

NEC A Series

LED Poster

Fine Pitch LED Video Display Indoor

USER GUIDE

For models:

LED-A019i

LED-A025i

2020-02-05



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1 ABOUT THIS USER GUIDE

Dear customer,

Thank you for choosing one of NEC Display Solutions fine pitch direct view LED Poster systems.

In this NEC A Series User Manual, you will be supplied with detailed information about your display and how to install, maintain and service it.

We hope your experience with our product meets or exceeds your expectations. Please contact us if you have any questions.

1.1 Important Information



WARNING



TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE. ALSO, DO NOT USE THIS UNIT'S POLARIZED PLUG WITH AN EXTENSION CORD RECEPTACLE OR OTHER OUTLETS UNLESS THE PRONGS CAN BE FULLY INSERTED. REFRAIN FROM OPENING THE CABINET AS THERE ARE HIGH VOLTAGE COMPONENTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



CAUTION



TO REDUCE THE RISK OF ELECTRIC SHOCK, MAKE SURE POWER CORD IS UNPLUGGED FROM WALL SOCKET. TO FULLY DISENGAGE THE POWER TO THE UNIT, PLEASE DISCONNECT THE POWER CORD FROM THE AC OUTLET. DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol warns user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any part inside this unit.



This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully in order to avoid any problems.

⚠ CAUTION: Please use the power cord provided with this equipment in accordance with the table below. If a power cord is not supplied with this equipment, please contact NEC. For all other cases, please use the power cord with the plug style that matches the power socket where the equipment is located. The compatible power cord corresponds to the AC voltage of the power outlet and has been approved by, and complies with, the safety standards in the country of purchase.

This equipment is designed to be used in the condition of the power cord connected to earth. If the power cord is not connected to the earth, it may cause electric shock.

Please make sure the power cord is earthed properly.

1.2 Safety Precautions, Maintenance & Recommended Use

Safety Precautions and Maintenance

FOR OPTIMUM PERFORMANCE, PLEASE NOTE THE FOLLOWING WHEN SETTING UP AND USING THE LED Poster:

- DO NOT OPEN THE LED Poster. There are no user serviceable parts inside and opening or removing covers may expose you to dangerous shock hazards or other risks. Refer all servicing to qualified service personnel.
- Do not bend, crimp or otherwise damage the power cord.
- Do not place any heavy objects on the power cord.
Damage to the cord may cause shock or fire.
- Please make sure that enough power is supplied to the LED Poster. Please refer to the "Power Supply" in the specifications.
- The power supply cord you use must have been approved by and comply with the safety standards of your country.
- In the UK use a BS-approved power cord with a molded plug having a black (5 A) fuse installed for use with this LED Poster.
- The power cable connector is the primary means of detaching the system from the power supply.
The LED Poster should be installed close to a power outlet that is easily accessible.
- Do not spill any liquids into the cabinet or use your LED Poster near water.
- Do not insert objects of any kind into the cabinet slots, as they may touch dangerous voltage points, which can be harmful or fatal, or may cause electric shock, fire or equipment failure.
- Do not place this product on a sloping or unstable cart, stand or table, as the LED Poster may fall, causing serious damage to the LED Poster.
- Do not mount this product face up, face down, or upside down for an extended period of time as it may cause permanent damage to the screen.
- Do not use the LED Poster outdoors.
- It is required that the vents on the LED Poster are not covered.
- Allow adequate ventilation around the LED Poster, so that heat can properly dissipate.
- Do not block ventilated openings or place the LED Poster near a radiator or other heat source.
- Do not put anything on top of the LED Poster.
- Handle with care when transporting. Save packaging for transporting.
- To ensure the LED Poster's reliability, please clean the ventilation holes at the rear side of the cabinet at least once a year to remove dirt and dust.
- When using a LAN cable, do not connect to a peripheral device with wiring that might have excessive voltage.
- Do not use the LED Poster in high temperature, humid, dusty, or oily areas.
- Do not use the LED Poster under rapid changes in temperature and humidity, and avoid cold air directly from an air-conditioning vent. These conditions may shorten the life of the LED Poster or cause condensation. If water condensation has occurred, unplug the LED Poster and do not use the LED Poster until the condensation has evaporated.

Under the following conditions immediately disconnect your LED Poster from the wall outlet and refer servicing to qualified service personnel:

- If the power supply cord or plug is damaged.
- If liquid has spilled or objects have fallen into the LED Poster.
- If the LED Poster has been exposed to rain or water.
- If the LED Poster has been dropped or the cabinet has been damaged.
- If you notice any structural damage such as cracks or unnatural wobbling.
- If the LED Poster does not operate normally by following operating instructions.

1.3 Declaration of Conformity

- CE
- FCC
- RoHS
- EEE Yönetmeliğine Uygundur
- Electromagnetic Compatibility Directive (EMC) 2014/30/EU
- Low Voltage Directive 2014/35/EU
- ETL

CE Information



WARNING!

This equipment is compliant with Class A of CISPR 32.
In a residential environment this equipment may cause radio interference.

FCC Information (for USA only)



WARNING!

- The Federal Communications Commission does not allow any modification or changes to the unit EXCEPT those specified by NEC Display Solutions of America, Inc. in this manual. Failure to comply with this government regulation could void your right to operate this equipment.
- 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.

Supplier's Declaration of Conformity (for USA only)

This device complies with Part 15 of 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.

U.S. Responsible Party: NEC Display Solutions of America, Inc.

Address: 3250 Lacey Rd, Ste 500
Downers Grove, IL 60515

Telephone Number: 630-467-3000

Type of Product LED POSTER

Equipment Classification: Class A Peripheral

Model Number: LED-A019i
LED-A025i



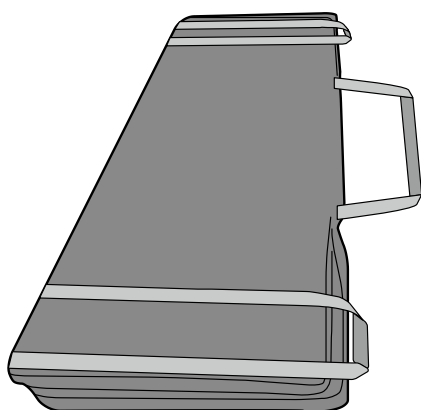
If necessary, the user should contact the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet, prepared by the Federal Communications Commission, helpful: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-0034.

2 ABOUT THIS PRODUCT

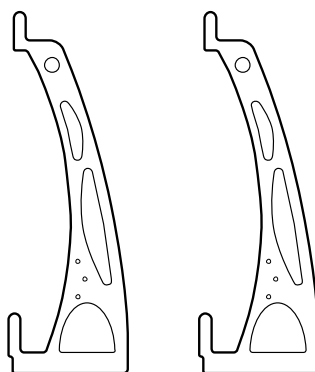
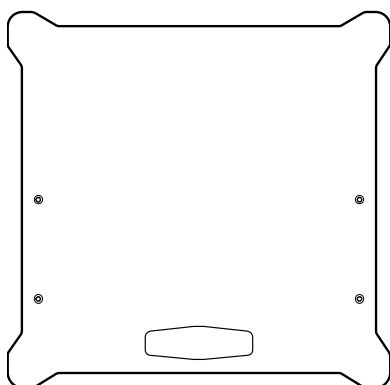
The A Series is a complete display solution for immediate use in signage applications. It can be controlled with fixed or portable Windows, IOS and Android devices. The content can be refreshed and stored in built-in media player through Wireless LAN or USB to achieve asynchronous play.

2.1 Contents

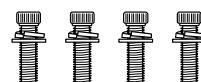
- LED Poster
- USB device
- HDMI cable
- Power cord
- Setup manual
- Warranty card
- Carrying bag



- Pedestal stand



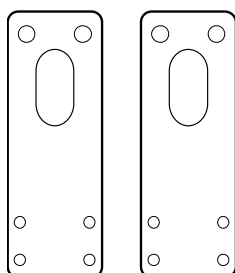
- M6 x 30 mm



- M6 x 16 mm



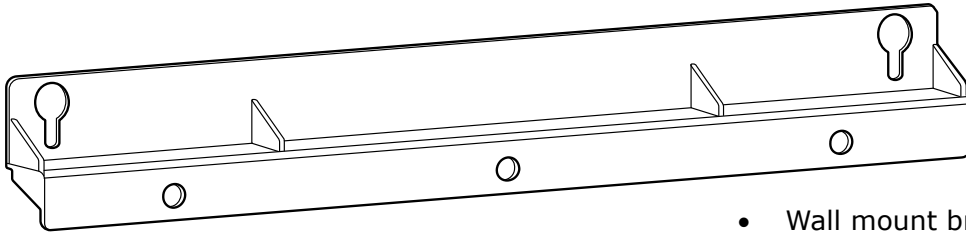
- Hanging bracket



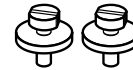
- M6 x 16 mm



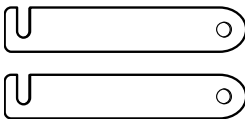
- Wall mount bracket



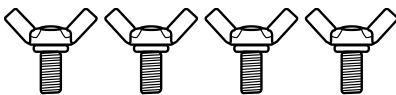
- Wall mount bracket fixing screw



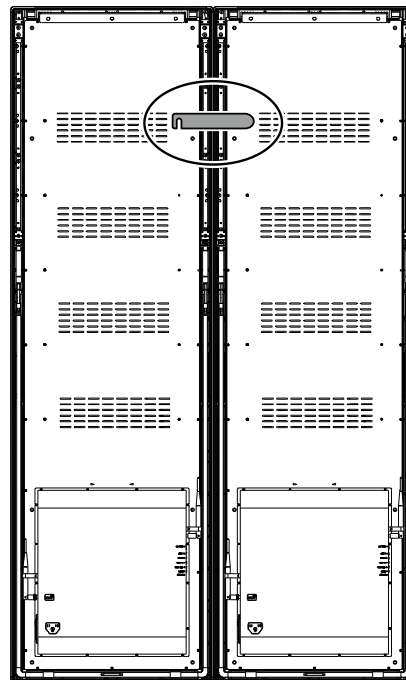
- Connection bracket



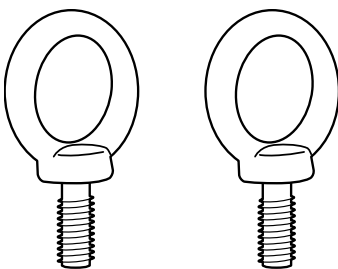
- Connection screw



Used to fix together two LED Posters installed next to each other when two or more LED Posters have been purchased.



- Eye bolt



2.2 Specification

2.2.1 Specification LED Poster

Table 1: Specification LED Poster

Model	LED-A019i	LED-A025i
LED & Pixel Card		
Pixel configuration	SMD 3-in-1	
Pixel pitch [mm]	1,944	2,500
Pixels (W × H)	144 × 108	112 × 84
Pixel card size [mm]	280 × 210	280 × 210
Module		
Pixel cards configuration	2 × 9	2 × 9
Pixels (W × H)	288 × 972	224 × 756
Module area [m²]	1.09	1.09
Module size (W × H × D) [mm]	572 × 1,902 × 35	
Net weight (without stand) [kg]	29.5	
Power	AC 100 V to AC 240 V, 50 Hz/ 60 Hz	
Type of protection (Front/Rear)	IP20	
Service availability	Rear Service	
Displays		
Power average (W)	220	210
Power max. (W)	520	520
Viewing angle (H / V)	150°/140°	150°/140°
Brightness [cd/m²]	1,000	1,000
Contrast ratio	4,500:1	4,500:1
Operating temperature	-10 °C to 35 °C at 100 – 120 V -10 °C to 40 °C at 200 – 240 V	
Operating humidity	10 to 80% (without condensation)	
Operating environment	below 5,000 m	
Storage environment temperature	-20 to 45°C	
Storage environment humidity	10 – 85% (without condensation)	
Lifetime (50% brightness)	100,000 hours	
Greyscale processing	13 bit	
Colors	281 trillion	
Refresh rate (up to)	≥ 2,880 Hz	
Frame rate	50/60 Hz	
Brightness level	Manually & automatically 256 levels	
Color temperature	3,000 – 9,500 K (adjustable)	
Digital input (HDMI)		
Supported video signal	640 x 480 @ 60Hz, 800 x 600 @ 60Hz, 1024 x 768 @ 60Hz, 1280 x 720 @ 60Hz, 1360 x 768 @ 60Hz, 1680 x 1050 @ 60Hz, 1920 x 1080 @ 60Hz, 1920 x 1200 @ 60Hz(RB)	

2.2.2 Specification Audio and Video Decoder

Notice

- Some files may not be played even if they meet the conditions below.
- Some movie files may not be played normally depending on the type of USB memory, the bit rate of the movie file and the number of reference frames.

2.2.2.1 Image

Table 2: Technical Specification: Image - Decoder

Codec	Supported Image Size	Extension	Remarks
JPEG	48×48 pixels ~8176×8176 pixels	JPG JPEG	
BMP	No Restriction	BMP	N/A
GIF	No Restriction	GIF	N/A
PNG	No Restriction	PNG	N/A
WEBP	No Restriction	WEBP	N/A

2.2.2.2 Movie

Table 3: Technical Specification: Movie - Decoder

Codec	Extension	Video Codec (*1)	Audio Codec (*2)
3GP	.3gp	H.264	AAC
MOV	.mov	H.264, H.265, MPEG4 Visual	AAC
MP4	.mp4	H.264, H.265, MPEG4 Visual	AAC
TS	.ts	H.264, MPEG4 Visual	AAC
WEBM	.webm	VP8, VP9	Vorbis

*1) Video

Table 4: Technical Specification: Video - Decoder

Codec	Maximum Frame Rate	Maximum Bit Rate (Ideal Case)
H.264	4K@30fps, 1080P@60fps	100Mbps
H.265	4K@30fps, 1080P@60fps	100Mbps
MPEG 4 Visual	1080p@30fps	15Mbps
VP8	1080p@30fps	38.4Mbps
VP9	4K@30fps, 1080P@60fps	38.4Mbps

*2) Audio

Table 5: Technical Specification: Audio - Decoder

Codec	Channel	Max. Sampling Rate
AAC	2	48 kHz
PCM	2	48 kHz
Vorbis	2	48 kHz

2.3 Parts Description

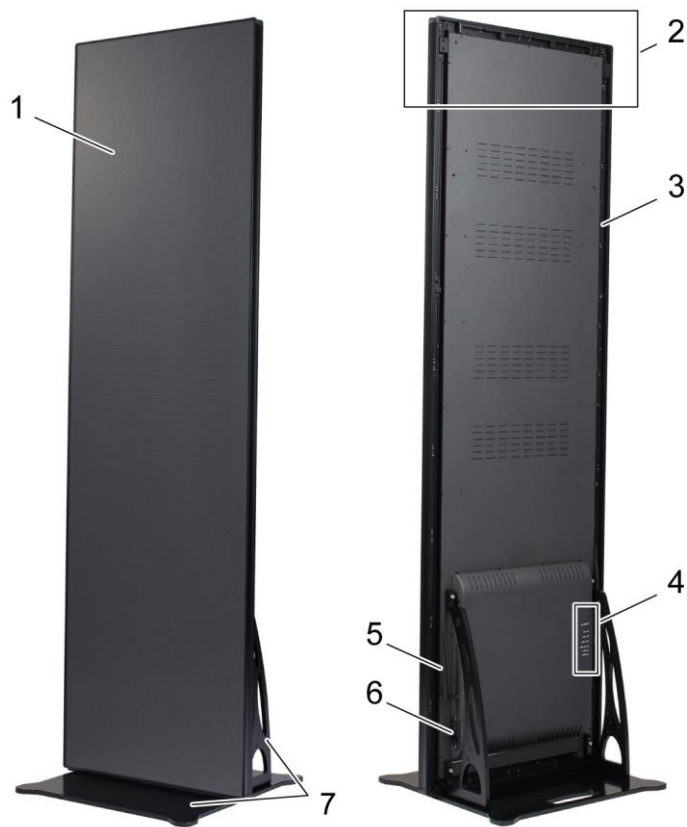


Figure 1: Parts of the LED Poster

- | | | | |
|---|---------------------------------------|---|-----------------------------|
| 1 | Display area | 5 | Wireless LAN antenna |
| 2 | Hanging accessories installation area | 6 | Power connection and switch |
| 3 | Main frame | 7 | Pedestal stand |
| 4 | Port area | | |

2.4 Ventilation Requirements

	⚠ WARNING!
	Risk of fire and product damage. Never block the air ventilation holes. Keep them free at all times.

Do not operate the LED Poster in an ambient temperature above 35 °C at 100 – 120 V or 40 °C at 200 – 230 V.

Keep the distances given below to ensure proper ventilation of the LED Poster and to avoid overheating.

Table 6: Ventilation Distances for Freestanding and Wall Mounting

Freestanding Mounting (Pedestal Stand)			Wall Mounting	
	A	B	C	D
Distance	100 mm	100 mm	280 mm	30 mm

2.4.1 Heat Dissipation

The LED Poster is provided with a highly efficient LED chip to reach low power consumption, less heat production and a long working life.

The modules are designed fan-free which ensures a super quiet operation. Therefore there are holes in the middle of the back cover. To allow the heat dissipation these holes must NOT be covered at all.

2.4.2 Cooling

The required ventilation depends on each particular project. Depending on the structural design and environmental temperature it may be necessary to add an external cooling.

To integrate the ideal, energy-efficient air conditioner for the LED display, you have to determine the capacity or size you need. This is important for two reasons: An undersized unit might not cool adequately the LED display in extremely hot weather. An oversized air conditioner can also adversely affect your comfort. The unit may switch on and off too often, without running long enough to dehumidify the LED display properly or cool the space uniformly. And it will consume more energy than necessary.

	<p>⚠ Caution!</p> <p>Do not point the air conditioning directly at the LED Poster. This can shorten the life of the LED Poster or cause condensation. If water condensation has occurred, unplug the LED Poster and do not use the LED Poster until the condensation has evaporated.</p>
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Info

The ideal environment temperature for the LED display is 25 °C.

2.5 Power Supply

Use the power cord provided with this equipment in accordance with the table below. If a power cord is not supplied with this equipment, please contact NEC. For all other cases, use the power cord with the plug style that matches the power socket where the equipment is located. The compatible power cord corresponds to the AC voltage of the power outlet and has been approved by, and complies with, the safety standards in the country of purchase.

This equipment is designed to be used in the condition of the power cord connected to earth. If the power cord is not connected to the earth, it may cause electric shock. Please make sure the power cord is earthed properly.

