



TW2U-16RJ-8H VIDEO WALL SPLICER

SPECIFICATIONS

INTRODUCTION

- The TW2U is TWT's newest generation of video wall splicer, featuring excellent image quality and designed especially for fine-pitch LED screens. The TW2U 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 TW2U can be widely used in a variety of applications, such as energy and power, judicial departments and prisons, military command, water conservancy and hydrology, meteorologic earthquake prediction, enterprise management, metallurgy of steel, banking and finance, national defense, 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 TW2U features a stable and highly 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 TW2U 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 TW2U also provides two kinds of LED 4K sending cards, allowing for the backup between the OPT ports and Ethernet ports as well as ultra-long distance transmission. Moreover, the TW2U 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 TW2U 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, Mac, iOS, Android or Linux platform, online collaboration of multiple users is supported and the Web page response speed is very fast, which greatly improves on-site setup efficiency. What's more, the TS2U supports online firmware update, allowing for easy hardware update on a PC.

FEATURES

Modular and plug-in design, for flexible configuration

- Two kinds of LED 4K 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.
- Simple screen configuration using a single card and connector
- Online status monitoring of all input and output cards
- Hot-swappable input and output cards
- H_2xRJ45 IP input card supports up to 100 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.
 - Supports irregular rectangle mosaic without any limitations.
- Irregular screen configuration
 - Input source grouping management
 - Eye saver mode
 - Display the image in a warmer but less bright way to relieve eye strain.
 - LCD bezel compensation

Diverse display possibilities for flexible configuration

- Multi-layer display
 - A single card supports 16x 2K layers, 8x DL layers or 4x 4K layers.
 - All layers support cross-connector output and the layer quantity is not reduced for cross-connector output
- High-definition scrolling text
 - Customize the scrolling text content, such as slogans or notification messages, and set the text style, scrolling direction and speed.
 - Channel logo management
 - Set a text or image logo for identifying the input source.

- Up to 2,000 presets
Fade effect and seamless switching supported, less than 60ms 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.
- OSD settings on a single screen and adjustable OSD transparency
- BKG settings
BKG images do not occupy the layer resources. The max. width and height of a BKG image is up to 15K and 8K respectively
- 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
Input, output and layer color adjustable, including the brightness, contrast, saturation, hue and Gamma
- XR scenario control
- 3D function
Work with TWT's 3D emitter – EMT200 to enjoy the 3D visual effect.

Web-page control, easy, friendly and convenient

- Web control
Real-time response and 1000M/100M self-adaptive network control, allowing for multi-user collaboration
- Monitoring of inputs and outputs on Web page
- Firmware update on Web page
- Ark Visualized Management and Control Platform App control on pad device

Status monitoring for better stability and reliability

- 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
- Backup design
 - Backup between devices
 - Backup between LED 4K sending cards.

APPEARANCE

Front Panel



*The picture shown is for illustration purpose only. Actual product may vary due to product enhancement.

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.

NAME	DESCRIPTION
LCD screen	Displays the device status and monitoring information.

Rear Panel



*The picture shown is for illustration purpose only. Actual product may vary due to product enhancement.

Notes:

- The silkscreen marking "I-x" or "I/x" indicates the slot is dedicated for 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" or "O/x" indicates the slot is dedicated for the output card. "O" stands for output and "x" stands for the slot number. For example, "O-10" indicates this slot is the 10th output slot and for installing an output card only.
- The silkscreen marking " $\frac{I-x}{MVR}$ " indicates the slot can accept an input card or preview card.

Input Card

H_4xHDMI input card



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

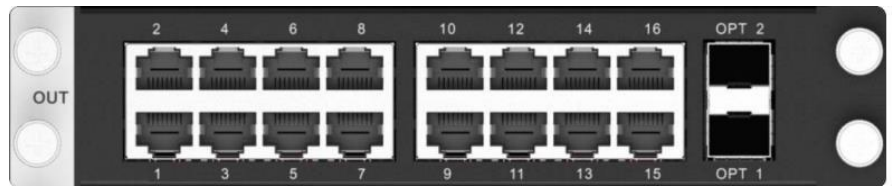
For HDMI 1.3 inputs:

- 2x HDMI 1.3
 - Each connector supports the maximum resolution of 2048×1152@60Hz, and the minimum resolution of 800×600@60Hz.
 - Custom resolutions:
 - Max. width: 2560 pixels (2560×972@60Hz)
 - Max. height: 2560 pixels (884×2560@60Hz)
 - HDCP 1.4 compliant
- 2x HDMI 1.4
 - Each connector supports the maximum resolution of 2048×1152@60Hz, and the minimum resolution of 800×600@60Hz.

- Custom resolutions:
Max. width: 2560 pixels (2560×972@60Hz)
Max. height: 2560 pixels (884×2560@60Hz)
 - HDCP 1.4 compliant For
- 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.
 - Custom resolutions:
Max. width: 3840 pixels (3840×1124@60Hz)
Max. height: 4095 pixels (1014×4095@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.

