Ledup
UserManual

LEDECA®
ALWAYSBRIGHT

LEDECA®

1. OVERVIEW

1.1. Instructions

1. This manual is applied to LEDUP type displays. Manual systematically introduces the product features, specifications, installation and interface.
2. Manual operation instruction is based on built-in NovaLCT-Taurus Series Multimedia Players.
3. The manual only used for customers to provide proper solutions.

1.2. Safety Notice

1. Please read below safety instructions before installation, power-up, operation and testing.
2. Make sure to follow the safety instructions, please contact the supplier for any questions.
3. Due to flame, electric shock, fall down, this product may cause injury to person.
4. This product is non-waterproof therefore can not be used in complete outdoor environments.
5. Please do not block the ventilation holes during operation.
6. Please take moisture-proof measures when packing and stocking.
7. Please do not drop, strike, scratch, wrap or shake LED display or external equipment.
8. Please make sure the product is operated under professional staff due to inside strong current.
9. Please make sure the ground is flat and before placing the product.
10. Please make sure this product earthed correctly to ensure safety and prevent electrical shock.
11. Please cut off in lightning weather or make sure taking some lightning protection measures.
12. Please cut off display power during installation, maintenance, dissasemble.
13. Please make sure the AC power meets local building & electrical standards and equipped with overload and earth faulty protection.
14. Please check electricity, cable and all connected equipments meet current requirements before   using this product.
15. Please make sure power cable is not damaged. Replace with new one if any over-heating situation occurs.
16. Product should be operated by professional/authorized personnel only. Contact with supplier for any questions.
17. Please wear eye-protection during intervention.
18. Please do not block heat ventilation gaps of screen, processor and power supply.
19. Please do not stick any other object on the screen.
20. Please do not intervene without permission of authorized person.
21. Please do not expose the product to sun directly. Environment tempreture should be less then 45 degrees.
22. Please wear helmet during maintenance and installation.
23. Please make sure connected parts are fully fixed and meet safety standards.

Warning: Manufacturer is not responsible for any unauthorized personnel intervention and operations.

1.3. Certificates

Products are tested and qualified for CE, ETL, RoHS and FCC certifications which represent international standards.

2. PRODUCT INTRODUCTION

2.1. Brief Introduction

Rapid development of the Led Poster puts customers in search of high quality LEDUP Screens with actual application requirements of customers, events etc. LEDUP Screens are manufactured to respond customers' needs quickly in certain way. LEDECA LEDUP embodies features including various installation solutions, easy operation, multiple communication modes, high brigthness, low power consumption and ultra-thin body. These features ensure stable and high quality display effect even in brightlight venues.Beside of elegant appearance, LEDUP Screens have unique advantages comparing to other type of LEDUP Screens. LEDUP Screens are mostly preferred in hotels, restaurants, shopping malls, banks, government agencies, hospitals and so on. We can simply list advantages under these topics;

1. LEDUP Screens are available for both indoor and semi-outdoor use.
2. Easy to control and centralize contents.
3. Double or one side display available.
4. Can be carried by one person with flight case.
5. Same pixel pitch LEDUP Screens let us to create bigger screen by placing them next to each other. (Up to 10 LEDUP Screens.)
6. Contents can be playable simultaneously.

2.1.1. Features

- Portable, mobile and easy to install ;
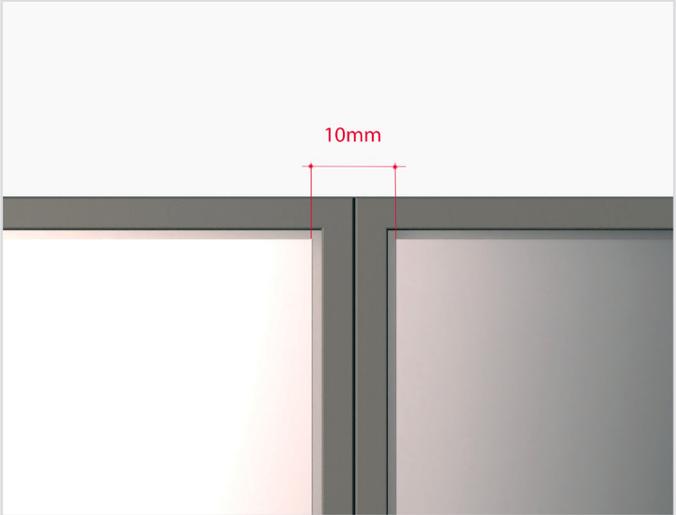
10mm

- Different installation types ;

| Standby on the ground | Fold-out standing | Hanging | Wall-mounting |

- Thin frame-high display ratio ;

Product Size	650 X 1.610 mm.	650 X 1.770 mm.	650 X 1.930 mm.	970 X 1.770 mm.	970 X 1.930 mm.
Display Size	640 X 1.600 mm.	640 X 1.760 mm.	640 X 1.920 mm.	960 X 1.760 mm.	960 X 1.920 mm.
Display Ratio	97.84 %	97.90 %	97.95 %	98.41 %	98.45 %

10 mm thin frame allows to obtain around 98 % display ratios for all LEDUP Screens.

- Vibrant colors and large viewing angle compared to LCD ;

LCD   LED

Compared with LCDPoster, the color of LED is more gorgeus, brightness is more uniform, the size is more flexible and with large viewing angle.

2.1.2. Work Modes

- Easy content handling ;

Cable   Cable

- **Mode 1:** A single LEDECA poster via usb or ethernet work independently.
- **Mode 2:** Three screen are cascaded from the first to the third one.

- Screens can be combined to achieve bigger screen sizes ;


Front view   Rear view

Via single controller up to 10 screens can be combined depending on pixel pitch.

LEDECA®

- Easy to control with simple setup ;

Cable

Router

Cable

Cable
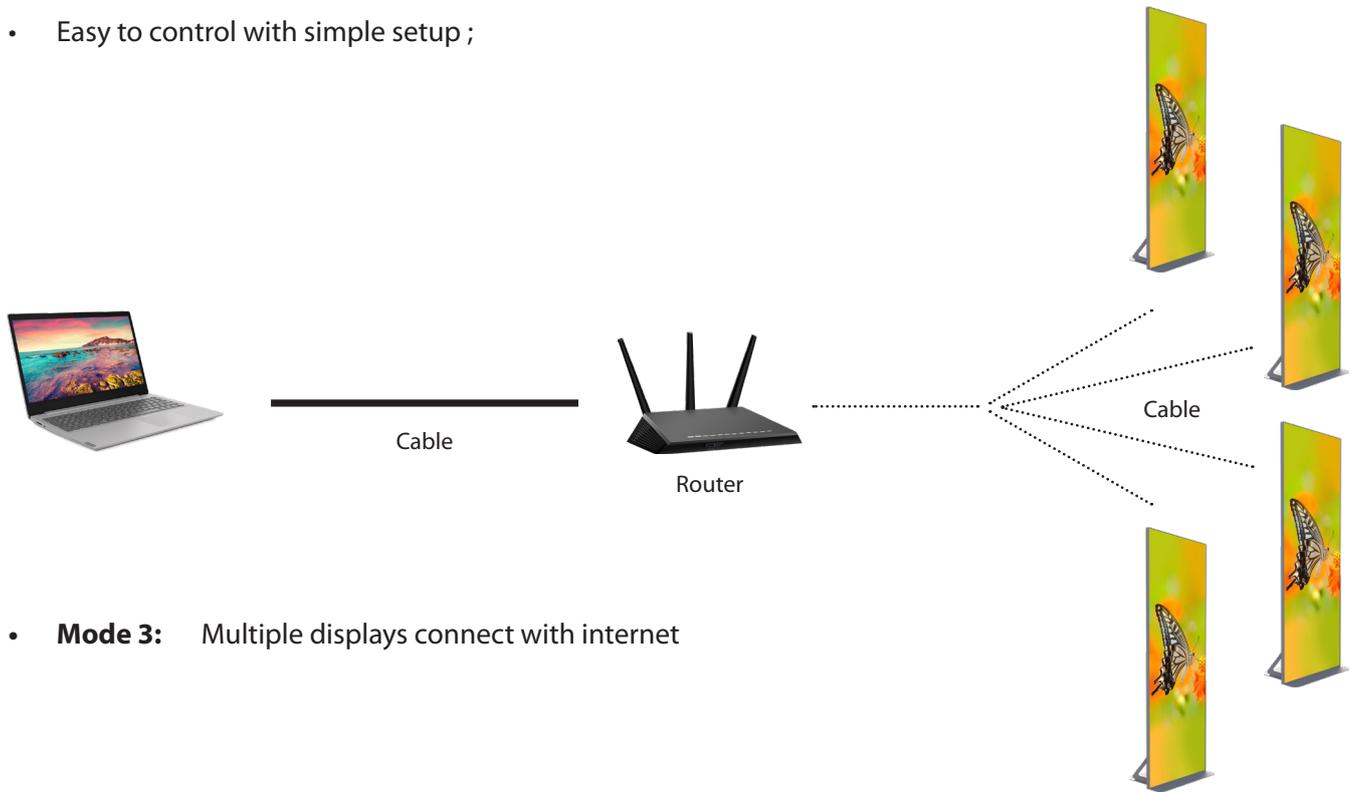
- **Mode 3:** Multiple displays connect with internet