Table 7: Compatible Plug Types and Power Cords


Plug type	North America		European Continental	U.K.	Japan
Plug shape					
Region	USA / Canada	Taiwan	EU (except U.K.)	U.K.	Japan
Voltage	120 V*	110 V	230 V	230 V	100 V
Pins	3	3	2	3	3

* When operating this equipment with its AC 125–240 V power supply, use a power supply cord that matches the power supply voltage of the AC power outlet being used.

Note

This product can only be serviced in the country where it was purchased.
Use the power cord which has BSMI mark at both ends when you use this equipment in Taiwan.

3 MOUNTING THE LED POSTER

	<p>⚠ Caution!</p> <p>For proper installation it is strongly recommended to use a trained and qualified technician. Please contact your supplier as they may be able to provide a list of qualified installation professionals. Mounting on a wall or ceiling and hiring a technician is the customer's responsibility.</p>
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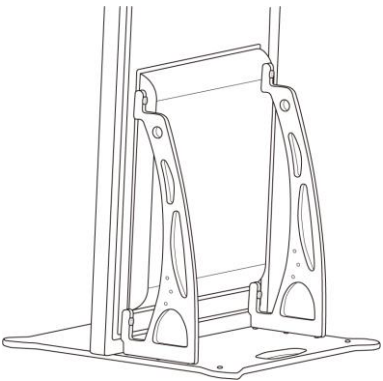
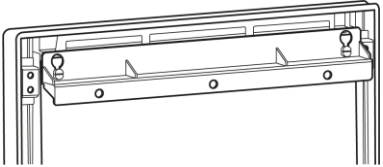
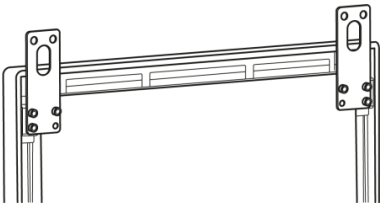
Failure to follow NEC standard mounting procedures could result in damage to the equipment or injury to the user or installer. Product warranty does not cover damage caused by improper installation. Failure to follow these recommendations could result in voiding the warranty.

General precautions for installation:

- Always perform installation or transport of the LED Poster with two people.
- When installing, do not apply pressure to the LED Poster or excessive force to any part of the LED Poster by pushing or leaning on it. This may cause the monitor to become distorted or damaged.
- The LED Poster cannot be used or installed without the pedestal stand or other mounting accessory for support.

Notice
<p>Save the packaging, including the wooden box, for transporting the LED Poster after using it. It will also be needed for sending the LED Poster to the Customer Service.</p>

Table 8: Installation Options for LED Poster

Installation type	Reference	
Freestanding mounting (Pedestal Stand)	3.2 Freestanding Mounting (on Pedestal Stand), p.17	
Wall mounting	3.3 Wall Mounting, p. 19	
Hanging mounting	3.4 Hanging Mounting, p. 21	

Ask your retailer if you want to install the product using other means than the pedestal stand, the hanging bracket or the wall mount bracket.

3.1 Before Mounting the LED Poster



Before starting the installation, consider the following topics to ensure safe and convenient installation and operation of the LED Poster.

3.1.1 Mounting Location

Table 9: Mounting Location

Location	Dos	Don'ts
Operation environment	✓ Install and use the unit indoors.	✗ Do not use the unit outdoors.
	✓ Install the unit on a place, which offers enough space for ventilation.	✗ Do not install the unit close to door or gate.
	✓ Choose a location which is dry, free of vibrations and dust.	✗ Do not install in areas where the unit will be subjected humidity, to strong vibrations and dust.
		✗ Do not install or use the unit close to water.
Mounting	✓ Make sure, that people are not able to grab and hang onto the unit or the mounting equipment.	✗ Do not install the unit in a location where people can easily grab and hang onto the unit or the mounting equipment.
	✓ Adhere to the ventilation specifications. For more information, see 2.4 Ventilation Requirements, p. 12.	✗ Do not cover or block the vents on the LED Poster rear panel.
		✗ Do not place the LED Poster close near a radiator or other heat source.
		✗ Do not use the LED Poster in high temperature, humid, dusty or oily areas.
	✓ Install the unit only on ceilings or walls, which are strong enough to support the unit and the mounting accessories.	✗ Do not mount the unit on hanging fixtures.
	✓ Mount the unit to a solid structure within the ceiling, such as a support beam.	
Power connection	✓ Mount the LED Poster so the display is in a vertical position, upright, and the bottom part lower than the top.	✗ Do not mount this product face up, face down, or upside down for an extended period of time as it may cause permanent damage to the screen.
	✓ Install the LED Poster close to a power outlet that is easily accessible.	✗ Do not install the unit next to a location where the main power supply is fed into the building.

3.1.2 Information on Wall Mounting and Hanging Mounting


	<p> Caution!</p> <p>Risk of personal injuries and product damage if the LED Poster falls down due to improper installation.</p> <ul style="list-style-type: none">• Prior to mounting, inspect the installation location to ensure that the ceiling is strong enough to support the weight of the unit and the mounting equipment over time, against earthquakes, unexpected vibrations, and other external forces. Not all walls or ceilings are capable of supporting the weight of the unit. For information on the weight of the LED Poster, see 3.2 Specification.• Be sure the unit is mounted to a solid structure within the ceiling, such as a support beam.• Secure the unit using bolts, spring lock washers, washer and nut.• Do not use wood screws or anchor screws for mounting. Choose installation equipment, e.g. tools, screws and dowels, that are suitable for the wall conditions and the weight of the LED Poster.• All additional fixation components and tools must be determined by a detailed static calculation to ensure safe installation.• Do not use the eyebolts nor the safety wire to suspend the LED Poster. The LED Poster must be properly installed. <p>Stability hazard: The device may fall, causing serious personal injury or death. To prevent injury, this device must be securely attached to the floor/wall in accordance with the installation instructions.</p>
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3.2 Freestanding Mounting (on Pedestal Stand)

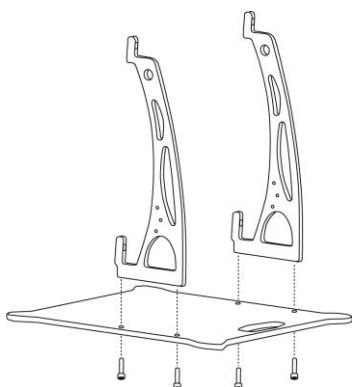
Prerequisites

Personal	2 or more	
Tools	Screwdriver	
Equipment	Pedestal stand Screws <ul style="list-style-type: none"> • 4× M6×30 mm with washers • 4× M6×16 mm 	see 2.1 Contents, p. 7

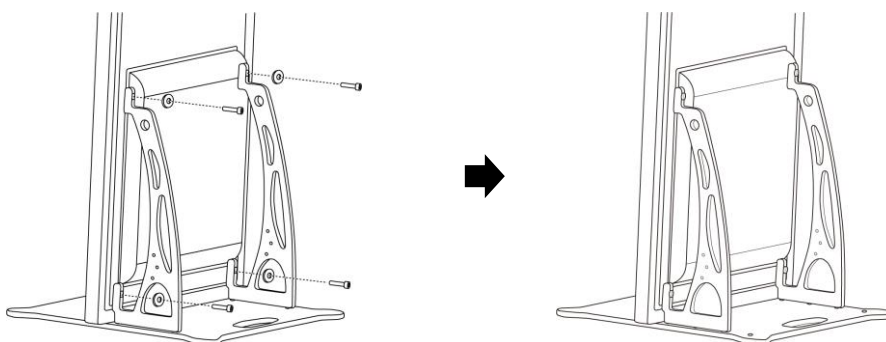
How to do it

	⚠ Caution! Risk of pinching your fingers. When installing the pedestal stand, handle the unit with great care.

- Step 1) Assemble the pedestal stand first.
 Attach the two mounting brackets to the base plate with the four screws M6×16 mm.




- Step 2) Tighten the screws properly. The tightening torque range is 275 – 314 N·cm.
 Step 3) Attach the pedestal stand to the LED Poster with the four screws M6×30 mm and four washers.



- Step 4) Tighten the screws properly. The tightening torque range is 275 – 314 N·cm.
Result: The LED Poster is mounted on the pedestal stand.

3.2.1 Preventing Tipping – Using a Safety Wire

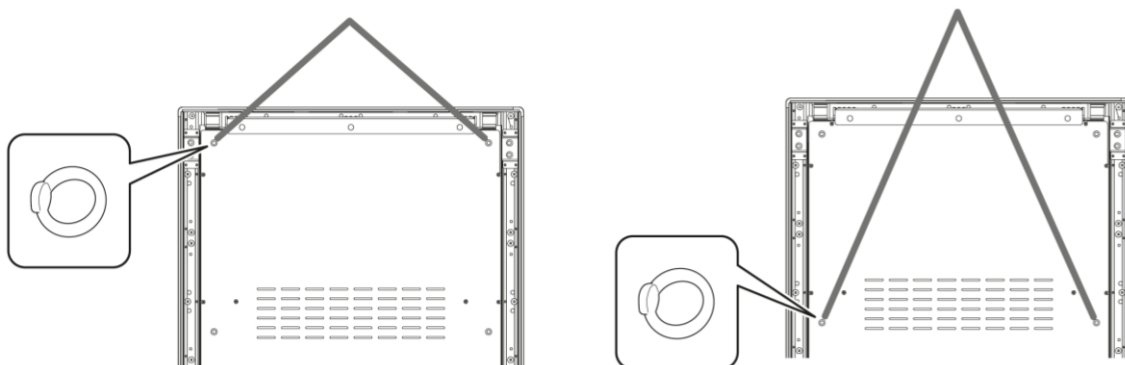
To prevent the LED Poster from tipping over with the pedestal stand, NEC strongly recommends using a safety wire as additional security.

	<p>⚠ Caution!</p> <p>Risk of personal injuries and product damage if the LED Poster tips over due to improper installation.</p> <ul style="list-style-type: none"> • Do not attempt to hang the LED Poster using the safety wire. The LED Poster must be properly installed. • Do not use the eyebolts to suspend the LED Poster. • A safety wire is not included in the delivery. Use a wire or chain as safety wire that can support the weight of the unit if needed. • Ensure the wall or ceiling can support the weight of the LED Poster.
---	--

Personal	2 or more	
Equipment	Wire or chain (to prevent tipping)	not included in delivery
	Attachment for wall, e.g. hook	depending on <ul style="list-style-type: none"> • weight of LED Poster • mounting surface, wall material/condition
	2 Eyebolts for tipping prevention	see 2.1 Contents, p. 7

How to do it

Step 1) Attach the eyebolts to the LED Poster at a suitable position.




Step 2) Attach a suitable safety wire to the eyebolts in the LED Poster.

Step 3) Mount a suitable attachment, e.g. a hook, to the wall to that the LED Poster will be attached.

Step 4) Attach the safety wire to the LED Poster and the wall.

Result: The LED Poster is secured.

	<p>⚠ Caution!</p> <p>Risk of product damage. Be sure to remove the cord or chain from the wall before moving the LED Poster.</p>
---	---

3.2.2 Preventing Tipping – Using Anchor Bolts

To prevent the LED Poster from tipping over with the pedestal stand, you can also bolt the pedestal stand to the floor with commercially available anchor bolts.

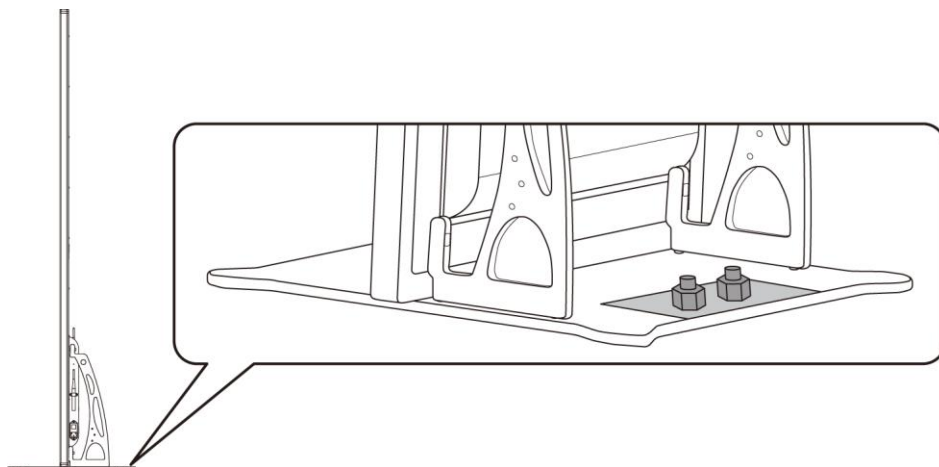


Figure 2: LED Poster Bolted to the Floor

3.3 Wall Mounting

Notice

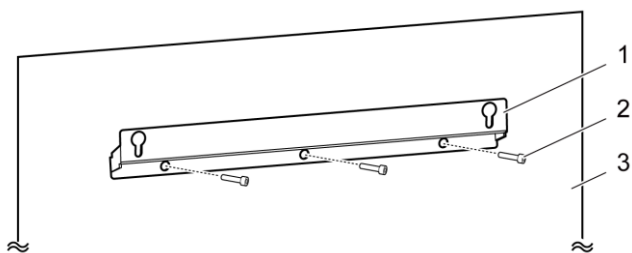
Before attaching the LED Poster to the wall, carefully 3.1.2 Information on Wall Mounting and Hanging Mounting.

Prerequisites

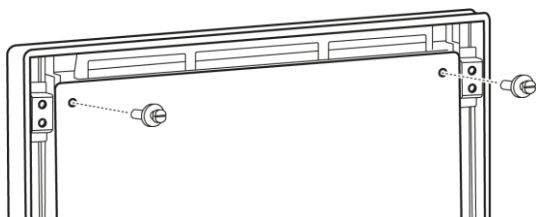
Personal	Two or more people	
Tools	Ladder/ elevated working platform	
	Tools for mounting (e.g. hammer, screwdriver, Allen key, jaw spanner)	
	Drilling equipment (e.g. drilling machine and fitting attachment/head)	depending on mounting surface, wall material/ condition
	Mounting material (screws, dowels etc.)	depending on <ul style="list-style-type: none">• weight of LED Poster• mounting surface, wall material/condition
	Measurement tools (e.g. rule, spirit level)	
Equipment	Wall mount bracket 2 Wall mount bracket fixing screws	see 2.1 Contents, p. 7

How to do it

- Step 1) Mount the wall mount bracket (1) to the wall (3) at the desired position.
Keep the size and weight of the LED Poster in mind. Use suitable screws (2) and anchors.

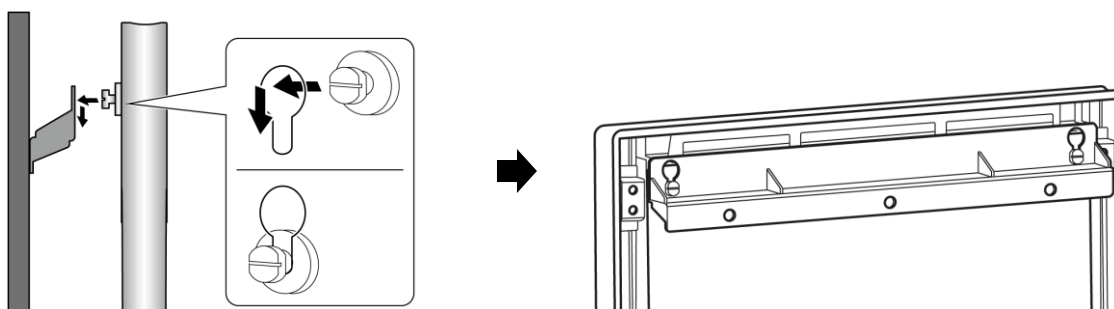


- Step 2) Attach the two wall mount screws to the LED Poster.
The tightening torque range is 275 – 314 N·cm.



- Step 3) Hook the LED Poster onto the wall mount bracket through the keyhole suspension and lower the LED Poster carefully.

Result: The LED Poster is mounted on the wall.



3.4 Hanging Mounting

Notice

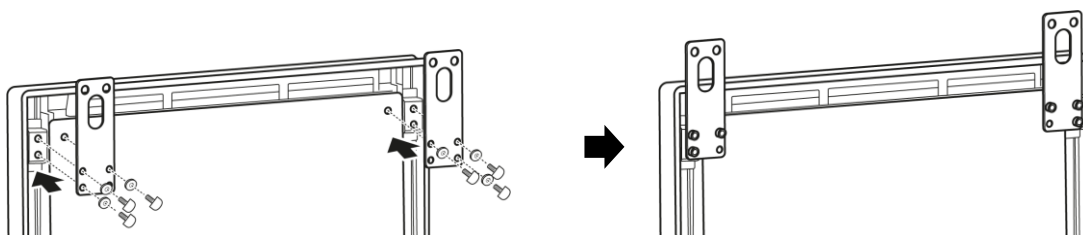
Before attaching the LED Poster to the ceiling, carefully read 3.1.2 Information on Wall Mounting and Hanging Mounting.

Prerequisites

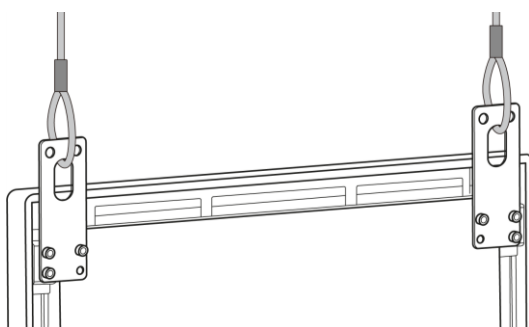
Personal	Two or more people	
Tools	Ladder/ elevated working platform	
	Tools for mounting (e.g. hammer, screwdriver, Allen key, jaw spanner)	
	Drilling equipment (e.g. drilling machine and fitting attachment/head)	depending on mounting surface, wall material/condition
	Mounting material (screws, dowels etc.)	depending on <ul style="list-style-type: none"> • weight of LED Poster • mounting surface, wall material/condition
	Measurement tools (e.g. rule, spirit level)	
Equipment	2 Hanging brackets 6 screws M6 x 16 mm (with washer)	see 2.1 Contents, p. 7

How to do it

- Step 1) Attach suitable mounts for the LED Poster to the ceiling (e.g. a hook).
- Step 2) Attach the Hanging brackets on each side of the LED Poster with three screws. The tightening torque range is 275 – 314 N·cm.



- Step 3) Attach the wires from the ceiling to the Hanging brackets on the LED Poster.
Result: The LED Poster is mounted to the ceiling.



3.5 Mounting Multiple LED Posters as Video Wall

The LED Posters can be placed next to each other and display images or videos like a video wall. To achieve optimal results, observe the following instructions when mounting multiple LED Posters next to each other.

Notice		
When used in a video wall configuration for a long time, slight expansion of the LED Poster may happen due to temperature changes. It is recommended that over 1 mm gap is kept between adjacent LED Poster edges.		

