ViewSonic®

CDE5010
Commercial Display
User Guide

IMPORTANT: Please read this User Guide to obtain important information on installing and using your product in a safe manner, as well as registering your product for future service. Warranty information contained in this User Guide will describe your limited coverage from ViewSonic Corporation, which is also found on our web site at http://www.viewsonic.com in English, or in specific languages using the Regional selection box in the upper right corner of our website. “Antes de operar su equipo lea cu idadosamente las instrucciones en este manual”

Model No. VS17539

Thank you for choosing ViewSonic

As a world leading provider of visual solutions, ViewSonic is dedicated to exceeding the world's expectations for technological evolution, innovation, and simplicity. At ViewSonic, we believe that our products have the potential to make a positive impact in the world, and we are confident that the ViewSonic product you have chosen will serve you well.

Once again, thank you for choosing ViewSonic !

ViewSonic®

Compliance Information

NOTE: This section addresses all connected requirements and statements regarding regulations. Confirmed corresponding applications shall refer to nameplate labels and relevant markings on unit.

FCC Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, 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/her own expense.

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Warning: To comply with the limits for the Class A digital device, pursuant to Part 15 of the FCC Rules, this device must be installed in computer equipment certified to comply with the Class A limits. All cables used to connect the computer and peripherals must be shielded and grounded. Operation with non-certified computers or non-shielded cables may result in interference to radio or television reception. Changes and modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

CAN ICES-3 (A)/NMB-3(A)

WARNING: This equipment is compliant with Class A of EN55032.In a residential environment this equipment may cause radio interference.

CE Conformity for European Countries

CE The device complies with the EMC Directive 2014/30/EU and Low Voltage Directive 2014/35/EU.

WARNING: This equipment is compliant with Class A of EN55032.In a residential environment this equipment may cause radio interference.

Declaration of RoHS2 Compliance

This product has been designed and manufactured in compliance with Directive 2011/65/EU of the European Parliament and the Council on restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS2 Directive) and is deemed to comply with the maximum concentration values issued by the European Technical Adaptation Committee (TAC) as shown below:

Substance	Proposed Maximum Concentration	Actual Concentration
Lead (Pb)	0.1%	< 0.1%
Mercury (Hg)	0.1%	< 0.1%
Cadmium (Cd)	0.01%	< 0.01%
Hexavalent Chromium (Cr^{6+})	0.1%	< 0.1%
Polybrominated biphenyls (PBB)	0.1%	< 0.1%
Polybrominated diphenyl ethers (PBDE)	0.1%	< 0.1%
Bis(2-ethylhexyl) phthalate (DEHP)	0.1%	< 0.1%
Butyl benzyl phthalate (BBP)	0.1%	< 0.1%
Dibutyl phthalate (DBP)	0.1%	< 0.1%
Diisobutyl phthalate (DIBP)	0.1%	< 0.1%

Certain components of products as stated above are exempted under the Annex III of the RoHS2 Directives as noted below:

Examples of exempted components are:

1. Lead as an alloying element in aluminium containing up to 0.4% lead by weight.
2. Copper alloy containing up to 4% lead by weight.
3. Lead in high melting temperature type solders (i.e. lead-based alloys containing 85% by weight or more lead).
4. Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound.

Safety Precautions

FOR OPTIMUM PERFORMANCE, PLEASE NOTE THE FOLLOWING WHEN SETTING UP AND USING THE LCD COLOR MONITOR:

- DO NOT REMOVE MONITOR BACK COVER. 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 spill any liquids into the cabinet or use your monitor 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 any heavy objects on the power cord. Damage to the cord may cause shock or fire.
- Do not place this product on a sloping or unstable cart, stand or table, as the monitor may fall, causing serious damage to the monitor.
- Do not place any objects onto the monitor and do not use the monitor outdoors.
- The inside of the fluorescent tube located within the LCD monitor contains mercury. Please follow the laws or rules of your municipality to dispose of the tube properly.
- Do not bend power cord.
- Do not use monitor in high temperature, humid, dusty, or oily areas.
- If monitor or glass is broken, do not come in contact with the liquid crystal and handle with care.
- Allow adequate ventilation around the monitor, so that heat can properly dissipate. Do not block ventilated openings or place the monitor near a radiator or other heat sources. Do not put anything on top of the monitor.
- The power cable connector is the primary means of detaching the system from the power supply. The monitor should be installed close to a power outlet, which is easily accessible.
- Handle with care when transporting. Save packaging for transporting.
- Please clean the holes of back cabinet to reject dirt and dust at least once a year because of set reliability.
- If using the cooling fan continuously, it’s recommended to wipe holes a minimum of once a month.
- When installing the remote control batteries;
  - Align the batteries according to the (+) and (-) indications inside the case.
  - Align the (-) indication of the battery first inside the case.
- Usage of other than specified head- or earphones can result in hearing loss due to excessive sound pressures.

CAUTION:

Immediately unplug your monitor from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- When the power supply cord or plug is damaged.
- If liquid has been spilled, or objects have fallen into the monitor.
- If the monitor has been exposed to rain or water.
- If the monitor has been dropped or the cabinet damaged.
- If the monitor does not operate normally by following operating instructions.

Recommended Use

CAUTION:

- For optimum performance, allow 20 minutes for warm-up.
- Rest your eyes periodically by focusing on an object at least 5 feet away. Blink often.
- Position the monitor at a 90° angle to windows and other light sources to minimize glare and reflections.
- Clean the LCD monitor surface with a lint-free, nonabrasive cloth. Avoid using any cleaning solution or glass cleaner!
- Adjust the monitor's brightness, contrast and sharpness controls to enhance readability.
- Avoid displaying fixed patterns on the monitor for long periods of time to avoid image persistence (after image effects).
- Get regular eye checkups.

Ergonomics

To realize the maximum ergonomic benefits, we recommend the following:

- Use the preset Size and Position controls with standard signals.
- Use the preset Color Setting.
- Use non-interlaced signals.
- Do not use primary color blue on a dark background, as it is difficult to see and may produce eye fatigue due to insufficient contrast.

Table Of Contents

1. Unpacking and Installation 1
- 1.1. Unpacking 1
- 1.2. Package Contents 1
- 1.3. Installation Notes 1
- 1.4. Mounting on a Wall 2
  - 1.4.1. VESA Grid 2

2. Parts and Functions 4
- 2.1. Control Panel 4
- 2.2. Input/Output Terminals 5
- 2.3. Remote Control 6
  - 2.3.1. General functions 6
  - 2.3.2. Inserting batteries in the remote control 7
  - 2.3.3. Handling the remote control . 7
  - 2.3.4. Operating range of the remote control 7
- 2.4. Using of Remote sensor and power indicator 8

3. Connecting External Equipment 9
- 3.1. Connecting External Equipment (DVD/VCR/VCD) 9
  - 3.1.1. Using HDMI video input 9
- 3.2. Connecting a PC 9
  - 3.2.1. Using VGA input 9
  - 3.2.2. Using DVI input 9
  - 3.2.3. Using HDMI input 10
- 3.3. Connecting Audio Equipment 10
  - 3.3.1. Connecting an external audio device 10
- 3.4. Connecting Multiple Displays in a Daisy-chain Configuration 10
  - 3.4.1. Display control connection . 10
- 3.5. IR Pass-through Connection 11
- 3.6. IR Pass-through Connection 11

4. Operation 12
- 4.1. Start-up and initial Setting 12
  - 4.1.1. Welcome 12
  - 4.1.2. Network Setting 12
  - 4.1.3. Signage Display Settings ... 12
  - 4.1.4. Setup Complete 12
- 4.2. Watch the Connected Video Source 12
- 4.3. Change Picture Format 12
- 4.4. Media Player 13
- 4.5. Web Browser 14
- 4.6. PDF Reader 16
- 4.7. Custom App 17
  - 4.7.1. OSD Menu operation: 17
  - 4.7.2. Set Custom App 17
- 4.8. vCastReceiver 18
  - 4.8.1. Cast sender from Windows-based devices, Macbook, and Chrome devices 18
  - 4.8.2. Viewboard Cast sender from mobile devices: iOS-based (iPhone, iPad) and Android OS based phone/tablet 18
  - 4.8.3. ViewBoard Cast out from mobile device will support annotation function 19

5. Setting (Admin mode) 19
- 5.1. Setting 19
- 5.2. Ethernet 19
  - 5.2.1. DHCP 20
  - 5.2.2. Static IP 20
- 5.3. Signage Display 20
  - 5.3.1. General Settings 20
  - 5.3.2. Server Settings 23
  - 5.3.3. Source Settings 25
  - 5.3.4. Security 27
- 5.4. System Tools 27
  - 5.4.1. Clear Storage 27
  - 5.4.2. Reset 28
  - 5.4.3. Import & Export 28
  - 5.4.4. Clone 28
- 5.5. Display 29
- 5.6. Apps 29
- 5.7. Date & time 29
- 5.8. Developer options 29
- 5.9. About 29
  - 5.9.1. System updates 30

6. OSD Menu 30
- 6.1. Settings 31
  - 6.1.1. Picture menu 31
  - 6.1.2. Screen menu 32
  - 6.1.3. Audio menu 33
  - 6.1.4. Configuration1 menu 33
  - 6.1.5. Configuration2 menu 34
  - 6.1.6. Advanced option menu 35

7. Supported Media Formats 40

8. Input mode 42

9. Cleaning and Troubleshooting 43
- 9.1. Cleaning 43
- 9.2. Troubleshooting 44

10. Technical Specifications 45

11. RS232 Protocol 47

11.1. Introduction 47

11.2. Description 47

11.2.1. Hardware specification 47

11.2.2. Communication Setting 47

11.2.3. Command Message Reference 47

11.3. Protocol 48

11.3.1. Set-Function Listing..... 48

11.3.2. Get-Function Listing 52

11.3.3. Remote Control Pass-through mode 55

12. Other Information 58

Customer Support..... 58

Limited Warranty 59

Mexico Limited Warranty 61

Copyright Information

Copyright © ViewSonic® Corporation, 2018. All rights reserved.

ViewSonic©, the three birds logo, OnView, ViewMatch, and ViewMeter are registered trademarks of ViewSonic Corporation.

ENERGY STAR® is a registered trademark of the U.S. Environmental Protection Agency (EPA).

Disclaimer: ViewSonic Corporation shall not be liable for technical or editorial errors or omissions contained herein; nor for incidental or consequential damages resulting from furnishing this material, or the performance or use of this product.

In the interest of continuing product improvement, ViewSonic Corporation reserves the right to change product specifications without notice. Information in this document may change without notice.

No part of this document may be copied, reproduced, or transmitted by any means, for any purpose without prior written permission from ViewSonic Corporation.

Product Registration

To meet your future needs, and to receive any additional product information as it becomes available, please register your product on the Internet at:
www.viewsonic.com.

The ViewSonic® Wizard CD-ROM also provides an opportunity for you to print the registration form, which you may mail or fax to ViewSonic.

For Your Records

Product Name:	CDE5010 ViewSonic Commercial Display
Model Number:	VS17539
Document Number:	CDE5010_UG_ENG Rev. 1A 07-04-18
Serial Number:	_____
Purchase Date:	_____

Product disposal at end of product life

ViewSonic respects the environment and is committed to working and living green. Thank you for being part of Smarter, Greener Computing.

Please visit ViewSonic website to learn more.

USA & Canada: http://www.viewsonic.com/company/green/recycle-program/

Europe: http://www.viewsoniceurope.com/eu/support/call-desk/

Taiwan: https://recycle.epa.gov.tw/

1. Unpacking and Installation

1.1. Unpacking

- This product is packed in a carton, together with the standard accessories.
- Any other optional accessories will be packed separately.
- Due to the size and weight of this display it is recommended for two people to move it.
- After opening the carton, ensure that the contents are complete and in good condition.

1.2. Package Contents

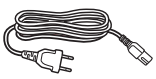
Please verify that you received the following items with your package content:

- LCD display
- CD ROM
- Remote control with AAA batteries
- Quick Start Guide
- Power cord (1.8 m)
- RS232 cable (1.8 m)
- RS232 daisy chain cable (2.5mm-2.5mm)
- IR sensor cable

* The supplied power cord varies depending on destination.

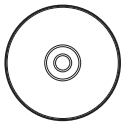
Remote Control and AAA Batteries

IR sensor cable

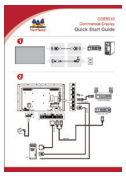


For EU

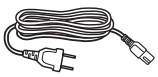
For China



CD ROM

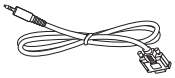


Quick Start Guide

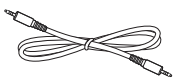


For North America

For UK



RS232 Cable



RS232 daisy chain cable

NOTES:

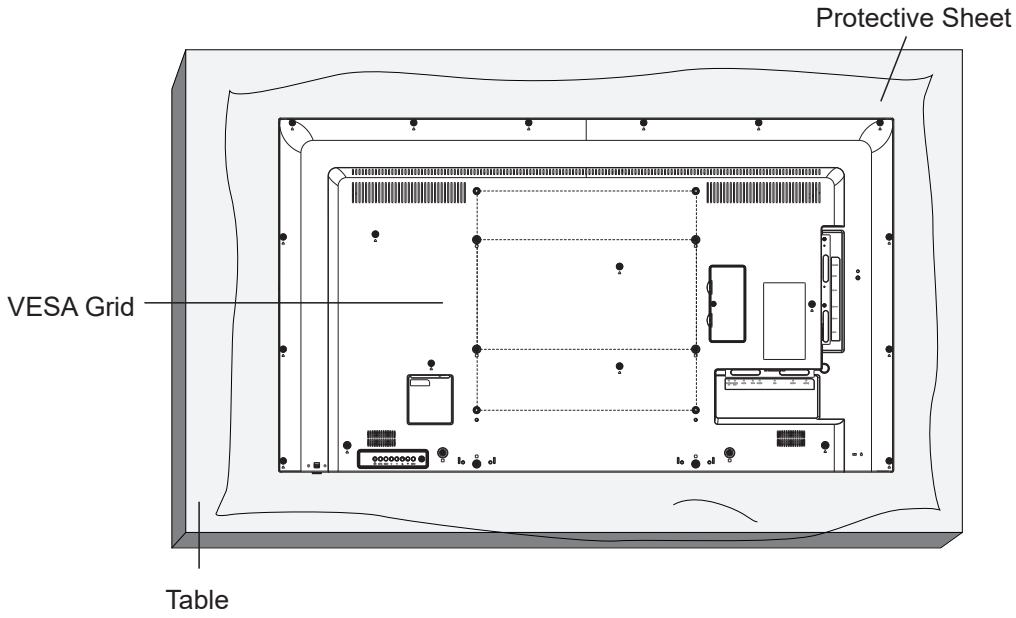
- For all other regions, apply a power cord that conforms to the AC voltage of the power socket and has been approved by and complies with the safety regulations of the particular country.
- Keep the package box and packing material for shipping the display.

1.3. Installation Notes

- Due to the high power consumption, always use the plug exclusively designed for this product. If an extended line is required, please consult your service agent.
- The product should be installed on a flat surface to avoid tipping. The distance between the back of the product and the wall should be maintained for proper ventilation. Avoid installing the product in the kitchen, bathroom or any other places with high humidity so as not to shorten the service life of the electronic components.
- The product can normally operate only under 3000 m in altitude. In installations at altitudes above 3000 m, some abnormalities may be experienced.

1.4. Mounting on a Wall

To mount this display to a wall, you will have to obtain a standard wall-mounting kit (commercially available). We recommend using a mounting interface that complies with UL1678 standard in North America.



1. Lay a protective sheet on a table, which was wrapped around the display when it was packaged, beneath the screen surface so as not to scratch the screen face.
2. Ensure you have all accessories for mounting this display (wall mount, ceiling mount, table stand, etc)
3. Follow the instructions that come with the base mounting kit. Failure to follow correct 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.
4. For the wall-mounting kit, use M6 mounting screws (having a length 10 mm longer than the thickness of the mounting bracket) and tighten them securely.
5. Unit without base weight= 12.6 Kg.The equipment and its associated mounting means still remain secure during the test. For use only with UL Listed Wall Mount Bracket with minimum weight/load: 12.6 Kg.
6. Por trait is not allowed.

1.4.1. VESA Grid

Model	Vesa Grid
CDE5010	400(H) x 400(V)mm

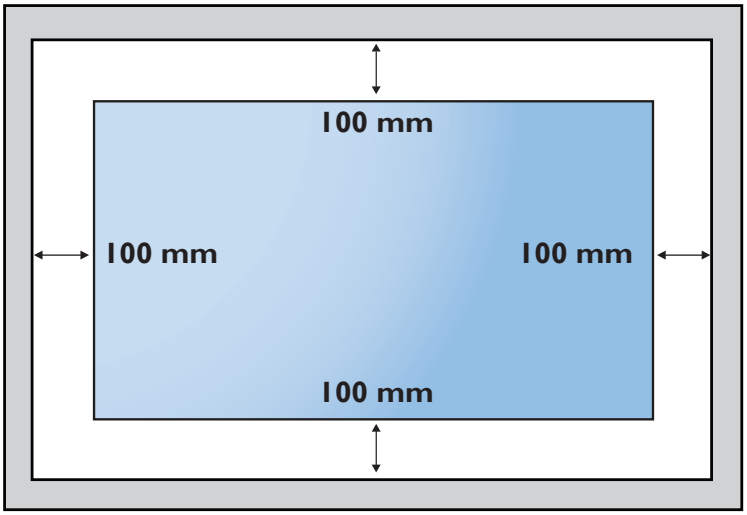
Caution:

To prevent the display from falling:

- For wall or ceiling installation, we recommend installing the display with metal brackets which are commercially available. For detailed installation instructions, refer to the guide received with the respective bracket.
- To lessen the probability of injury and damage resulting from fall of the display in case of earthquake or other natural disaster, be sure to consult the bracket manufacturer for installation location.

Ventilation Requirements for enclosure locating

To allow heat to disperse, leave space between surrounding objects as shown in the diagram below.

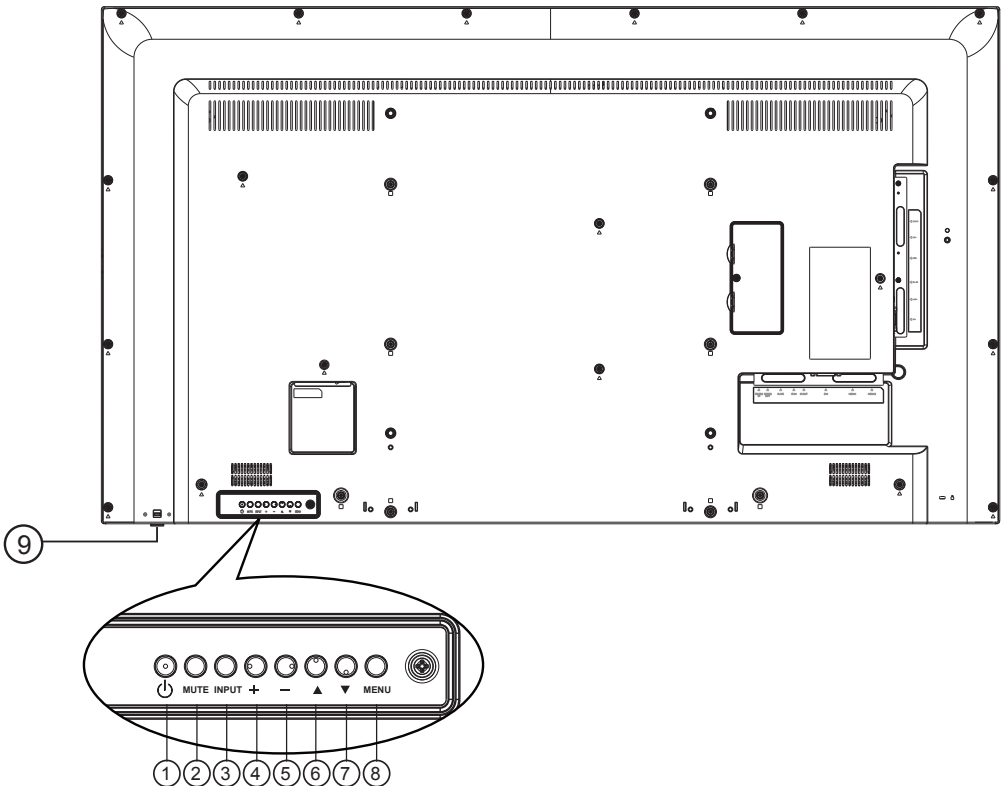


NOTES:

When installing the display on a wall, proper installation. We accept no liability for installations not performed by a professional technician.

