroring.
- Supports the following standard output resolutions:
  - PAL: 720×576i@50Hz
  - NTSC: 720×480i@59.94Hz
  - 1920×1080i@50/59.94/60Hz
  - 1280×720p@23.98/24/25/29.97/30/50/59.94/60Hz
  - 1920×1080p@23.98/24/25/29.97/30/50/59.94/60Hz

## Specifications

- Weight: 500 g
- Dimensions: 193 mm × 247.12 mm × 21.15 mm
- Power consumption: 24 W

# H_4xHDBaseT Output Card




4x RJ45 Gigabit Ethernet ports

Support for single link and dual link output modes

This card does not support the fade transition effect.

Supports the transmission distance up to 100 m when Cat5e and Cat6 standard Ethernet cables are used.

## Connector

### Single Link Output

- Four connectors are all available for output.
- Each connector supports the maximum resolution of 2048×1152@60Hz.
- Custom resolution:
  - Max. width: 2560 pixels (2560×983@60Hz)
  - Max. height: 2560 pixels (884×2560@60Hz)
- Supports 8-bit RGB 4:4:4/YCbCr 4:4:4/YCbCr 4:2:2 output.
- Supports 10-bit RGB 4:4:4/YCbCr 4:4:4 output.

### Dual Link Output

- Connector 2 and 4 are available for output.
- Connector 1 copies the output on connector 2, and connector 3 copies the output on connector 4.
- Each connector supports the maximum resolution of 4096×2160@30Hz/3840×1080@60Hz.
- Custom resolution:
  - Max. width: 4096 pixels (4096×1130@60Hz)
  - Max. height: 4096 pixels (1014×4096@60Hz)
- Supports 8-bit RGB 4:4:4/YCbCr 4:4:4/YCbCr 4:2:2 output.
- Supports 10-bit RGB 4:4:4/YCbCr 4:4:4 output.

## Status LEDs

- Green (on), yellow (flashing): The backend device is connected via the Ethernet cable.
- Green (off), yellow (off): The backend device or Ethernet cable is not connected.

## Specifications

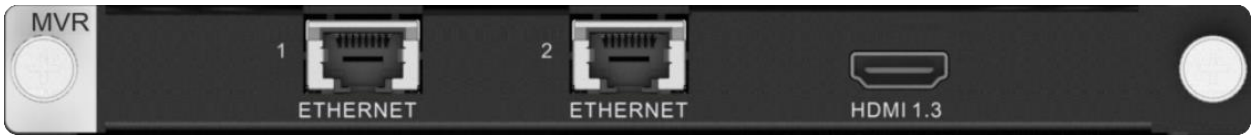
- Weight: 500 g
- Dimensions: 193 mm × 247.12 mm × 21.15 mm
- Power consumption: 32 W

## H_1x12G SDI Output Card




| Connector | Specifications |
| --- | --- |
| **1x 12G-SDI and 1x 12G-SDI (COPY)**<br>• The 12G-SDI connector is used for primary output, and the other one copies the output on the 12G-SDI.<br>• Backward compatible with 6G-SDI, 3G-SDI, HD-SDI and SD-SDI<br>• Supports ST-2082-1 (12G), ST-2081-1 (6G), ST-424 (3G), ST-292 (HD) and SMPTE 259 SD.<br>• Each connector supports the maximum resolution of 4096×2160@60Hz.<br>• Supports 10-bit YCbCr 4:2:2 output.<br>• Supports Level A format only.<br>• Custom output resolution settings are not allowed.<br>• The screen loaded by this card does not support the fade transition effect. | • Weight: 500 g<br>• Dimensions: 193 mm × 247.12 mm × 21.15 mm<br>• Power consumption: 20 W |