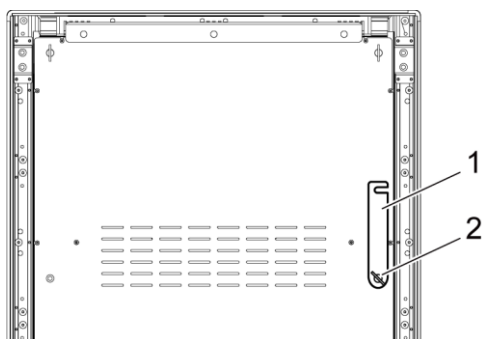
3.5.1 Freestanding Mounting (on Pedestal Stand)

Prerequisites

Personal	2 or more	2
Tools	Screwdriver	
	Wire or chain (to prevent tipping)	
	Attachment for wall, e.g. hook (to prevent tipping)	depending on <ul style="list-style-type: none"> • weight of LED Poster • mounting surface, wall material/condition
Equipment	Pedestal stand Screws for tipping prevention Connection bracket and Connection screw Screws <ul style="list-style-type: none"> • 4× M6×30 mm with washers • 4× M6×16 mm 1× M6 × 12 mm 	see 2.1 Contents, p. 7

How to do it

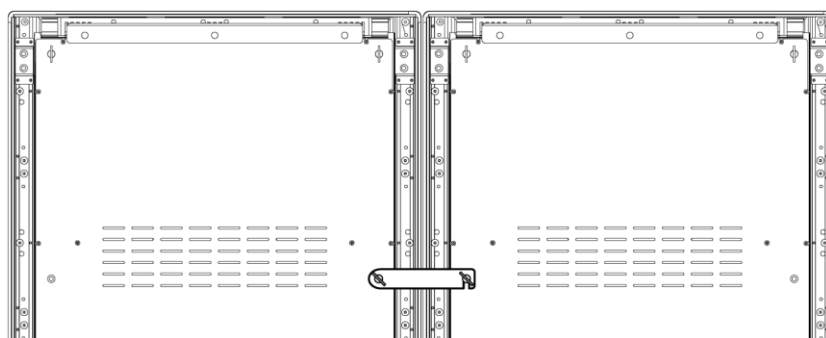
- Step 1) Assemble the LED Posters (see 3.2 Freestanding Mounting (on Pedestal Stand), p.17).
Result: The LED Posters are mounted on the pedestal stand.
- Step 2) Attach the Connection bracket (1) to the rear panel of the first LED poster with the delivered Connection screw (2). Only tighten the screw lightly, so that the Connection bracket can still be turned.



- Step 3) Place the second LED Poster close to the first LED Poster.

Step 4) Fix the Connection bracket on the second LED Poster together with the delivered Connection screw.

Result: The LED Posters are connected.



Step 5) Prevent tipping of the LED Poster, see 3.2.1 Preventing Tipping – Using a Safety Wire.

Result: The LED Poster is secure.

3.5.2 Wall Mounting

To mount two or more LED Posters as a video wall, draw the anchor points for each wall mount bracket (1) on the wall. Leave a gap of 73 mm (A) between two brackets.

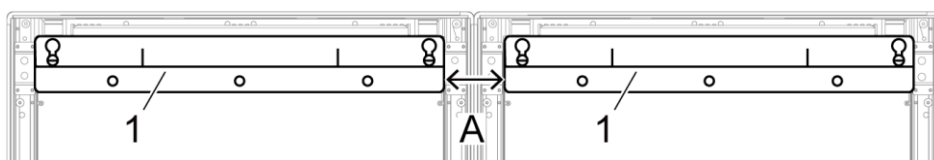


Figure 3: Mounting Two Adjacent Cabinets on a Wall

Then proceed with the wall mounting as described in section 3.3 Wall Mounting, on page 19.

3.5.3 Hanging Mounting

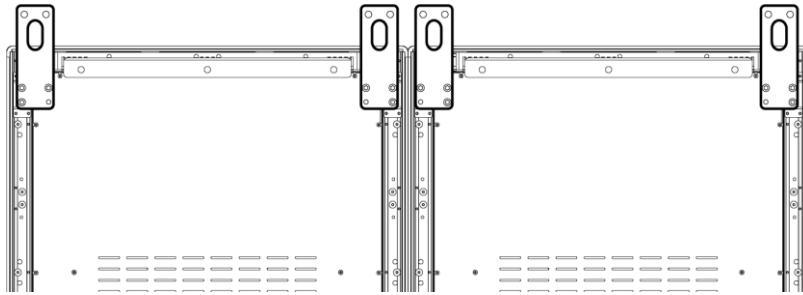
Prerequisites

Personal	Two or more people	
Tools	Ladder/ elevated working platform	
	Tools for mounting (e.g. hammer, screwdriver, Allen key, jaw spanner)	
	Drilling equipment (e.g. drilling machine and fitting attachment/head)	depending on mounting surface, wall material/condition
	Mounting material (screws, dowels etc.)	depending on <ul style="list-style-type: none"> • weight of LED Poster • mounting surface, wall material/condition
	Measurement tools (e.g. rule, spirit level)	
Equipment	4 Hanging brackets 12 screws M6 × 16 mm 12 washers	see 2.1 Contents, p. 7

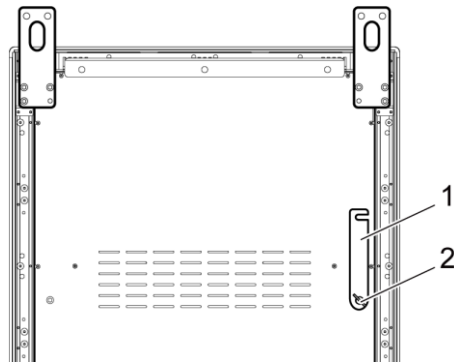
How to do it

- Step 1) Attach the Hanging brackets to each LED Poster with 3 M6 × 12 mm screws and 3 washers for each Hanging bracket. The tightening torque range is 275 – 314 N·cm.

Result: The Hanging brackets are fixed on the rear panel.



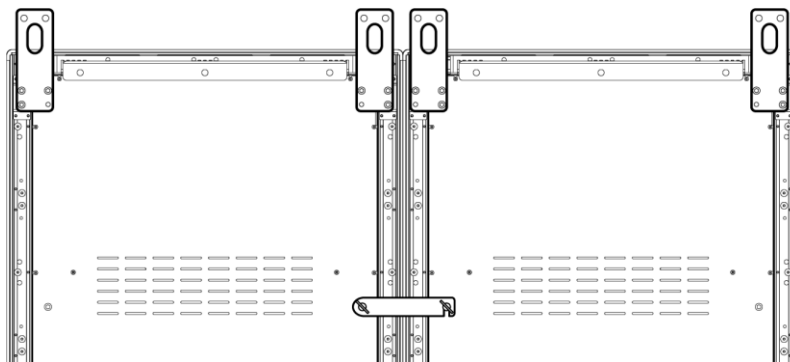
- Step 2) Attach the Connection bracket (1) to the rear panel of the first LED poster with the delivered Connection screw (2). Only tighten the screw lightly, so that the Connection bracket can still be turned.



- Step 3) Place the second LED Poster close to the first LED Poster.

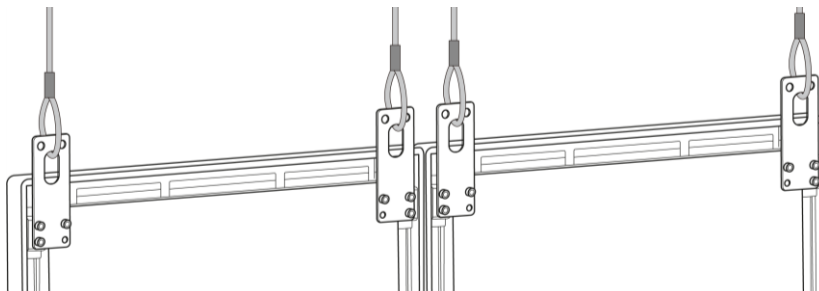
- Step 4) Fix the Connection bracket on the second LED Poster together with the delivered Connection screw.

Result: The LED Posters are connected.



- Step 5) Attach the wires from the ceiling to the Hanging brackets on the LED Posters.

Result: The LED Posters are mounted to the ceiling.



4 GETTING STARTED

4.1 Wiring the LED Poster

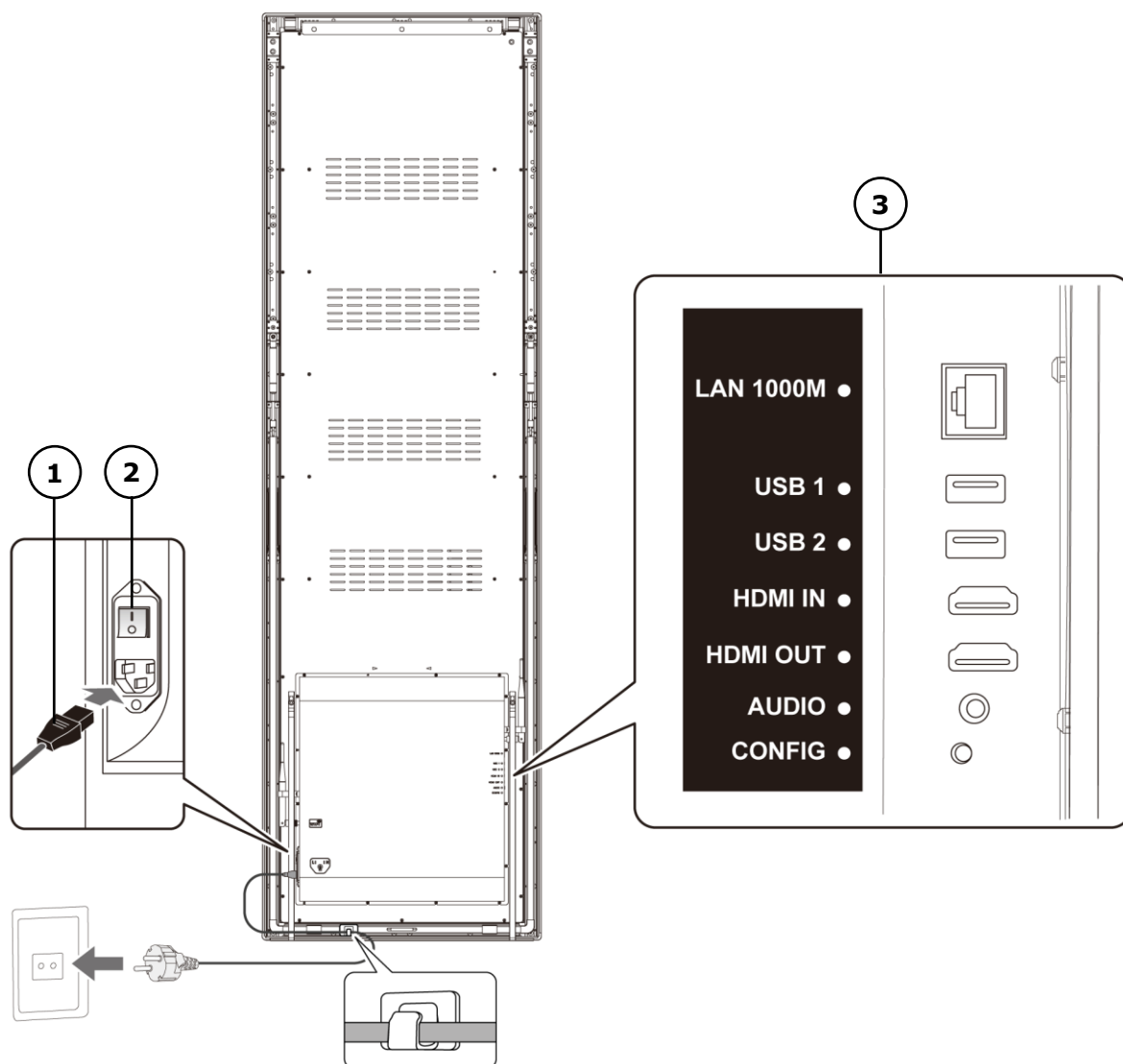


Figure 4: Connections on the Back of the LED Poster

- 1 Power cable
- 2 Power switch
- 3 Input and output ports, see Table 10

Table 10: Input and Output Ports on LED Poster

Port	Description
LAN 1000M	Ethernet connection
USB 1	USB devices such as USB storage device
USB 2	USB devices such as USB storage device
HDMI IN	HDMI video player or computer (HDMI) without HDCP
HDMI OUT	Next LED Poster ¹
AUDIO	Stereo amplifier
CONFIG	Only for service

¹ Multiple LED Posters that are daisy-chained have a limit to the number of connectible LED Posters.

Prerequisites

- Prepare the required cables.
Which cables are needed, depends on the localization, installation variant and the connection variant with the software.

How to do it

- Step 1) Connect the Power cable to the LED Poster and to mains.
- Step 2) Connect the HDMI cable with the Input port.
- Step 3) Connect the USB devices.
- Step 4) If needed, connect the AUDIO port.

4.2 Switching on/Switching off the LED Poster

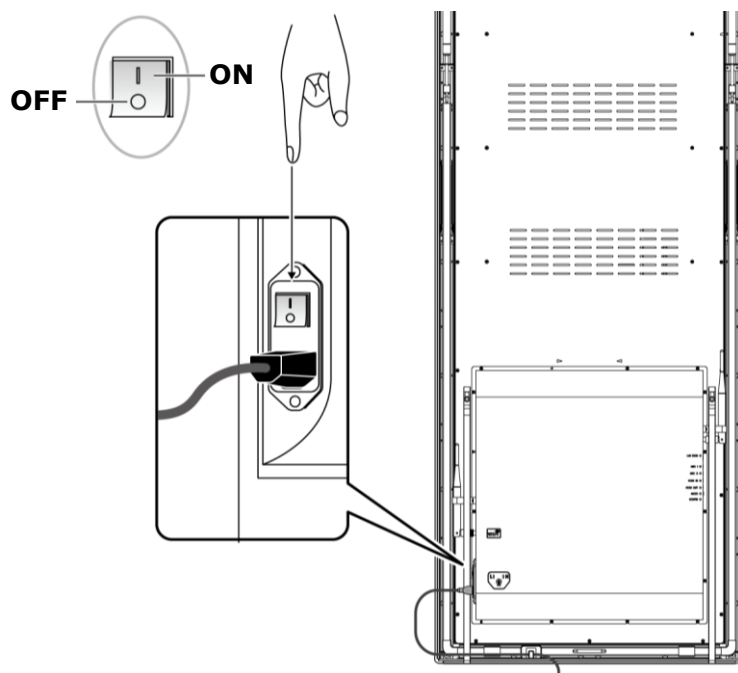
Prerequisites

- The LED Poster is correctly wired.
- The LED poster is located in an environment where the permissible temperature and ventilation conditions are given.

How to do it

- Step 1) Press the power switch down.

Result: The LED poster is connected to the power grid.



4.3 Getting and Installing the Software ViPlex

ViPlex Handy is a software for managing screens via LAN. The software can be used for the management of the LED Poster players.

ViPlex Express is a LAN-based screen management software. ViPlex Express is used as the client software on PC for the LED Poster multimedia players. This software automatically finds and connects to terminals in the same local area network (LAN). Use ViPlex Express to configure screens, publish solutions and control solution playing. The current versions are only available for Windows PC.

For detailed information, see the respective manual for ViPlex Express.

Download the current version at: www.novastar.tech

Note

Each LED Poster comes with an internal unit to process the video and control input. This unit is referred to as the **Taurus T6**, or **Taurus**. All data input and output are connected to the Taurus.

4.3.1 Required Information

Table 11: Related Software Versions



Name	Type	Description	Address	More Information
ViPlex Handy	Mobile client	LAN-based screen management software for Android and iOS, which is mainly used for screen management, solution editing and publishing.		5.1.1, 5.2
ViPlex Express	PC client	LAN-based screen management software for Windows, which is mainly used for screen management, solution editing and publishing.	https://www.nec-display.com/dl/en/dp_soft/led_display/index.html?	5.1.2, 5.3

Table 12: Account Information for LED Poster

Item	Account Name	Default Password
Connect LED Poster Wireless LAN AP	"AP"+ the last 8 digits of the SN For example: AP10000033	12345678
Log in LED Poster	admin	123456

4.3.2 Installing ViPlex Handy (Android/iOS)

Step 1) Download the installation file for ViPlex Handy:

	Link	QR Code
Android	https://play.google.com/store/apps/details?id=nova.priv.hand.easypluto.google	
iOS	https://apps.apple.com/us/app/viplexhandy/id1241302188	

Step 2) Install the app on the mobile device. Follow the installation instructions.

4.3.3 Installing ViPlex Express

Step 1) Download the installation file for ViPlex Express:

https://www.nec-display.com/dl/en/dp_soft/led_display/index.html?

Step 2) Click the installation file **ViPlex Express V1.x.x Setup.exe**.

Step 3) Follow the instructions given by the Installation Wizard until the installation is finished.

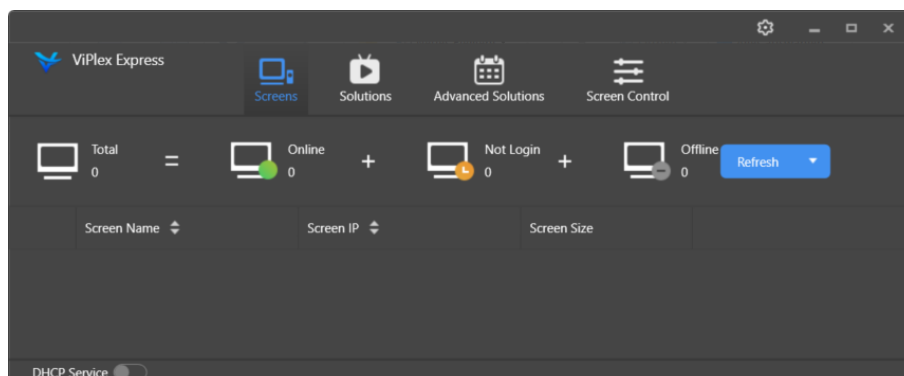


Figure 5: ViPlex Express – Home Screen

4.4 Connecting the LED Poster with the Software

The LED Poster can be connected to the Internet through the following ways. The priority order is from high to low:

- Wired network:
 - direct connection via Ethernet cable
 - LAN connection through router
- Wireless network:
 - direct connection via Wireless LAN Access Point
 - connection through router via Wireless LAN Station Mode

4.4.1 Connecting via Ethernet Cable

Users can access the LED Poster directly when it is connected via the Ethernet cable.