2. Parts and Functions

2.1. Control Panel



① **[⏻] button**
Use this button to turn the display on or put the display to standby.

② **[MUTE] button**
Switch the audio mute ON/OFF.

③ **[INPUT] button**
Choose the input source.

- Used as [**OK**] button in the On-Screen-Display menu.

④ **[+] button**

- Increase the volume
- Enter into submenu while OSD menu is on

⑤ **[—] button**

- Decrease the volume
- Back to previous menu while OSD menu is on

⑥ **[▲] button**

- Move the highlight bar up to adjust the selected item while OSD menu is on
- Increase the adjustment while adjust value.

⑦ **[▼] button**

- Move the highlight bar down to adjust the selected item while OSD menu is on.
- Decrease the adjustment while adjust value.

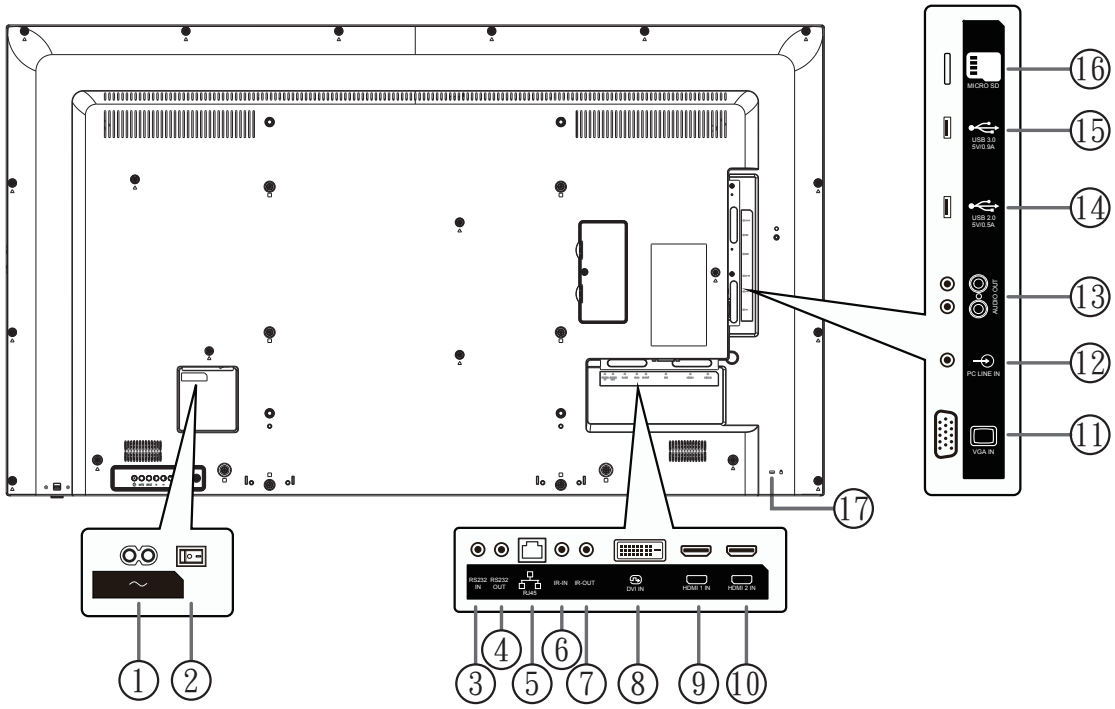
⑧ **[MENU] button**
Return to previous menu while OSD menu is on, or to activate the OSD menu when OSD menu is off.

⑨ **Remote control sensor and power status indicator**

- Receives command signals from the remote control.
- Indicates the operating status of the display without OPS:
  - Lights green when the display is turned on
  - Lights red when the display is in standby mode
  - When {SCHEDULE} is enabled, the light blinks green and red
  - If the light blinks red, it indicates that a failure has been detected
  - Lights off when the main power of the display is turned off

* Using IR sensor cable for better remote control performance. (Please refer to the instructions of 3.5)

2.2. Input/Output Terminals



① **AC IN**
AC power input from the wall outlet.

② **MAIN POWER SWITCH**
Switch the main power on/off.

③ **RS232 OUT** / ④ **RS232 IN**
RS232C network output / input for the loop-through function.

⑤ **RJ-45**
LAN control function for the use of remote control signal from control center.

⑥ **IR OUT** / ⑦ **IR IN**
IR signal output /input for the loop-through function.

NOTES:

- This display's remote control sensor will stop working if the jack [**IR IN**] is connected.
- To remotely control your A/V device via this display, refer to page 14 for or IR Pass Through connection.

⑧ **DVI-D IN**
DVI-D video input.

⑨ **HDMI1 IN** / ⑩ **HDMI2 IN**
HDMI video/audio input.

⑪ **VGA IN (D-Sub)**
VGA video input.

⑫ **PC LINE IN**
Audio input from VGA source (3.5mm stereo phone).

⑬ **AUDIO OUT**
Audio output to external AV device.

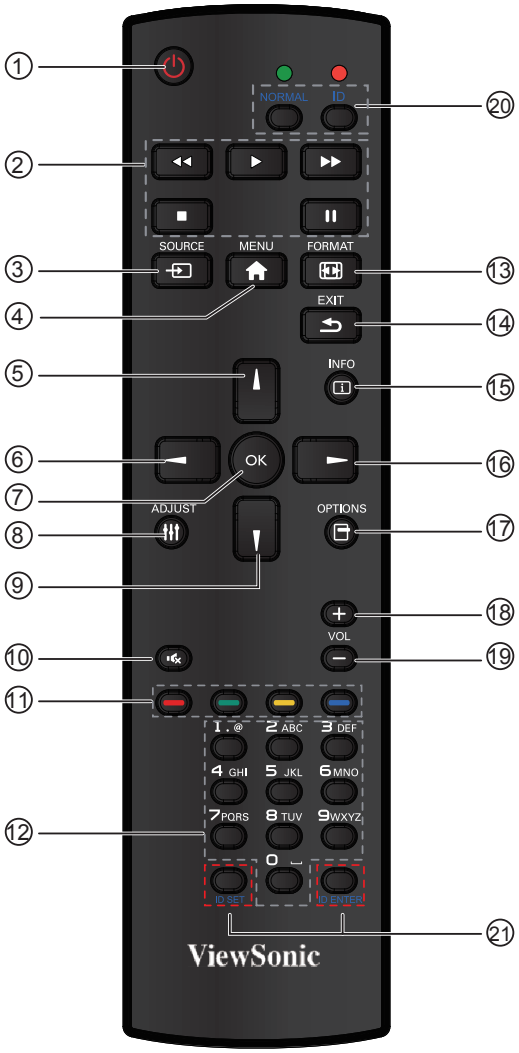
⑭ **USB 2.0** / ⑮ **USB 3.0 PORT**
Connect your USB storage device

⑯ **MICRO SD CARD**
Connect your MICRO SD CARD

⑰ **Security LOCK**
Used for security and theft prevention.

2.3. Remote Control

2.3.1. General functions



① **[POWER] button**
Press to switch on the display from standby mode. Press again to turn it off and back into standby mode.

② **[PLAY] button**
Control playback of media files (for Media Input only).

③ **[SOURCE] button**
Press to toggle Video Source Menu. Press [▲] or [▼] button to select one of the video sources among **DVI-D, VGA, HDMI1, HDMI2, Media Player, Browser** or **PDF Player**. Press [**OK**] button.

④ **[MENU] button**
Press to turn the OSD menu on/off.

⑤ **[▲] button**
Press to move the selection up in OSD menu.

⑥ **[◀] button**
Press to decrease the value in OSD menu.

⑦ **[OK] button**
Press to activate the setting inside the OSD menu.

⑧ **[ADJUST] button**
Press to run the Auto Adjust function.
NOTE: This button is functional for VGA input only.

⑨ **[▼] button**
Press to move the selection down in OSD menu.

⑩ **[ ] MUTE button**
Press to turn the mute function on/off.

⑪ **COLOR buttons**
Choose tasks or options.(for Media Input only).

⑫ **[NUMERIC] buttons**
Enter text for network setting.

⑬ **Format button**
Press to switch screen aspect ratio.

⑭ **[EXIT] button**
Press to turn back to the previous OSD menu.

⑮ **[INFO] button**
Press to turn on/off the information OSD displayed on the upper right corner of the screen.

⑯ **[▶] button**
Press to increase the value in OSD menu.

⑰ **[OPTION] button**
Access currently available options, picture and sound menus (for Media Input only).

⑱ **[+] Volume up button**
Press to increase the audio output level.

⑲ **[-] Volume down button**
Press to decrease the audio output level.

⑳ ㉑ **[ID SET] button**
If a single large- screen matrix (video wall) is created, set ID key to control each dispaly.

ID Remote Control:

You can set the remote control ID when you want to use this remote control on one of several different displays.
Press [**ID**] button. The red LED blinks twice.

1. Press [**ID SET**] button for more than 1 second to enter the ID ode. The red LED lights up.
   Press the [**ID SET**] button again will exit the ID Mode. The red LED lights off.
   Press the digit number [**0**] ~ [**9**] to select the display you want to control.
   For example: press [**0**] and [**1**] for display No.1, press [**1**] and [**1**] for display No. 11.
   The numbers available are from [**01**] ~[**255**].
2. Not pressing any button within 10 seconds will exit the ID Mode.
3. If an error pressing of buttons other than the digits occurred, wait 1 second after the red LED lights off and then lights up again, then press the correct digits again.
4. Press [**ID ENTER**] button to confirm. The red LED blinks twice and then lights off.

NOTE:

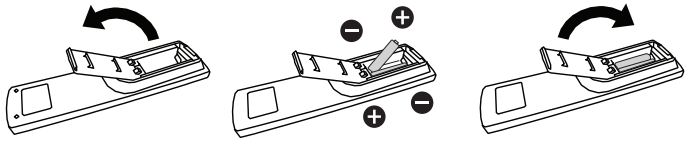
- Press [**NORMAL**] button. The green LED blinks twice, indicating the display is in normal operation. It is ncecssary to set up the ID number for each display before selecting its ID number.

2.3.2. Inserting batteries in the remote control

The remote control is powered by two 1.5V AAA batteries.

To install or replace batteries:

1. Press and then slide the cover to open it.
2. Align the batteries according to the (+) and (–) indications inside the battery compartment.
3. Replace the cover.



Caution:

The incorrect use of batteries can result in leaks or bursting. Be sure to follow these instructions:

- Place “AAA” batteries matching the (+) and (–) signs on each battery to the (+) and (–) signs of the battery compartment.
- Do not mix battery types.
- Do not combine new batteries with used ones. It causes shorter life or leakage of batteries.
- Remove the dead batteries immediately to prevent them from liquid leaking in the battery compartment. Don’t touch exposed battery acid, as it can damage your skin.

NOTE: If you do not intend to use the remote control for a long period, remove the batteries.

2.3.3. Handling the remote control

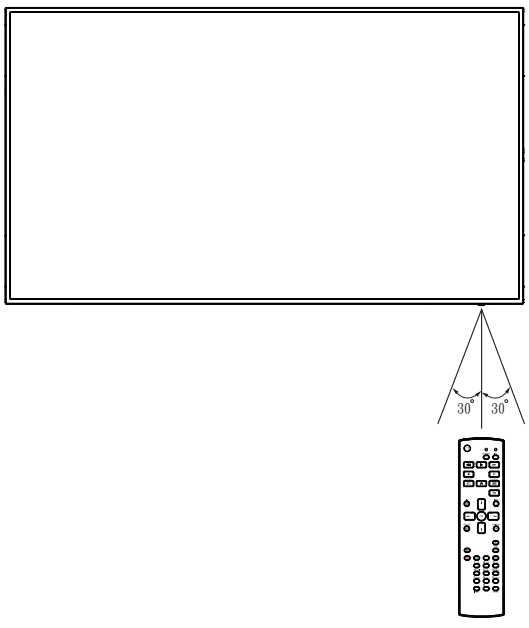
- Do not subject to strong shock.
- Do not allow water or other liquid to splash the remote control. If the remote control gets wet, wipe it dry immediately.
- Avoid exposure to heat and steam.
- Other than to install the batteries, do not open the remote control.

2.3.4. Operating range of the remote control

Point the front of the remote control toward this display’s remote control sensor when pressing a button.

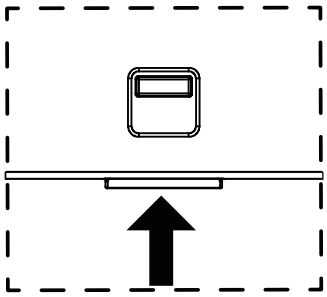
Use the remote control within a distance of less than 8m/26ft from this display’s sensor, and a horizontal and vertical angle of less than 30 degrees.

NOTE: The remote control may not function properly when the remote control sensor on this display is under direct sunlight or strong illumination, or when there is an obstacle in the path of signal transmission.

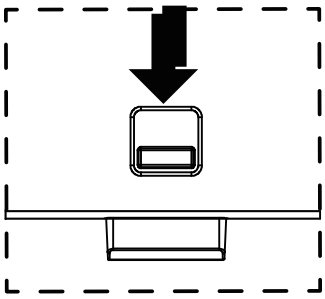


2.4. Using of Remote sensor and power indicator

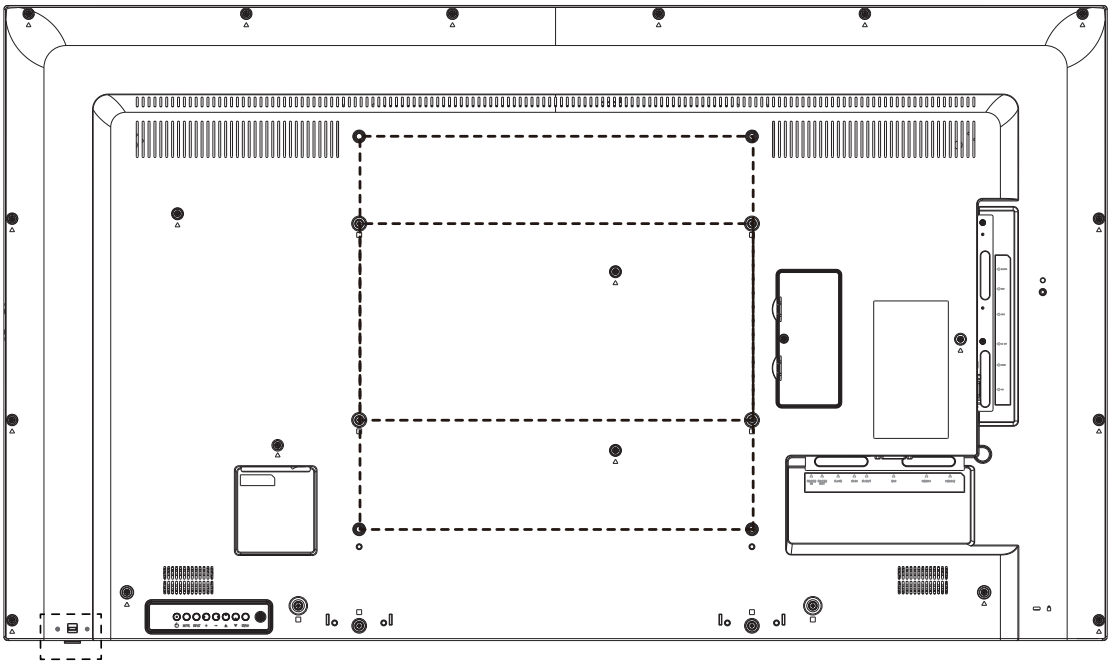
1. Push down the lens to have better remote control performance and easy to observe the light information of power status..
2. Push up the lens before mounting the display for video wall application.
3. Pull/Push the lens until hearing the click sound.



Push up to collapse the lens



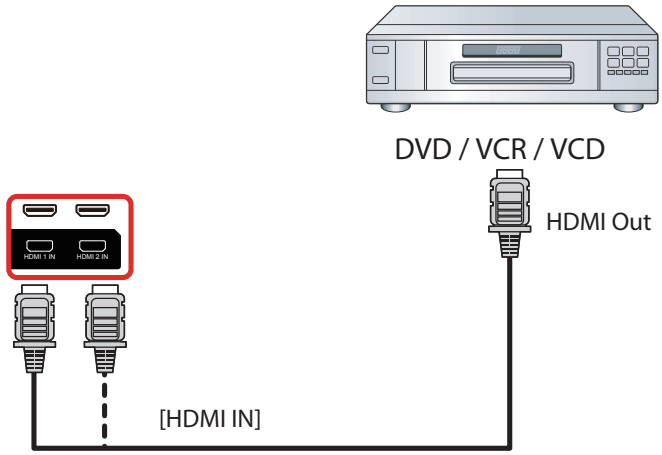
Push down to extend the lens



3. Connecting External Equipment

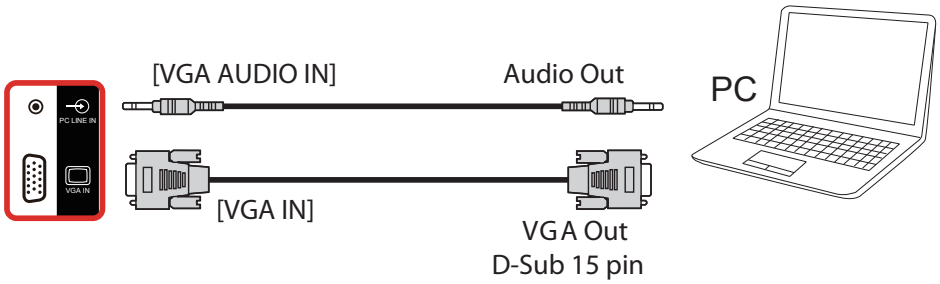
3.1. Connecting External Equipment (DVD/VCR/VCD)