- Creative splicing display effect ;

2.1.3. Cost

Power consumption comparison in Watts ;

The power consumption in only half of the traditional LED Poster.
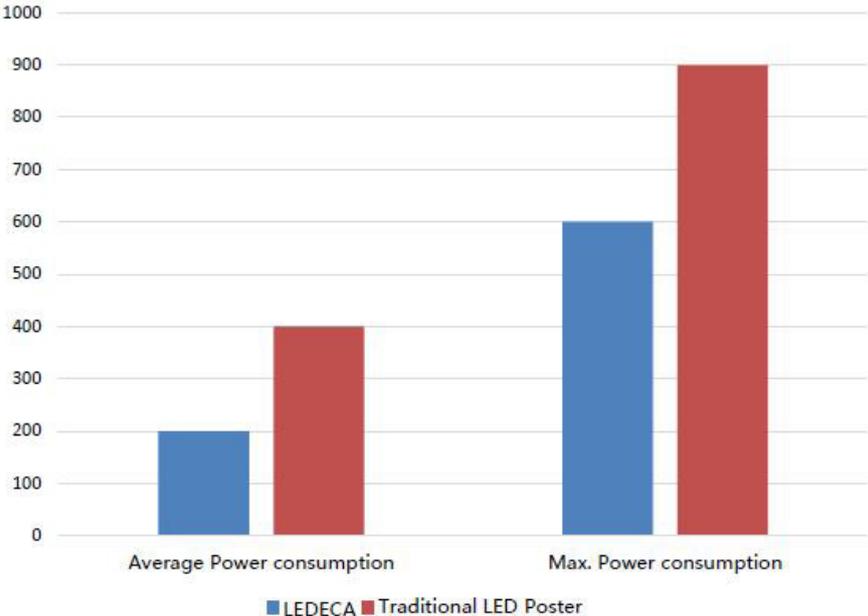
2.1.4. Applications

LEDECA LEDUP Screens are widely used amongst hotels, restaurants, shopping malls, airports , train stations etc. Some of the applications are shown to demonstrate the LEDECA's installation quality.

Shopping malls ;

LEDECA®

Retail stores ;

Airports & train stations ;

2.2. Technical Specification

LEDECA offers wide pixel pitch ranges according to customers's need.
Technical specifications can be seen in the data sheet.

| PIXEL PITCH	1.25 mm	1.66 mm	1.87 mm	2.50 mm	3.07 mm
MODEL	LUCISP01.2M210	LUCISP01.6M210	LUCISP01.8M210	LUCISP02.5M210	LUCISP03.0M210
Screen Dimensions			640x1.600 mm		
Screen Resolutions	512x1.280 px.	384x960 px.	344x860 px.	256x640 px.	208x520 px.
MODEL	**LUCISP01.2M211**	**LUCISP01.6M211**	**LUCISP01.8M211**	**LUCISP02.5M211**	**LUCISP03.0M211**
Screen Dimensions			640x1.760 mm		
Screen Resolutions	512x1.408 px.	384x1.056 px.	344x946 px.	256x704 px.	208x572 px.
MODEL	**LUCISP01.2M212**	**LUCISP01.6M212**	**LUCISP01.8M212**	**LUCISP02.5M212**	**LUCISP03.0M212**
Screen Dimensions			640x1.920 mm		
Screen Resolutions	512x1.536 px.	384x1.152 px.	344x1.032 px.	256x768 px.	208x624 px.
MODEL	**LUCISP01.2M311**	**LUCISP01.6M311**	**LUCISP01.8M311**	**LUCISP02.5M311**	**LUCISP03.0M311**
Screen Dimensions			960x1.760 mm		
Screen Resolutions	768x1.408 px.	576x1.056 px.	516x946 px.	384x704 px.	312x572 px.
MODEL	**LUCISP01.2M312**	**LUCISP01.6M312**	**LUCISP01.8M312**	**LUCISP02.5M312**	**LUCISP03.0M312**
Screen Dimensions			960x1.920 mm		
Screen Resolutions	768x1.536 px.	576x1.152 px.	516x1.032 px.	384x768 px.	312x624 px.
Operating Environment			Indoor		
Service Type			Rear access		
Calibrated Brightness			>900 nits		
Lamp Type			SMD		
Lifespan (hours at %50 brightness)			>100.000 hours		
White Color Calibration (adj.)			3.500-8.500K		
Gray Scale			>16 bits		
Brightness Control			256 level		
Module Specifications					
Module Dimensions			320x160		
Module Resolutions	256x128 px.	192x96 px.	172x86 px.	128x64 px.	104x52 px.
Refresh Frequency			3.840 Hz		
LED Drive Method			Dynamic		
Module Material			Plastic		
PCB Type			Multilayer		
PCB Surface Coating			Humiseal		
Panel Specifications					
Optional Double Side			YES		
Product Material			Aluminum		
Installation Stand Options			YES		
IP Level			IP22		
Optional PC Cover (2mm)			YES		
Product Weight			40 kg		
Viewing Angle (horizontal x vertical)			>120° x 120°		
Minimum Viewing Distance	>1.2 m	>1.5 m	>2 m	>2.5 m	>3 m
Operating Tempreture Range			-5℃ ~ +45C°		
Storage Tempreture Range			-20℃ ~ +60C°		
Operating Humidity			10% ~ 90%		
Power Input Voltage			110 ~ 240 VAC		
Power Input Frequency			50 ~ 60 Hz		
Average Power per sqm			<105 W		
Max Power per sqm			<360 W		
Active PFC			YES		
Load Tolerance			25% min.		
Cooling			Passive cooling		
Product Color			Grey (RAL 7016)		
Other					
Internal Player			YES		
Combined Screen Function			YES		
Installation Type			Standing, hanging , wall mounting and inclined		
Brightness Adjustment			Automatic & manual		
Death Pixel Monitoring			N/A		
Module Monitoring			N/A		
Tempreture Monitoring			YES		
Signal Path Backup			YES		
Signal Transmission			CAT or Fiber Optic		
Standby Scheduling			YES		
Power on/off Scheduling			Optional		
Power Saving Mode			YES		
Certification			CE-LVD, RoHS, ETL, FCC		

2.3. Packing List

LEDUP Screens consist of poster and power cable.USB flash disk, cleaning cloth and gloves are also used during installation and maintenance.