## H_2xRJ45+1xHDMI1.3 Preview Card



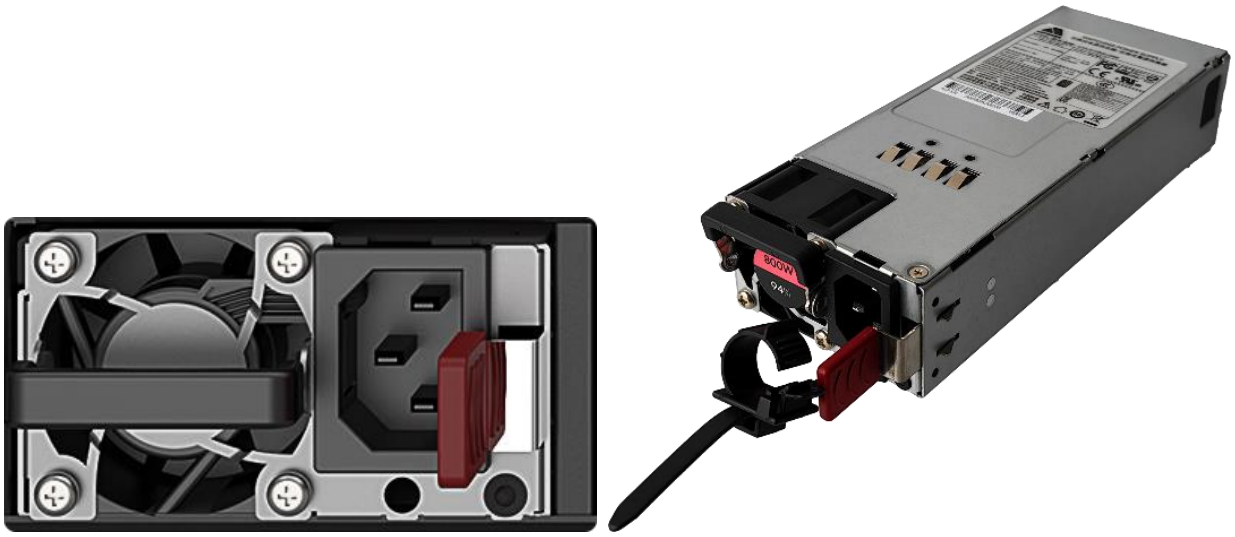

| Connector | |
| --- | --- |
| **2x RJ45 Gigabit Ethernet Outputs**<br>Connect to the network for monitoring the inputs and outputs. | **1x HDMI 1.3**<br>Connect to a monitor for displaying the monitoring information. |
| **Specifications** | |
| • Weight: 500 g<br>• Dimensions: 193 mm × 247.12 mm × 21.15 mm<br>• Power consumption: 19.5 W | |

# H_Control Card




| GENLOCK | ETHERNET |
|---|---|
| Supports Bi-Level and Tri-Level.<br>• IN: Accept the Genlock signal.<br>• LOOP: Loop the Genlock signal. | A Gigabit Ethernet port<br>• Connect to the control PC for communication.<br>• Connect to the router, switch or PC.<br>• For Web control and NovaLCT screen configuration |
| **USB 1 & USB 2** | **COM** |
| 2x USB 2.0<br>• Update the device program.<br>• Import or export the device configuration parameters.<br>**Note:**<br>The USB connectors cannot provide power for the connected devices. | A serial port that adopts RS232 serial protocol<br>Support for central control system<br>The COM port uses an RJ45 port, and the wiring sequence follows the 568A standard.<br>• IN: Accept the commands from the central control system for the control of H series devices.<br>• OUT: Output the custom commands for the control of other devices.<br>**Note:**<br>• The COM port cannot be connected to the network (router or switch) or LED cabinet (receiving card).<br>• The COM OUT port cannot be used for device cascading control. |
| **Power Switch** | **Specifications** |
| • **–** / **ON**: Power on the device.<br>• **O** / **OFF**: Power off the device. | • Weight: 500 g<br>• Dimensions: 193 mm × 247.12 mm × 21.15 mm<br>• Power consumption: 6.2 W |

# H_800W Power



| Specifications |
| --- |
| • Input voltage: 100 to 240V~, 50/60Hz<br>• Current: 10A to 5A<br>• Max power consumption: 800 W<br>• Dimensions: 185 mm × 73.5 mm × 39 mm |

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Official website
www.novastar.tech

Technical support
support@novastar.tech