3.1.1. Using HDMI video input

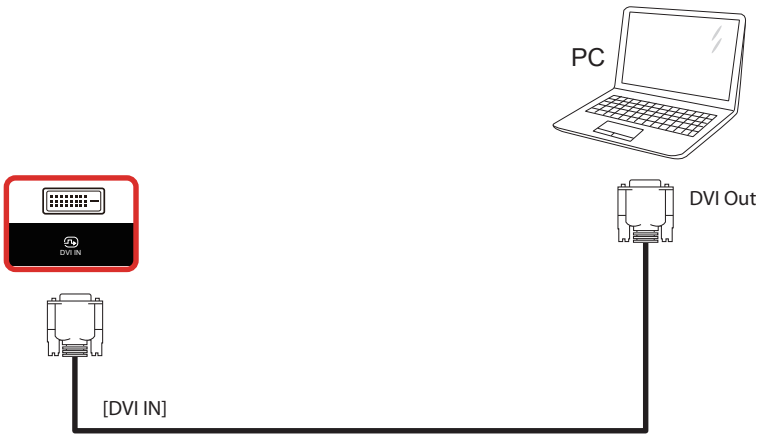


3.2. Connecting a PC

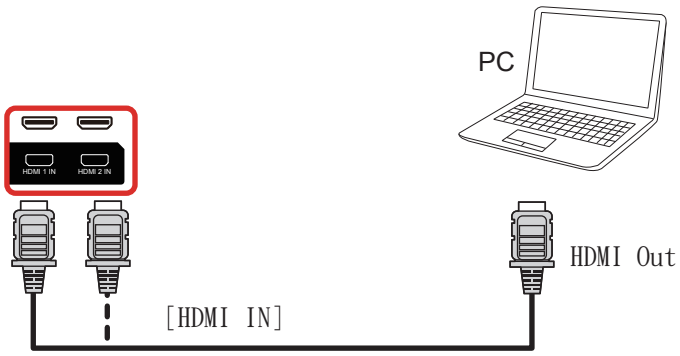
3.2.1. Using VGA input



3.2.2. Using DVI input

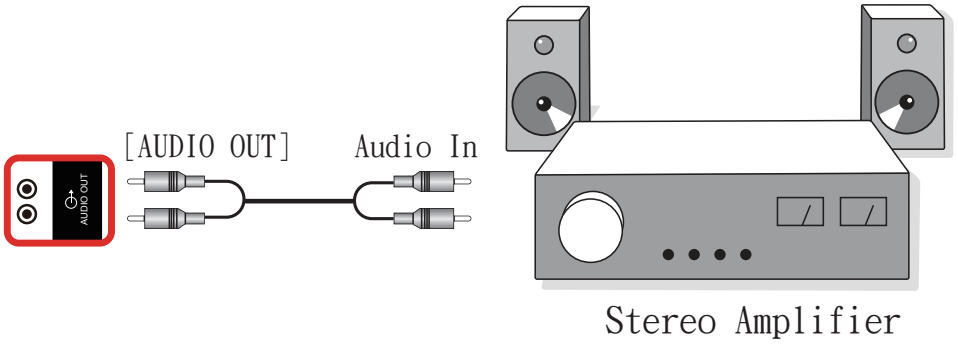


3.2.3. Using HDMI input



3.3. Connecting Audio Equipment

3.3.1. Connecting an external audio device

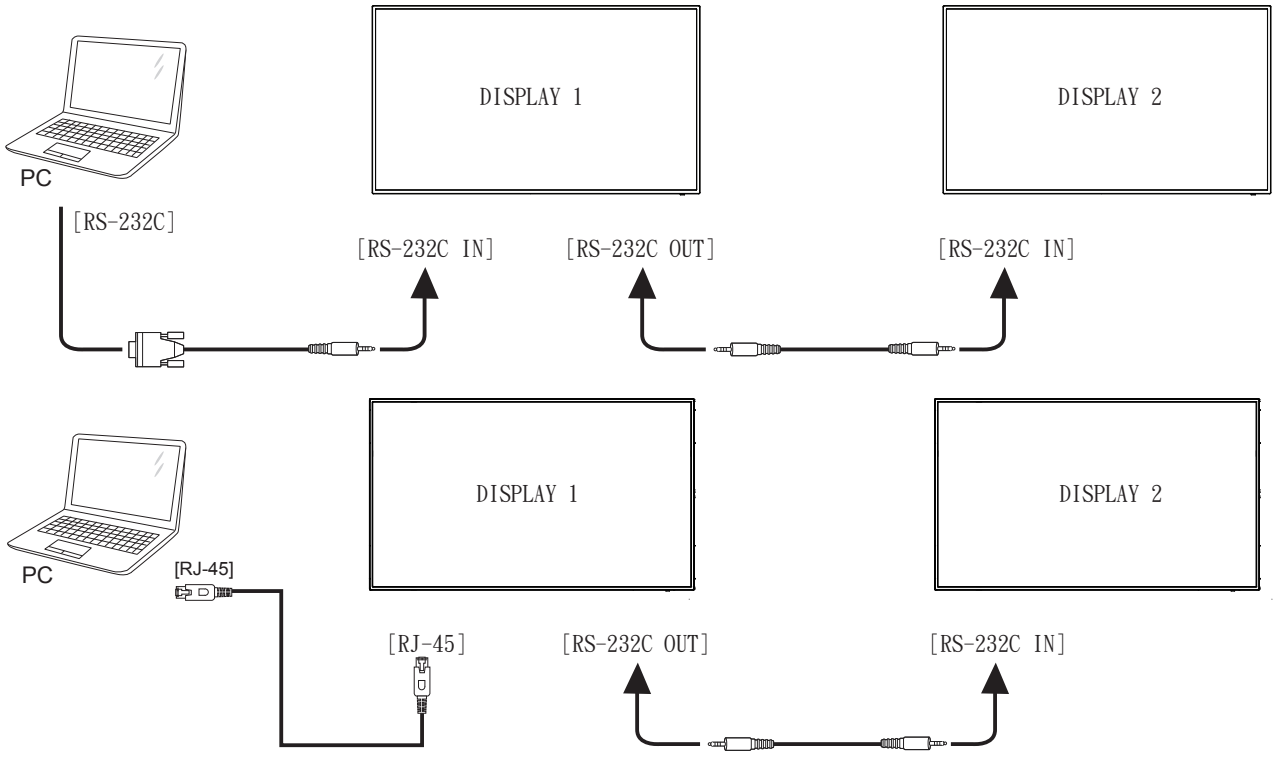


3.4. Connecting Multiple Displays in a Daisy-chain Configuration

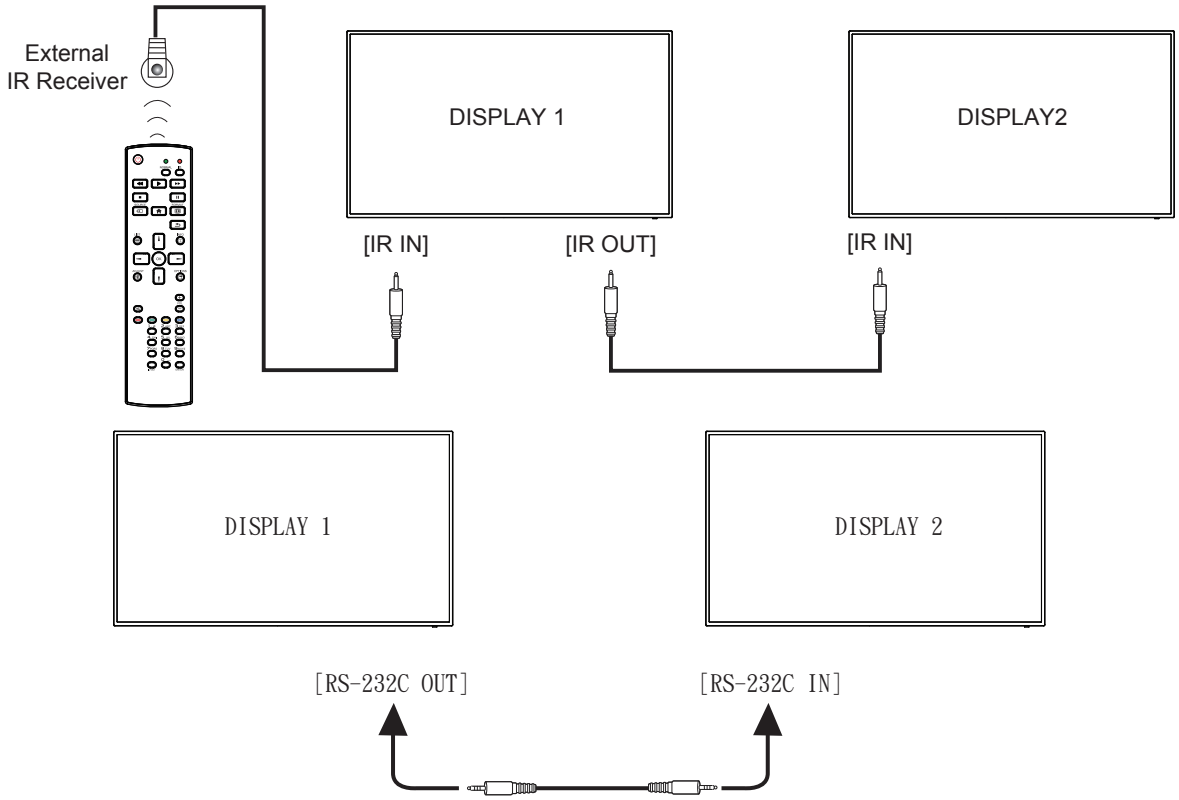
You can interconnect multiple displays to create a daisy-chain configuration for applications such as a menu board.

3.4.1. Display control connection

Connect the [RS232C OUT] connector of DISPLAY 1 to the [RS232C IN] connector of DISPLAY 2.



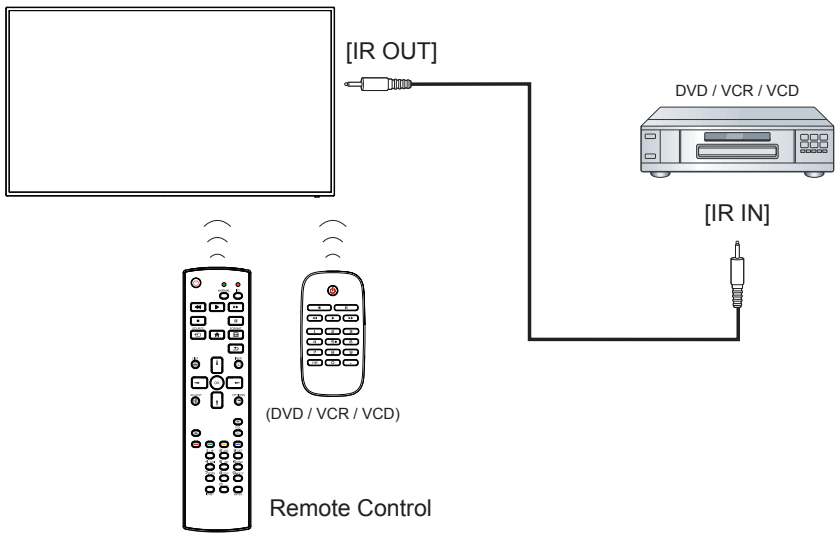
3.5. IR Pass-through Connection



NOTE:

1. This display's remote control sensor will stop working if the [IR IN] is connected.
2. IR loop through connection can suppor t up to 9 displays.
3. IR in daisy chain via RS232 connection can suppor t up to 9 displays.

3.6. IR Pass-through Connection



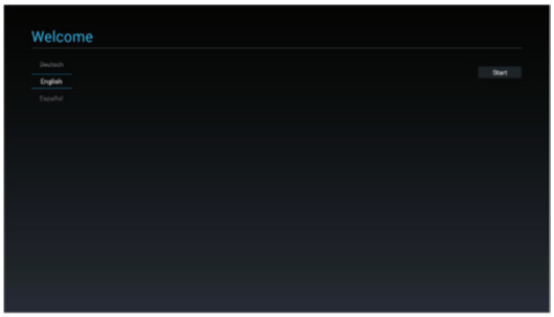
4. Operation

NOTE: The control button described in this section is mainly on the remote control unless specified otherwise.

4.1. Start-up and initial Setting

4.1.1. Welcome

Select your language and tap “Start”.

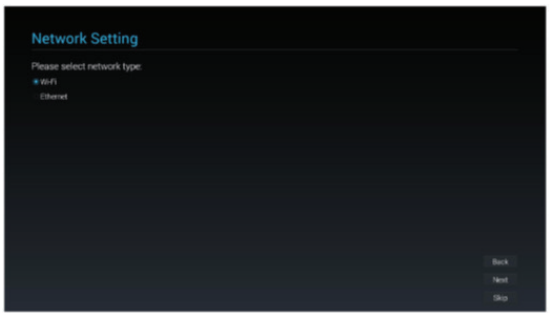


4.1.2. Network Setting

Tape “Next” button to next page and it will show.

1. Connection Type : DHCP / Static IP
2. IP Address
3. Netmask
4. DNS Address
5. Gateway

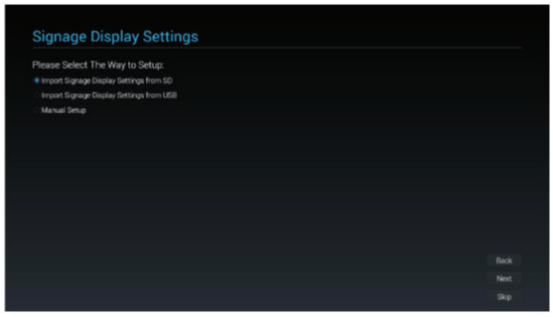
You also can tape “Skip” to configure later



4.1.3. Signage Display Settings

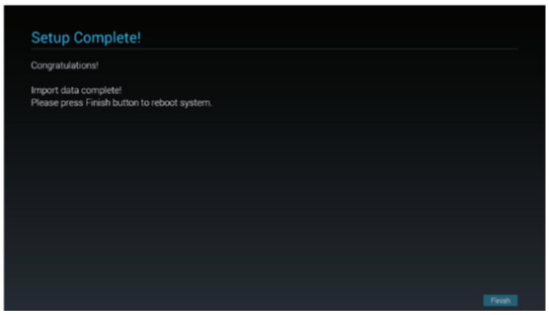
User can import the setting file from SD, USB or manual setting. User also can tape “Skip”.

Note: The setting file should be put on viewsonic folder in SD or USB and the file name is settings. db.



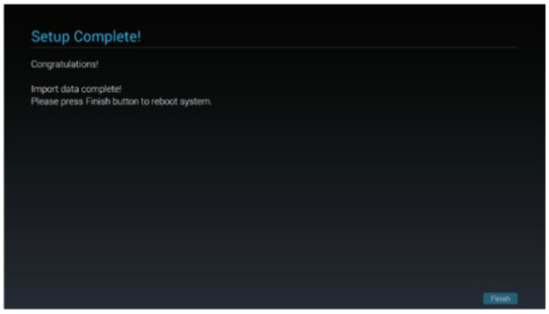
4.1.4. Setup Complete

The initial settings are completed. Press “Finish” and display will reboot automatically.



4.2. Watch the Connected Video Source

1. Press **SOURCE** button.
2. Press ▲ or ▼ button to select a device, then press OK button.



4.3. Change Picture Format

You can change the picture format to suit the video source. Each video source has its available picture formats.

The available picture formats depend on the video source:

1. Press FORMAT button to choose a picture format.

- PC mode: {**Full**} / {**4:3**} / {**Real**} / {**21:9**}/ {**Custom**}.
- Video mode: {**Full**} / {**4:3**} / {Real} / {21:9}/ {Custom}

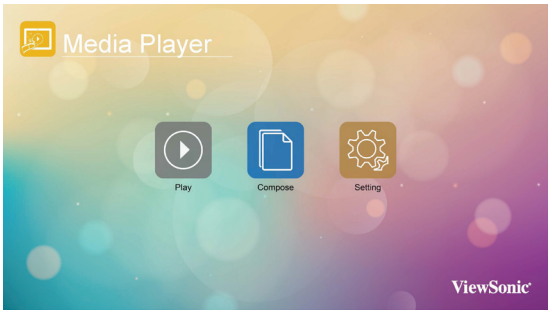
4.4. Media Player

You can play videos, photos, and music on your display from:

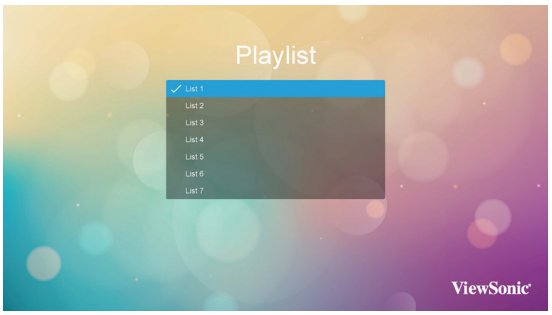
- USB Multimedia Player for Scheduled Playback of Videos, Photos and Music.
- A USB device connected to this display.

Media Player page has three items: {**Play**}, {**Compose**} and {**Settings**}.

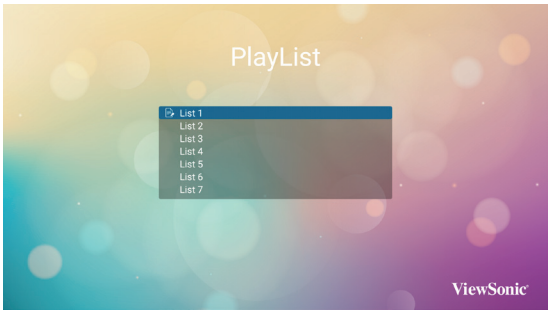
- {**Play**} : select playlist to play.
- {**Compose**}: edit playlist.
- {**Settings**}: setting play properties.



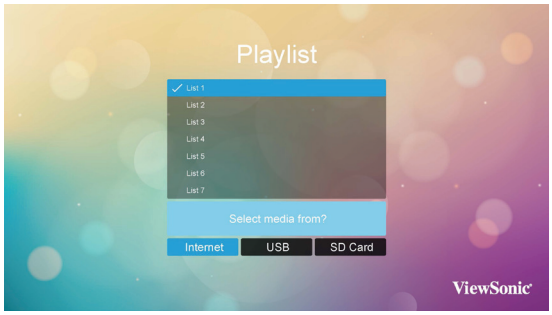
1. Select {**Play**} on this page, first you should choose one playlist to play between FILE 1 and FILE 7. The pencil icon means the playlist is non-empty.



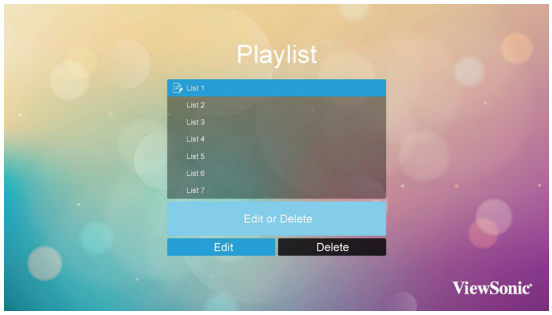
2. Select {**Compose**} on this page, first you should choose one playlist to edit between FILE 1 and FILE 7. The pencil icon means the playlist is non-empty.



A. If an empty playlist is chosen, the app will guide you to select the media source.
All media files should be placed in / viewsonic / of root directory.
For example,
   - videos in /root/viewsonic/video/
   - photos in /root/ viewsonic /photo/
   - music in /root/ viewsonic /music/



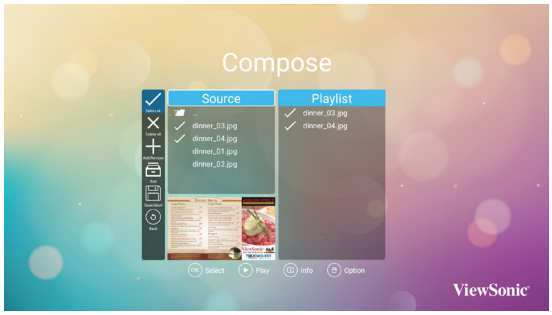
B. You could edit or delete a non-empty playlist, just choose the desired playlist which is with pencil icon.



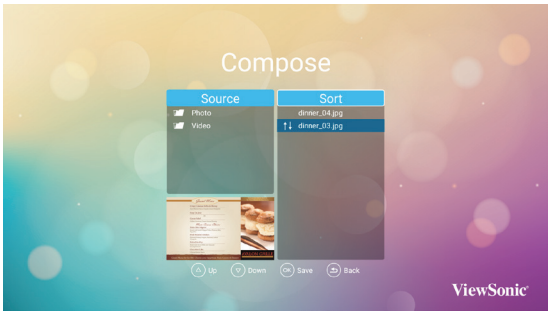
C. Once you start to edit a playlist, you will see below screen.
Source - files in storage.
Playlist – files in playlist.
There are 4 icons which map to the keys of remote controller.
Option key – launch slidebar
Play key – play media file.
Info key – show media info.
Ok key – select/unselect file.

In the slidebar, it helps you to do the following:

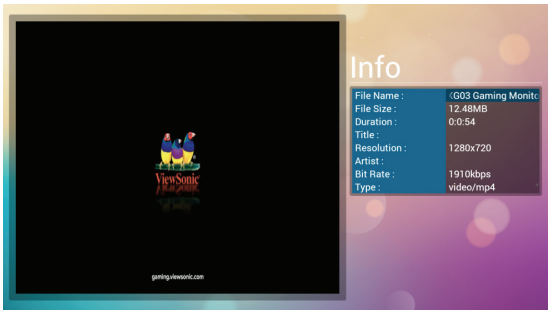
- select all : select all storage files.
- delete all : delete all playlist files.
- add/remove : update playlist from source.
- sort : sort playlist.
- save/abort : save or abort playlist.
- back : return.