Ledup

USB Flash Disk

Power Cable

According to installation types we have mentioned on 2.1.1. Features' topic (Fold-out standing, Standby on the ground, Hanging, Wall-mounting) we use apparatuses such as ;


Fold-out standing

Foot-mounting

Hanging
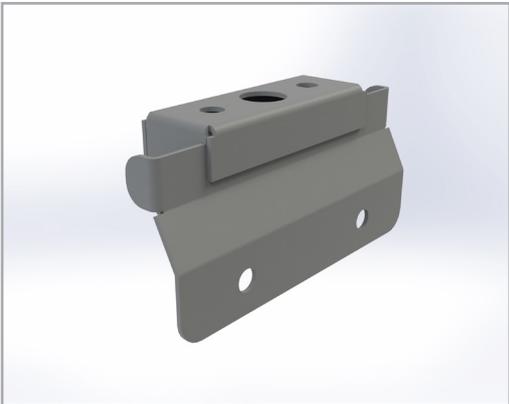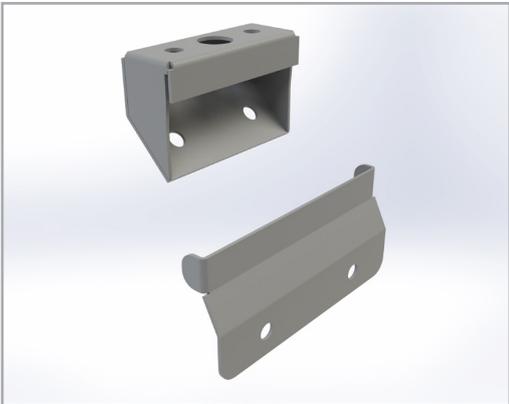
Wall-mounting

Finalized package with styrofoam layers to protect LED poster and carrier leg;
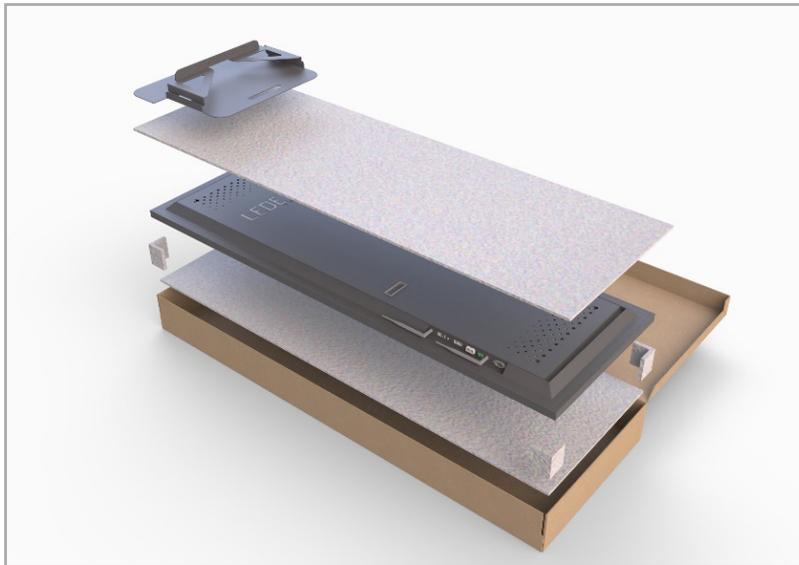
All in one whole package to cover every part of dissassembled LED Screen ;

Finalized package with styrofoam layers to protect LED poster and carrier leg;

3. INSTALLATION

3.1. Foot-mounting Installation

Foot-mounting type installation lets LED Screen stand vertically 90˚ with ground. Foot-mounting type LED screen has its own special leg to stand on. LED Screen can stand alone without any further intervention after simple assembly of the carrier feet apparatus.


Carrier feet ;

Assembly form of carrier feet ;

Carrier frame must be aligned as shown in the figure before installation. After alignment, frame will be fixed via 9 pieces steel anchors.

Final view of back of LED Screen after carrier feet assembly ;

3.2. Fold-out Installation

Fold-out type installation lets LED Screen stand vertically 75° with ground. Fold-out type LED screen has its own special leg to lean on.

Lean on type apparatus can be mounted via screws on LED poster easily from right and left side of the screen as shown in the figure ;
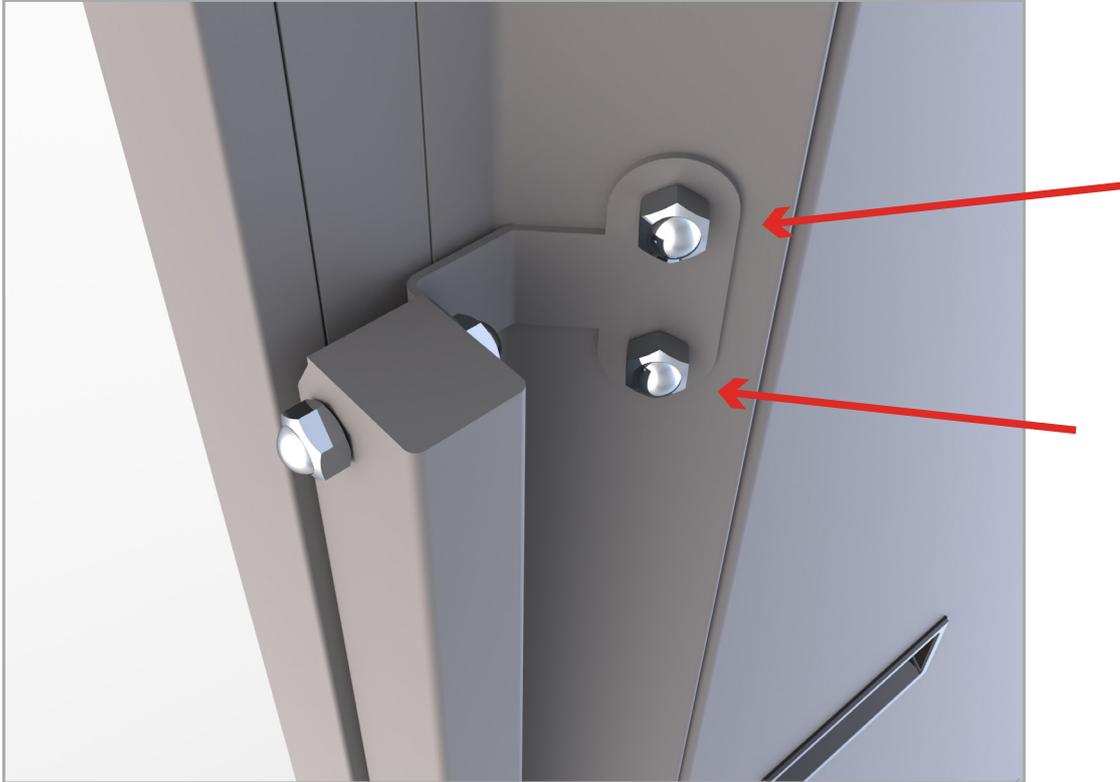
LEDUP Screen can remain its angle position with the help of this simple mechanism;
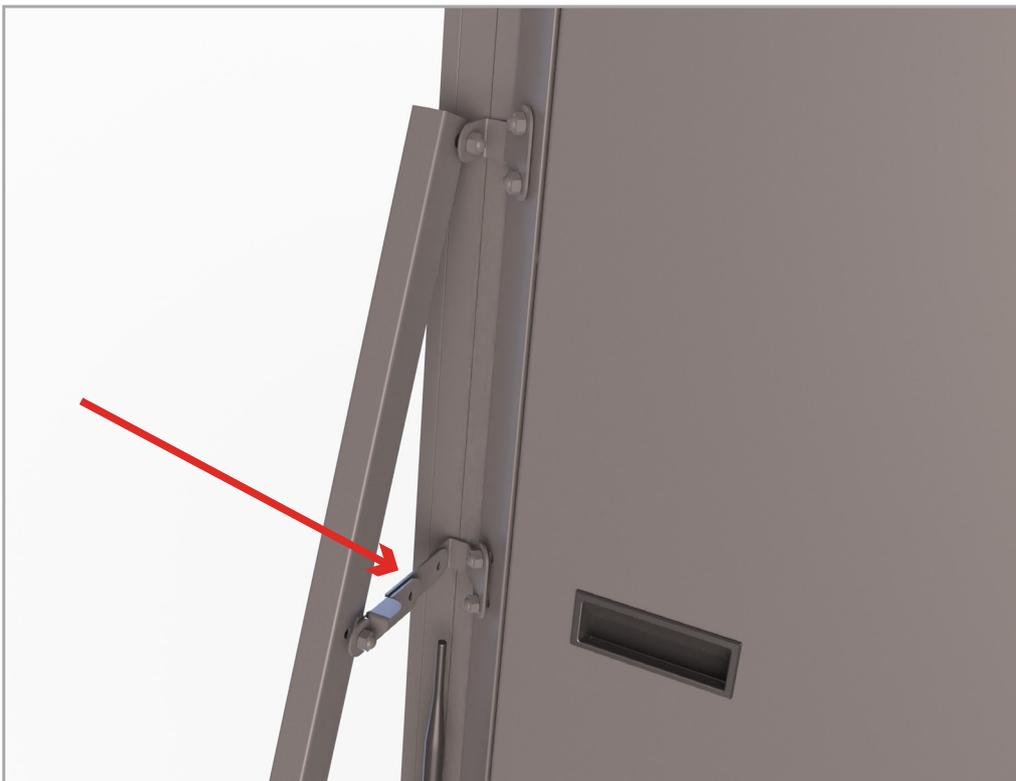
3.3. Hanging Installation