Figure 6: Network Diagram – Connection with Ethernet Cable

Configuring via ViPlex Express

- Step 1) Log in to the LED Poster (see 4.5).
- Step 2) Select **Screen control, Network configuration**.
- Step 3) Turn off DHCP and set static IP address for the LED Poster.

4.4.2 Connecting via Local Area Network (LAN)

Users can access the LED Poster through LAN when it is connected via LAN. In this case there is no need for any configurations.

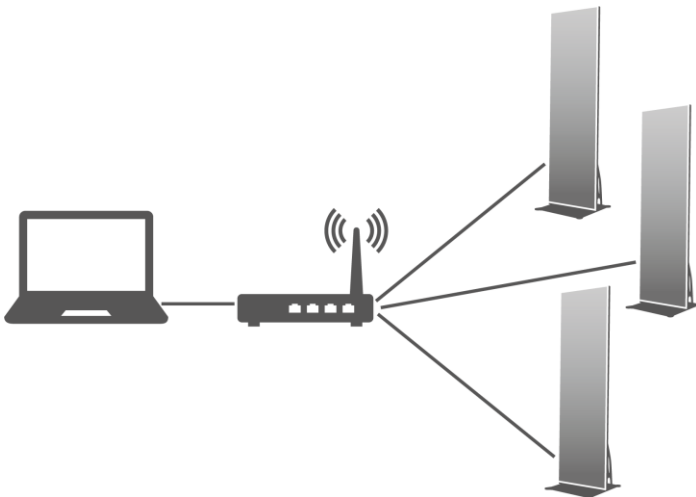


Figure 7: Network Diagram – Connection via LAN

4.4.3 Connecting via Wireless LAN

The LED Poster products have dual Wireless LAN function which can provide Wireless LAN hotspot as well as serve as Wireless LAN Station at the same time.

4.4.3.1 Wireless LAN Access Point Mode

Users can access the LED Poster directly when it is connected via Wireless LAN Access Point (AP).

There is no need for configuration. Connect the Wireless LAN Access Point of the LED Poster. SSID is "AP" + the last 8 digits of the SN, for example, "AP10000033".

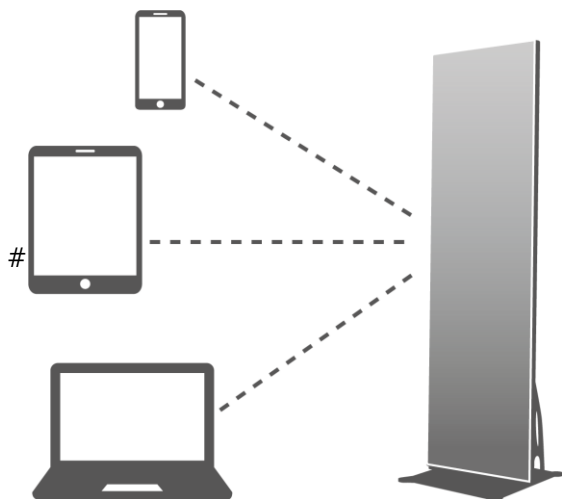


Figure 8: Network Diagram – Connection via Wireless LAN Access Point Mode

4.4.3.2 Wireless LAN Station Mode

Users can access LED Poster through external router when it is connected via Wireless LAN Station Mode.

Configuring via ViPlex Handy

- Step 1) Log in to the LED Poster (see 4.5.1).
- Step 2) Click the screen name to select **Network Settings, Wireless LAN Setting**.
- Step 3) Turn on Wireless LAN Station Mode. Click the Wireless LAN name of the external router and enter the password of the Wireless LAN.

Configuring via ViPlex Express

- Step 1) Log in to the LED Poster (see 4.5.2).
- Step 2) Select **Screen control, Network configuration**.
- Step 3) Turn on Wireless LAN Station Mode. Click the Wireless LAN name of the external router and enter the password of the Wireless LAN.

4.4.3.3 Wireless LAN Access Point + Station Mode

By using Wireless LAN Access point + Station Mode connection, users can directly access the LED Poster or access the Internet through bridging connection.

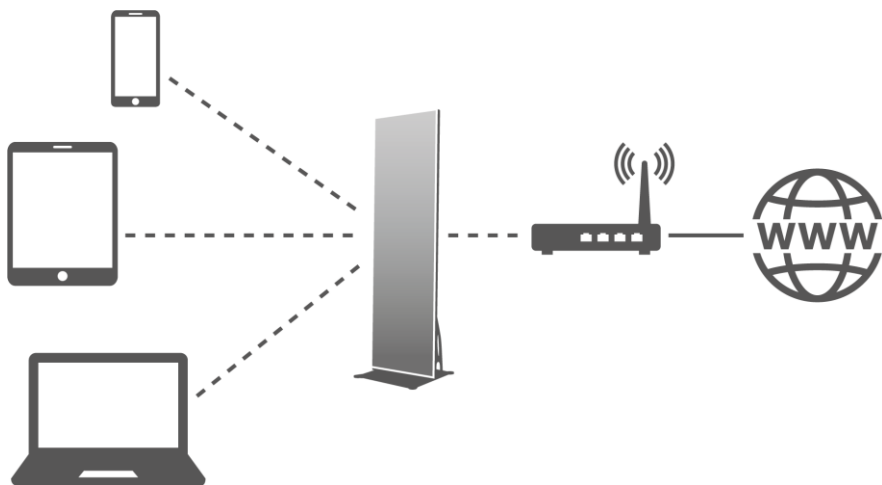


Figure 9: Network Diagram – Connection via Wireless LAN Access Point + Station Mode

Configuring via ViPlex Handy

- Step 1) Log in to the LED Poster (see 4.5.1).
- Step 2) Select **Network Setting, Wireless LAN Setting** in the **Screen management** page.
- Step 3) Turn on Wireless LAN Station mode. Click the Wireless LAN name of the external router and then enter the password of the Wireless LAN.

Configuring via ViPlex Express

- Step 1) Log in to the LED Poster (see 4.5.2).
- Step 2) Select **Screen control, Network configuration**.
- Step 3) Turn on Wireless LAN Station Mode. Click the Wireless LAN name of the external router and then enter the password of the Wireless LAN.

4.4.4 Connecting to LED Poster via ViPlex Express (PC client)

- Step 1) Open the network connection at your PC.
- Step 2) Find the Wireless LAN from LED Poster. For example: Wireless LAN AP60000040.
- Step 3) Click the **Connect** button.
- Step 4) Enter the password. Click the **OK** button.

Result: If the LED Poster is connected via Wireless LAN with the PC, the software interface shows the following screen.

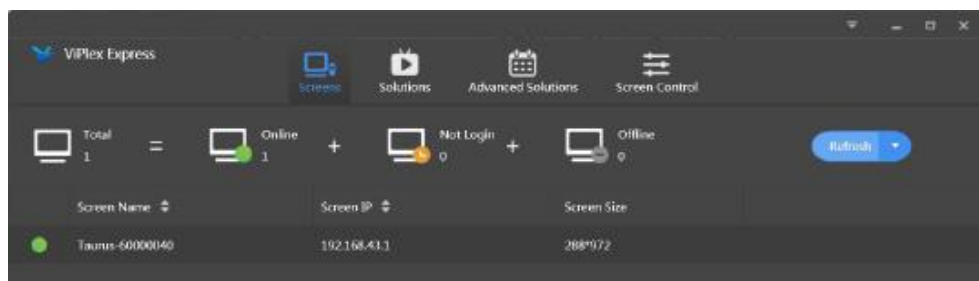


Figure 10: Home Screen – connected with Wireless LAN

- Step 5) The automatic login starts.
Result: If the login is successfully, **YES** is shown and the operation is finished.
If the login fails, **NO** is shown. Go to Step 6.

Step 6) Click the **Connect** button next to the screen information.

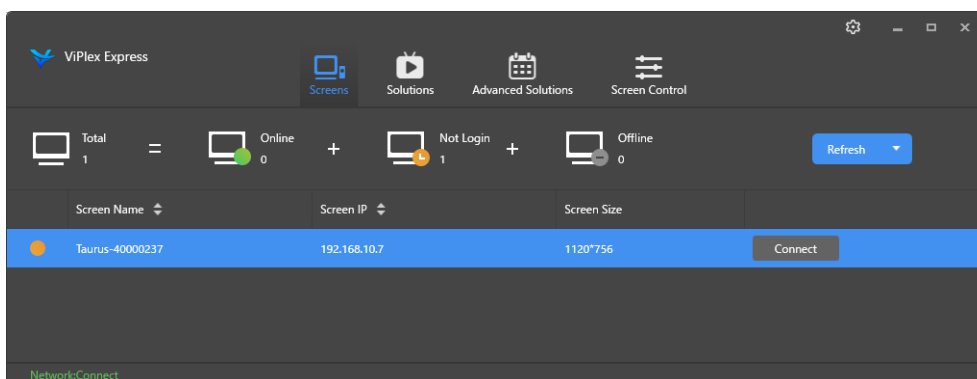


Figure 11: Home Screen – Login Wireless LAN Connection

Step 7) Enter the user name and the password and click the **OK** button.

4.5 Login to LED Poster

Required Account Information for LED Poster

Table 13: Account Information for LED Poster

Item	Account Name	Default Password
Connect LED Poster Wireless LAN Access point	"AP" + the last 8 digits of the SN For example: AP10000033	12345678
Log in LED Poster	admin	123456

4.5.1 Login via ViPlex Handy

Step 1) Connect the mobile device to the LED Poster products or external router.

Step 2) Start ViPlex Handy.

The system can automatically detect the LED Poster products and refresh **Screen list**. Users can also slide down the **Screen list** to manually refresh the list.

● The LED Poster is online and you can log into it.

● The LED Poster is offline and you cannot log into it.

● The login to the LED Poster is successful.

Step 3) Click the **Connect** button behind the screen name.

Step 4) Enter username and password, click the **Log In** button.

Select **Ignore Once** to keep the same password, or **Change Password** to change the password.

The system saves the relevant user name and password of current screen automatically after successful login.


4.5.2 Login via ViPlex Express

Connect the PC to the LED Poster products via one of the following methods (see 5.4):

- Wireless LAN Access point of the LED Poster
- External router
- Ethernet cable

Notice

If the IP addresses of the PC and LED Poster are not in the same network segment and can be pinged successfully, click the **Refresh** button and select **Specify IP** to connect to LED Poster manually.

If the PC and LED Poster are connected through Ethernet cable and there are no other DHCP servers in the network, click the button  on the top right corner of the page and select **DHCP Service**. Then, select a local IP address and turn on **DHCP service** to connect to LED Poster automatically.

Step 1) Start ViPlex Express.

Step 2) Click the **Refresh** button.

Result: The screen list appears.



The LED Poster is online and you can log in to it.



The LED Poster is offline and you cannot log in to it.



The login to the LED Poster is successful.

After ViPlex Express found the LED Poster, ViPlex Express attempts to log in to the LED Poster automatically with the default account or the account used for last login.

Step 3) Automatic login starts.

Result: If the login is successfully, **YES** is shown and the operation is finished.

If the login failed, **NO** is shown. Go to Step 4).

Step 4) Click the **Connect** button next to the screen information.

Step 5) Enter your user name and password, click the **OK** button.

Related Operations

Right click the screen information to see the related operations.

- **Logout:** Log out of the LED Poster.
- **Rename:** Rename the LED Poster.
- **Change Password:** Modify the password used for the user "admin" as login to the LED Poster.
- **Forget password:** Delete the user name and password used for last login.


4.6 Loading the Configuration File/Configure the Parameters

If the receiving card parameters are already configured, please skip this chapter and perform the operations in 5.3.4.13 Configuring the Network via ViPlex Express.

4.6.1 Loading the Configuration File via ViPlex Handy (Android only)

- Step 1) Save the receiving card configuration file to mobile device.
- Step 2) Log in to the LED Poster.
- Step 3) Click screen name to enter the **Screen management** page.
- Step 4) Select **Screen Setting, Receiving card configuration** to enter the Receiving card configuration page.
- Step 5) Select the receiving card configuration file and click the **Send** button.

4.6.2 Loading the Configuration File via NovaLCT-Taurus

- Step 1) Start NovaLCT-Taurus.
- Step 2) Select the **System** menu button, Search **All Display**.
Result: The system displays the screen information list.
- Step 3) Click screen information and click **Connect System**.
Result: The gray button on the page becomes normal.
- Step 4) Select **User, Advanced login**.
- Step 5) Enter password and click the **Login** button.
The default password is "admin".
- Step 6) Click the  menu button to enter the **Screen Config** page.
- Step 7) Confirm whether the local PC has the required receiving card configuration file.
 - a) Yes: Perform **Load Configuration File**.
 - b) No: Please perform **Manual Configuration**.

Loading the Configuration File

- Step 1) Select **Cascading scan board** and **Load Configuration File**.
- Step 2) Click the **Browse** button to choose a configuration file from the local PC.
- Step 3) Click the **Next** button to load the configuration file.

Manual Configuration

- Step 1) Select **Cascading scan board** and click the **Next** button.
- Step 2) Configure the receiving card parameters based on your actual conditions.
- Step 3) Click the **Send To HW** button.
- Step 4) Set the parameters based on your actual conditions and click the **Send** button.
- Step 5) Adjust parameters until the screen displays normally. Click the **Save to Screen** button.
- Step 6) (Optional) Click the **Save Config File** button to back up the receiving card configuration file to the local PC.

4.7 Screen Configuration


4.7.1 Configuring a Screen via ViPlex Handy

- Step 1) Launch ViPlex Handy. Select **Mode** under **Settings**, and change the mode to **Screen Configuration Mode**.
- Step 2) Log in to the LED Poster (see 4.5).
- Step 3) Click on the **Screen name** to enter the **Screen management** page.
- Step 4) Select **Screen Setting, Screen configuration** to enter the **Screen configuration**.
- Step 5) Configure screen information based on actual conditions and click **OK**.

5 SOFTWARE VIPLEX

ViPlex is a LAN-based screen management software, which is available for following clients:

Table 14: Related Software Versions

Name	Type	Description	Address	More Information
ViPlex Handy	Mobile client	LAN-based screen management software for Android and iOS, which is mainly used for screen management, solution editing and publishing.		5.1.1, 5.2
ViPlex Express	PC client	LAN-based screen management software for Windows, which is mainly used for screen management, solution editing and publishing.	https://www.nec-display.com/dl/en/dp_soft/led_display/index.html?	5.1.2, 5.3

For detailed information, see the respective manual for ViPlex Express.

Download the current version at: www.novastar.tech

5.1 About the Software

Note

Each LED Poster comes with an internal unit to process the video and control input. This unit is referred to as the **Taurus T6**, or **Taurus**. All data input and output are connected to the Taurus.

VNNOX is a secure cloud-based publishing service launched by NovaStar to implement remote LED display content management and screen control.

5.1.1 ViPlex Handy

ViPlex Handy is a software for managing screens via Wireless LAN. The software can be used for the management of the LED Posters. ViPlex Handy supports Android and iOS.

5.1.2 ViPlex Express

ViPlex Express is a LAN-based screen management software. This software automatically finds and connects to terminals in the same local area network (LAN). ViPlex Express can connect to multiple LED Poster products.

ViPlex Express is used as the client software on PC for the LED Posters. Use ViPlex Express to configure screens, publish solutions and control solution playing.

The current versions are only available for Windows PC.

5.2 ViPlex Handy

5.2.1 Overview Functions

Menu	Sub-Menu	
Quick Control	Sync Time	Set UTC time
	Adjust Volume	Set the volume
	Color Temperature	Set the color temperature
Screen Configuration (Screen Configuration Mode only)	-	<p>Set the information of receiving cards used to load the screen. Parameter meanings:</p> <ul style="list-style-type: none"> • Ethernet Port Quantity: Number of Ethernet ports used to load the screen • RV Card Size: Resolution of a single receiving card • RV Card Quantity: Number of receiving cards used to load the screen • Offset coordinate: Image offset • Cabinet Connection: Connection order of receiving cards
Screen Settings	Screen status control	<p>Set the rules for manual and timed screen on or off.</p> <ul style="list-style-type: none"> • Manual: Switching on or off a screen manually. • Timed: Switching on or off a screen automatically as required.
	Brightness Control	<ul style="list-style-type: none"> • Manual: Adjust the brightness manually. • Smart: Set rules for automatic and scheduled brightness adjustment. <p>In smart brightness adjustment mode, if Auto Brightness Adjustment is selected, you need to set Auto Brightness Adjustment Parameters, that is, screen brightness will be adjusted according to the auto brightness adjustment parameters during the scheduled enabling time.</p> <p>Select Timed Brightness Adjustment and set the brightness to a fixed value. Screen brightness will be set to the fixed value during the scheduled opening time.</p> <p>Auto Brightness Adjustment Parameters: Divide the environment brightness range from the maximum value to the minimum value into several equal intervals and set the relevant screen brightness of each interval. Select Auto Brightness Adjustment and the screen brightness will be adjusted automatically according to current ambient brightness.</p>
	RV Card Configuration (Android only)	<p>Send the receiving card configuration file with the extension ".rcfgx" to the LED Poster (Taurus). Save the configuration file to mobile device before sending the file. ViPlex Handy can automatically identify the configuration file and display it on RV Card Configuration page.</p>
	Timed Restart	Set rules for timed screen reboot.

Menu	Sub-Menu	
Advanced Settings	Password	Change the login password for the LED Poster. The default login: user name " admin ", password is " 123456 ". Recommendation: Change the default password after first login.
	Upgrade (Android only)	<p>Upgrade software of the LED Poster, including terminal software and terminal system. The terminal software includes terminal application software and FPGA program.</p> <p>Save software upgrade package to mobile device before upgrading the software. ViPlex Handy can automatically identify the software upgrade package and display it on the Upgrade page.</p>
	Time Synchronization	<p>Set rules for time synchronization.</p> <p>To enable synchronous playing on different LED Posters, keeping the time in sync is one of the basic conditions.</p> <p>Users can choose following ways to sync time according to actual situation:</p> <ul style="list-style-type: none"> • OFF: Do not sync time. • NTP: After connecting the LED Poster to the Internet, sync time according to the NTP server. • RF: Sync the time of the LED Poster via synchronization module. Set the current Poster as the master device and enable Auto Time Synchronization to sync the time of the master device with the NTP server. If the current Poster is set as the slave device, the time of the slave device will be synchronized with the master device via RF network. <p>Time parameters of RF:</p> <ul style="list-style-type: none"> • Group ID: It is required to enter the same group ID for the LED Poster units requiring time synchronization, namely, assign these LED Posters to the same group. • Device type: Set current LED Poster • as master or slave device. Sync the time of slave device with master device via RF network. • Auto Time Synchronization: To sync the time of master device via NTP server, it is required to enable Auto Time Synchronization and set an NTP server. • NTP server: The time of master device will be synchronized based on NTP server.
	Advanced Function	<ul style="list-style-type: none"> • Synchronous Playing: Turning on or off the Synchronous Playing function. When the function is turned on, synchronous displays of different screens can be enabled as long as such screens have the synchronous time and are playing the same contents. • Resolution: Setting the resolution of the Poster. • Restart: Rebooting the Poster. • Clear All Media: Clearing all the media stored in the Taurus. • Restore Factory Settings: Resetting the Taurus to factory settings.