D. if you choose “Sort” in the slidebar, you can change the order of files one by one.

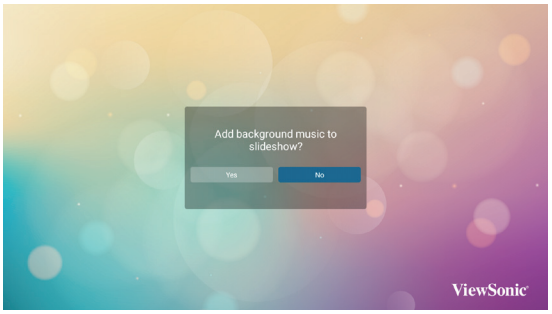


E. Press info key after you choose desired file, you will get the detail information.



F. Press play key after you choose desired file, you will plays the media file directly.

G. If you make a playlist with all images files, before saving, the app will ask you if you want to have background music while slideshow playing.

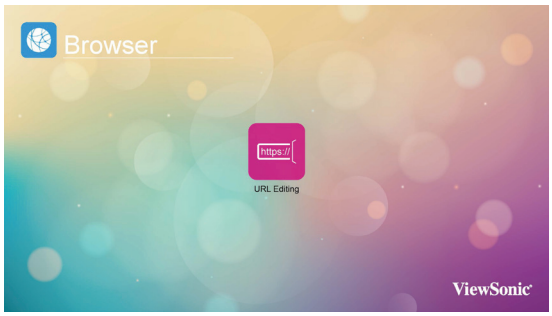


3. Select {**Settings**} on this page, this page has three parts, {**Repeat Mode**}, {**Slideshow Effect**} and {**Effect Duration**}.
   - {**Repeat Mode**} : play mode.
   - {**Slideshow Effect**} : photo slideshow effect.
   - {**Effect Duration**} : photo effect duration.

4.5. Web Browser

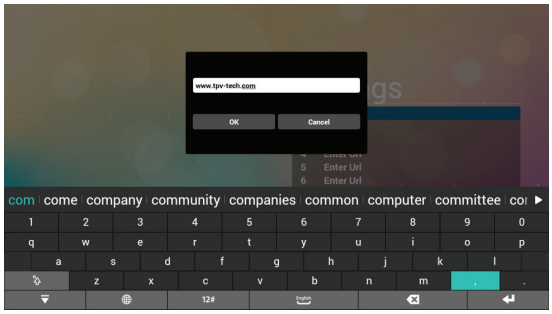
You can save the web link and easy to browse the web site.

Browser page has one item: {**Settings**}. Press {**Settings**} then enter next page.

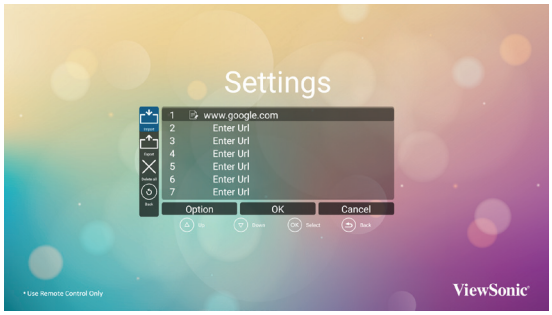


1. Users can choose 1~7. Press any one will show a dialog.

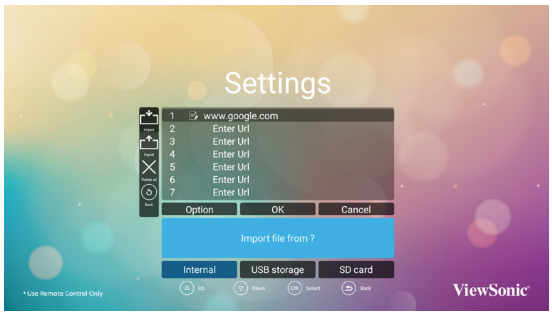
Enter URL and press OK then data will save on List

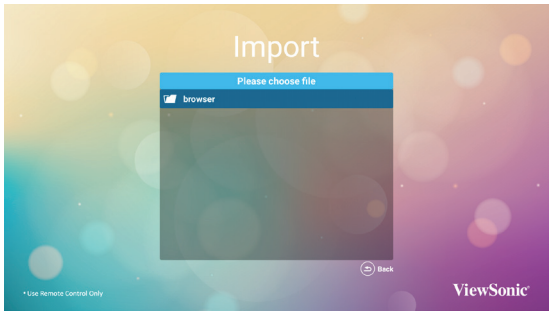


2. Press “Option” then left side will pop up a list
   Import : Import url list file
   Export : Export url list file
   Delete all : Delete all url record on right side
   Back : left side list will be close.

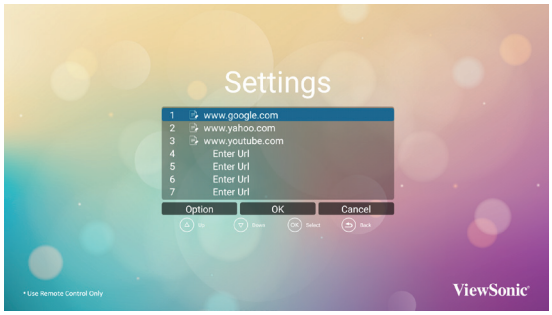


A. Import
Click Import, you can select URL file from Internal, USB storage or SD card.





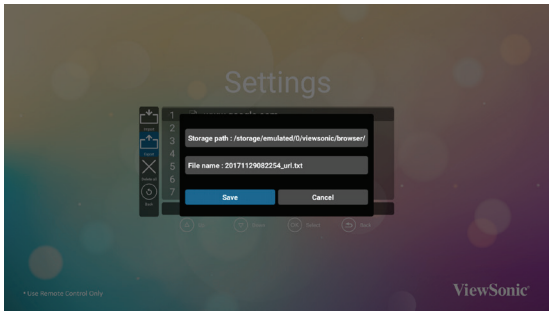
After URL file selected, URL will show on list.



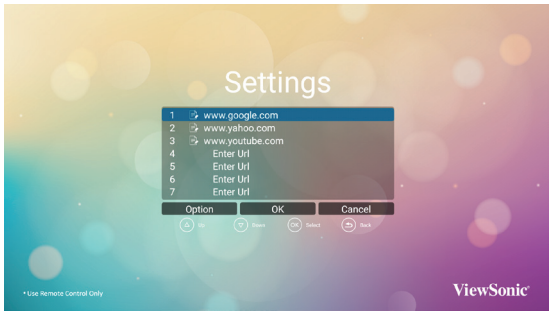
B. Export

Click Export, you can select Internal, USB storage or SD card for export file to.

Dialog shows path file will be saved and file’s name. Press “save” button then URLs on list will be saved.



3. On URL list page, if you select non-empty item, it will show a dialog to ask edit or play url. If press “Edit”, it will show edit url dialog, if press “Play”, it will show web page of item’s url.

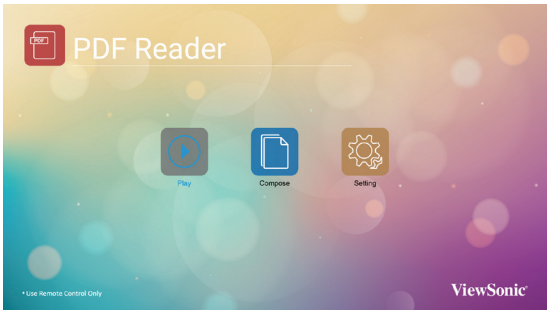


4.6. PDF Reader

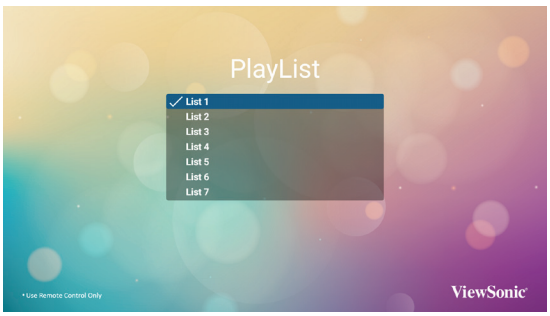
You can play PDF file on your display from internal, USB or SD card.

This page has three items: {**Play**}, {**Compose**} and {**Settings**}.

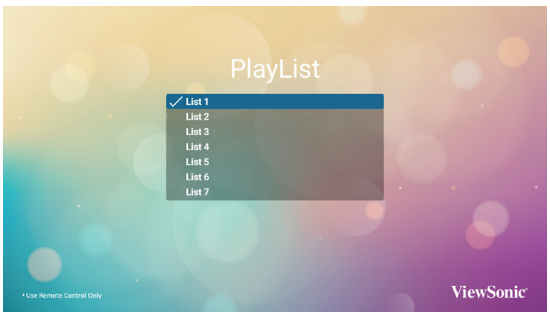
- {**Play**}: select playlist to play.
- {**Compose**}: edit playlist.
- {**Settings**}: setting play properties.



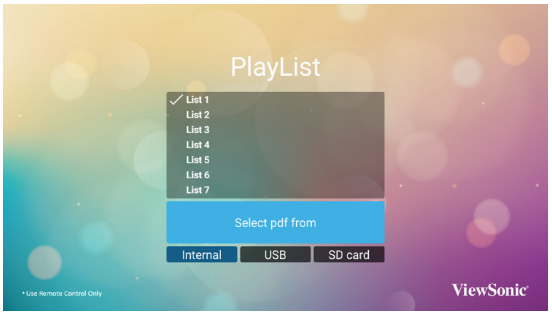
1. Select {Play} on this page, first you should choose one playlist to play between FILE 1 and FILE 7. The pencil icon means the playlist is non-empty.



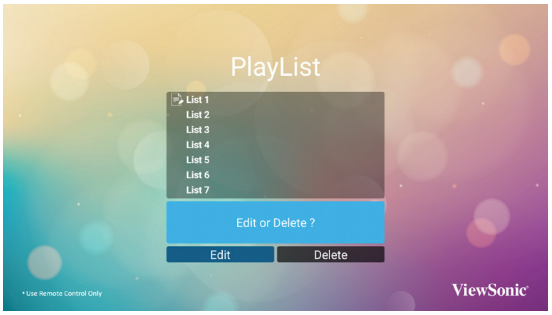
2. Select {**Compose**} on this page, first you should choose one playlist to edit between FILE 1 and FILE 7. The pencil icon means the playlist is non-empty.



A. If an empty playlist is chosen, the app will guide you to select the media source.
All media files should be placed in /viewsonic/ of root directory.
For example,
   - pdfs in /root/viewsonic/pdf/



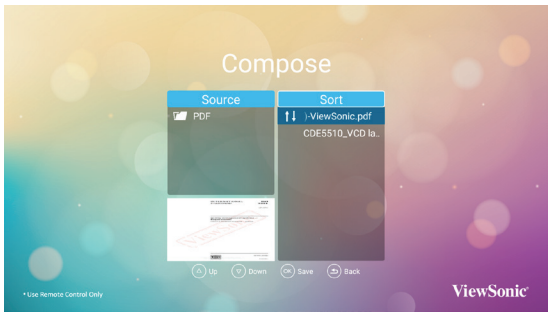
B. You could edit or delete a non-empty playlist, just choose the desired playlist which is with pencil icon.



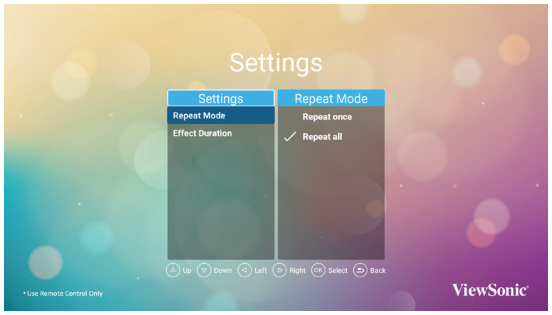
C. Once you start to edit a playlist, you will see below screen.
Source - files in storage.
Playlist – files in playlist.
There are 4 icons which map to the keys of remote controller.
Option key – launch slidebar
Play key – play media file.
Info key – show media info.
Ok key – select/unselect file.

In the slidebar, it helps you to do the following:
- select all : select all storage files.
- delete all : delete all playlist files.
- add/remove : update playlist from source.
- sort : sort playlist.
- save/abort : save or abort playlist.
- back : return.

Select “Sort” in the slidebar, you can change the order of files one by one.



3. Select {**Settings**} on this page, this page has two parts, {**Repeat Mode**} and {**Effect Duration**}.
   - {**Repeat Mode**} : play mode.
   - {**Effect Duration**} : photo effect duration.



4.7. Custom App

User can set up the application for Customer Source

Note:

(1) Only display User Installed app.

(2) Will not show up system pre-install app.

4.7.1. OSD Menu operation:

Press **SOURCE** button and select Custom.

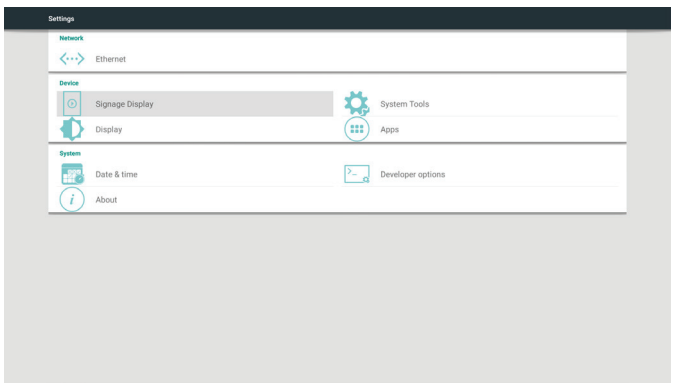
If set up customer APK, PD will open customer app when switch source to Customer mode.

If no set up customer APK, PD will show Black screen when switch source to Customer mode.

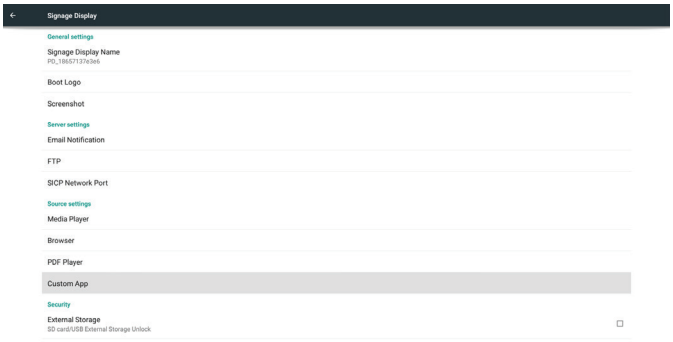
4.7.2. Set Custom App

Select custom app from source setting.

1. Entry Signage Display in Admin Mode (Refer section 4.7 & 4.7.3)

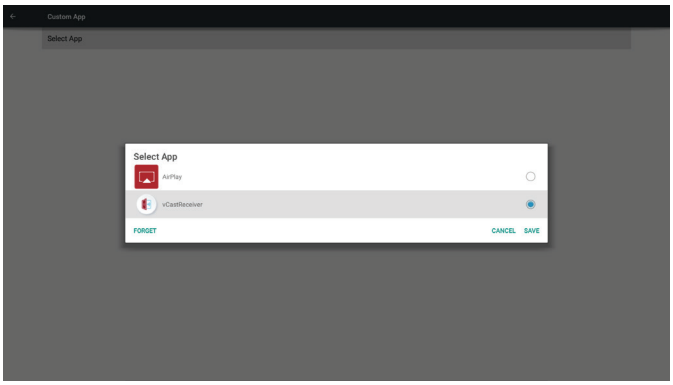


2. Select Custom app will show the installed APK. CDE model pre-install the vCastReceiver APK inside.



3. Press Select App to show the APK list.

4. Select vCastReceiver and press Save.

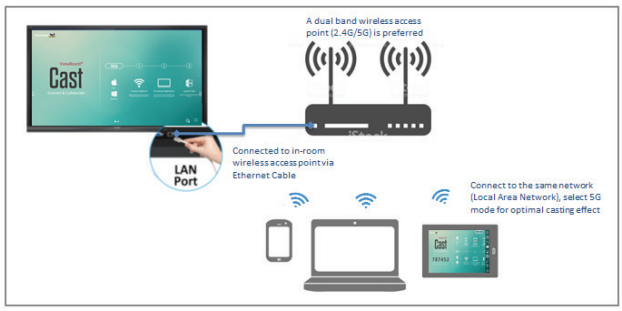


5. vCastReceiver APK name will show on Select App.

6. Exit admin mode and press custom input source. vCastReceiver will run on screen.

4.8. vCastReceiver

ViewBoard Cast is the built-in wireless screen sharing receiver app within ViewBoard that allow users to cast in their presentation content, including mirroring screen content, images, videos, and audios. Before use ViewBoard Cast function, please be noted that proper network infrastructure setting is required.

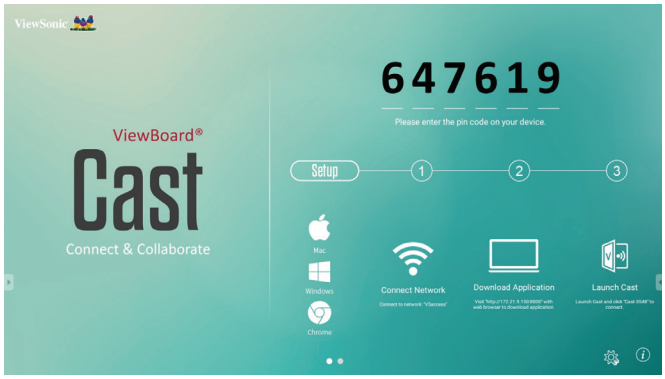


ViewBoard Cast is the wireless peer to peer data communication so that a proper ports setting is required.

• Ports :
  - TCP: 56789, 25123, 8121, and 8000 ports
  - UDP: 48689, 25123
• Port for activation:
  - Port: 8001

[Remark] please be noted that screen sharing or video casting in/out is highly defendant on the each school's or corporate's IT network configuration and WiFi network bandwidth. The variation might be cause from internal network speed, routing, WiFi configuration, and QoS setting. Please consult your IT for related details.

4.8.1. Cast sender from Windows-based devices, Macbook, and Chrome devices



Mac, Windows and Chrome devices

1. Make sure your device is connected to the same network with IFP.
2. Visit the address that shown on IFP to download application.
3. Launch ViewBoard Cast and click the icon number that shown on IFP.

4.8.2. Viewboard Cast sender from mobile devices: iOS-based (iPhone, iPad) and Android OS based phone/tablet

iOS

Step 1: Make sure your device is connected to the same network with IFP.

Step 2: Enter password that shown on IFP.

Step 3: Slide up at the bottom enter the quick set Open AirPlay.

Step 4: Select the device, then the iOS operate interface will appear.

Android

Step 1: Make sure your device is connected to the same network with IFP.

Step 2: Enter password that shown on IFP.

Step 3: Scan the QR code that shown on IFP to download the client.

Step 4: Open the ViewBoard Cast client.

4.8.3. ViewBoard Cast out from mobile device will support annotation function

Item		Description
	Toggle	Click to hide or display tool bar
	Home	Click to return to home interface
	Return	Click to return to previous operation interface
	Folder	Click to view or open mobile device internal file
	Screen sharing	Click to share screen (Android 5.0 above supported)
	Touch	Click to change to touch mode
	Pen	Click to make annotation in the picture Click to change color or thickness
	Clear	Click to clean all the elements
	Camera	Click to use camera then send the image to IFP50

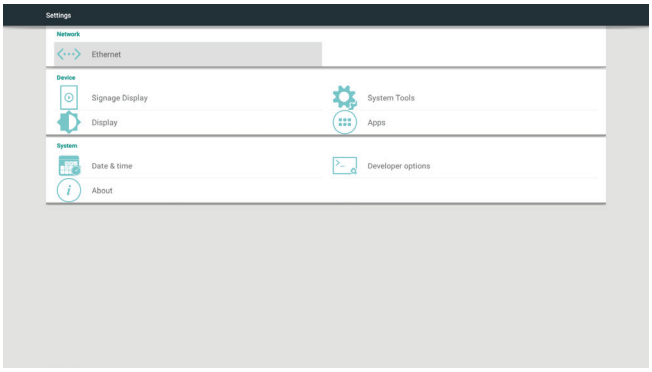
5. Setting (Admin mode)

Press Menu 1 9 9 8 on remote control to enter admin mode.