Hanging type installation lets LED Screen hang from ceiling where there are no other options to work with. It can also be used for stylish appearance.

Notice the hanging part of the screen ;
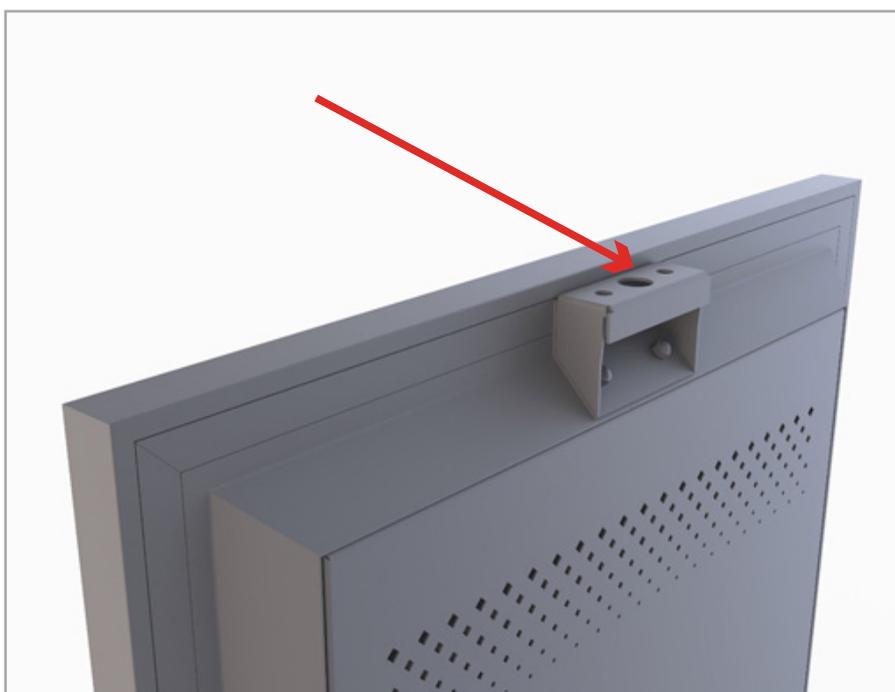
Ceiling side of hanging apparatus can be mounted via 4 pcs screws on ceiling ;

Then mount the LED poster on hanging apparatus via 2 pcs screws ;
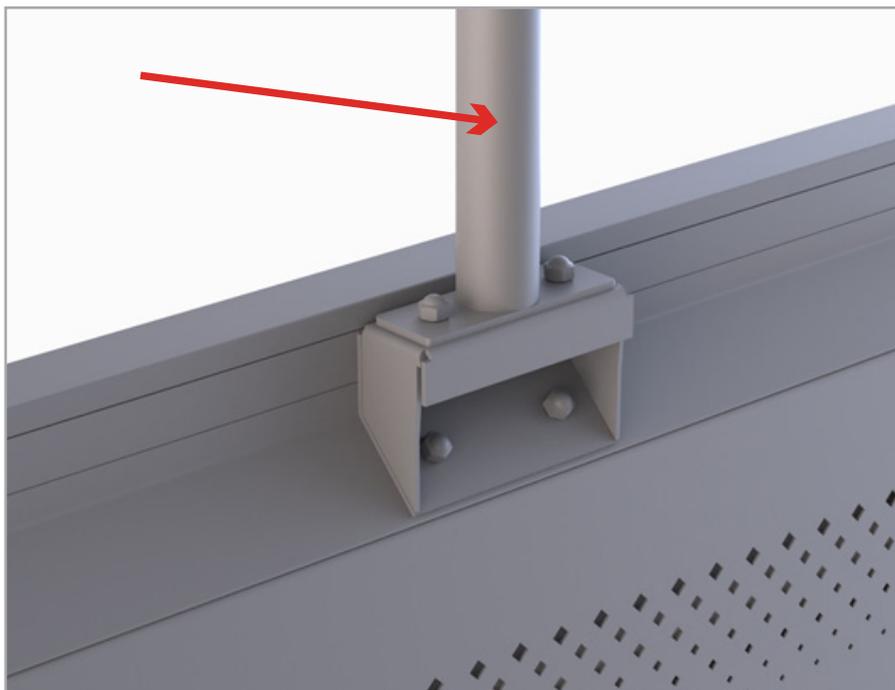
3.4. Wall-mount Installation