Output Card

H_16xRJ45+2xfiber sending card



LED 4K sending card can load up to 10,400,000 pixels (max. width: 10,240 pixels, max. height: 10,240 pixels).

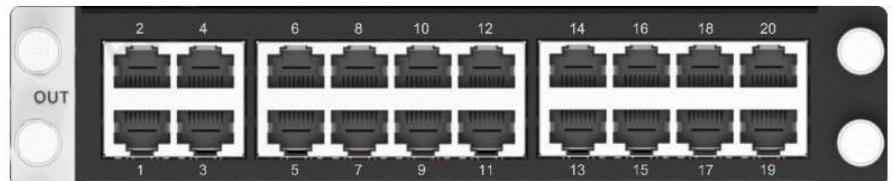
This card occupies two slots.

- 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 320,000 pixels.
 - Backup between Ethernet ports
- 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.

Note:

For the optical module connected to the OPT port, you need to order or purchase Separately.

H_20xRJ45 sending card



LED 4K 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.

- 20x 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 320,000 pixels.
 - Backup between Ethernet ports

H_2xRJ45+1xHDMI1.3 preview card



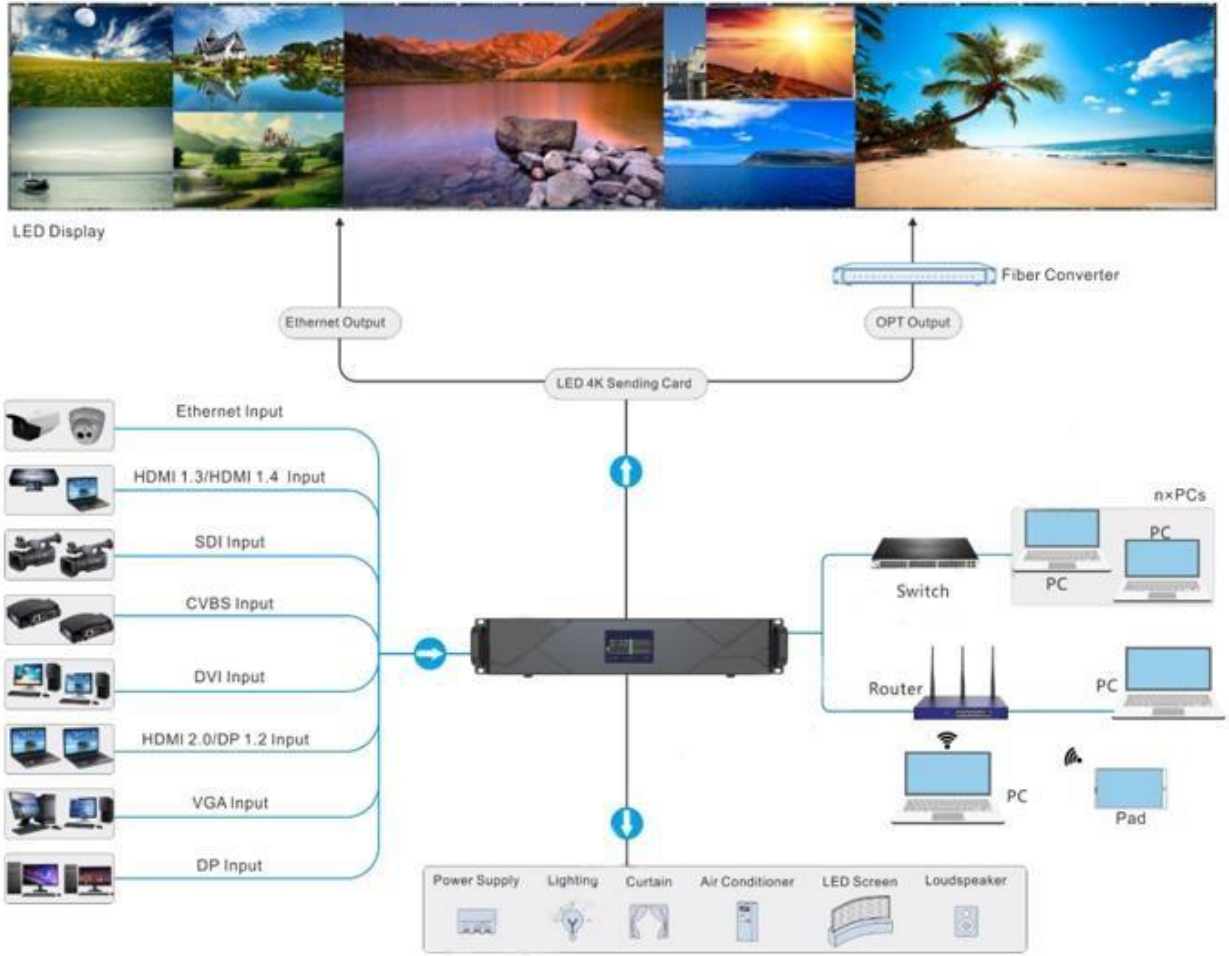
- 2x RJ45 Gigabit Ethernet outputs
Connect to the network for monitoring the inputs and outputs.
- 1xHDMI 1.3
Connect to a monitor for displaying the monitoring information.