5.1. Setting

Main items:

(1) Ethernet
(2) Signage Display
(3) System Tools
(4) Display
(5) Apps
(6) Date & time
(7) Developer options
(8) About



5.2. Ethernet

Enable/Disable to turn on/off Ethernet
After enable Ethernet, the settings will show:

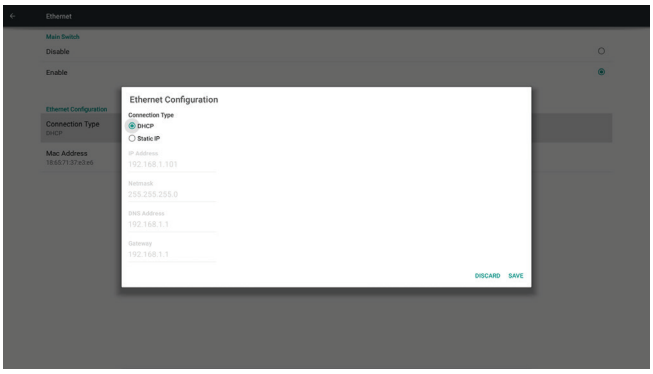
(1) Connection Type (Available connection type: DHCP/Static IP)
A. DHCP
B. Static IP
C. IP Address
D. Netmask
E. DNS Address
F. Gateway
(2) Mac Address

5.2.1. DHCP

DHCP mode:

(1) Cannot modify IP Address, Netmask, DNS Address and Gateway.

(2) If connect successfully, it will display current network configuration.



5.2.2. Static IP

In Static IP mode, user can input IP Address, Netmask, DNS address and Gateway.

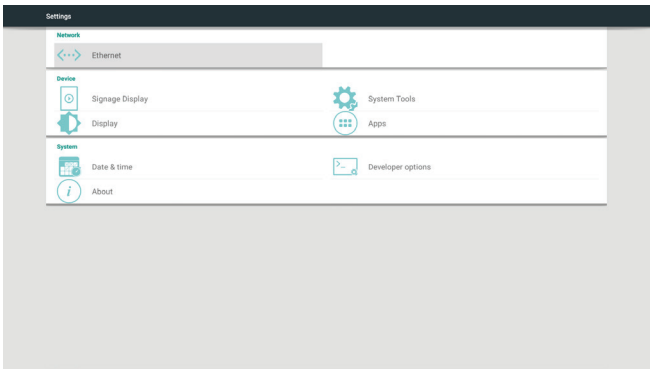
Note:

IP address, netmask, DNS address and gateway address input limitation.

(1)Format:

I. number 0-9

II. decimal point “.”



5.3. Signage Display

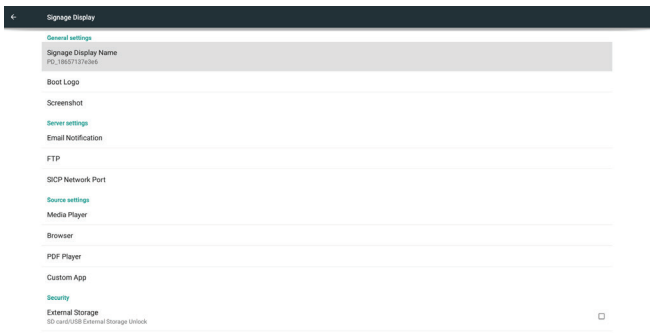
Divide into 4 groups: General Settings / Server Settings / Source Settings / Security

(1) General Settings
- A. Signage Display Name
- B. Boot Logo
- C. Screenshot

(2) Server Settings
- A. Email Notification
- B. FTP
- C. SICP Network Port

(3) Source Settings
- A. Media Player
- B. Browser
- C. PDF Player
- D. Custom app

(4) Security
- A. External Storage



5.3.1. General Settings

1. Signage Display Name

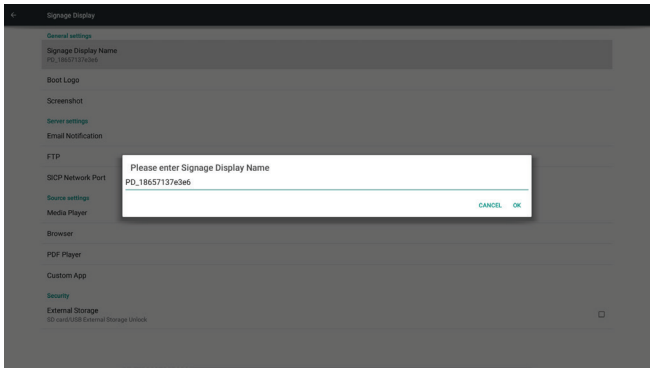
Set up PD name “PD_” + Ethernet Mac Address.

Note:

Input limitation:

(1) length: Max 36 characters

(2) format: no limit



2. Boot Logo

1) Scalar OSD menu to control Android boot logo enable/disable Scalar OSD menu operation

RCU: MENU -> Configuration2 -> Logo -> On/Off/ User.

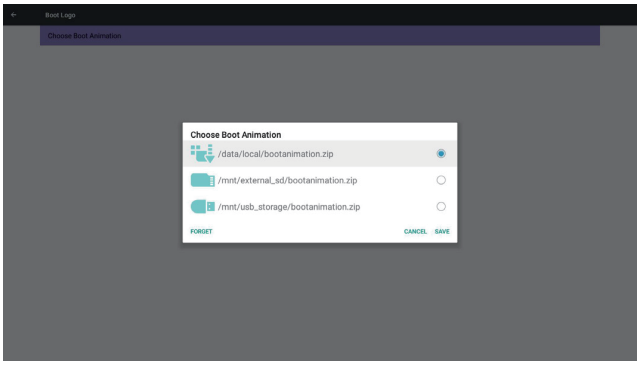
In user mode, user can choose their own boot logo animation file.

Note:

(1) Boot animation file name: bootanimation. zip

(2) Will pop-up a window for user to select USB and SD card. No priority issue.

3) When boot logo selected, PD will check if there is bootanimation. zip under USB and SD card.



Function introduction:

a. Option description

/data/local

Use customized boot animation file which is copied from SD card or USB

/mnt/external_sd

Use boot animations file under SD card

/mnt/usb_storage

Use boot animations file under USB

b. Save

Press save key to save SD card or USB bootanimation.zip to /data/ local and set it as boot logo.

c. Forget

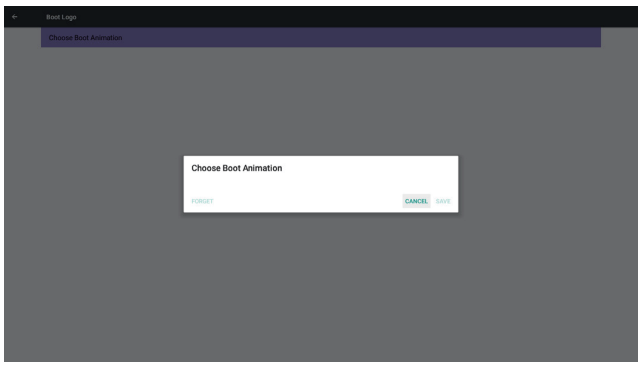
Press Forget key to delete /data/local bootanimation.zip and not show boot logo.

d. Cancel

Close dialogue w/o changes. Scenario introduction:

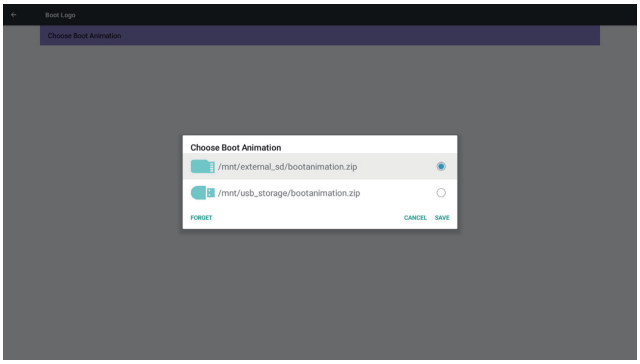
Case 1

The user don't settle customized boot logo. PD does not find any bootanimation.zip file under SD and USB.The list will be blank. Save and Forget button will be gray and useless.



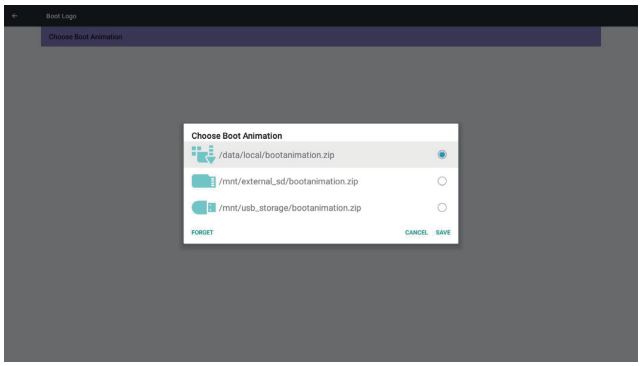
Case 2

The users do not settle customized boot logo. PD find bootanimation.zip file under SD and USB.The screen will show bootanimation.zip and select the first file automatically.



Case 3

The user settle customized boot logo, the screen will show /data/ local/bootanimation.zip.



4) If OSD menu Logo item is On or Off, the users cannot choose boot animation in Android settings.

3. Screenshot

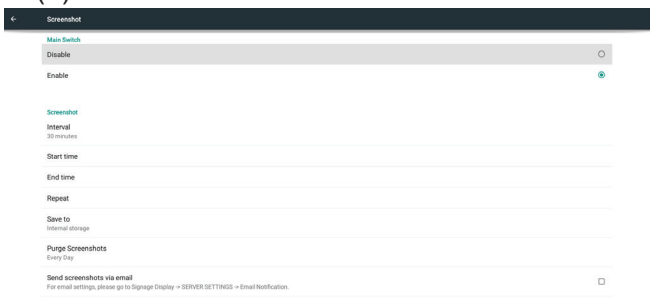
Via Enable/Disable to control screenshot On/Off. After Enable, user can set screenshot timeslot and save path.

Note:

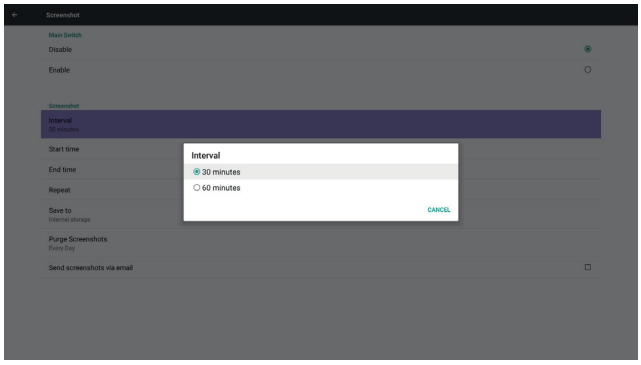
Time slot of deletion and screenshot:

(1) Will delete picture at initial time 0 sec.
(2) Will screeshot at first 40 sec.
(3) Media player, Browser, CMND & play, PDF reader, Custom source are suppor ted.

(4) Screenshot will not include video container



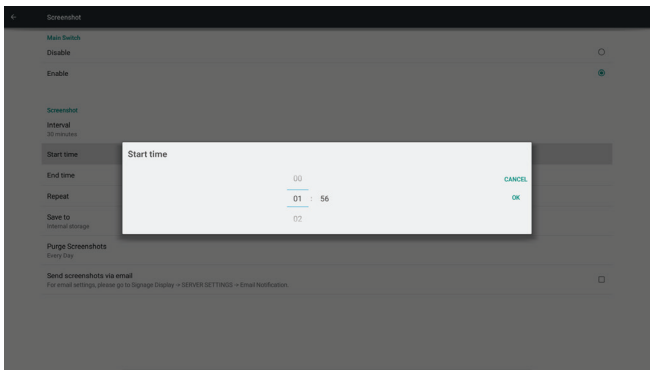
1) Inter val
Set up interval timeframe. 30 mins or 60 mins



2) Start Time
Set up screenshot start time.

Note:

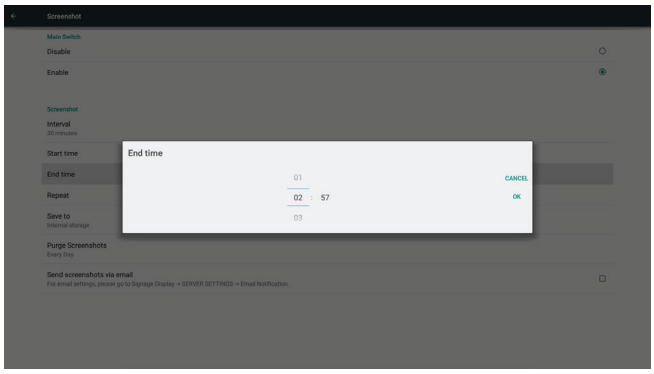
(1) If no star t time, the screen will show current time automatically
(2) Just press Back key to exit dialog for Set up
(3) Start time cannot be newer than End time. It will show Error toast.



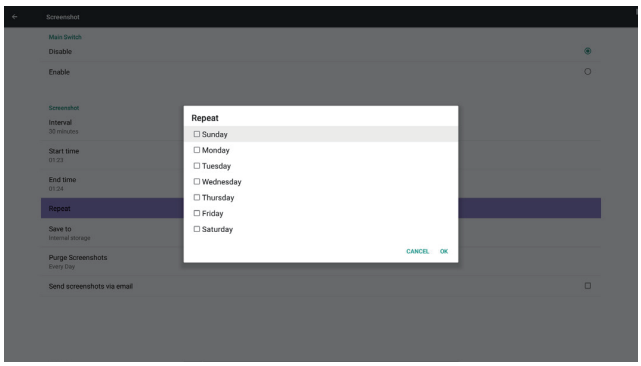
3) End Time
Set up screenshot End time

Note:

(1) If no End time, the screen will show current time automatically
(2) Star t time cannot be newer than End time. It will show error toast.



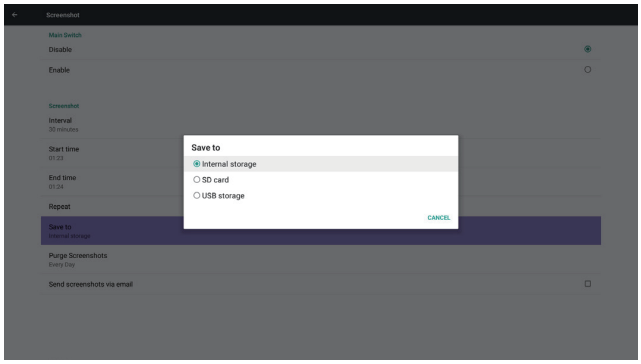
4) Repeat
Set screenshot repeat cycle. User can choose screenshot time frame. (Multiple selection)



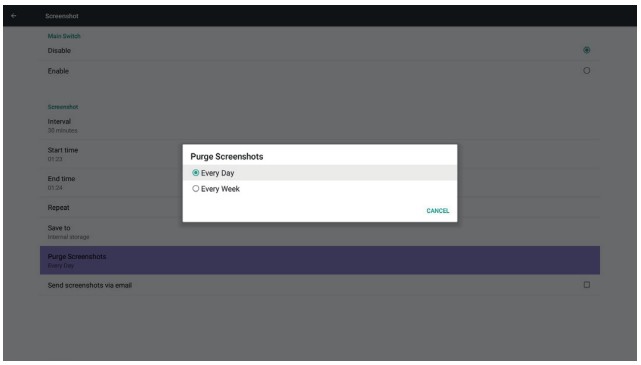
5) Save to
Set up screenshot save path. Internal storage, SD card or USB storage.)

Note:
picture storage path

(1) In root of internal storage/usb storage/sd card, PD will create folder automatically.
(2) The picture will save to ViewSonic/ Screenshot/.



6) Purge Screenshots
Set up purge timeframe. One day or One week.



(7) Send screenshots via email
After check this item, it will send screenshot to email of administrator
Please refer to 6.2.1 Email notification

Note:
Please confirm Email setting is done.

5.3.2. Server Settings

1. Email Notification

Via Enable/Disable to control Email On/Off)

After Enable, user can set up Email notification configuration.

1) SMTP (Set SMTP configuration)

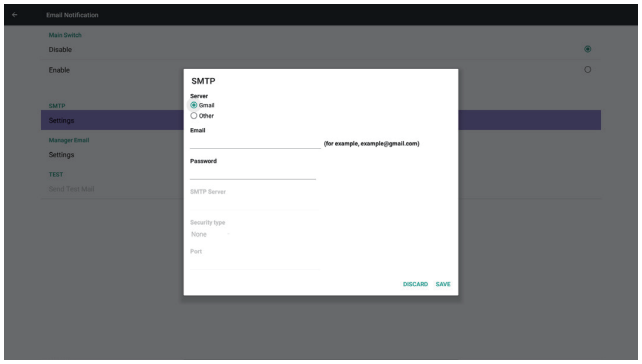
User can set Gmail account or other mail account.

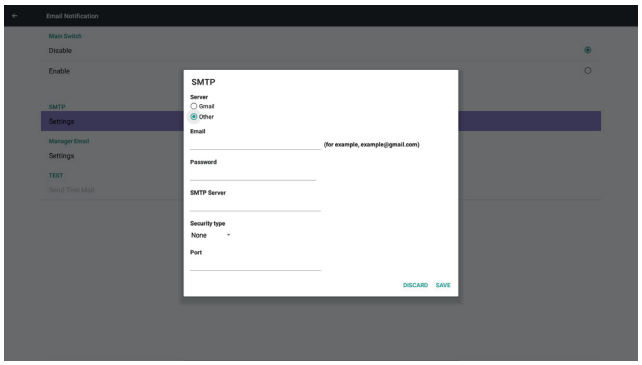
User can select other mail account and set up SMTP server, Security type and por t item

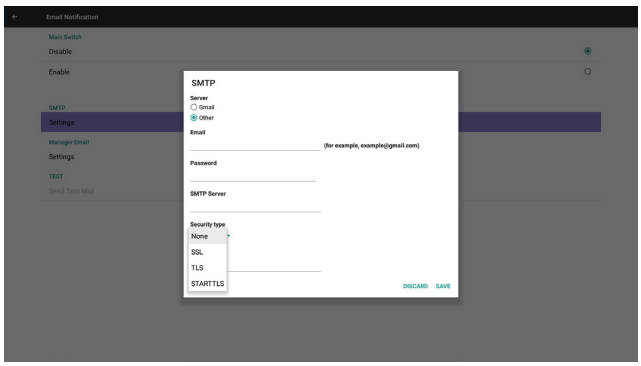
Note

Password input limitation

(1) Length: 6-20 characters
(2) Format: no limit
(3) unavailable por t: 5000



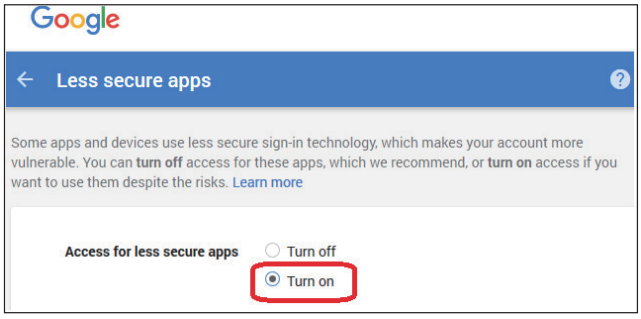




Gmail safety setting

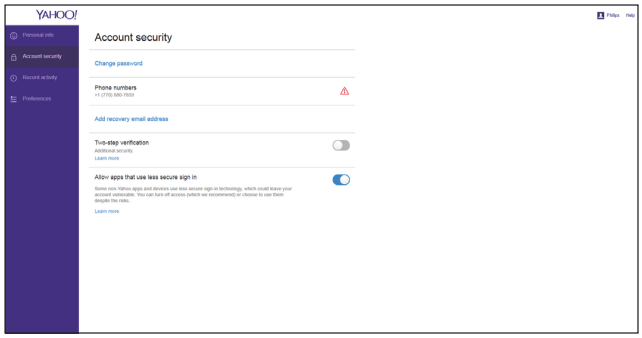
If Gmail is not working when setting is complete, please test Gmail account via PC and link below URL

And confirm “Access for less secure apps” item is Turn On



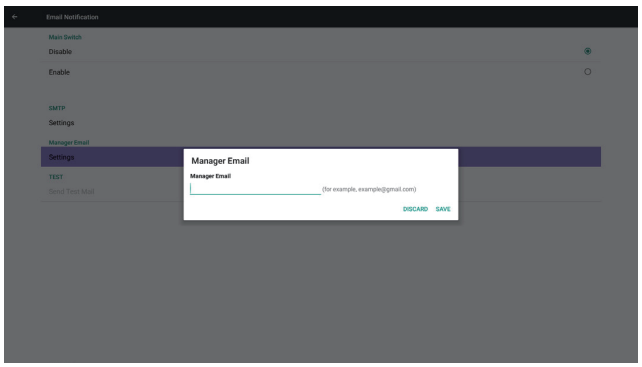
Yahoo Email Security Setting

If Yahoo Email is not working when setting complete, please confirm “Allow apps that use less secure sign in” item is enabled.