Wall-mount type installation also can be applicable according to customers' need . Wall-mount type LED screen does not need any special apparatus to mount LED Screen on wall.
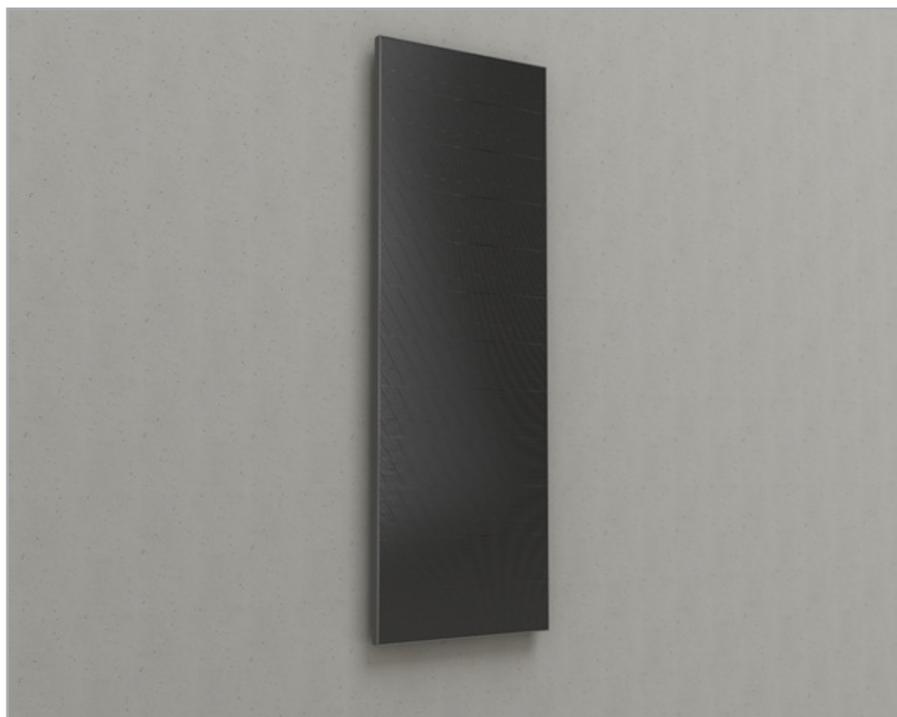
Fix the LED poster hanging apparatus on the wall via 2 pcs screws as shown in the figure ;
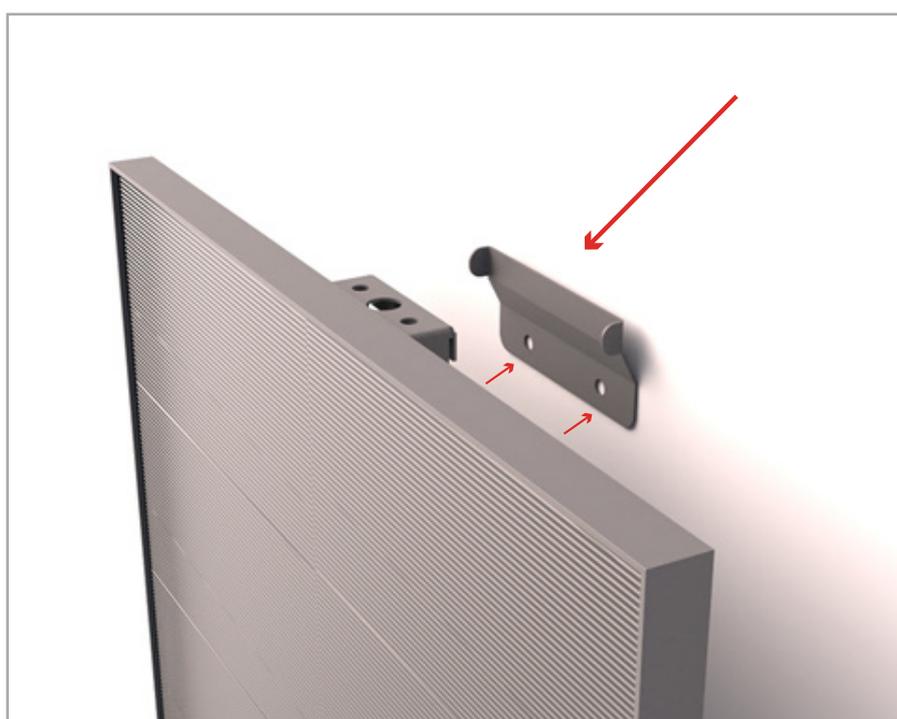
Notice the gap left for the hanging apparatus to mount on ;
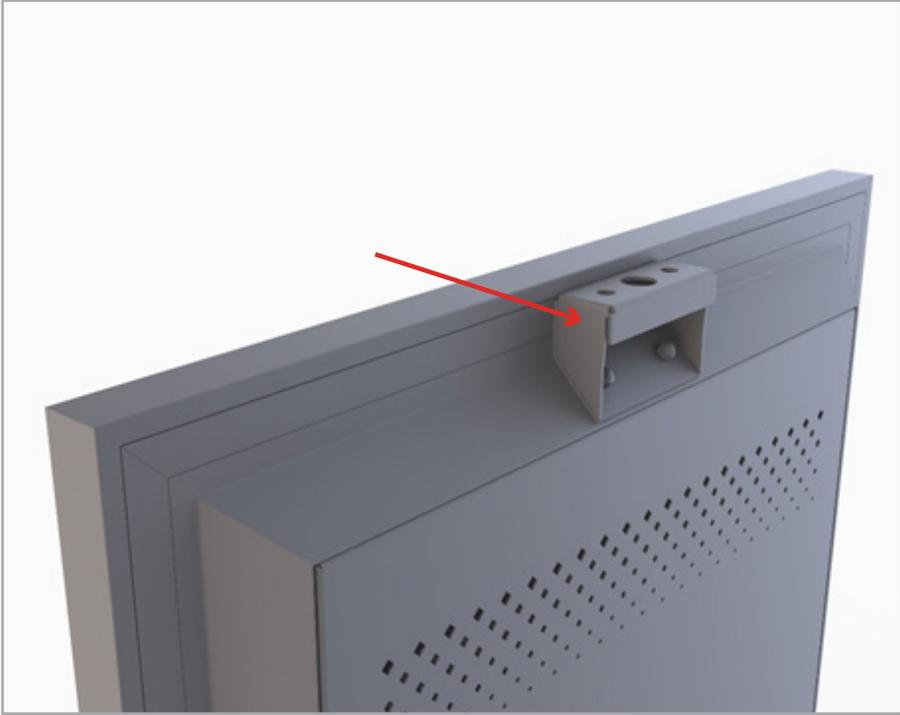
Mount the LED poster on the apparatus ;
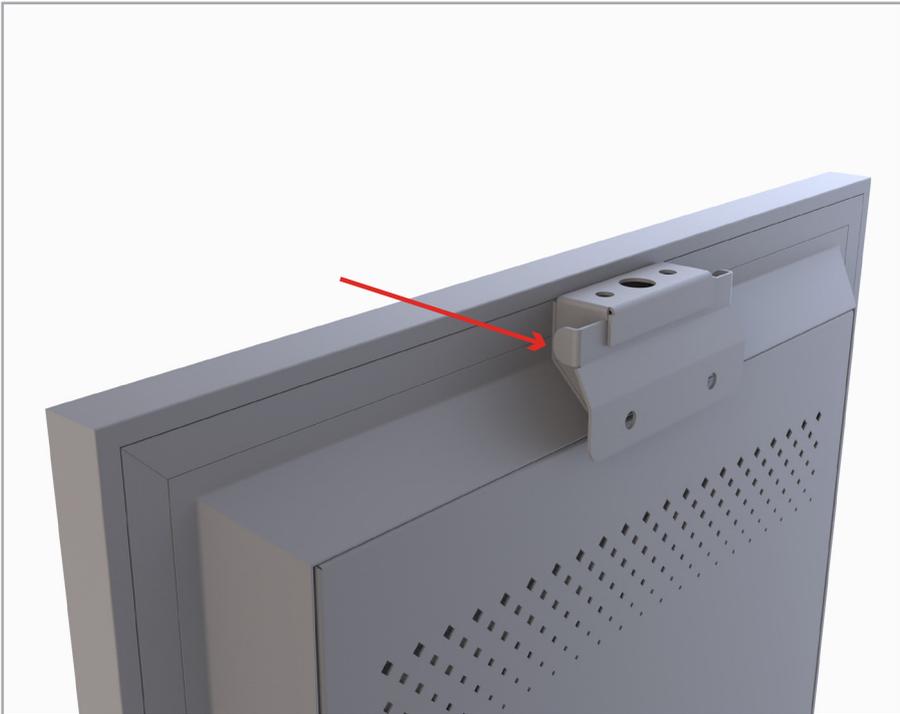
4. INTERFACE

4.1 Scenario

This document introduces a quick way to use LEDUP series and provides instructions for the first-timer.