Menu	Sub-Menu	
Network Settings	Wireless Network Settings	Turn on/off Wireless LAN Station mode of the LED Poster. When the LED Poster is connected via external router, turn on Wireless LAN Station mode, click the Wireless LAN name of the external router and enter the password of the Wireless LAN.
	Wired Network Settings	Turn DHCP on/off. When the LED Poster is connected via Ethernet cable, please turn off DHCP and set the static IP address and other relevant information.
	Mobile Data Settings	The LED Poster cannot connect to mobile network.
Monitoring	Ambient Brightness	Display ambient brightness. This is only available when a light sensor is connected to the LED Poster.
	Temperature	Display receiving card temperature.
	Playback Screenshot	Capture current screen.
	System Parameter	Display CPU usage, available storage and external storage.
	Time Parameter	Display the time zone and time of the LED Poster.
Video Controller	-	<p>Control video input mode, video source, zoom and offset position (for T6/TB6 and the later versions of Taurus only).</p> <p>Meanings of the values of Mode:</p> <ul style="list-style-type: none"> • Manual: Switch instantly between the synchronous mode and asynchronous mode. • Timing: Switch between the synchronous mode and asynchronous mode as scheduled. • HDMI preferred: HDMI is preferred for playing videos in synchronous mode. <p>Zoom is available for external HDMI input signal.</p> <p>Meanings of the values of Zoom:</p> <ul style="list-style-type: none"> • On: Images are scaled and displayed to fit the screen size automatically. • Off: Pictures are displayed according to the original size. Prompt: Offset range cannot be greater than the screen width.
Playback Management	-	<p>Read back the solution played on the LED Poster, play, stop, or delete the solution.</p> <ul style="list-style-type: none"> • Solutions under Cloud Solution are sent to the LED Poster from VNNOX. • Solutions under LAN Solution are sent to the LED Poster from ViPlex Handy (iOS), ViPlex Handy (Android) and ViPlex Express.
Remote Management	VNNOX	Bind asynchronous players of the VNNOX to the LED Poster. After they are bound together, ViPlex Handy can download relevant solutions from VNNOX to LED Poster. Username and password are the same as on VNNOX.
Screen Information	-	Set the screen name and registration address, and displaying the software version and subprogram version information.

5.2.2 Multi-Screen Mosaic

Used for image mosaic by splicing multiple screens with the same specifications. Screens can only be spliced horizontally from the left to right.

Before Starting:

- Connect hardware devices. For example, splice 3 screens and use external video sources (see Figure 12).
- Log in to the corresponding LED Posters (i.e. Taurus units).

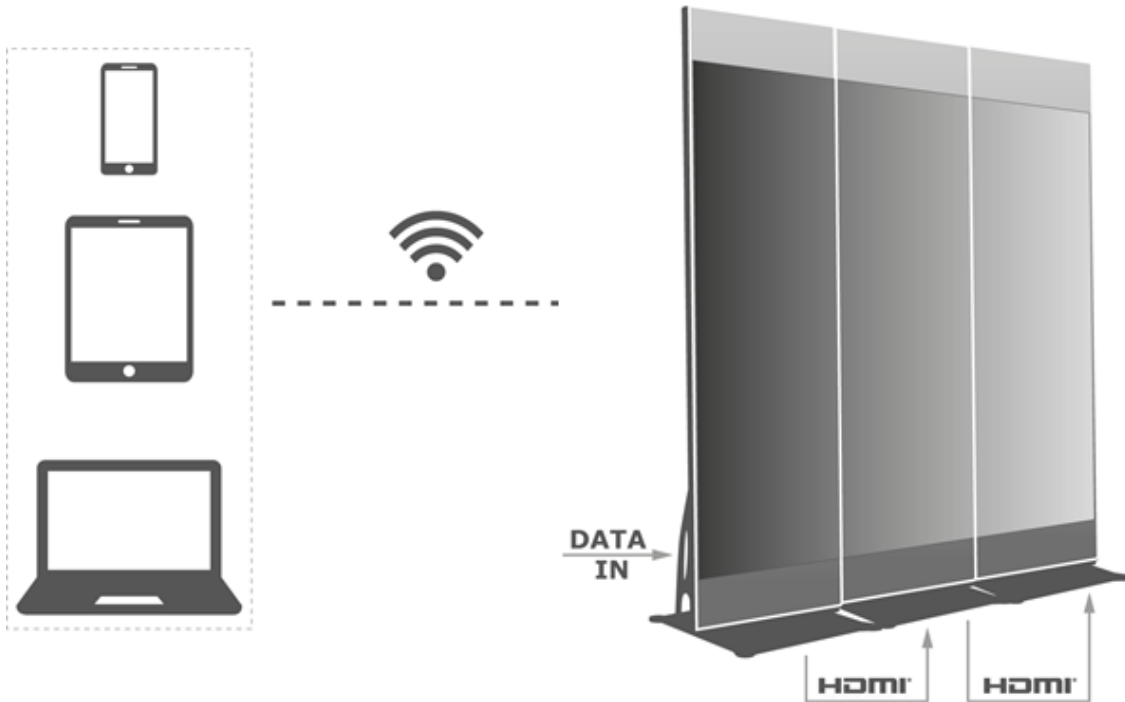




Figure 12: LED Poster Connection Example

5.2.2.1 Set Multi-Screen Mosaic

- Step 1) Choose **Screens**.
- Step 2) On the **Screen List** page, click the  button at the top right.
- Step 3) Enter a resolution and click the **Query** button to search for screens.
The online LED Poster and offline LED Poster with mosaic order that match your query will be displayed.
- Step 4) (Optional) Click the  button to sort the LED Posters with mosaic order by ascending mosaic order.
- Step 5) Click the **Mosaic** button.
- Step 6) Set the number of screens used for mosaic.
The number of screens cannot be greater than the top integer of the value of "Resolution width of Taurus / image width".
The resolution width of the LED Poster is up to 4096 pixels.
- Step 7) Set mosaic orders. The system will set the horizontal image offset automatically according to the mosaic orders and image width.
$$\text{Offset} = (\text{Mosaic order} - 1) \times \text{Image width}$$

For example, if the image width is 500 px, set the offset of the second screen to 500 px and the offset of the third screen to 1000 px.
- Step 8) Set the video source of the first screen.

5.2.2.2 Cancel Multi-Screen Mosaic

- Step 1) Click the  button to delete the mosaic orders of screens.

5.2.3 Solution List

Used for editing and publishing solutions and managing custom solution templates.

Notice
To edit, publish and play solutions normally, the following settings on iOS 11.0 or later are required to be done in advance. <ul style="list-style-type: none">• Photo setting: Settings > Photos > Download and Keep Originals• Camera setting: Settings > Camera > Formats > Most Compatible

ViPlex Handy supports following media types (see Table 15):

Table 15: ViPlex Handy – Supported Media Types

Menu	Format
Image	Adding pictures, and setting the display effects, play duration and transition of the images. When you add images, you can crop them. There are two types of effects: entrance effect and playback effect. Currently, only one of them can be set. Images can be added through the following two methods: <ul style="list-style-type: none">• Add pictures from the local media library.• Add pictures through the camera. (Android only) Supported formats: JPEG, BMP, GIF, PNG, WEBP
Video	Adding videos, and setting the display effects of the videos. Supported formats: MPEG-4, H.264, H.265, Google VP8, The Android version also supports adding GIF images.
GIF (iOS only)	Adding images of GIF format.
Text	Adding single-line or multi-line texts, and setting the text properties, play duration and transition of the texts.
Analog clock	Adding analog clocks, and setting the styles, texts and play duration of the analog clocks.
Weather (Android only)	Adding weather widgets, and setting the display content, temperature unit and animation effects, etc.
Digital clock	Adding digital clocks, and setting the styles and play duration of the digital clocks.

5.2.4 Settings

Table 16: ViPlex Handy – Settings

Menu	Description
Help	Displaying software version, copyright information, email address and providing the link to the User Guide.
Language	Setting software language. Cannot be changed when logged in to the LED poster.
Mode	Setting the mode of the software (default: User Mode). <ul style="list-style-type: none">• User Mode: Mainly designed for common users.• Screen Configuration Mode: Mainly designed for technical support engineers. Compared to user mode, the Screen Configuration and Mosaic functions are added in screen configuration mode which requires professional knowledge and experience.


















5.2.5 Media


Used for displaying local media on a mobile device. When you edit a solution, files in the media library can be added to the solution. For iOS 11.0 or later, you have to set the camera to **Most Compatible**, otherwise the media cannot be played normally after the solutions are published.

5.3 ViPlex Express

5.3.1 Overview Functions

Table 17: ViPlex Express – Overview Functions

Menu	Description		
Screens	Total		Number of connected screens
	Online		The login to the LED Poster is successful. After ViPlex Express found the LED Poster, ViPlex Express attempts to log in to the LED Poster automatically with the default account or the account used for last login.
	Not Login		The LED Poster is online and you can log into it.
	Offline		The LED Poster is offline and you cannot log into it.
	Refresh		Refresh the screen
Solutions	New		Create a new Solution
	Edit		Edit an existing Solution
	Delete		Delete an existing Solution
	Import		Import a Solution
	Export		Export a Solution
	Publish		Publish a Solution
Advanced Solutions	New		Create a new Advanced Solution
	Edit		Edit an existing Advanced solution
	Delete		Delete an existing Advanced Solution
	Import		Import an Advanced Solution
	Export		Export an Advanced Solution
	Publish		Publish an Advanced Solution
Screen control	see 5.3.4		

Menu	Description	
Settings 	Language	Set the system language
	RF management	Manage the playback of all LED Posters except the reference device when the RF time synchronization mode is enabled. Before operation, enter the password "admin".
	Custom server	Add, modify or delete custom servers.
	DHCP service	Turn DHCP service on/off. If the PC and LED Poster are connected through Ethernet cable and there is no other DHCP server in the network, turn on DHCP server to connect to the LED Poster automatically, if the connection is not stable, please set a static IP address for the PC.
	Setting	<ul style="list-style-type: none"> • Set the storage path of files, incl. the ViPlex Express configuration files, data, temporary files, etc. • Enable or disable the terminal auto reconnection function and set the reconnection interval.
	Check for Updates	Check for software updates.
	Help	View ViPlex Express User Guide.
	About	Show the version of ViPlex Express and the official website of NovaStar.

5.3.2 Solutions

The function **Solutions** offers to create, edit, delete, import, export and publish solutions.

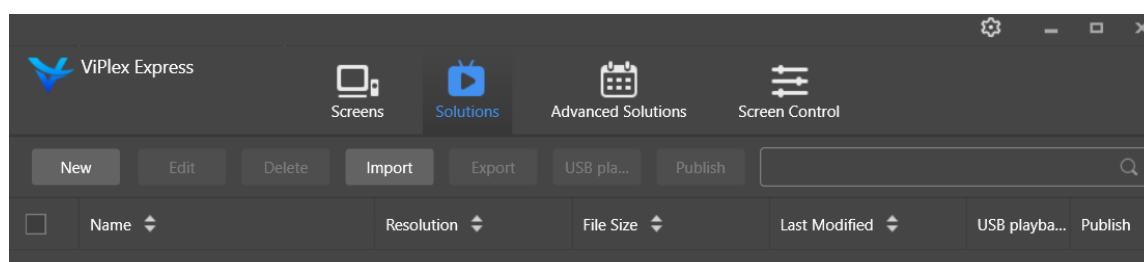


Figure 13: Start Screen Solutions

5.3.2.1 Overview Functions

The editing page is structured as follows:

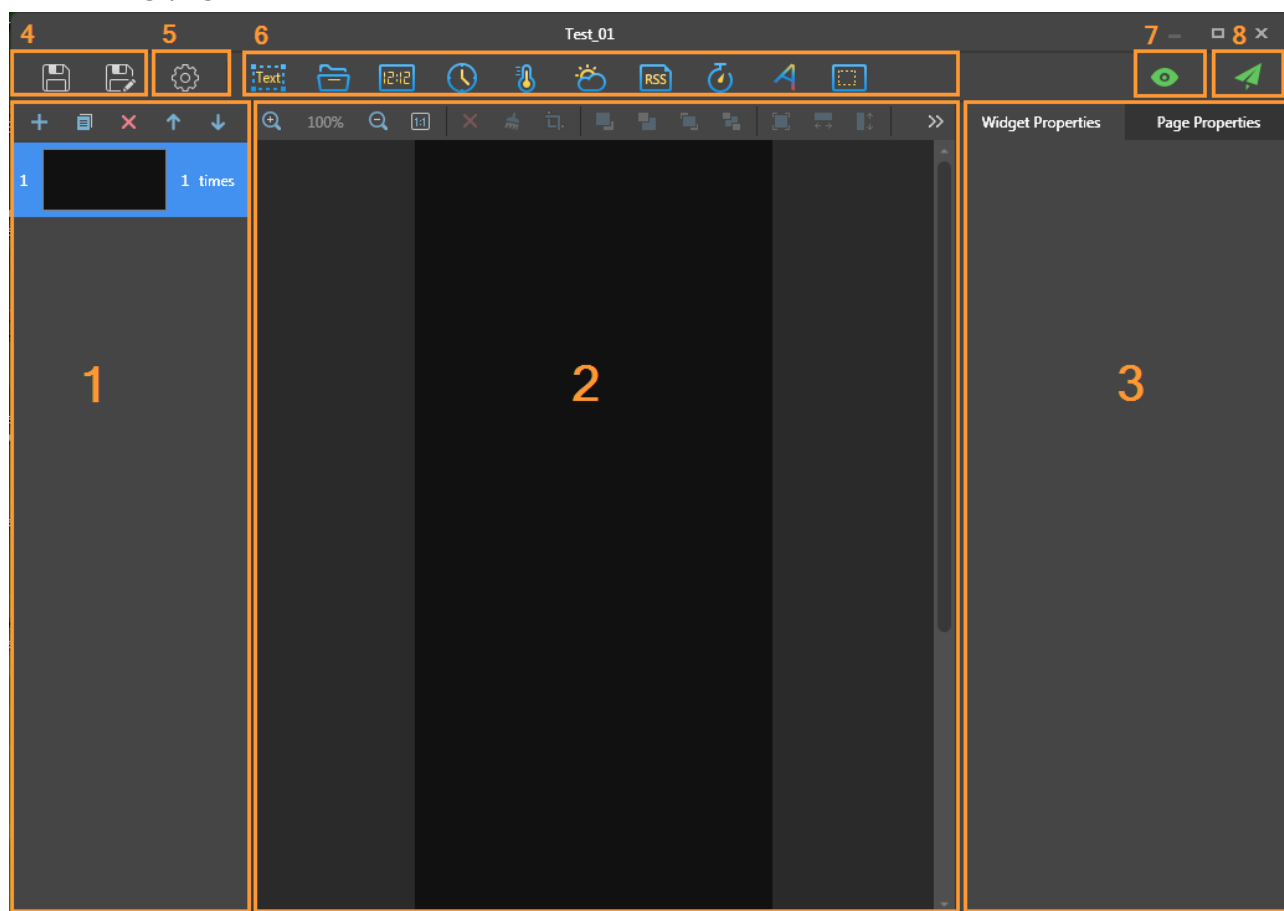






Figure 14: Start Screen Editing Page











Table 18: Start Screen Editing Page – Description and Functions

#	Area/Function	Icon	Description
1	Editing area of solution page		Create a page
			Copy a page
			Delete a page
			Sort the pages
2	Editing area of page media	100%	Zoom in or out of page
			Delete/Clear/Crop media
			Adjust media layout
3	Properties editing area	<div>Widget Properties</div> <div>Page Properties</div>	<p>Edit widgets properties and page properties. Widgets are the media added in pages. Before editing the widget properties, click to select a widget.</p> <p>In the page properties, you can set the playback schedule of a page. If the schedule of the page overlaps with the schedules of other pages, these pages will be played according to the page order from the top to the bottom.</p>

#	Area/Function	Icon	Description
4	Saving		Save a solution and save a solution as another solution
5	Setting		Set solution name and resolution
6	Adding media	see Figure 14	Add media to a solution page
7	Preview		Preview current page
8	Publish		Publish solutions

Supported Media Types and Functions in the Editing Page

Table 19: Adding media to Solution – Function Overview

Icon	Description	Supported formats/comments
	Text	Add text
	File	Add file
	Digital clock	Add digital clock
	Analog clock	Add analog clock
	Temperature	Add temperature field
	Weather widget	Add weather widget
	RSS	Load/Add a website
	Timer	Add timer settings
	Colorful Word	Add text with effects
	Window	Add a new area

5.3.2.2 Creating a Solution

Get the screen size before creating solutions.

Step 1) Click the **Solutions** menu button.

Step 2) Click the **New** button.

Result: Pop-up dialog **Solution Information** opens.

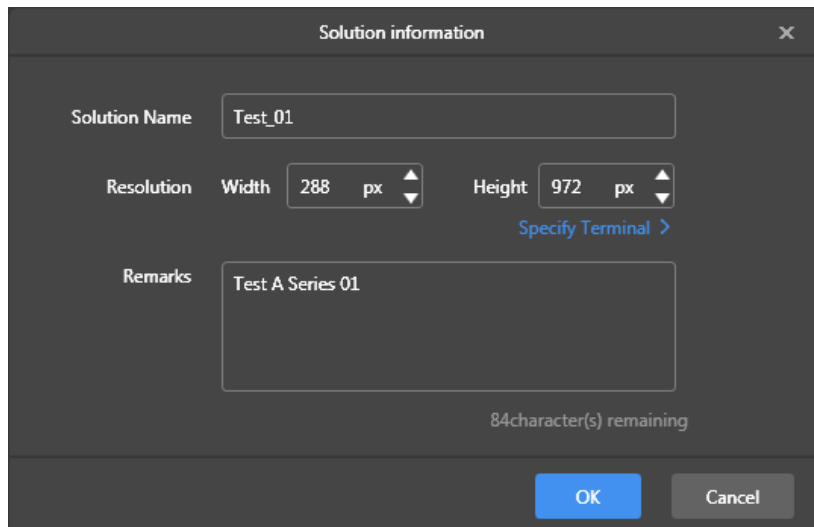


Figure 15: Pop-up dialog Solution Information – Data of LED Poster P1.9

Step 3) Enter the solution name, screen width and height.

You can set the resolution by clicking **Specify Terminal** and the resolution will be the same as that of the selected terminal.