2) Manager Email

Set up Receiver mail account



3) Test

Send Test Mail

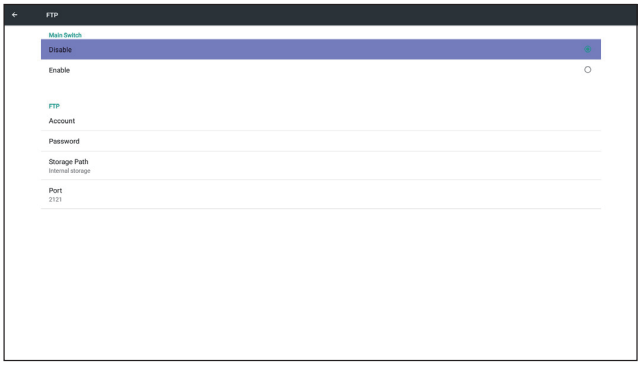
To test Gmail account receive/send function. Note

(1) When Email is Disable, “Send Test Mail Button” button will gray out

2. FTP

Via Enable/Disable to control FTP On/Off. After set up, PD can share

FTP files.



1) Account

Set up FTP account

Note:

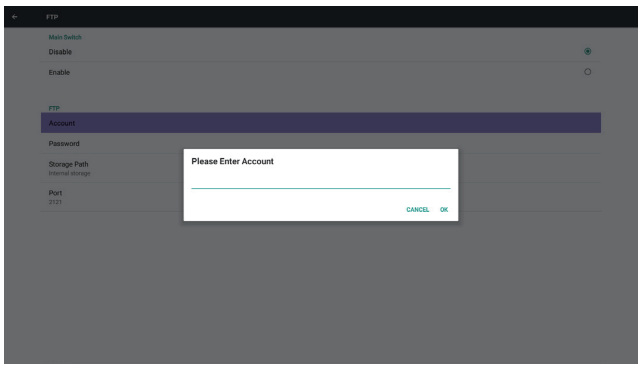
Input limitation

(1) Length: 4-20 characters

(2) Format:

I. English a-z and A-Z

II. Number 0-9



2) Password

Set up FTP password.

Note:

Input limitation

(1) Length: 6-20 characters

(2) Format:

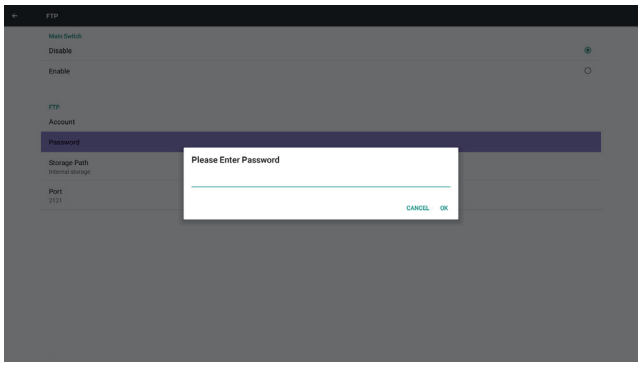
I. English a-z and A-Z

II. Number 0-9

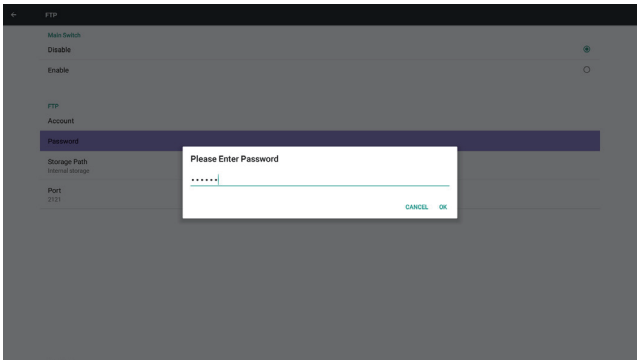
FTP password display

(1) Will show “*” symbol to instead password if set up password via remote control.

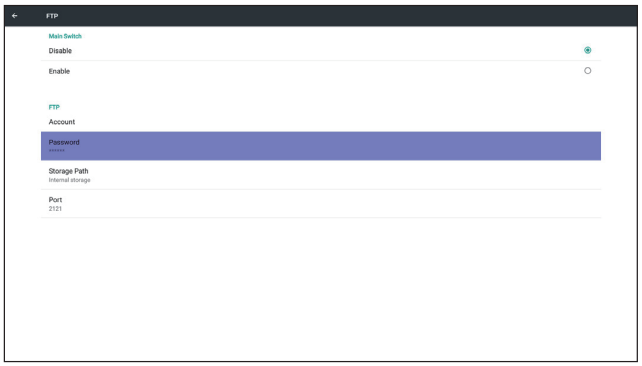
(2) After set up, the password text will show as “*” symbol. Before password input:



After password input:

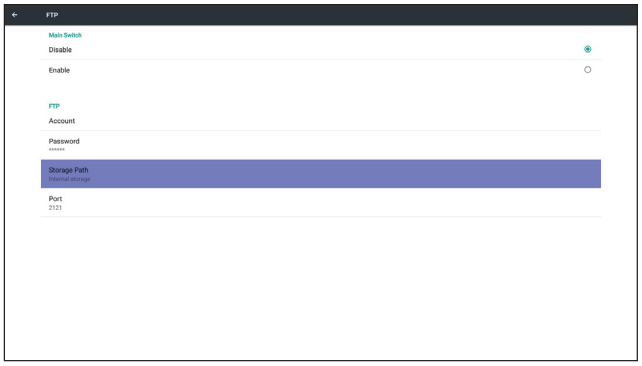


Set up completed screen:



3) Storage Path
Show default path: Internal storage

Note:
Can only display Internal storage, cannot be modified.(Only show path)

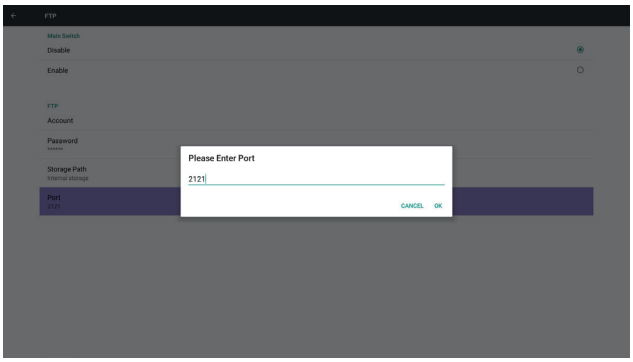


4) Will show Server is unbinded if Remote control server feedback unbinded status.

5) Port
Set up FTP por t number. Default: 2121

Note:
Input limitation

(1) Length: Max 5 characters
(2) Range: 1024 ~ 65535
(3) Format: Number 0-9
(4) Unavailable por t: 5000
(5) The por t number must more than 1024



3. SICP Network Port
Change SICP Network Port.

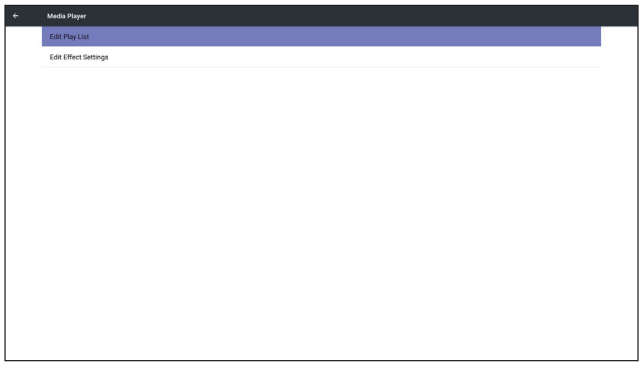
Note:

(1) Range: 1025-65535
(2) unavailable port: 8000 / 9988 / 15220 / 28123 / 28124

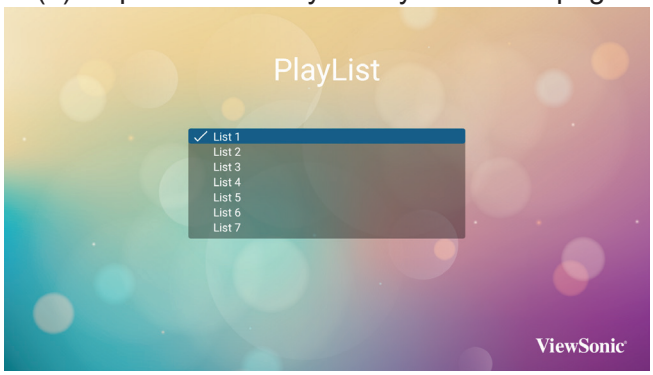
5.3.3. Source Settings

1. Media Player

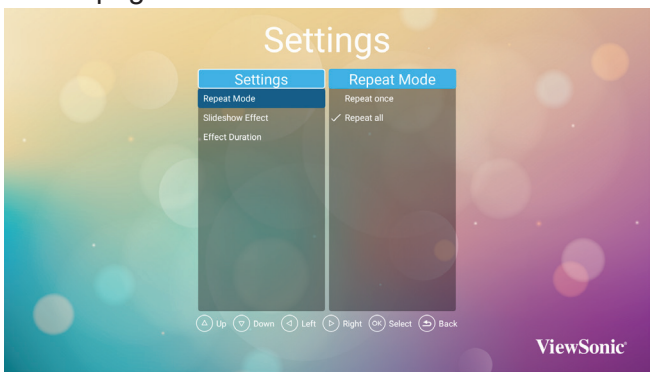
Can Edit Media Player play list and effect settings.



(1) Open Media Player Player List edit page.

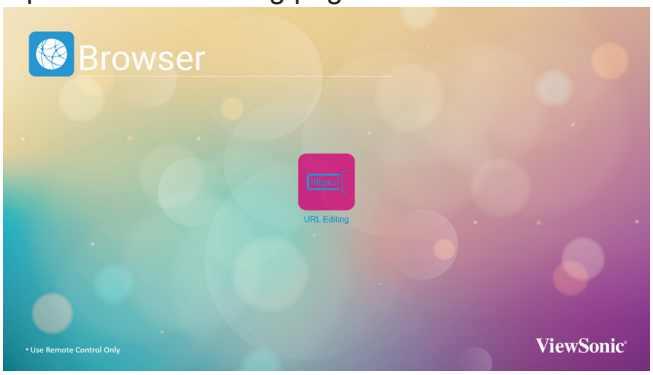


(2) Open Media Player slideshow effect edit page.

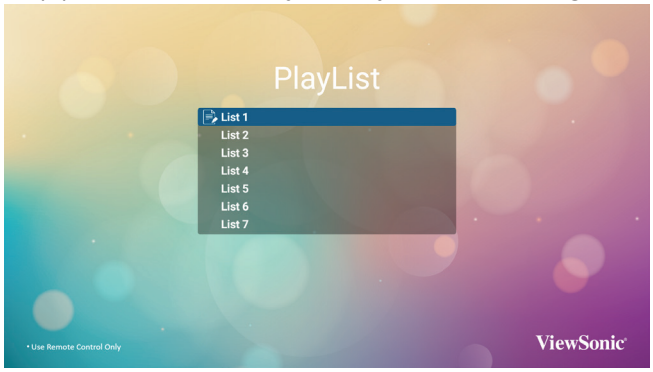


2. Browser
Can edit Bookmark configuration.

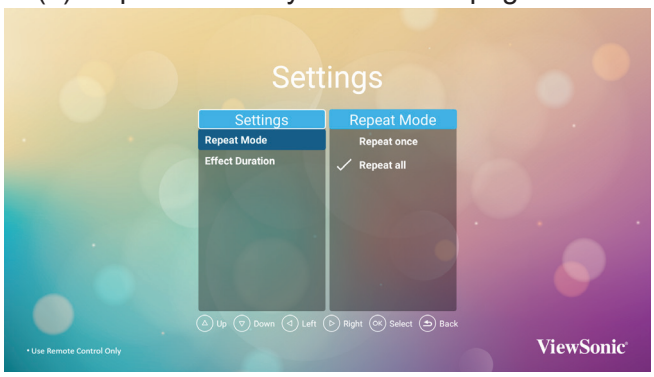
Open Browser setting page.



3. PDF Player
(1) Open PDF Player Player List edit page.

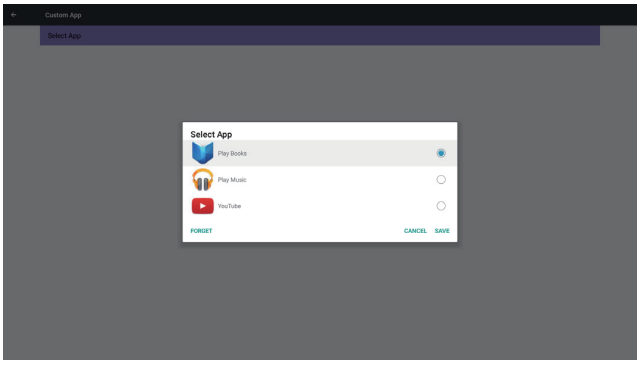


(2) Open PDF Player effect page.



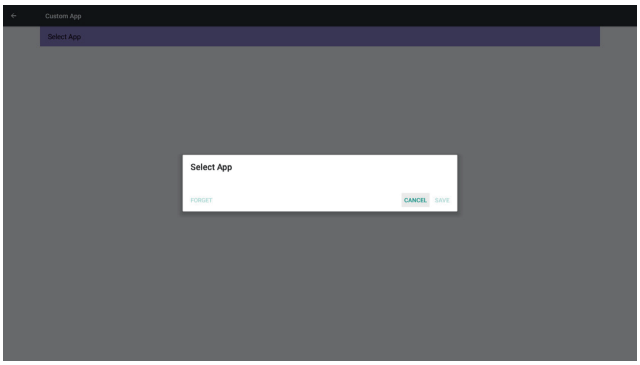
4. Custom App
User can set up the application for Customer Source. Note
(1) Only display User Installed app.
(2) Will not show up system pre-install app.
Scalar OSD menu operation
RCU: Source -> Custom
If set up customer APK, PD will open customer app when switch source to Customer mode.
If no set up customer APK, PD will show Black screen when switch source to Customer mode.

Function introduction

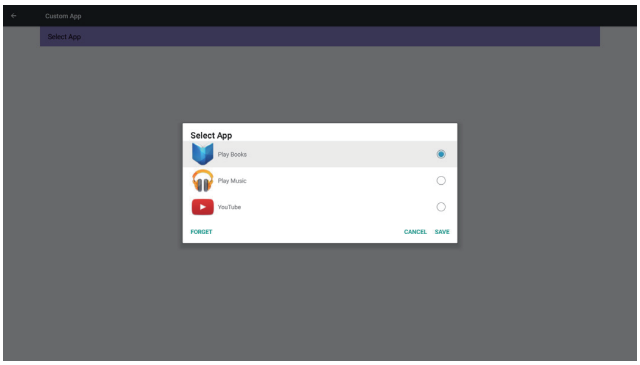


(1) Save
Select App and press Save key to save it.
(2) Forget
Press Forget key to clean previous stored data
(3) Cancel
No change, close window directly
If no customer installed apk, the list will be blank.

No option for choose. Save and Forget key will be gray and unavailable.

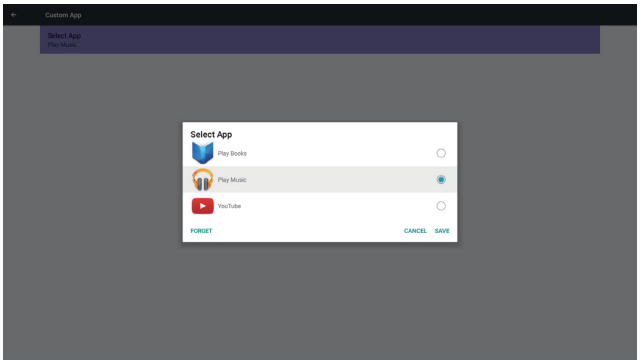


User can select customer installed apk in list
No setup Custom App
Screen will show available apps and focus on first app item automatically.



After setup, it will show App name

Case2. Setup Custom App. (there is a checked circle on right)



5.3.4. Security

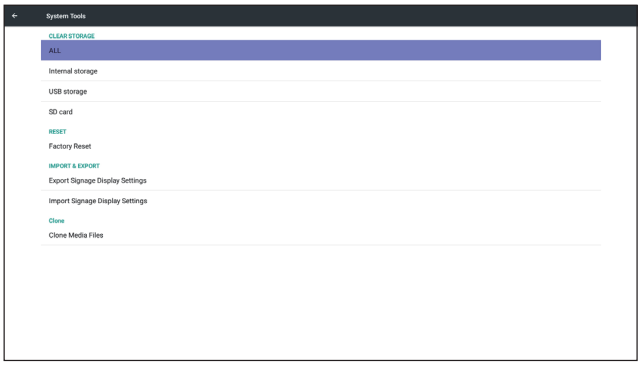
1. External Storage
   Enable: SD card/USB External Storage Lock.
   Disable: SD card/USB External Storage Unlock.

Note:
Must re-plug SD card/USB External Storage after unlock the external storage.

5.4. System Tools

System tools 4 main functions:

(1) Clear Storage
(2) Reset
(3) Import & Export
(4) Clone

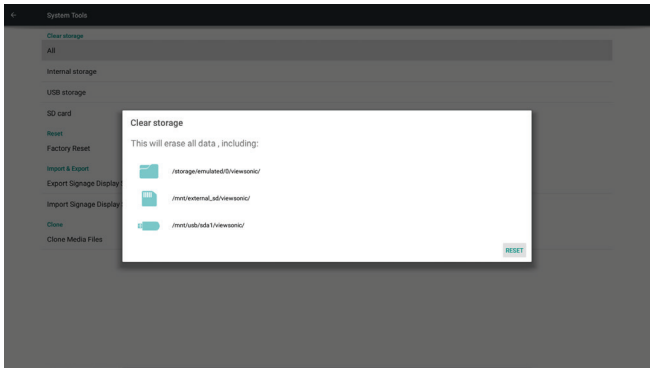


5.4.1. Clear Storage

The purpose is to clear all data in viewsonic folders. Divided into 4 mode:

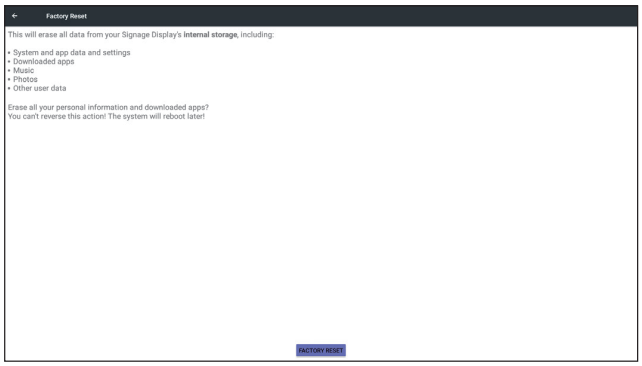
(1) Clear all viewsonic folders
(2) Only clear viewsonic folder under Internal storage.
(3) Only clear viewsonic folder under USB storage.
(4) Only clear viewsonic folder under SD card.