LEDUP products use NovaLCT-Taurus Series Multimedia Players for offline control.
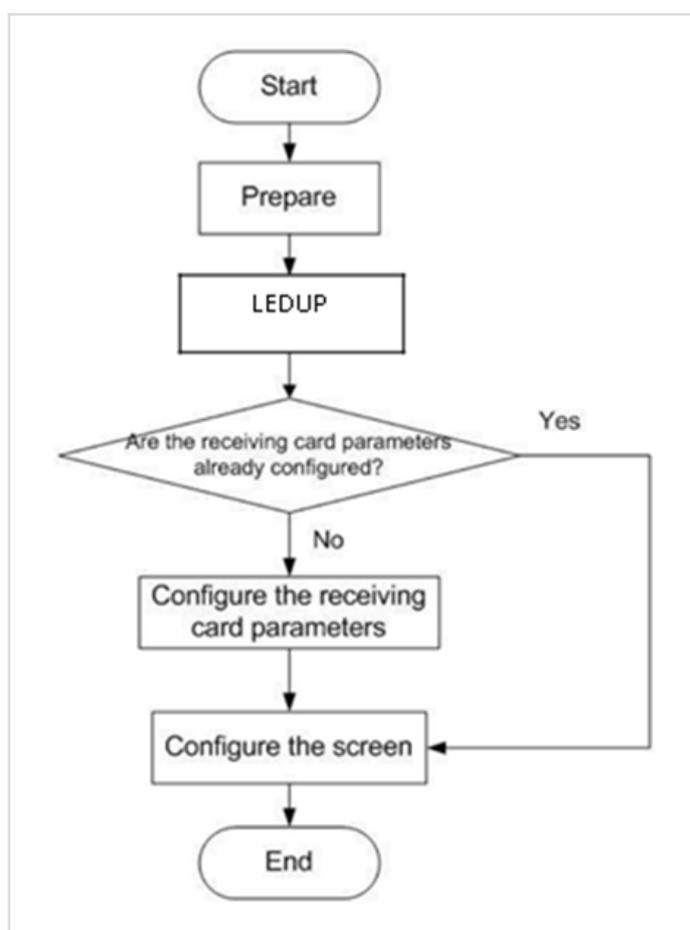
Getting and Installing Software

| Item	Description	How to get	How to install
ViPlex Handy	It is a LAN-based display management software, including the one applicable to Android and iOS operating systems, is mainly used for display management as well as solution editing and publishing.	Scan the following OR code to download and install the APP. Use the App Store on your iPhone to get ViPlex Handy for iOS.	Software installation is the same as other applications.
ViPlex Express	It is a LAN-based display management software applicable to the Windows operating system, and is mainly used for display management as well as solution editing and publishing.	Visit www.novastar.tech, download and install the required software.	
NovaLCT-Taurus	Screen configuration software, which only supports Windows and is mainly used for adjusting screens to the optimal display status.	Visit www.novastar.tech, download and install the required software.	

Getting Documents

Item	Description	How to get
Taurus Series Multimedia Players Product Description-V1.0.0	Describing application scenarios, features, safety instructions, hardware structure, software structure and specifications of Taurus series products.	Visit www.novastar.tech to download the required documents.

Getting Required Account Information

Item	Account Name	Default Password
Connect LEDUP WiFi AP	AP+ *last 8 digits of the SN,* For example: AP10000033	12345678
Log into the LEDUP	admin	123456

4.3 Connecting via Ethernet Cable

Network Diagram

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

PC   LEDUP
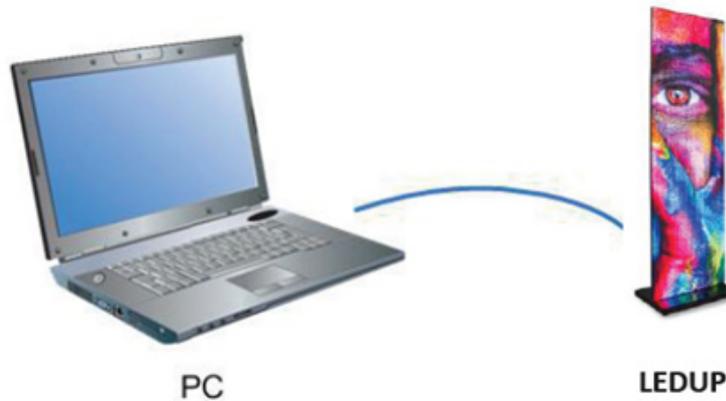
Configuration

Step 1 Refer to "5.6 and 5.7 LEDUP Login with Viplex" to log in to the LEDUP..
Step 2 Turn off DHCP and set static IP address for the LEDUP.

ViPlex Handy: Select **Network Setting, Wired Network Setting** in the **Screen management** page.
ViPlex Express: Select Screen Control, Network configuration.

4.4 Connecting via Local Area Network (LAN)

Network Diagram

Users can access the LEDUP through LAN when it is connected via LAN.
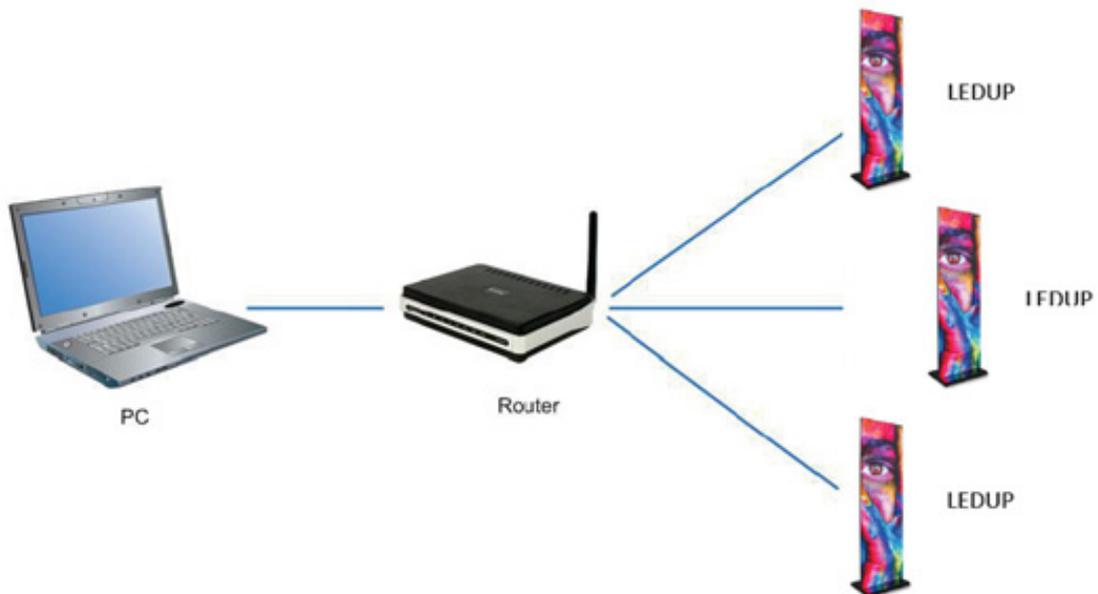
Configuration

No need for configuration.