Click the **OK** button to confirm the entry.

Result: The display size is saved. The editing page of the solution appears (see 5.3.2.1).

5.3.2.3 Editing a Solution

Step 1) Click the **Solutions** menu button.

Step 2) Select a solution in the solution list.

Step 3) Click the **Edit** button.

Result: The editing page of the solution appears (see 5.3.2.1).

Step 4) Set the desired changes.

Step 5) Click the save button  to save your changes.

Result: The changes to the solution are saved.

5.3.2.4 Deleting a Solution

Step 1) Click the **Solutions** menu button.

Step 2) Select a solution in the solution list.

Step 3) Click the **Delete** button.

Result: A pop-up dialog opens.

Step 4) Confirm that you want to delete the solution.


Result: The solution is deleted.

5.3.2.5 Importing a Solution

Step 1) Click the **Solutions** menu button.

Step 2) Click the **Import** button.

Result: A pop-up dialog opens.

Step 3) In the pop-up dialog, click the  button to select the file path.
(The default name of the folder of the solution exported from ViPlex is **nova**.)

Step 4) Click the **Next** button.

Result: The import is in progress. The status of the progress is shown.

Step 5) When the progress shows 100%, click the **Done** button.

Result: The solution is imported.


5.3.2.6 Exporting a Solution

Notice
Only solutions that contain media can be exported.

Step 1) Click the **Solutions** menu button.

Step 2) Select one or more solutions and click **Export**.

Result: A pop-up dialog opens.

Step 3) In the pop-up dialog, click the  button to select the file path.

Step 4) Click the **Export** button.

Result: The export is in progress. The status of the progress is shown.


Step 5) When the progress shows 100%, click the **Done** button.

Result: The solutions are exported.

Note: ViPlex Express will automatically convert the formats of videos that are not supported by the terminals while exporting solutions.

5.3.2.7 USB Playback of a Solution

Step 1) Click the **Solutions** menu button.

Step 2) Click the playback icon  of a solution, or select one or more solutions and click **USB playback**.

Result: A pop-up dialog opens.

Step 3) Select the playback mode:

a) **Plug and play:** As soon as the USB flash drive that stores the solution is plugged into the terminal, the solution will be played. During playing, the USB flash drive cannot be removed.

b) **Copy and play:** After the solution that is stored on the USB drive is copied to the terminal, the solution will be played. During playing, the USB drive can be removed.

Step 4) Enter the file path and the terminal password.

Note: After the USB drive where solutions are stored is inserted into the terminal, the solutions can be played only when the password is correct.

Step 5) Select a solution and click the **OK** button.

Step 6) When the progress shows 100%, click the **Done** button.


Result: The solutions are exported for playback.

5.3.2.8 Publishing a Solution

Notice

- Only solutions containing media can be published.
- Only one solution at a time can be sent to terminals.
- One solution can be sent to multiple terminals simultaneously.

Step 1) Click the **Solutions** menu button.

Step 2) Click the publishing icon  of a solution, or select one or more solutions and click **Publish**.

Result: A pop-up dialog opens.

Step 3) Click the **Refresh** button in the Publish solution dialog box to show the information of terminals which are logged in.

Step 4) Select one or more terminals and click the **Publish** button.

Result: The publishing is in progress. The status of the progress is shown.

Step 5) When the progress shows 100%, click the **Done** button.

Result: The solution is published.

5.3.3 Advanced Solutions

An Advanced Solution is a solution added with a playback schedule. Users can create, edit, delete, import, export and publish Advanced Solutions.

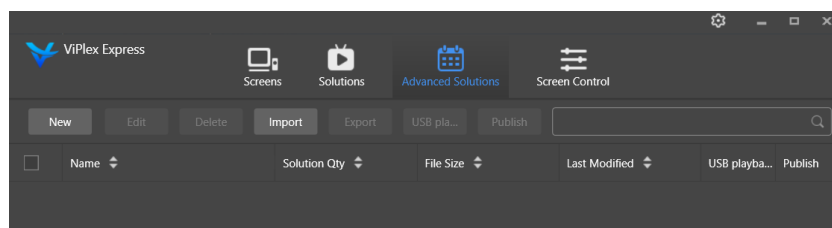


Figure 16: Start Screen Advanced Solutions

5.3.3.1 Creating an Advanced Solution

Get the screen size before creating solutions.

Step 1) Click the **Advanced Solutions** menu button.

Step 2) Click the **New** button.

Result: A pop-up dialog opens.

Step 3) Name the Advanced Solution.

Step 4) Click the **+** icon.

Result: A pop-up dialog opens.

Step 5) Select a common solution, and set the validity range, repeating method and playback duration.

Step 6) Click the **Add** button to confirm the entries.

Step 7) Click the **Cancel** button.

Step 8) Optional: Click the box next to **Non-Scheduled Content** to select a solution as non-schedule content.

Result: The non-schedule content will be played by default during the non-scheduled period.

Step 9) Click the **Add** button.

Result: The Advanced Solution is added.


5.3.3.2 Editing an Advanced Solution

- Step 1) Click the **Advanced Solutions** menu button.
- Step 2) Select a solution of the Advanced Solution List.
- Step 3) Click the **Edit** button.
Result: The editing page of the Advanced Solution appears.
- Step 4) Set the desired changes.
- Step 5) Click the **OK** button to save your changes.
Result: The changes to the Advanced Solution are saved.

5.3.3.3 Deleting an Advanced Solution


- Step 1) Click the **Advanced Solutions** menu button.
- Step 2) Select a solution of the Advanced Solution List.
- Step 3) Click the **Delete** button.
Result: A pop-up dialog opens.
- Step 4) Confirm that you want to delete the solution.
Result: The Advanced Solution is deleted.

5.3.3.4 Importing an Advanced Solution

- Step 1) Click the **Advanced Solutions** menu button.
- Step 2) Click the **Import** button.
Result: A pop-up dialog opens.
- Step 3) Click in the pop-up dialog, click the  button to select the file path.
(The default name of the folder of the advanced solution exported from ViPlex is **nova**.)
- Step 4) Click the **Next** button.
Result: The import is in progress. The status of the progress is shown.
- Step 5) When the progress shows 100%, click the **Done** button.
Result: The Advanced Solution is imported.


5.3.3.5 Exporting an Advanced Solution

Notice
Only solutions that contain media can be exported.

- Step 1) Click the **Advanced Solutions** menu button.
- Step 2) Select one or more solutions and click **Export**.
Result: A pop-up dialog opens.
- Step 3) Click in the pop-up dialog the  button to select the file path.
- Step 4) Click the **Export** button.
Result: The export is in progress. The status of the progress is shown.
- Step 5) When the progress shows 100%, click the **Done** button.
Result: The Advanced Solutions are exported.

5.3.3.6 USB Playback of an Advanced Solution

Step 1) Click the **Advanced Solutions** menu button.

Step 2) Click the corresponding playback icon  of a solution, or select one or more solutions and click **USB playback**.

Result: A pop-up dialog opens.

Step 3) Select the playback mode:

a) **Plug and play:** As soon as the USB flash drive that stores the solution is plugged into the terminal, the solution will be played. During playing, the USB flash drive cannot be removed.

b) **Copy and play:** After the solution that is stored on the USB drive is copied to the terminal, the solution will be played. During playing, the USB drive can be removed.

Step 4) Enter the file path and the Terminal password.

Note: After the USB drive where solutions are stored is inserted into the terminal, the solutions can be played only when the password is correct.

Step 5) Select a solution and click the **OK** button.

Step 6) When the progress shows 100%, click the **Done** button.

Result: The Advanced Solutions are exported for playback.

5.3.3.7 Publishing an Advanced Solution

Notice

- Only solutions containing media can be published.
- Only one solution can be sent to terminals each time.
- One solution can be sent to multiple terminals simultaneously.

Step 1) Click the **Advanced Solutions** menu button.

Step 2) Click the corresponding publishing icon  of a solution, or select one or more solutions and click **Publish**.

Result: A pop-up dialog opens.

Step 3) Click the **Refresh** button in the Publish solution dialog box to show the information of terminals which are logged in.

Step 4) Select one or more terminals and click the **Publish** button.

Result: The publishing is in progress. The status of the progress is shown.

Step 5) When the progress shows 100%, click the **Done** button.

Result: The Advanced Solution is published.

5.3.4 Screen control

Click the **Read back** button to read terminal information back to ViPlex Express and display it.

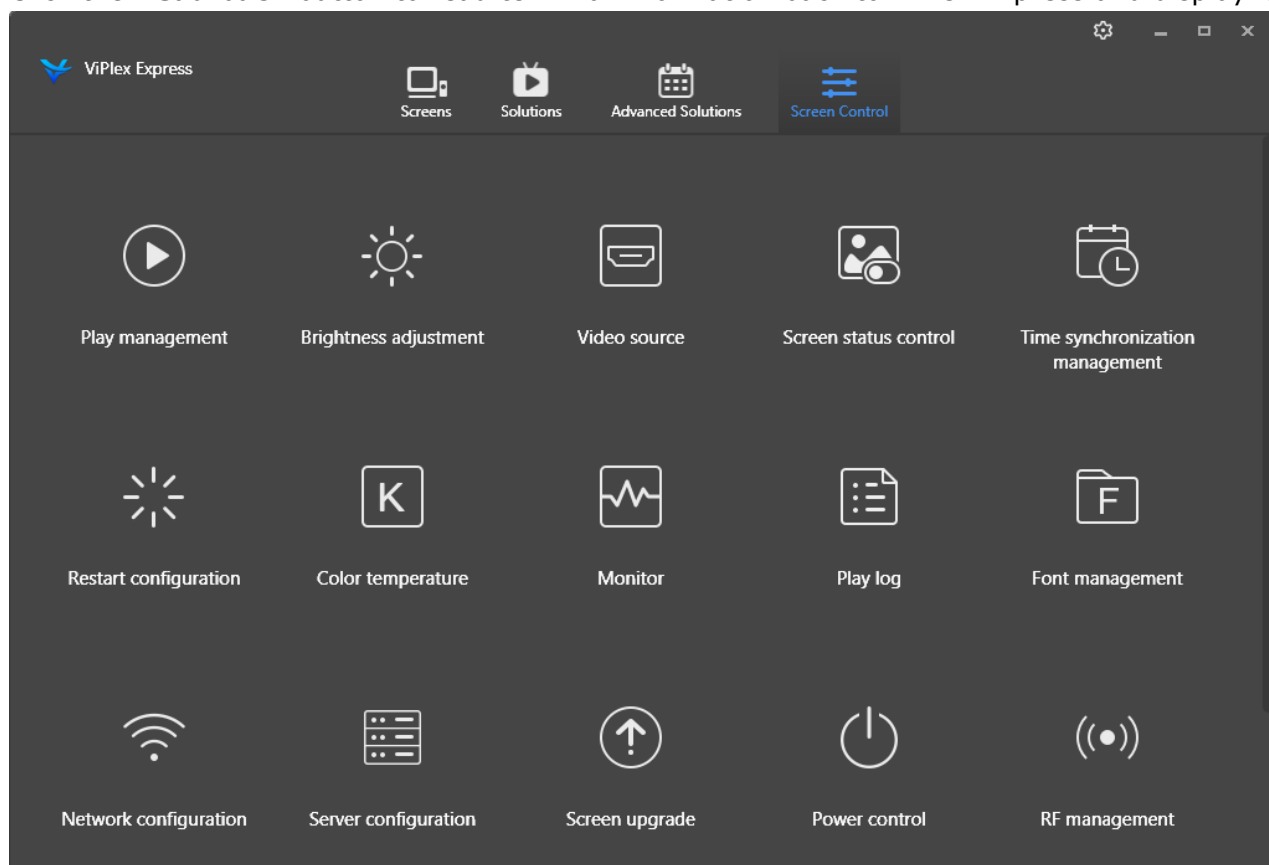

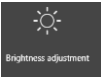
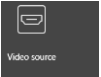
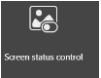


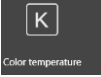

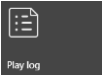



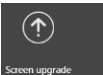


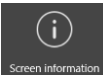


Figure 17: Start Screen – Screen control

5.3.4.1 Overview Functions

Table 20: Screen control – Function Overview

Area/Function	Icon	Description
Play management		<ul style="list-style-type: none"> • Manage the play mode, volume and content of terminals. • Enabling Synchronous Playing. • Enabling or disabling the synchronous playing function will restart the terminal.
Brightness adjustment		Manually adjust the brightness or set rules of smart brightness adjustment.
Video source		Control the video input mode, video source and output offset position.
Screen Status Control		Set the current playing status of the screen.
Time synchronization management		Set time synchronization mode.
Restart configuration		Restart terminals immediately and configure restart rules.
Color temperature		Set the screen display's color temperature, including neutral white, standard white and cool white.

Area/Function	Icon	Description
Monitor		Give current information acquiring time to the selected screen (memory status, CPU usage, environment brightness).
Play log		View and export play logs.
Font management		Manage the fonts used by the LED Poster.
Network configuration		Set the IP address for an LED Poster based on your actual needs while connecting the Poster to the Internet via Ethernet cable.
Server configuration		View configuration parameters for connecting screens to VNNOX and NovaCare.
Screen upgrade		Upgrade the application software and system software of terminals. Note: Keep the power on during upgrade.
Power control		Turn on or off screens remotely.
RF management		Set parameters related to RF synchronization.
Screen information		Display the terminal MAC address, terminal IP address, system software version, product model, application software version.

5.3.4.2 Managing the Playback

Manage the play mode, volume and content of terminals.

Step 1) Click the **Screen control** menu button.

Step 2) Select the **Play management** function.

Result: The Play Management Screen appears.

Enabling Synchronous Playing

Step 1) Select the target terminal in the terminal list.

Step 2) Select **Enable** next to Synchronous Playing.

Result: A pop-up dialog opens.

Step 3) Click the **OK** button to confirm.

Adjusting Volume in Real Time



Step 1) Drag the slider or enter a value to adjust volume.

Note: Volume can be adjusted only when the LED Poster is in asynchronous mode.

When the information related to RF synchronization is displayed, it indicates that volume synchronization is enabled on the current terminal. See relevant operations in 6.3.8. RF synchronization requires you to specify a master device and slave devices. Users only need to set the volume of the master device. The slave devices will keep the same volume as the master device via RF signal

Managing Terminal Solutions

Step 1) Click the **View Screenshot** button to view the real-time screenshot of the solution which is being played on the terminal.

Operation	Step
View screenshot	Click View Screenshot to view the real-time screenshot of the solution which is being played on the terminal.
Play a Solution	Move the mouse to the thumbnail of the solution and click the play button  .
Stop a Solution	Move the mouse to the thumbnail of the solution and click the stop button  .
Delete a Solution	See 5.3.2.4 and 5.3.3.3.

5.3.4.3 Adjusting Brightness

Manual Adjustment

- Step 1) Click the **Screen control** menu button.
- Step 2) Select the **Brightness adjustment** function.
- Step 3) Select the target terminal in the terminal list.
- Step 4) Choose the **Manual** button and drag the slider or enter a value to adjust the screen brightness.

Smart Adjustment

Smart Adjustment offers two options:

- **Timing brightness adjustment:** During the time period that you set to enable smart adjustment; the screen brightness will be the fixed value that you set manually.
- **Auto brightness adjustment:** During the time period that you set to enable auto adjustment; the screen brightness will be automatically adjusted according to the auto brightness adjustment table.

The auto brightness adjustment table divides the ambient brightness into several subsections and sets corresponding screen brightness to each subsection. The screen brightness will be automatically adjusted according to the ambient brightness subsection where the current ambient brightness belongs to.

- Step 1) Click the **Screen control** menu button.
- Step 2) Select the **Brightness adjustment** function.
- Step 3) Select the target terminal in the terminal list.
- Step 4) Choose the **Smart** button to enter the smart adjustment page.

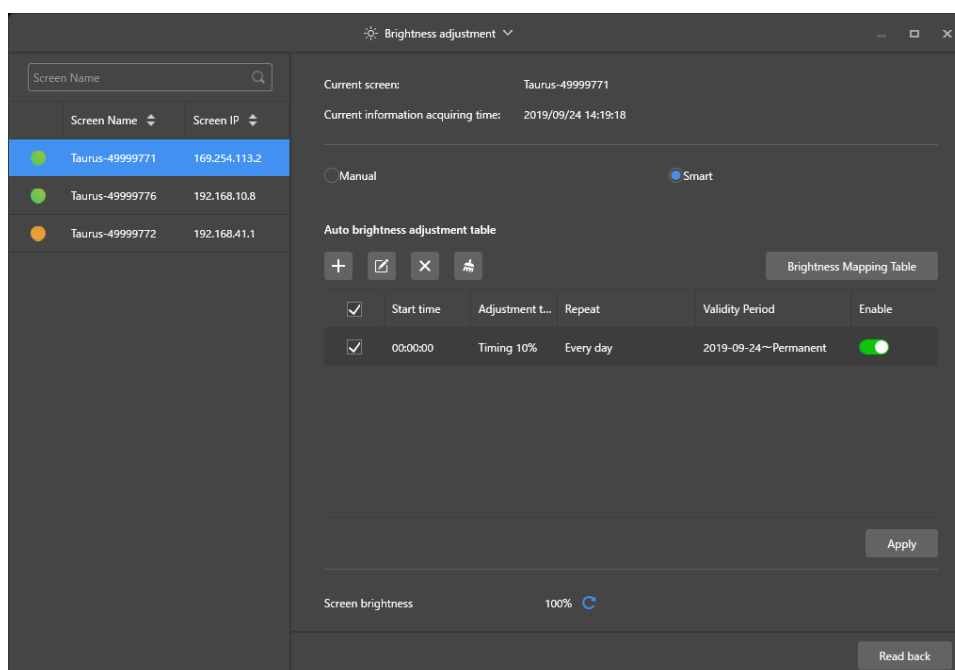






Figure 18: Brightness Adjustment – Smart Adjustment

Step 5) Perform the following operations based on your actual needs:

Operation	Step
Create a rule	a) Click the + button. <u>Result:</u> A pop-up dialog opens. b) Choose the Timing button or Auto button. c) Set the corresponding brightness adjustment rules. d) Click the Add button. <u>Result:</u> The rule is created.
Modify a rule	a) Select a rule. b) Click the  button. <u>Result:</u> A pop-up dialog opens. c) Modify the rule. d) Click the Add button. <u>Result:</u> The rule is modified.
Delete a rule	a) Select one or more rules. b) Click the  button. <u>Result:</u> A pop-up dialog opens. c) Click the Confirm button. <u>Result:</u> The rule is deleted.
Clear a rule	a) Click the  button. <u>Result:</u> A pop-up dialog opens. b) Click the Confirm button. <u>Result:</u> The rule is cleared.
Enable a rule	a) In the rule list, turn on Enable switch next to a rule.
View current brightness	a) Click the  button.