Pop-up the window to display all folders which can be clear.

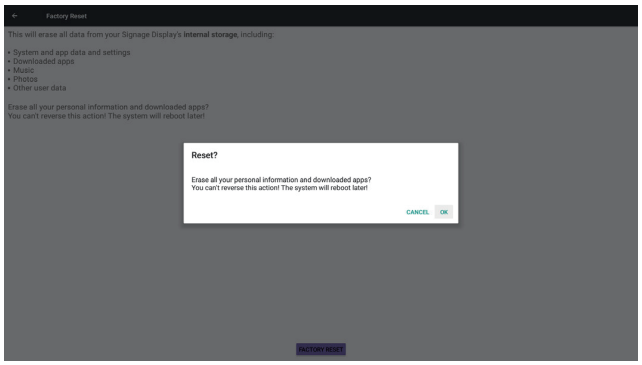


5.4.2. Reset

Factory Reset can recover to Factory default settings.



Press OK to execute Reset function automatically.



5.4.3. Import & Export

The function of Impor t & Export PD settins.

Notes.

(1) Settings.db (Saved file name: settings.db)
(2) Will save to viewsonic folder in storage

5.4.3.1 Export Signage Display Settings

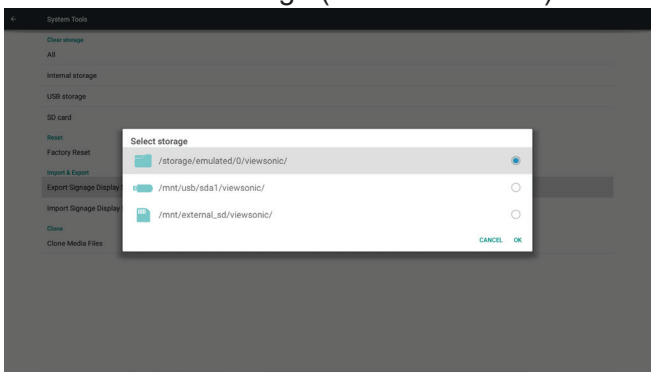
Will export to viewsonic folder under USB or SD card

(1) Export settings.db. Include OSD setting, Android settings but “Signage Display Name” and “Boot Logo”
(2) Export 3rd party apk to viewsonic/app/

Note:

If no viewsonic folder exists in USB or SD card, it will be created automatically.

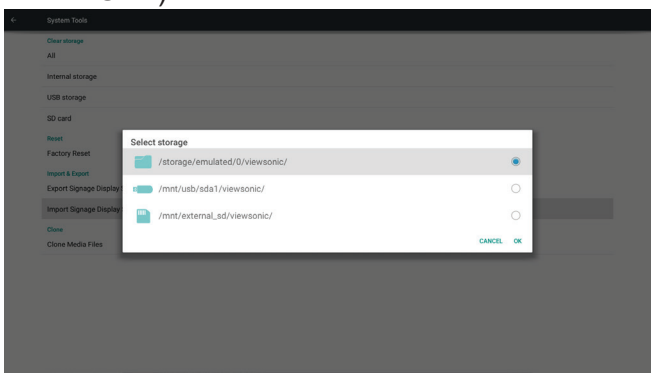
List all available storage (internal/SD/USB)



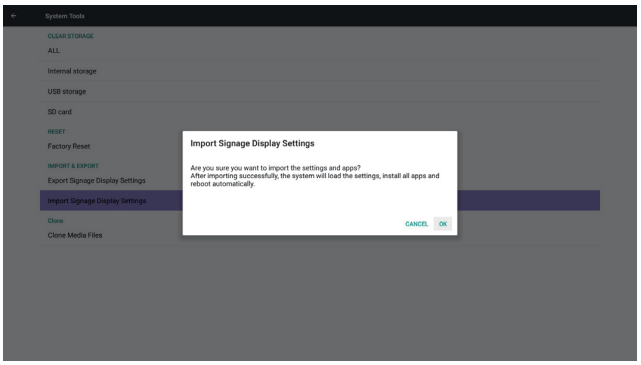
5.4.3.2 Import Signage Display Settings

Impor t settings.db from viewsonic folder under USB or SD card.

(1) Import settings.db. Include OSD setting, Android settings but “Signage Display Name” and “Boot Logo”
(2) Auto install 3rd par ty apk from viewsonic/app/List all available storage (Internal/SD/USB)



Show notification dialog before database import

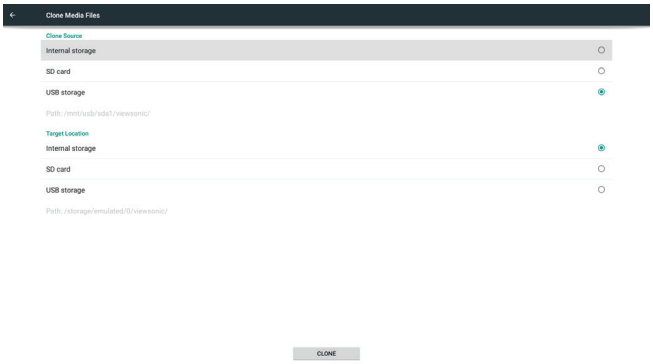


5.4.4. Clone

Clone media file from Internal, SD or USB viewsonic folder.

1. The cloned folder name under viewsonic folder
   (1) viewsonic/photo
   (2) viewsonic/music
   (3) viewsonic/video
   (4) viewsonic/pdf
   (5) viewsonic/browser

2. Clone Source
   (1) Internal storage
       (a) check FTP
       (b) check /viewsonic/
   (2) SD / USB
       Files under root
3. Target Location
   (1) Internal storage
       Save to /viewsonic/
   (2) SD / USB
       Save to root



5.5. Display

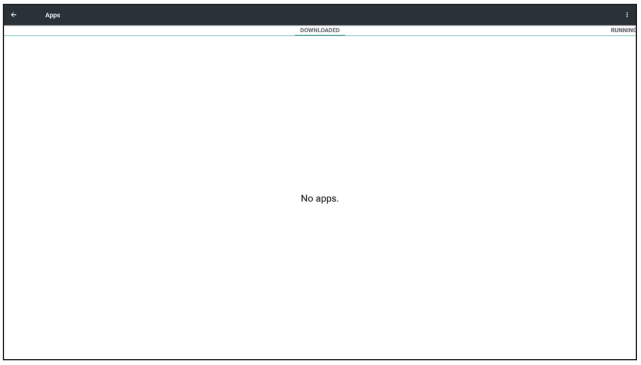
User can modify the font size, can choose: Small/ Normal/Large/Huge

5.6. Apps

Display applications information.

Note

(1) User options key on RCU to show setting option.

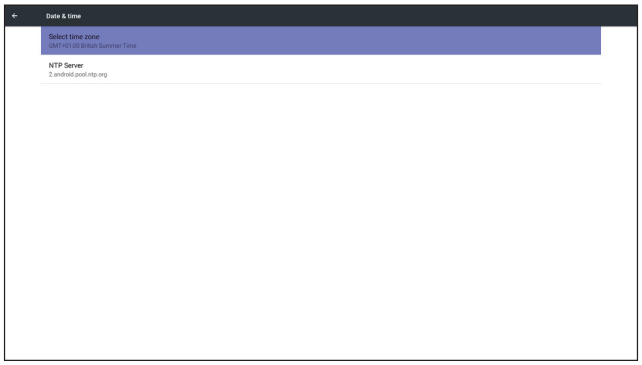


5.7. Date & time

Via Scalar OSD menu to control Auto Time On/Off.

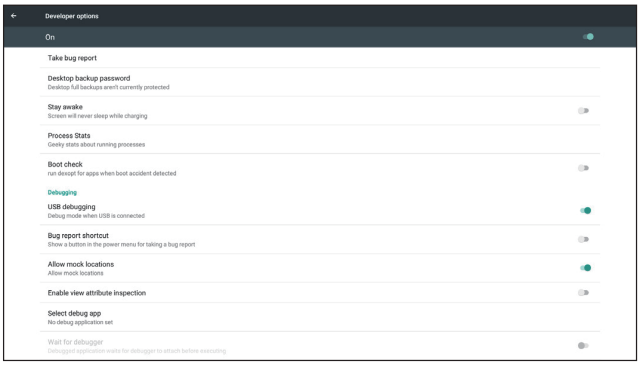
Note:

Add new NTP server to display current ser ver IP.



5.8. Developer options

Android developer options



5.9. About

Main info in About:

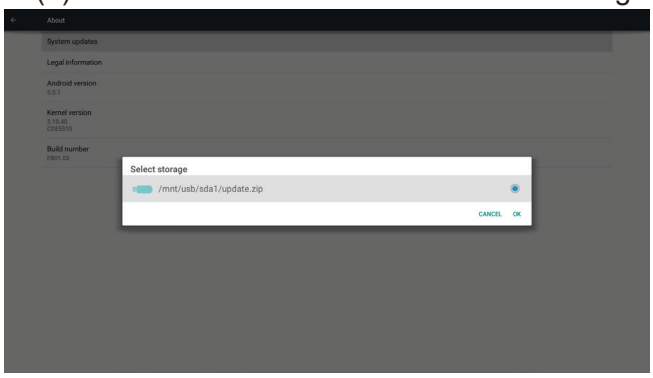
(1) System updates
(2) Legal information
(3) Android version
(4) Kernel version
(5) Build number

5.9.1. System updates

Will automatically search update.zip in USB. Will be shown in list for user selection if found

Note:

(1) Only support Android Full image.
(2) file name should be update.zip.
(3) the file should be located in root of storage.



After select update.zip file, PD will restart and start to update.

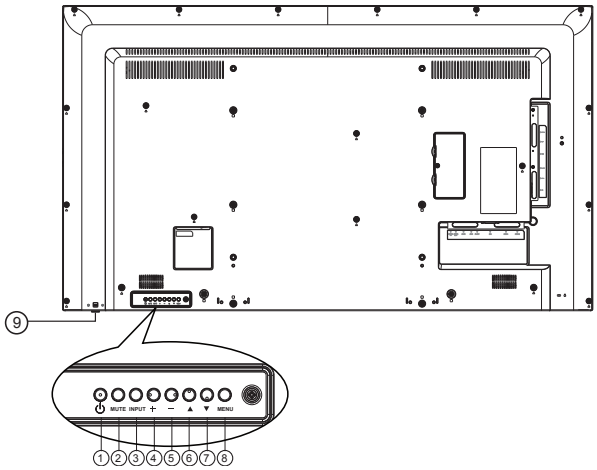
6. OSD Menu

An overall view of the On-Screen Display (OSD) structure is shown below. You can use it as a reference for further adjusting your display.

Navigating the OSD menu using the remote control:

1. Press the [⌂] **MENU** button to display the OSD menu.
2. Press [▲] [▼] [◄] or [►] button to select its menu item or to adjust its value. Press **OK** button to confirm.
3. Press [⮌] **EXIT** button to go back to the previous menu layer.
4. Press [⌂] **MENU** button to exit the OSD menu.

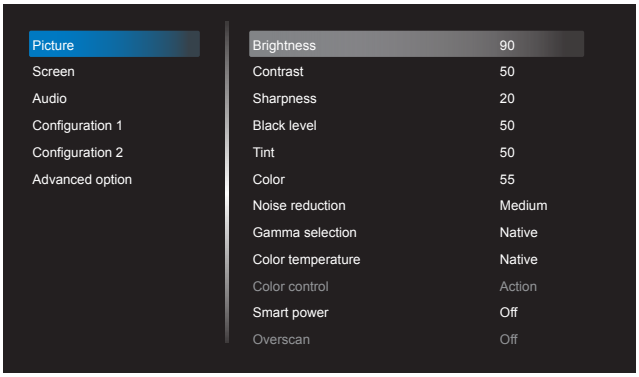
Navigating the OSD menu using the display's control buttons:



1. Press the **MENU** button to display the OSD menu.
2. Press the [▲] [▼] [+] or [–] to select menu item or adjust its value.
3. Press [**INPUT**] button to confirm menu selection and enter its submenu.
4. Press **MENU** to confirm menu selection and enter its submenu.

6.1. Settings

6.1.1. Picture menu



Brightness (Picture)

Adjust the overall image and background screen brightness(backlight).

Contrast

Adjust the image contrast ratio for the input signal.

Sharpness

This function is digitally capable to keep crisp image at any timings.

It is adjustable to get a distinct image or a soft one as you prefer and set independently for each picture mode.

Black level

Adjust the image brightness for the background.

NOTE: sRGB picture mode is standard and cannot be changed.

Tint (Hue)

Adjust the tint of the screen.

Press + button the flesh tone color becomes greenish. Press - button the flesh tone color becomes purplish.

NOTE:VIDEO mode only.

Color (Saturation)

Adjust the color of the screen.

Press + button to increase color depth. Press - button to decrease color depth.

NOTE: VIDEO mode only

Noise Reduction

Adjust the noise reduction level.

Gamma selection

Select a display gamma. It's refer to the brightness performance cur ve of signal input. Choose from {Native} / {2.2} / {2.4} / {s gamma} / {D-image}.

NOTE: sRGB picture mode is standard and cannot be changed.

Color temperature

It is used to adjust the color temperature.

The image becomes reddish as the color temperature decreases, and becomes bluish as the color temperature increases.

CCT	10000º K	9300 º K	7500 º K	6500 º K	5000 º K	4000 º K	3000 º K
X	0.279 ± 0.030	0.283 ± 0.030	0.299 ± 0.030	0.313 ± 0.030	0.346± 0.030	0.382± 0.030	0.440± 0.030
Y	0.292 ± 0.030	0.298 ± 0.030	0.315 ± 0.030	0.329 ± 0.030	0.359± 0.030	0.384± 0.030	0.403± 0.030

Color control

The color levels of red, green, and blue are adjusted by the color bars. R: Red gain, G: Green gain, B: Blue gain.

Smart power

Smar t Power control is not relative to brightness control:

1. Initial setting Brigthness
   70 (in the range from 0-100)
   Power consumption 70% of maximum power consumption
2. Smart Power
   OFF: no adaptation
   MEDIUM: 80% of power consumption relative to current settings
   HIGH: 65% of power consumption relative to current settings

Overscan

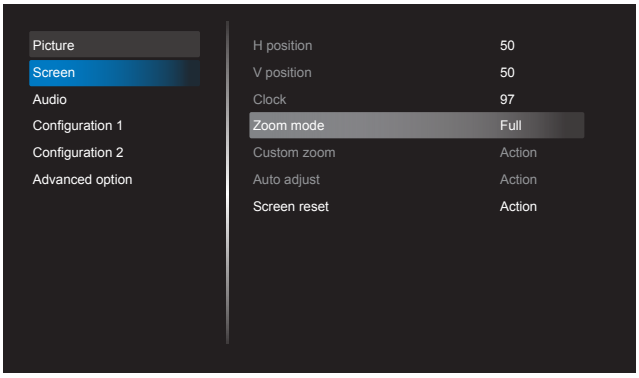
Change the display area of the image. ON: Set to display area about 95%. OFF: Set to display area about 100%.

Picture reset

Reset all settings in the Picture menu.

Select "Yes" and press "SET" button to restore to factory preset data. Press "EXIT" button to cancel and then return to the previous menu.

6.1.2. Screen menu



H position

Control Horizontal Image position within the display area of the LCD.

Press + button to move screen to right.

Press - button to move screen to left.

NOTE:VGA input only.

V position

Control Ver tical Image position within the display area of the LCD.

Press + button to move screen to up.

Press - button to move screen to down.

NOTE:VGA input only.

Clock

Press + button to expand the width of the image on the screen the right.

Press - button to narrow the width of the image on the screen the left.

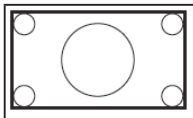
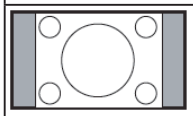
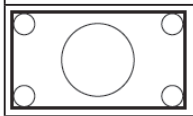
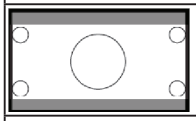
NOTE:VGA input only.

Zoom mode

HDMI, DP, DVI,VGA, OPS: {**Full**} / {**4:3**} / {**Real**} / {**21:9**}/ {**Custom**}. Playing media in Media Player : {**Full**} / {**4:3**} / {**Real**} / {**21:9**}

There are no function when BROWSER, CMND & Play, PDF Player, PDF Player, Custom and Media Player UI and Android UI

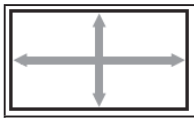
Zoom Mode will be "**Full**" when tiling

	**Full** This mode restores the correct proportions of pictures transmitted in 16:9 using the full screen display.
	**Normal** The picture is reproduced in 4:3 format and a black band is displayed on either side of the picture.
	Real This mode displays the image pixel-by-pixel on screen without scaling the original image size.
	**Dynamic** The picture is reproduced in 16:9 format and a black band at the top and bottom.
	**21:9** The picture is reproduced in 21:9 format and a black band at the top and bottom.
	Custom Choose to apply the custom zoom settings in the Custom Zoom submenu.

Custom zoom

You can use this function to fur ther customize the zoom settings to suit the image you want to display.

NOTE: This item is functional only when the {**Zoom mode**} is set to {**Custom**}.

	**Zoom** Expands the horizontal and vertical sizes of the image simultaneously.
	H zoom Expands the horizontal size of the image only.
	V zoom Expands the vertical size of the image only.
	H position Moves the horizontal position of the image left or right.
	V position Moves the ver tical position of the image up or down.

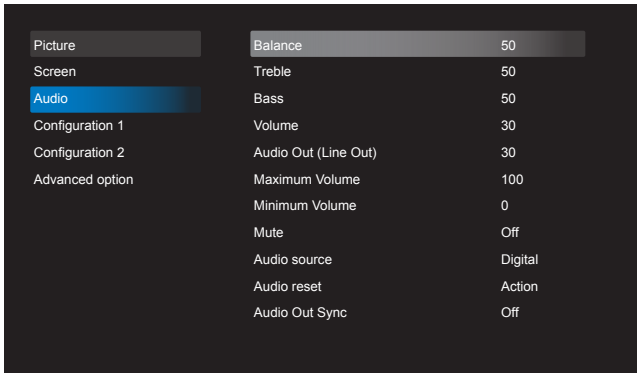
Auto adjust

Press "Set" to detect and adjust H position,V position, Clock, Phase

Screen reset

Reset all settings in the Screen menu to factory preset values.

6.1.3. Audio menu



Balance

Adjust to emphasize left or right audio output balance.

Treble

Adjust to increase or decrease higher-pitched sounds.

Bass

Adjust to increase or decrease lower-pitched sounds.

Volume

Adjust to increase or decrease the audio output level.

Audio out (line out)

Adjust to increase or decrease line out output level.

Maximum volume

Adjust your own limitation for the maximum volume setting.This stops the volume from being playing at too loud a level.

Minimum volume

Adjust your own limitation for the minimum volume setting.

Mute

Turn the mute function on/off.

Audio source

Select the audio input source.There are no audio output when no video signal.

Analog: audio from audio input

Digital : audio from HDMI/DVI audio.

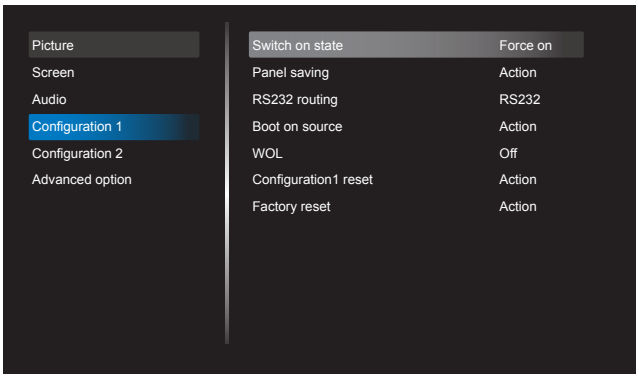
Audio reset

Reset all settings in the Audio menu to factory preset values.