H_Control Card

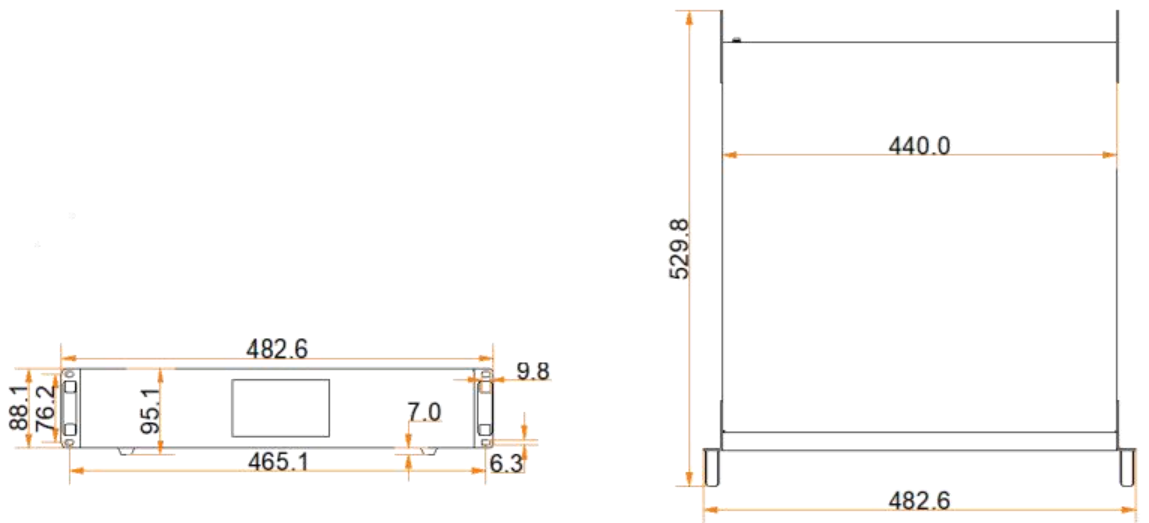


GENLOCK	Supports bi-level and tri-level. <ul style="list-style-type: none">• IN: Accept the Genlock signal• LOOP: Loop the Genlock signal.
ETHERNET	A Gigabit Ethernet port <ul style="list-style-type: none">• Connect to the control PC for communication.• Connect to the router, switch or PC.• For Web control and NovaLCT screen configuration
USB 1& USB 2	2x USB 2.0 <ul style="list-style-type: none">• Update the device program.• Import or export the device configuration parameters.
COM	A serial port that adopts RS232 serial protocol Support for central control system <ul style="list-style-type: none">• IN: Accept the signal from the central control system.• OUT: Loop the signal.
Power switch	<ul style="list-style-type: none">• - / ON: Power on the device.• O / OFF: Power off the device.

APPLICATIONS



DIMENSIONS



Tolerance: ± 0.3 Unit: mm



SPECIFICATIONS

ODEM		TW2U-16RJ-8H
RACK UNIT		2U
MAX. INPUT CARDS		4
MAX. INPUT CHANNELS		16
MAX. OUTPUT CARDS		2
MAX. LOADING CAPACITY (LED 4K SEDING CARD)		26,000,000 pixels
MAX. LAYERS		32
ELECTRICAL SPECIFICATIONS	POWER CONNECTOR	100–240V~, 50/60Hz, 10A–5A
	POWER CONSUMPTION	210 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 × 88.1 mm × 455 mm
	NET WEIGHT	15.6 kg
	GROSS WEIGHT	18 kg
PACKING INFORMATION	PACKING BOX	660 mm × 570 mm × 210 mm
	ACCESSORIES	1x Power cord 1x RJ45 Ethernet cable 1x Grounding cable 1x HDMI cable 1x Quick Start Guide 1x Certificate of Approval 1x Safety Manual 1x Custom Letter
CERTIFICATIONS		CE, FCC, IC Note: If the product does not have the relevant certifications required by the countries or regions where it is to be sold, please apply for the certifications yourself or contact NovaStar to apply for them.



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.



TWT APPLIED TECHNOLOGY AND SERVICES PTE LTD

TWT reserves the right to make product, dimensions and specifications alternations.

TWT APPLIED TECHNOLOGY AND SERVICES PTE LTD reserves the ultimate right to the interpretation of this catalogue.

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