Step 6) Click the **Apply** button to confirm the configuration.
Result: The configuration is saved.

5.3.4.4 Switching the Video Source

Manual Switching

Choose this to switch immediately between the internal input source and HDMI input source.

- Step 1) Click the **Screen control** menu button.
- Step 2) Click the **Video source** function.
- Step 3) Select the target terminal in the terminal list.
- Step 4) Choose the **Manual** button and configure the required parameters.
- Step 5) Click the **Apply** button.

Result: The play management switches immediately between the internal input source and HDMI input source.

Scheduled Switching

Choose this to switch between the internal input source and HDMI input source at regular time.

- Step 1) Click the **Screen control** menu button.
- Step 2) Click the **Video source** function.
- Step 3) Select the target terminal in the terminal list.
- Step 4) Choose the **Timing** button.

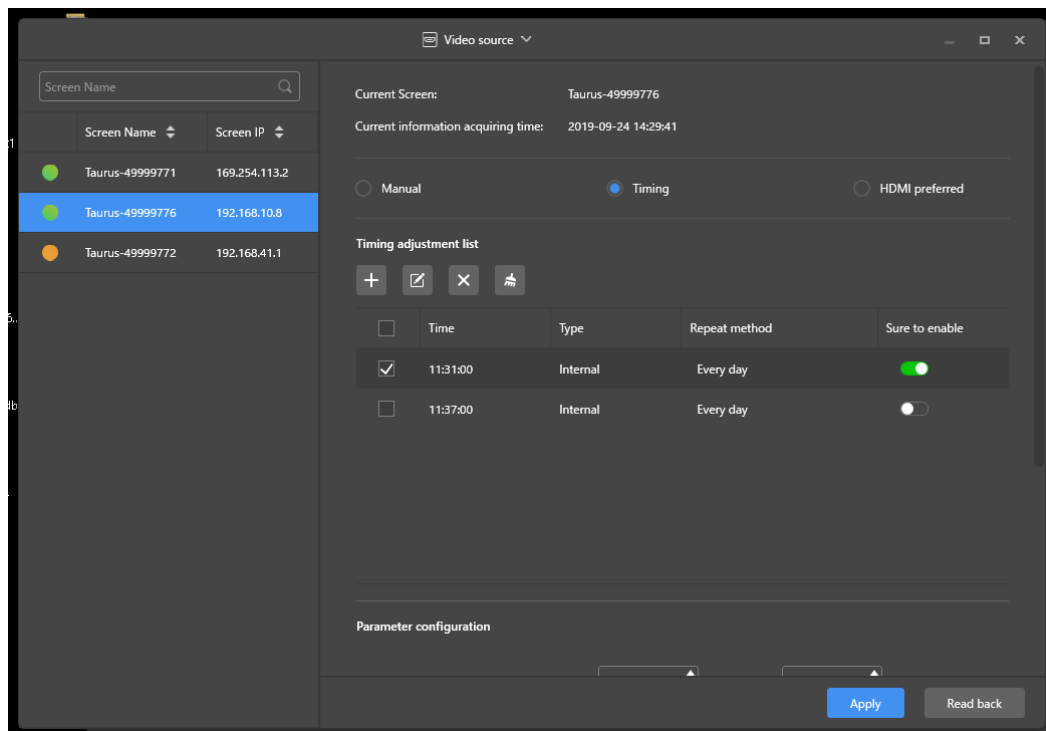





Figure 19: Video Source – Scheduled Switching

Step 5) Perform the following operations based on your actual needs:

Operation	Step
Create a rule	a) Click the + button. <u>Result:</u> A pop-up dialog opens. b) Choose Internal or HDMI . c) Set the time and cycle to use the video source. d) Click the Add button. <u>Result:</u> The rule is created.
Modify a rule	a) Select a rule. b) Click the  button. <u>Result:</u> A pop-up dialog opens. c) Modify the time and cycle to use the video source. d) Click the OK button. <u>Result:</u> The rule is modified.
Delete a rule	a) Select one or more rules. b) Click the  button. <u>Result:</u> A pop-up dialog opens. c) Click the Confirm button. <u>Result:</u> The rule is deleted.
Clear a rule	a) Click the  button. <u>Result:</u> A pop-up dialog opens. b) Click the Confirm button. <u>Result:</u> The rule is cleared.
Enable a rule	a) In the rule list, turn on the Sure to enable switch next to a rule.
Configure HDMI parameter	a) Choose to enable the full screen size zoom function or not. b) Set the position of the playing window.

Step 6) Click the **Apply** button to confirm the configuration.

Result: The configuration is saved.

HDMI as Preferred Mode

The HDMI port is preferred for playing the video in the synchronous mode.

Step 1) Click the **Screen control** menu button.

Step 2) Click the **Video source** function.

Step 3) Select the target terminal in the terminal list.

Step 4) Click the **HDMI preferred** button.

Step 5) Choose whether to enable Full screen zoom and set the output position. That is the position of the playback window.

Step 6) Click the **Apply** button to confirm the configuration.

Result: The configuration is saved.

5.3.4.5 Controlling Screen Status

Manual Control

- Step 1) Click the **Screen control** menu button.
- Step 2) Click the **Screen status control** function.
- Step 3) Select the target terminal in the terminal list.
- Step 4) Click the **Manual** button to enter the manual settings page.
- Step 5) Click the **Blackout** button or the **Normal** button.

Timing Control

- Step 1) Click the **Screen control** menu button.
- Step 2) Click the **Screen status control** function.
- Step 3) Select the target terminal in the terminal list.
- Step 4) Click the **Timing** button to enter the timing settings page.

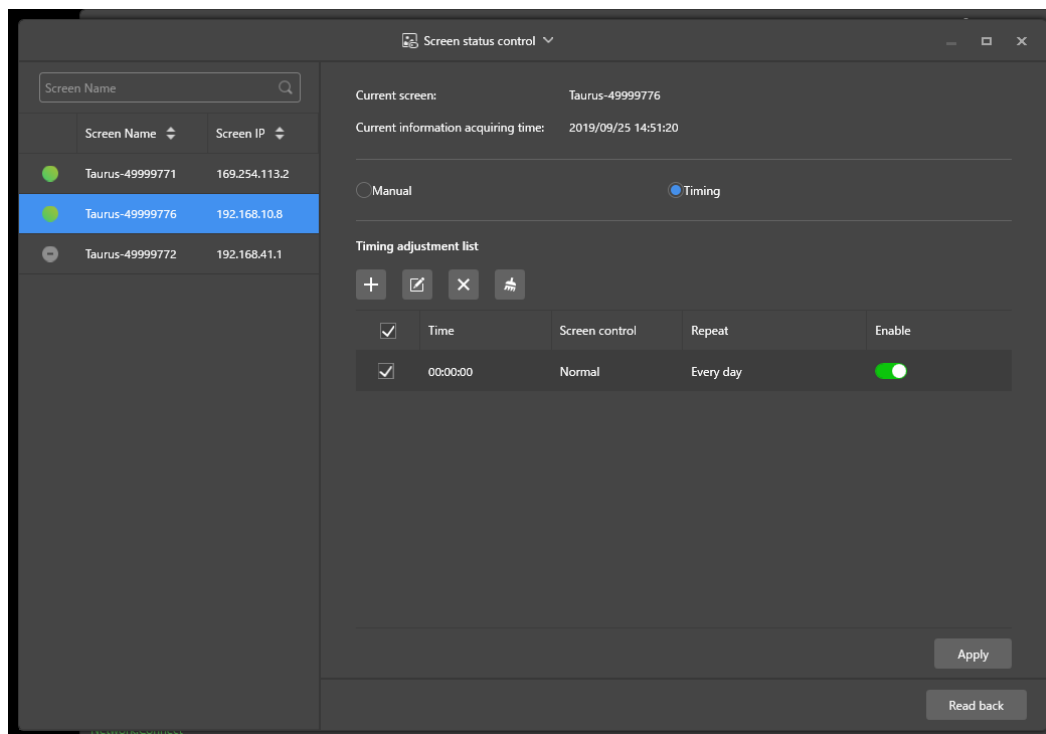





Figure 20: Screen Status Control

Step 5) Perform the following operations based on your actual needs:

Operation	Step
Create a rule	a) Click the + button. <u>Result:</u> A pop-up dialog opens. b) Choose Blackout or Normal . c) Set the playing time and cycle of screen. d) Click the Add button. <u>Result:</u> The rule is created.
Modify a rule	a) Select a rule. <u>Result:</u> A pop-up dialog opens. b) Click the  button. c) Modify the playing time and cycle of screen. d) Click the OK button. <u>Result:</u> The rule is modified.
Delete a rule	a) Select one or more rules. b) Click the  button. <u>Result:</u> A pop-up dialog opens. c) Click the Confirm button. <u>Result:</u> The rule is deleted.
Clear a rule	a) Click the  button. <u>Result:</u> A pop-up dialog opens. b) Click the Confirm button. <u>Result:</u> The rule is cleared.
Enable a rule	a) In the rule list, turn on the Enable switch next to a rule.

Step 6) Click the **Apply** button to confirm the configuration.
Result: The configuration is saved.

5.3.4.6 Managing Time Synchronization

- Step 1) Click the **Screen control** menu button .
- Step 2) Click the **Time synchronization management** function.
- Step 3) Click the **Auto sync time with NTP server**.

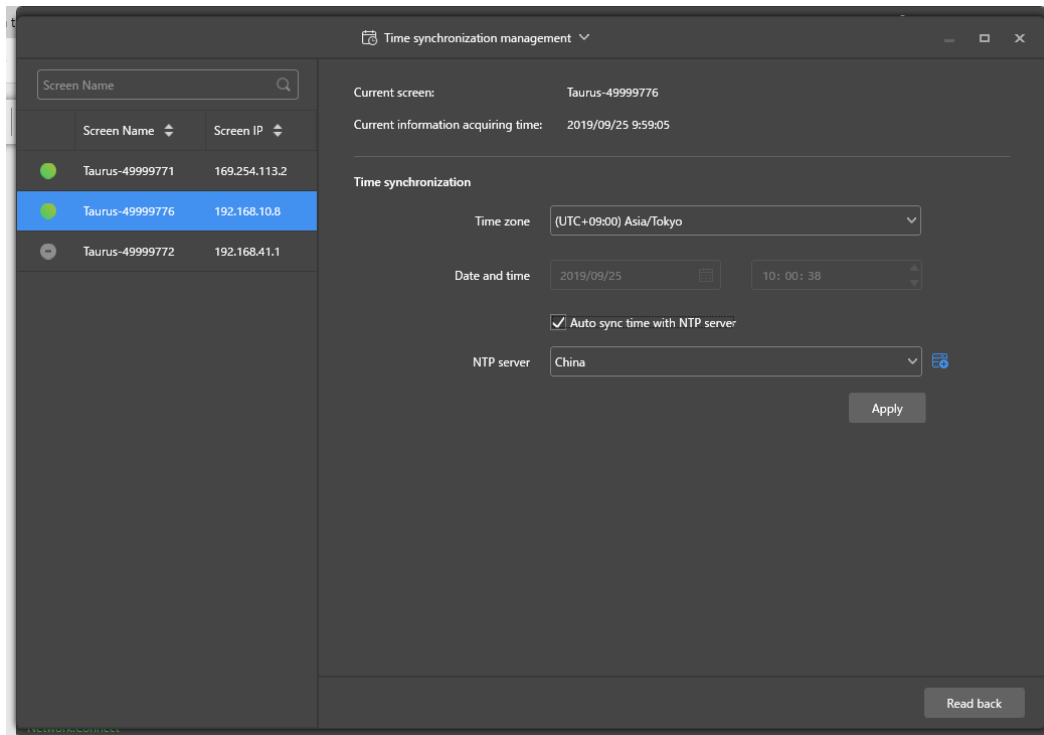


Figure 21: Time synchronization management

- Step 4) Select **China** or **American** under **NTP server**.
 - Step 5) Click the **Apply** button to confirm the configuration.
- Result: The configuration is saved.

5.3.4.7 Restarting Configuration

Immediate Restart

- Step 1) Click the **Screen control** menu button.
- Step 2) Click the **Restart configuration** function.
- Step 3) Select the target terminal in the terminal list.
- Step 4) Click the **Restart Now** button.
Result: A pop-up dialog opens.
- Step 5) Click the **Confirm** button to restart the terminal immediately.
Result: The Terminal restarts immediately.

Scheduled Restart

- Step 1) Click the **Screen control** menu button .
- Step 2) Click the **Restart configuration** function.
- Step 3) Select the target terminal in the terminal list.

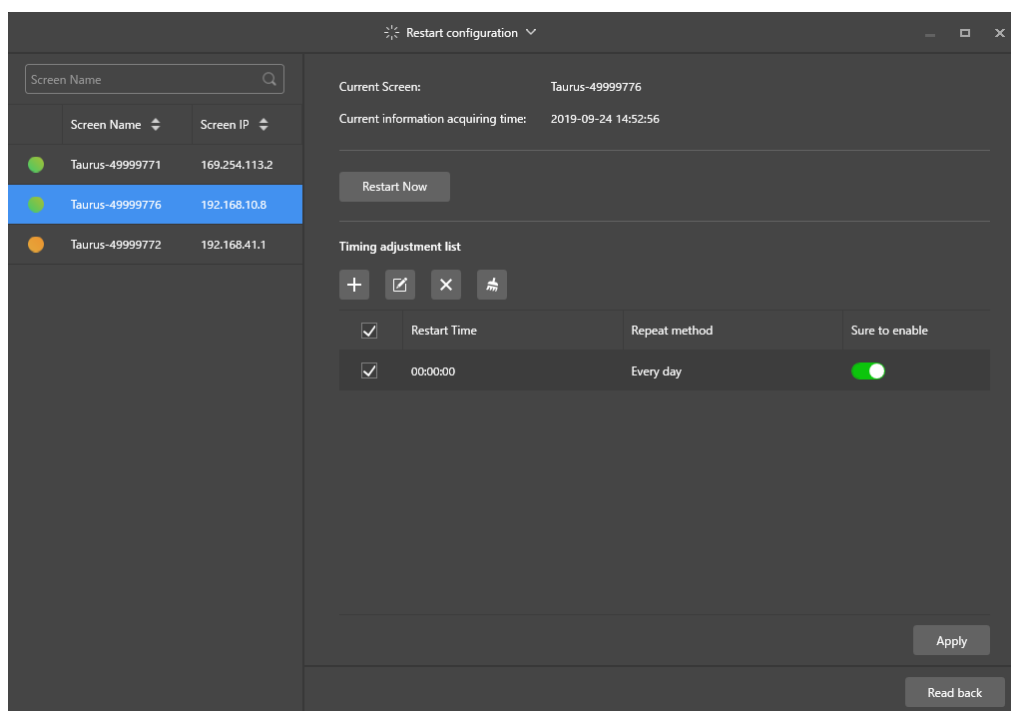





Figure 22: Restart configuration

Step 4) Perform the following operations based on your actual needs:

Operation	Step
Create a rule	a) Click the + button. <u>Result:</u> A pop-up dialog opens. b) Set the time and cycle to restart a terminal. c) Click the Add button. <u>Result:</u> The rule is created.
Modify a rule	a) Select a rule. b) Click the  button. <u>Result:</u> A pop-up dialog opens. c) Modify the time and cycle to restart a terminal. d) Click the OK button. <u>Result:</u> The rule is modified.
Delete a rule	a) Select one or more rules. b) Click the  button. <u>Result:</u> A pop-up dialog opens. c) Click the Confirm button. <u>Result:</u> The rule is deleted.
Clear a rule	a) Click the  button. <u>Result:</u> A pop-up dialog opens. b) Click the Confirm button. <u>Result:</u> The rule is cleared.
Enable a rule	a) In the rule list, turn on the Sure to enable switch next to a rule.

Step 5) Click the **Apply** button to confirm the configuration.
Result: The configuration is saved.

5.3.4.8 Setting Color Temperature

- Step 1) Click the **Screen control** menu button.
 Step 2) Click the **Color temperature** function.
 Step 3) Select the target terminal in the terminal list.
 Step 4) Select a color temperature type.

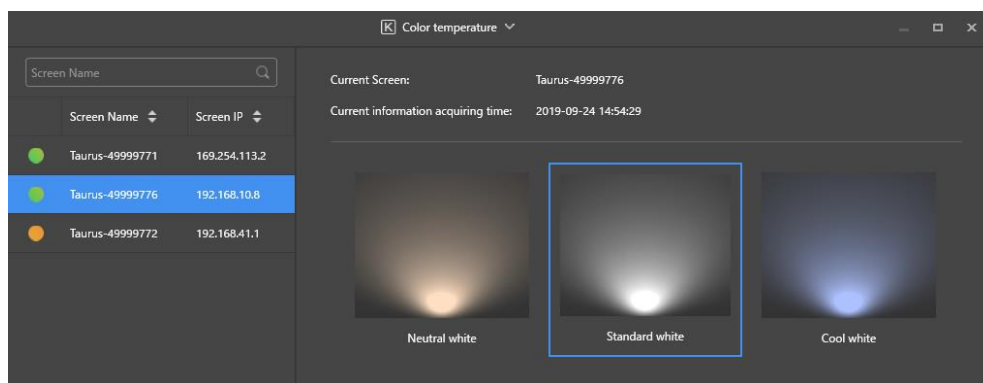


Figure 23: Color temperature

5.3.4.9 Monitoring the Hardware

- Step 1) Click the **Screen control** menu button.
- Step 2) Click the **Monitor** function.
- Step 3) Select the target terminal in the terminal list.
View terminal hardware information and solution play screenshot. Hardware information includes disk size, memory availability, CPU usage and environment brightness.
- Step 4) If you want to clean up the hard disk, click the **Clear All Media** button under the disk size.
- Result: All media and solutions will be deleted and the screen will be blacked out.

5.3.4.10 Viewing and Exporting Play Logs

View Play Logs

- Step 1) Click the **Screen control** menu button.
- Step 2) Click the **Play Logs** function.
- Step 3) Select the target terminal in the terminal list.