4.5 Connecting via Wi-Fi

The LEDUP series products have dual WiFi function which can provide Wi -Fi hotspot as well as serve as WiFi Station at the same time. The WiFi working frequency range is 2400~2483.5MHz.

4.6 LEDUP Login with ViPlex Handy (Android and iOS)

Before You Begin

Acquire the SSID and password of Wi-Fi AP of LEDUP series products. SSID is default to be composed of AP and the last 8 numbers of SN, and the password

- is default as "**12345678**"
- Acquire the login password of user "admin" of which the default password is "**123456**"

Operating Procedures

ViPlex Handy can connect numerous LEDUP series products.

Step 1 Connect Wi-Fi AP of the LEDUP series products.

Step 2 Start ViPlex Handy.

System can automatically detect the LEDUP series products and refresh **Screen list.**

Users can also slide down **Screen list** to manually refresh the list.

 denotes that LEDUP is online and you can log into it.

 denotes that LEDUP is offline and you cannot log into it.

 denotes that LEDUP login is successful.

Step 3 Click **Connect** next to the screen name.

Step 4 Enter the user name and password and click **Login.**

4.7 LEDUP Login with ViPlex Express (Windows)

Before You Begin

Acquire the SSID and password of Wi-Fi AP of LEDUP series products. SSID is default to be composed of AP and the last 8 numbers of SN, and the password

- is default as "**12345678**"
- Acquire the login password of user "admin" of which the default password is "**123456**"

Operating Procedures

ViPlex Express can connect numerous LEDUP series products.

Step 1 Connect Wi-Fi AP of the LEDUP series products.

Step 2 Start the ViPlex Express.

Step 3 Click **Refresh** and the screen list will be displayed on the page.

 denotes that LEDUP is oline and you cannot log into it.

 denotes that LEDUP is offline and you cannot log into it.

 denotes that LEDUP login is successful.

After the LEDUP is found by ViPlex Express, the ViPlex express will try to log into to the LEDUP with the default account or the account used for last login.

Step 4 LEDUP login is successful or not.

- Yes   appears and no further operation is required.

- No   appears and then perform

Step 5 Click **Connect** on the right of the screen information.

Step 6 Enter the username and password, and click **OK**

Creating Solutions

Get the screen size before creating solutions.

Step 1 Click New.
Step 2 Set the solution name and resolution, and then click OK.

Note: The resolution must be the same as that set on the terminal during screen configuration.

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

The editing page of the solution appears, as shown in Figure 1. Each area of the page is explained in Table 1.

Figure 1 Editing page of a solution
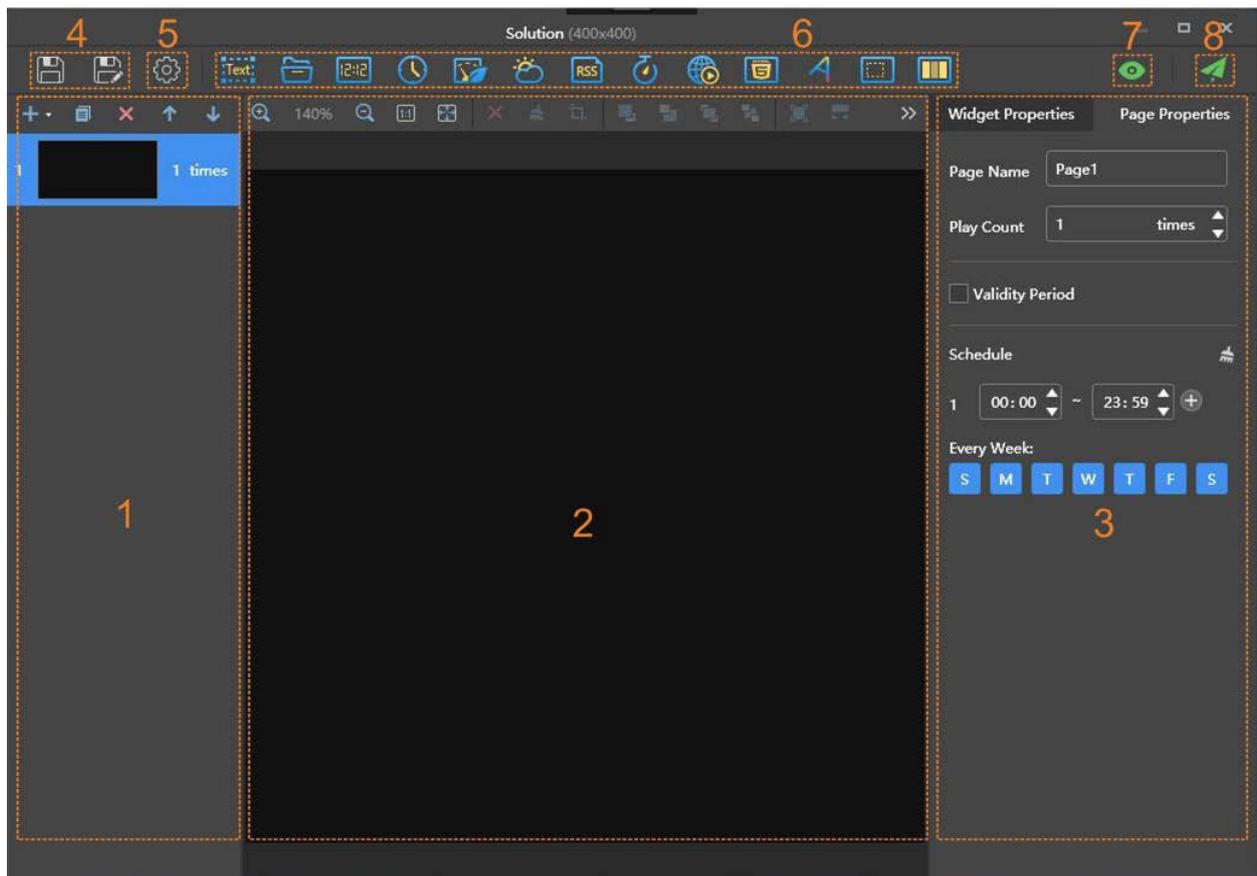
Table 1 Description of the editing page of a solution

No.	Name	Description
1	Editing area of solution page	Create, copy and delete pages, and adjust the order of pages. Two methods to create a page: Click ✚ to directly create a blank page. Click ⦂ to create a page by selecting a template. Templates include custom templates and system template. Users can add, change and delete custom templates. Pages are played according to the order from the top to bottom.
2	Editing area of page media	Delete media, clear media, zoom in or out pages, crop images and adjust media layout. Before operation, click to select a media.
3	Property editing area	Edit widget properties and page properties. Widgets are the media added in pages. Before editing the widget properties, click to select a widget. 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. This function is available for Taurus but not available for VPlayer.
4	Buttons for saving	Save solution or save as a new solution.
5	Setting button	Set solution name and resolution.
6	Buttons for adding media	Add media to a solution page.
7	Preview button	Preview current solution page. The 🚫 (stop preview) and 🔄 (refresh) buttons are displayed after clicking 👁 If VPlayer is not in use, the current page will be played. If VPlayer is in use, the previous solution will be stopped and the current page will be played. The previous solution will be played after the preview stops. To switch from the current page to another page for preview, select the target page and click 🔄

LEDECA®

Media types supported by ViPlex Express are shown in **Table 2**
Table 2 Media types