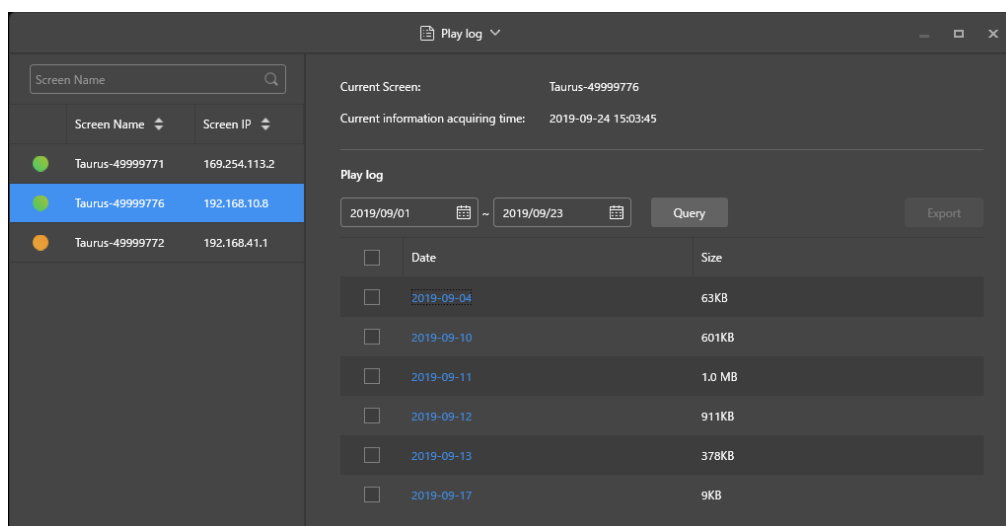


Figure 24: Play log

- Step 4) Choose the time range of the play log that you want to view.
- Step 5) Click the **Query** button.
- Step 6) Click a play log name in the play log list to view the log details.
- Result: Log details of the play log are shown.

Export Play Logs

- Step 1) Click the **Screen control** menu button.
- Step 2) Click the **Play Logs** function.
- Step 3) Select the target terminal in the terminal list.
- Step 4) Select the target play log in the play log list.
- Step 5) Click the **Export** button.
- Step 6) Choose the export path and format.
- Step 7) Click the **OK** button.
- Result: The play log has been exported.

5.3.4.11 Managing Fonts

Adding Fonts

- Step 1) Click the **Screen control** menu button.
- Step 2) Click the **Font Management** function.
- Step 3) Select the target terminal in the terminal list.

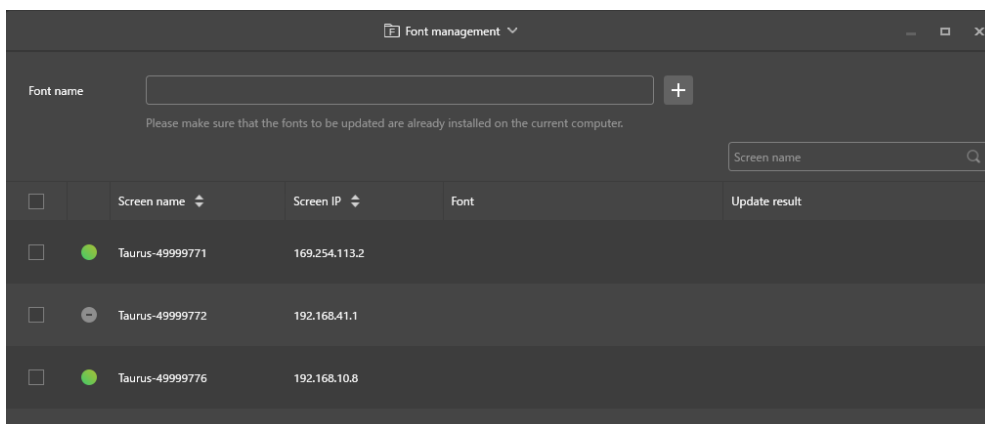


Figure 25: Font management – Selecting a Terminal

- Step 4) Click the **+** button next to the **Font name** button to acquire local fonts on the PC.
Result: A pop-up dialog opens.

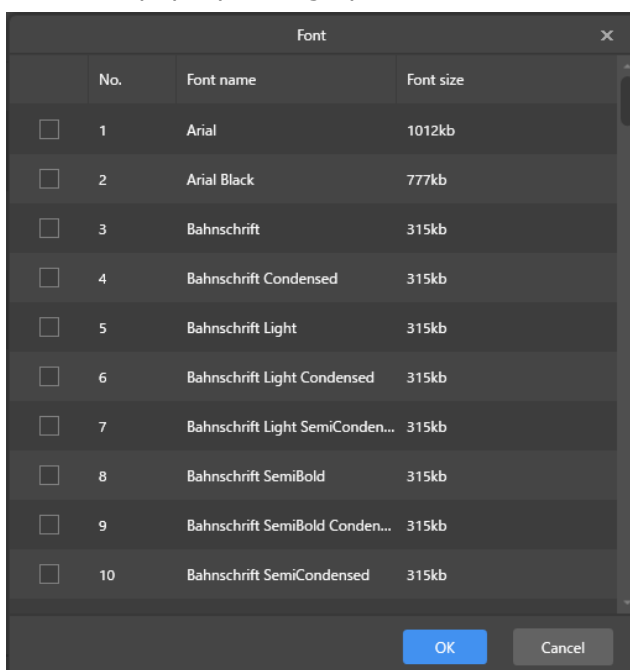


Figure 26: Font management – Selecting Fonts

- Step 5) Select the target font.
- Step 6) Click the **OK** button.
- Step 7) Click the **Update** button.
Result: The font is updated. The update progress is shown in the **Update result** column.

Deleting Fonts

- Step 1) Click the **Screen control** menu button.
- Step 2) Click the **Font Management** function.
- Step 3) Select the target terminal in the terminal list.
Result: A pop-up dialog opens.
- Step 4) Click the **Read back** button at the bottom right to read back fonts on the terminal.
- Step 5) Click the link in the font column of the target terminal.
Result: The **Font list in terminal page** is displayed.
- Step 6) Select target fonts.
- Step 7) Click the **Delete** button.
Result: The font file is deleted.

5.3.4.12 Configuring Power (Power Control)

Configure board power, power on or off devices remotely, and set scheduled power control rules.

- Board power: Control power supplies with relays on terminals.
- Multi-function card power: Control power supplies with relays on multi-function cards.

When the power switch in ViPlex Express is turned on, the relay will be closed and the power supply is connected. When the power switch in ViPlex Express is turned off, the relay will be released and the power supply is disconnected.

Board Power Configuration

After board power configuration is done, VNNOX can perform power control on the devices connected to the board power.




- Step 1) Click the **Screen control** menu button .
- Step 2) Click the **Power control** function.
- Step 3) Select the target terminal from the terminal list.
- Step 4) Select the option to be controlled from the drop-down box. Currently, only screen power is supported.
- Step 5) Click the **Apply** button.

Manual Control

- Step 1) Click the **Screen control** menu button .
- Step 2) Click the **Power control** function.
- Step 3) Select the target terminal from the terminal list.
- Step 4) Select **Manual** to enter the manual setting page.
- Step 5) Turn the power switch on or off.
Result: The power is turned on/off.

Scheduled Control

- Step 1) Click the **Screen control** menu button .
- Step 2) Click the **Power control** function.
- Step 3) Select the target terminal from the terminal list.
- Step 4) Select **Timing** to enter the scheduled setting page. Perform the following operations according to your actual needs.

Operation	Step
Create a rule	a) Click the + button. <u>Result:</u> A pop-up dialog opens. b) Set the object, time and cycle to control. c) Click the OK button. <u>Result:</u> The rule is created.
Modify a rule	a) Select a rule. b) Click the  button. <u>Result:</u> A pop-up dialog opens. c) Modify the settings. d) Click the OK button. <u>Result:</u> The rule is modified.
Delete a rule	a) Select one or more rules. b) Click the  button. <u>Result:</u> A pop-up dialog opens. c) Click the OK button. <u>Result:</u> The rule is deleted.
Clear all rules	a) Click the  button. <u>Result:</u> A pop-up dialog opens. b) Click the OK button. <u>Result:</u> The rules are cleared.
Enable a rule	a) In the rule list, turn on the Sure to enable switch next to a rule.

- Step 5) Click the **Apply** button to confirm the settings.

5.3.4.13 Configuring the Network via ViPlex Express

Configuring Wired Network

It is required to set a static IP address for the LED Poster while connecting it via Ethernet cable. Set the IP address based on your actual needs while connecting the Poster to the Internet via Ethernet cable.

- Step 1) Click the **Screen control** menu button.
- Step 2) Click the **Network configuration** function.
- Step 3) Select the target terminal in the terminal list.
Result: A pop-up dialog opens.
- Step 4) Perform the following operations in the network configuration area based on your actual needs:
 - a) Select **Enable** next to **Dynamic DHCP** to get the IP address automatically.
 - b) Deselect **Enable** next to **Dynamic DHCP** and configure a static IP address.
- Step 5) Click the **Apply** button.
Result: The wired network is configured.

Configuring Wireless LAN AP

The default SSID of terminal Wireless LAN AP is "AP" + the last 8 digits of the SN, and the default password is **12345678**.

- Step 1) Click the **Screen control** menu button.
- Step 2) Click the **Network configuration** function.
- Step 3) Turn on **AP** in the **Screen AP configuration** area.
Result: A pop-up dialog opens.
- Step 4) Enter the SSID and password of terminal Wireless LAN AP.
- Step 5) Click the **Apply** button.
Result: The Wireless LAN AP is configured.

Configuring Wireless LAN Station Mode

If the external router is connected to the Internet, terminals can access Internet via the external router after Wireless LAN Station Mode is configured.

- Step 1) Click the **Screen control** menu button.
- Step 2) Click the **Network configuration** function.
- Step 3) Turn on **Wireless LAN** in the **Screen AP configuration** area.
- Step 4) Double-click the Wireless LAN information of the external router.
Result: A pop-up dialog opens.
- Step 5) Enter password and then click the **OK** button.
- Step 6) Click the **Apply** button.
Result: The Wireless LAN AP is configured.

5.3.4.14 Upgrading the Software (Screen Upgrade)

Upgrade the application software and system software.

Notice

Do not power off the terminal and computer during upgrade. The terminal will restart once.
--

Online Upgrade

- Step 1) Click the **Screen control** menu button.
- Step 2) Click the **Screen upgrade** function.
- Step 3) Select **Online Upgrade**.
 - The system decides whether a terminal needs to be upgraded.
 - a) **Yes:** The current version information and the new version information will be displayed. Go to Step 4.
 - b) **No:** Only the current version information is displayed. No further operation is required.
- Step 4) Click the **More** button next to the system version and view the related information of the new version.
- Step 5) In the terminal information list, select one or more upgradable terminals.
- Step 6) Click the **Upgrade** button.
Result: The system software updates .

Local Upgrade

- Step 1) Click the **Screen control** menu button .
- Step 2) Click the **Screen upgrade** function.
- Step 3) Select **Local Upgrade**.
- Step 4) Select upgrade package path.
- Step 5) In the terminal information list, select one or more upgradable terminals.
- Step 6) Click the **Upgrade** button.
Result: The system software updates.

5.3.4.15 Configuring RF Synchronization (RF Management)

Set parameters related to RF synchronization and apply the parameters to time synchronization, brightness synchronization, volume synchronization and environment monitoring data synchronization.

Before using RF synchronization, install an RF module. ViPlex Express can detect and display RF module status.


- Step 1) Click the **Screen control** menu button.
- Step 2) Click the **RF management** function.
- Step 3) Select the target terminal from the terminal list.
- Step 4) Turn on **RF synchronization**.
- Step 5) Set the current terminal as the master device or a slave device.
- Step 6) Set a group ID.
Enter the group ID of the master device for a slave device, and this slave device and the master device will be grouped together.
- Step 7) Select the options that require RF synchronization.
After RF synchronization is applied, the time, brightness, volume and environment monitoring data of the slave device will keep the same as the master device via RF signal.
- Step 8) Click the **Apply** button to confirm the settings.

5.4 FAQ

#	Question	Solution	
1	How to view the version of the ViPlex Handy?	Step 1)	Choose Settings > Help .
		Step 2)	View the version of the ViPlex Handy.
2	How to view the version of the Taurus?	Step 1)	Log in to the LED poster.
		Step 2)	Click the screen name and enter the Screens page.
		Step 3)	Select Screen Information .
		Step 4)	View the version information and sub-software version information of the Taurus.
3	How to upgrade the version of the Taurus?	Only Android supports software version upgrade.	
		Step 1)	Log in to the LED poster.
		Step 2)	Click the screen name and enter the Screens page.
		Step 3)	Choose Advanced Settings > Upgrade .
		Step 4)	Click Upgrade next to the target version.

6 MAINTENANCE

6.1 Routine Maintenance

	⚠ Caution! Risk of electric shock. Always disconnect the LED Poster from the power outlet before performing any maintenance work.
---	--

Regular use

After you put the LED Wall into use, use it 25–30 h and 5-times a month so the LED Wall stays dry and delivers a stable performance.

Regular checks

- Periodically check for loose screws, gaps, distortions, or other problems that may occur with the mounting equipment. If a problem is detected, please refer to qualified personnel for service.
- Regularly check the mounting location for signs of damage or weakness that may occur over time.

6.2 Regular Cleaning

Notice <ul style="list-style-type: none">• Clean the unit only with materials or chemicals that are inert, nonabrasive, noncorrosive and non-marking. Consult the manufacturer for further advice should any doubts exist regarding any cleaning procedure.• Clean the components of the LED Wall very carefully to avoid damaging the surfaces. Do not alter the cleaning procedure above, otherwise pixels or Pixel cards can be permanently damaged.

Under normal conditions the recommended cleaning interval of the LED poster is every six months.


Before cleaning:

- Cut off the electricity power.
- Lock electric power supply against re-closure.
- If the cabinets are still warm from their latest usage, you shall wait with cleaning until they are completely cooled down.

Cleaning:

- Blow-dry only the front of the cabinets with compressed air and only with large distance.
- At least once a year: Clean the ventilation holes at the rear side of the cabinet to remove dirt and dust.

6.3 Power System Maintenance

	Caution!
	<p>Risk of electric shock.</p> <ul style="list-style-type: none">• Do not use the LED Poster if you detect any faults in the power supply.• Do not hot plug the system, i.e. do not unplug or plug in a component without disconnecting the power from the system.• Only qualified personnel with an electrician certificate are allowed to perform maintenance work.


Daily

Check on power supply system.

Monthly

Clean the interior of the power distribution cabinet and fasten screw connections.

6.4 Built-In Parts Maintenance

	WARNING!
	<p>Risk of electric shock or fire due to high-voltage components.</p> <ul style="list-style-type: none">• Do not open the cabinet because of the high-voltage components inside. There are no user-serviceable parts inside.• Only qualified service personnel are allowed to service and open the unit.

Contact qualified service personnel by any problems with Built-in Parts.

Notice

The integrated Service port may only be used by expert Service personnel.
Do not push this button except for service.

7 TROUBLESHOOTING

Table 21 summarizes the most common problems you could encounter with the appliance.

If you are unable to solve the problem with the information below, contact the NEC DISPLAY SOLUTIONS service team.

Table 21: Troubleshooting Solutions

Problem	Solution
Black screen	1. Check if electric power is switched on.
	2. Check if the screen saver is active. Check if the screen is black, blue or normal.
	3. Check if the Brightness setting is active. Check if the setting is 0% or not.
	4. Check if HDMI cable is connected.
	5. ViPlex Express: Check if Video source setting is correct. In case the setting is "Manual" and Video source is "HDMI", internal image does not show. (see section 5.3.4.4 Switching the Video Source)
Part of module malfunction	Please contact the NEC DISPLAY SOLUTIONS service team.
Communication error	ViPlex Express: Check if Screen control connection is active. Check if indicator is green.
	Check if the communication circuits are connected properly.

8 DISPOSAL

WEEE Mark (European Directive 2012/19/EU and amendments)



Disposing of your used product: In the European Union

EU-wide legislation as implemented in each Member State requires that used electrical and electronic products carrying the mark (left) must be disposed of separately from normal household waste. This includes LED Poster and electrical accessories, such as signal cables or power cords. When you dispose of such products, please follow the guidance of your local authority or ask the shop where you purchased the product, or if applicable, follow applicable legislation or agreement you may have. The mark on electrical and electronic products may only apply to the current European Union Member States.

Outside the European Union

If you wish to dispose of used electrical and electronic products outside the European Union, please contact your local authority and ask for the correct method of disposal.



For EU: The crossed-out wheeled bin implies that used batteries should not be put to the general household waste! There is a separate collection system for used batteries, to allow proper treatment and recycling in accordance with legislation.

According to EU directive 2006/66/EC and amendments, the battery can't be disposed improperly. The battery shall be separated to collect by local service.

9 COPYRIGHT AND DISCLAIMER

9.1 Copyright and Licenses

This document is © NEC DISPLAY SOLUTIONS, all rights reserved.

All product and company names are property of their respective owners. Use of them does not imply any affiliation with or endorsement by them.

NovaStar Taurus T6 and NovaStar ViPlex Express are registered trademarks of NovaStar Tech Co., Ltd.

The terms HDMI and HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc. in the United States and other countries.



About the MPEG-4 AVC, MPEG-4 Visual license included in this product:

1. MPEG-4 AVC

This product is licensed under the AVC patent portfolio license for the personal use of a consumer or other uses in which it does not receive remuneration to (I) encode video in compliance with the AVC standard ("AVC Video") and/or (II) decode AVC Video that was encoded by a consumer engaged in a personal activity and /or was obtained from a video provider licensed to provide AVC Video. No license is granted or shall be implied for any other use. Additional information may be obtained from MPEG LA, L.L.C. See <http://www.mpegla.com>

2. MPEG-4 Visual

This product is licensed under the MPEG-4 Visual patent portfolio license for the personal and non-commercial use of a consumer for (I) encoding video in compliance with the MPEG-4 Visual standard ("MPEG-4 Video") and/or (II) decoding MPEG-4 Video that was encoded by a consumer engaged in a personal and noncommercial activity and/or was obtained from a video. No license is granted or shall be implied for any other use. Additional information including that relating to promotional, internal and commercial uses and licensing may be obtained MPEG LA, L.L.C. See <http://www.mpegla.com>

9.2 Disclaimer

All instructions and specifications in this manual are based on information available at the time of publishing for the features and safety guidelines of the described products.

Technical specifications, measurements, weights and properties are not guaranteed.

The manufacturer reserves the right to make product alterations within legal provisions as well as changes to improve product quality.

NEC DISPLAY SOLUTIONS shall not be liable for personal injury or damage to materials caused by failure to observe this warning and safety information of this manual. Furthermore, NEC DISPLAY SOLUTIONS cannot be held responsible for damage or injury, caused by incorrect, inadequate or unsafe use, maintenance or installation of the entire system. The liability as well as the effects of the same will become void if other than genuine parts are used.

LOCAL REGULATIONS

This product and assembly variants that are shown in these instructions for assembly and use may be subject to local regulations, guidelines and norms.

The product use bears the responsibility for compliance to and with such regulations.

Subject to local regulations, we reserve the right not to supply all products illustrated here.