Icon	Description
	Text Supports background audio.
	Add Office files, images, videos and GIF. Allows users to add background audio for images. Supported image formats: JPEG, BMP, GIF, PNG, WEBP Video formats supported by terminals: Supported formats: MPEG-1/2, MPEG-4, H.264/AVC, MVC, H.265/HEVC, Google VP8, H.263, VC-1, Motion JPEG If a video format is not supported by terminals, ViPlex Express will automatically convert the format while publishing and exporting solutions. When a Word document is added, the following display layouts are supported: Automatic: The text in the Word document is played after the pages of the Word document are adjusted according to the width and height of the Word document media. Original: The text in the Word document is played by keeping the original page size and fitting the width and height of the playback window. Keep margins: When Original is selected, Keep margins can be selected to keep margins of the original Word document.
	Digital clock
	Analog clock
	Environment monitoring media If a terminal is connected to sensors, the environment monitoring media will display the latest data measured by the sensors during solution playback.
	Weather media
	RSS

| Icon	Description
	Timer Can be set as countdown or count up timer.
	Streaming media
	Webpage
	Colorful word
	Window All the above types of media can be added in a window. When multiple media are added, the media will be played from the top to the bottom. Supports background audio.
	Cut-to-display media Choose Solutions in ViPlex Express. Select the target solution and click the solution name to enter the solution editing page. Click to add cut-to-display media. In Widget Properties on the right, set Actual Screen Width and Height. The software will cut and display the current media automatically.
	Text, images, videos and colorful text can be added to cut-to-display media. When multiple media items are added, they will be played from the top to bottom. Asynchronous terminals cannot play the videos in cut-to-display media. Vertical and horizontal cutting are supported. The number of parts to cut is calculated according to the actual screen width and height and the configured screen width and height.
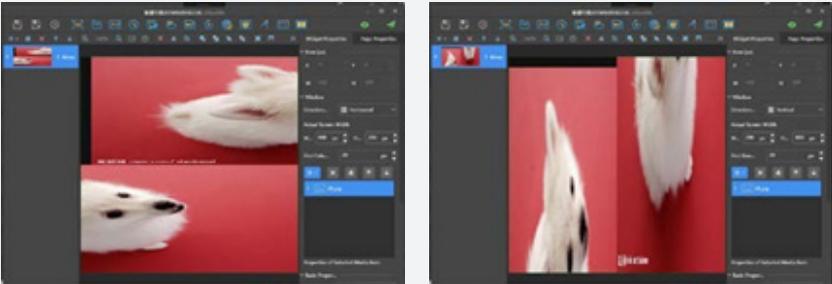
Step 3 After the solution is edited, click 🖫 to save.

Step 4 (Optional) Publish the solution. Click ◢

Select one or more terminals and click **Publish.**
Note: ViPlex Express will automatically convert the video formats that are not supported by terminals.

USB Playback

Step 1 Click the corresponding ▣ of a solution, or select one or more solutions and click USB playback.

Step 2 Select a playback method.

Plug and play: The solution will be played as soon as the USB drive where solutions are stored is inserted into the terminal. The USB drive cannot be removed during playback.

Copy and play: The terminal starts playing solutions after copying the solutions from the USB drive. The USB drive can be removed during playback.

Step 3 Click ⋯ to choose a destination for the solutions to be exported. Step 4 Enter the login password of the terminal.

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 **OK.**

Step 6 After solutions are exported successfully, click **Done.**

Image

Type	Codec	Supported Image Size	Container	Remarks
JPEG	JFIF file format 1.02	48×48 pixels ~ 8176×8176 pixels	JPG, JPEG	Not Support Non-interleaved Scan Software support SRGB JPEG Software support Adobe RGB JPEG
BMP	BMP	No Restriction	BMP	N/A
GIF	GIF	No Restriction	GIF	N/A
PNG	PNG	No Restriction	PNG	N/A
WEBP	WEBP	No Restriction	WEBP	N/A

Image

Type	Codec	Channel	Bit rate	Sampling rate	File Format	Remarks
MPEG	MPEG1/2/2.5 Audio Layer1/2/3	2	8kbps~320Kb ps, CBR and VBR	8KHZ~48 KHz	MP1, MP2, MP3	N/A
Windows Media Audio	WMA Version 4, 4.1, 7, 8, 9, wmapro	2	8kbps~320Kb ps	8KHZ~48 KHz	WMA	Non-support WMA Pro, lossless and MBR
WAV	MS-ADPCM, IMA-ADPCM, PCM	2	N/A	8KHZ~48 KHz	WAV	Support 4bit MS-ADPCM, IMA-ADPCM
OGG	Q1~Q10	2	N/A	8KHZ~48 KHz	OGG, OGA	N/A
FLAC	Compress Level 0~8	2	N/A	8KHZ~48 KHz	FLAC	N/A
AAC	ADIF, ATDS Header AAC-LC and AAC-HE, AAC-ELD	5.1	N/A	8KHZ~48 KHz	AAC, M4A	N/A
AMR	AMR-NB, AMR-WB	1	AMR-NB 4.75~12.2kbps@8kHz AMR-WB 6.60~23.85kbps@16kHz	8KHZ, 16KHz	3GP	N/A
MIDI	MIDI Type 0 and 1, DLS version 1 and 2, XMF and Mobile XMF, RTTTL/RTX, OTA, iMelody	2	N/A	N/A	XMF, MXMF, RTTTL, RTX, OTA, IMY	N/A

Video

Type	Codec	Supported Image Size	Maximum Frame Rate	Maximum Bit Rate (Ideal Case)	File Format	Remarks
MPEG-1/2	MPEG-1/2	48×48 pixels~1920×1080 pixels	30fps	80Mbps	DAT, MPG, VOB, TS	Support Field Coding
MPEG-4	MPEG 4	48×48 pixels~1920×1080 pixels	30fps	38.4Mbps	AVI, MKV, MP4, MOV, 3GP	Not support MS MPEG4 v1/v2/v3, GMC, DivX3/4/5/6/7…/10
H.264/ AVC	H.264	48×48 pixels~4096×2304 pixels	4K@25fps, 1080P@60fps	100Mbps	AVI, MKV, MP4, MOV, 3GP, TS, FLV	Support Field Coding, MBAFF
MVC	H.264 MVC	48×48 pixels~1920×1080 pixels	60fps	38.4Mbps	MKV, TS	Support St Profile only ereo High
H.265/ HEVC	H.265/ HEVC	64×64 pixels~4096×230 4 pixels	4K@60fps, 1080P@60fps	100Mbps	MKV, MP4, MOV, TS	Support Main Profile, Tile & Slice
GOO GLE VP8	VP8	48×48 pixels~1920×108 0 pixels	30fps	38.4 Mbps	WEBM, MKV	N/A
H.263	H.263	SQCIF(128×96), QCIF(176×144), CIF(352×288), 4CIF(704×576)	30fps	38.4Mbps	3GP, MOV, MP4	Not support H.263+
GOO GLE VP8	VP8	48×48 pixels~1920×108 0 pixels	30fps	38.4 Mbps	WEBM, MKV	N/A
H.263	H.263	SQCIF(128×96), QCIF(176×144), CIF(352×288), 4CIF(704×576)	30fps	38.4Mbps	3GP, MOV, MP4	Not support H.263+
VC-1	VC-1	48×48 pixels~1920×1080 pixels	30fps	45Mbps	WMV, ASF, TS, MKV, AVI	N/A
MOTI ON JPEG	MJPE G	48×48 pixels~1920×1080 pixels	30fps	38.4Mbps	AVI	N/A

User Manual

APRON TEKNOLOJİ A.Ş.