Audio Out Sync

Enable/disable audio out (line out) volume adjustability to sync with internal speakers.

6.1.4. Configuration1 menu



Switch on state

Select the display status used for the next time you connect the power cord.

- {**Power off**} - The display will remain off when the power cord is connected to a wall outlet.
- {**Forced on**} - The display will turn on when the power cord is connected to a wall outlet.
- {**Last status**} - The display will return to the previous power status

Panel saving

Choose to enable the panel saving functions and thus reduce the risk of “image persistence” or “ghost-imaging”.

- {**Brightness**} - Select {**On**} and the image brightness will be reduced to an appropriate level.The Brightness setting in the Picture menu will be unavailable when selected.
- {**Pixel shift**} - Select the time inter val ({**Auto**} / {**10 ~ 900**} Seconds/ {Off}) for the display to slightly expand the image size and shift the position of pixels in four directions (up, down, left, or right). Activating Pixel Shift will disable H Position,V Position and Zoom Mode in the Screen Menu.

Note: Only suppor t external input source (HDMI,VGA, DP, OPS).

RS232-Routing

Select the network control port.

Choose from: {RS232} / {LAN -> RS232}

Boot on source

Choose to select source when boot up. Input: select input source when boot up.

Playlist: select playlist index for Media player, Browser, PDF player.

0: no play list. Same as switch source from OSD.1~7: playlist number. No failover function, system will keep source even the source is no signal input.

WOL

Choose to turn on or off the wake on LAN function. Choose from : {Off} / { On}

Configuration1 reset

Reset all settings in **Configuration1** menu to the factory preset values.

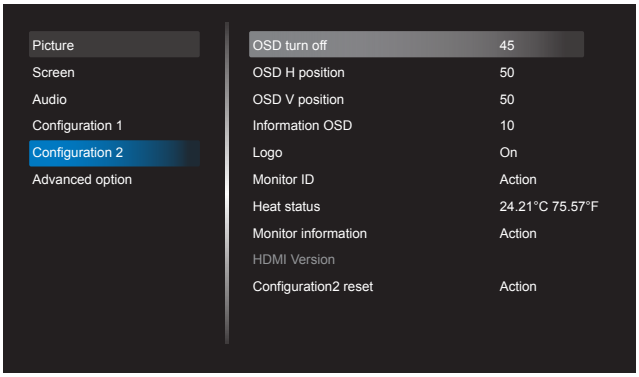
Factory reset

Reset all settings in the OSD menus of {**Picture**}, {**Screen**}, {**Audio**}, {**Configuration1**}, {**Configuration2**}, and {**Advanced option**} to the factor y preset values.

Android settings will also reset when factory reset.

Press [◄] or [►] button to select {**Reset**}, and press [**OK**] button to do the reset.

6.1.5. Configuration2 menu



OSD turn off

Set the period of time the OSD (on-screen display) menu stays on the screen.

The options are: {**Off**, **5 ~ 120**} seconds.

*{0ff} does not disappear automatically.

OSD H-position

Adjust the horizontal position of the OSD menu.

Information OSD

Set the period of time the information OSD is displayed on the upper right corner of the screen. The information OSD will display when input signal is changed.

The information OSD will remain on the screen with {**Off**} selection. The options are: {**1 ~ 60**} seconds.

Logo

Choose to enable or disable the picture of Logo when turn on your display.

The options are:

- {Off}
- {On} (Default)
- {User}

1. If Logo set to ON, both scalar ViewSonic logo and android animation ViewSonic logo will show.
2. If Log set to OFF, neither scalar ViewSonic logo nor android animation logo will not show.
3. If Logo set to USER, custom logo option in android is not set, then there will be no boot logo when power on.
4. If Logo set to USER, custom logo option in android is set, there will be only custom logo when power up.
   * Logo will NOT rotate with rotation setting/ detection.

Monitor ID

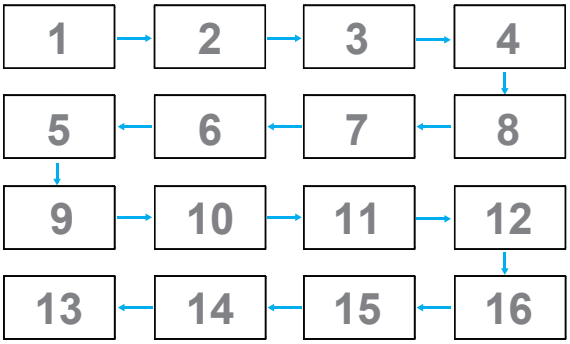
Set the ID number for controlling the display via the RS232C connection. Each display must have a unique ID number when multiple sets of this display are connected. Monitor ID number range is between 1 to 255.

The option are: {Monitor group}

{Monitor group}

The options are: {Off} / {1-254}

- {Off} – {Monitor group} are not suppor ted.
- {1-254} – {Monitor group} are suppor ted. The default setting is 1.

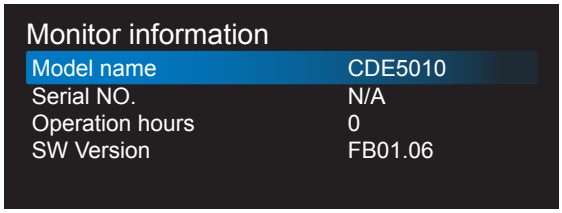


Heat status

This function allows you to check the thermal status at any time.

Monitor information

Shows information about your display, including model number, serial number, operating hours and software version.



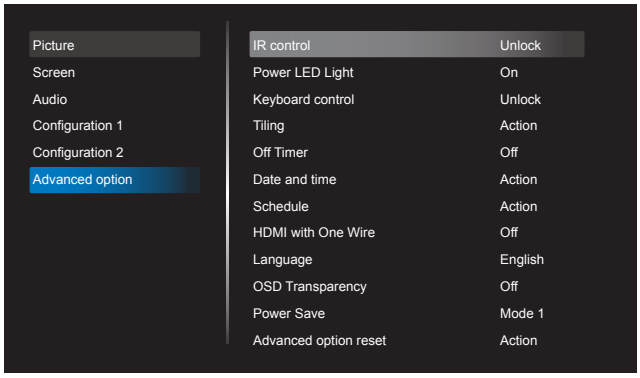
HDMI Version

Set the HDMI version to 1.4 or 2.0, this setting is only valid on HDMI input

Configuration2 reset

Reset all settings in Configuration2 menu to the factory preset values.

6.1.6. Advanced option menu



IR control

Select the operation mode of the remote control when multiple displays are connected via an RS232C connection.

- {**Normal**} - All displays can be operated normally by the remote control unit.
- {**Primary**} - Designate this display as the primar y display for remote control operation. Only this display can be operated by the remote control. (In primar y mode, IR key will always be processed regardless the monitor id/group settings).
- {**Secondary**} - Designate this display as the secondary display.This display can not be operated by the remote control, and will only receive the control signal from the primar y display via the RS232C connection.
- {**Lock All**} / {Lock all but Volume} / {Lock all but Power} / {Lock all except PWR & VOL}- Lock the remote control function of this display.To unlock, press and hold the [i] INFO button on the remote control for 6 (six) seconds.

Power LED light

Choose to set power indicate LED on or off. Choose {**On**} for normal use

Keyboard control

Choose to enable or disable the display keyboard (control buttons)

function.

- {**Unlock**} - Enable the keyboard function.
- {**Lock All**} / {Lock all but Volume} / {Lock all but Power} / {Lock all except PWR & VOL} - Disable the keyboard function.

NOTE: “Keyboard Control Lock Mode”This function completely

disables the access to all Keyboard Control functions.To enable or disable the keyboard control lock, press both [+] and [ ] buttons and hold down continuously for more than 3 seconds.

Tiling

With this function you can create a single large-screen matrix (video wall) that consists of up to 150 sets of this display (**up to 10-sets on the vertical and 15-sets on the horizontal sides**). This function requires a daisy-chain connection.

- **Switch on delay**: Set the power-on delaying time (in seconds). The default option {Auto} allows a sequential powering-on for each display by their ID number when multiple displays are connected.
  The options are: {Off (0) / Auto(1) / 2-255}
- **Brightness**: {Normal}/{ACS}
  • {**Normal**}: Adjust the overall image and background screen brightness (backlight).
  • {ACS}: Apply brightness value (backlight) which is adjusted by MIC tool.The default value before adjustment is the same as OSD brightness value, e.g., 70
- **Type**: {Off} (Default)/{SW Tool}/{OSD Only}
- **Source resolution**: {Full HD}(Default)/ {4K}
- **H monitors** - Select the number of displays on the horizontal side.
- **V monitors** - Select the number of displays on the ver tical side.
- **Position** - Select the position of this display in the screen matrix.
- **Frame comp.** - Choose to turn the frame compensation function on or off. If selected {Yes}, the display will adjust the image to compensate for the width of the display bezels in order to accurately display the image.

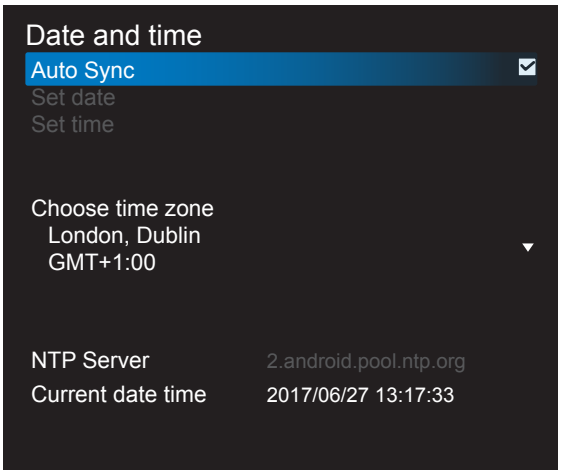
NOTE: Doesn't suppor t screen format function in tiling using cascade mode.

Off Timer

Set automatically power off time (in hours).

Date and time

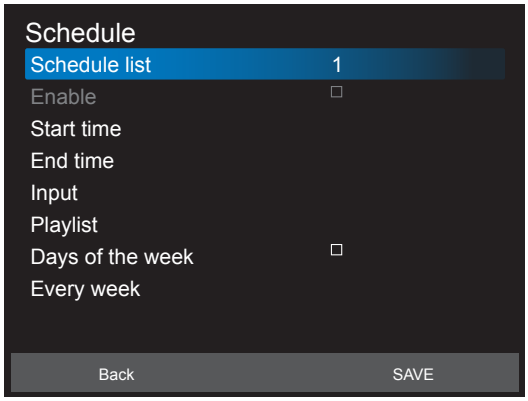
Adjust the current date and time for the display's internal clock.



1. Press [**OK**] button to enter or choose
2. Press [⮌] back button to return.
3. Press [⮜] or [⮞] button to adjust them.
   * Cannot set time to date after year 2037.

Schedule

This function allows you to program up to 7 (seven) different scheduled time intervals for the display to activate.



Schedule list:You can set 7 schedules.

- **Enable**: Enable/disable schedule. If set start/end time is conflict or empty, input is empty or time conflict with other schedule list, you cannot enable schedule.
- **Start time**: Set start time.
- **End time**: Set end time.
- **Input**: Platform will go to this select source automatically after the schedule on.
- **Play list**: 1 - 7: playback File1 - File7 of playlist automatically, only media player, pdf player and browser can set.
- **Days of the week**: Set Sunday, Monday,Tuesday, Wednesday, Thursday, Friday, Saturday.
- **Every week**: Set lifecycle.
- **Back**: Does not change schedule data.
- **Save**: Save schedule data.

HDMI with One Wire

CEC control.

- {**Off**} - Disable CEC.(Default)
- {**On**} - Enable CEC.

Language

Select the language used in the OSD menu.

The options are: English/Deutsch/ 简体中文 /Français/Italiano/Español/ Русский/Polski/Türkçe/ 繁體中文 .

OSD Transparency

Adjust OSD transparency.

- {Off} - Transparency off.
- {1-100} - Transparency level 1-100.

Power Save

Mode 1 [TCP off, WOL on, auto off]

Mode 2 [TCP off, WOL on, auto on/off]

Mode 3 [TCP on, WOL off, auto on/off]

Mode 4 [TCP on, WOL off, no auto on/off]

Power save modes

Mode 1: DC off -> Power off. LED: Red.
Power Save -> Power off, LED: Red

Mode 2: DC off -> Power off, LED: Red.
Power Save -> Power Saving.
LED: Orange. Can be wake up.

Mode 3: DC off -> Back light off, LED: Red
Power Save -> Back light off,
LED: Orange. Can be wake up.

Mode 4: DC off -> Back light off, LED: Red
Power Save -> Will not enter power save mode. show “no signal” only.

	RCU Power Button Off	No Signal	WoL	Android (ARM)
Mode 1 [TCP off, WOL on, auto off]	DC OFF	DC OFF	V	ARM OFF
Mode 2 [TCP off, WOL on, auto on/ off] (gary out)	DC OFF	When signal is back, system wake up	V	ARM OFF
Mode 3 [TCP off, WOL off, auto on/ off]	Backlight OFF	Backlight OFF	X	ARM OFF
Mode 4 [TCP off, WOL off, no auto on/off]	Backlight OFF	Backlight ON, show no signal	X	ARM OFF

* This product does not suppor t Mode 2

Following table is the action for Android board with different power mode.

DC off/on: press power button by RC

Power mode in OSD	Mode 1/2	Mode 3/4
DC off	shutdown	1. The cur rent source APK (such as MediaPlayer, Broswer, PDF or Smar tCMS) will be closed. 2. Android system will go to the default black launcher.
DC on	Boot up	1. Android system reboots

Auto FW Update

Setup Android FW auto background update time.

NOTE: When Auto FW update is not OFF, display will work under Mode3 for FW update, but OSD item will not change.

Advanced option reset

Reset all settings except {Date and Time} in the Advanced option menu to factory preset values.

1. Press [**OK**] or [►] button to enter the submenu.
2. Press [◄] or [►] button to select {**Reset**} and press the [**OK**] button to restore settings to factory preset values.
3. Press the [⮌] button or select {**Cancel**} and press the [**OK**] button to cancel and then return to the previous menu.

7. Supported Media Formats

USB Multimedia Codec Formats

Video Decode						
Type	**Video Codec**	**Container**	**Decode**	**Encode**	**Channel**	**Remark**
MPEG1/2	MPEG1/2	MPEG program stream (.DAT, .VOB, .MPG, .MPEG) MPEG transpor t stream (.ts, .trp, .tp) MP4 (.mp4, .mov) 3GPP (.3gpp, .3gp) AVI (.avi) MKV (.mkv)	V			Max Resolution: 1080P@60fps Max Bit Rats: 40Mbps
MPEG-4	MPEG-4	MP4 (.mp4, .mov) 3GPP (.3gpp, .3gp) AVI (.avi) MKV (.mkv)	V			Max Resolution: 1080P@60fps Max Bit Rats: 40Mbps
H.263	H.263	FLV (.flv) AVI (.avi)	V			Max Resolution: 1080P@60fps Max Bit Rats: 40Mbps
H.264	H.264	FLV (.flv) MP4 (.mp4, .mov) 3GPP (.3gpp, .3gp) MPEG transport stream (.ts, .trp, .tp) ASF (.asf) WMV (.wmv) AVI (.avi) MKV (.mkv)	V			Max Resolution: 1080P@60fps Max Bit Rats: 135Mbps 4k2k@30fps
H.265	H.265	MP4 (.mp4, .mov) 3GPP (.3gpp, .3gp) MPEG transport stream (.ts, .trp, .tp) MKV (.mkv)	V			Max Resolution: 4K2K@60fps Max Bit Rats: 100Mbps
GOOGLE VP8	VP8	MKV (.mkv) WebM (.webm)	V			Max Resolution: 1080P@30fps Max Bit Rats: 20Mbps
Motion JPEG	MJPEG	AVI (.avi) 3GPP (.3gpp, .3gp) MP4 (.mp4, .mov) MKV (.mkv)	V			Max Resolution: 1920*1080 @30fps Max Bit Rats: 40Mbps

Audio Decode

Type	Audio Codec	Container	Decode	Encode	Channel	Remark
MPEG Audio	MPEG1/2/2.5 Audio Layer1/2/3	MP3	V		2	Bit Rate: 8kbps~320Kbps Sampling Rate: 16KHZ~48KHz
Windows Media Audio	WMA Version 7, 8, 9,10 pro M0, 10Pro M1, M10 Pro M2	Decode: WMA	V		2	Bit Rate: 8kbps~768Kbps Sampling Rate: 8KHZ~96 (M10)KHz Non-support LBR
AAC Audio	MAIN, ADIF ,ATDS Header AAC-LC and AAC-HE	File Format: AAC, M4A	V		5.1	Bit Rate: N/A Sampling Rate: 8KHZ~48KHz

Image Decode

Type	Image Codec	Photo	Decode	Encode	Channel	Remark
JPEG	JFIF file format 1.02	File Format: JPG, JPEG	V		2	Max Resolution: 7000 x 7000 The limitation of max resolution depends on DRAM
BMP	BMP	File Format: BMP	V		2	Max Resolution: 15360 x 8640 The limitation of max resolution depends on DRAM
PNG	PNG	File Format: PNG	V		5.1	Max Resolution: 15360 x 8640 The limitation of max resolution depends on DRAM

NOTES:

- Sound or video may not work if the contents have a standard bit rate/frame rate above the compatible Frame/sec listed in the table above.
- Video content with a Bit rate or Frame rate larger than the rate specified in the table above can cause choppy video during playback.

8. Input mode

VGA Resolution:

Standard Resolution	Active Resolution		Refresh Rate	Pixel Rate	Aspect Ratio	Stand for Mode
	H Pixels	V Lines				
VGA	640	480	60 Hz	25.175 MHz	4:3	Video Graphic Array
			72 Hz	31.5 MHz		
			75 Hz	31.5 MHz		
WVGA	720	400	70 Hz	33.75 MHz	16:9	Wide Video Graphic Array
SVGA	800	600	60 Hz	40 MHz	4:3	Super VGA
			75 Hz	49.5 MHz		
XGA	1024	768	60 Hz	65 MHz	4:3	Extended Graphic Array
			75 Hz	78.75 MHz		
WXGA	1280	768	60 Hz	79.5 MHz	5:3	Wide XGA
WXGA	1280	800	60 Hz	79.5 MHz	16:10	Wide XGA
SXGA	1280	1024	60 Hz	108 MHz	5:4	Super XGA
WXGA	1366	768	60 Hz	85.5 MHz	16:9	Wide XGA
HD1080	1920	1080	60 Hz	148.5 MHz	16:9	HD1080

Note: 1280x768@60Hz can be suppor ted but not shown in EDID table.

SD Resolution:

Standard Resolution	Active Resolution		Refresh Rate	Pixel Rate	Aspect Ratio
	H Pixels	V Lines			
480i	720	480	29.97 Hz	13.5 MHz	4:3
480p			59.94 Hz	27 MHz	
576i	720	480	25 Hz	13.5 MHz	4:3
576p			50 Hz	27 MHz	

HD Resolution:

Standard Resolution	Active Resolution		Refresh Rate	Pixel Rate	Aspect Ratio
	H Pixels	V Lines			
720p	1280	720	50 Hz	74.25 MHz	16:9
			60 Hz		
1080i	1920	1080	25 Hz	74.25 MHz	16:9
			30 Hz		
1080p	1920	1080	50 Hz	148.5 MHz	16:9
			60 Hz		
2160p (HDMI only)	3840	2160	30 Hz	297 MHz	16:9
			50 Hz		
			60 Hz	594 MHz	

- The PC text quality is optimum in HD 1080 mode (1920 x 1080, 60Hz).
- Your PC display screen might appear different depending on the manufacturer (and your par ticular version of Windows).
- Check your PC instruction book for information about connecting your PC to a display.
- If a ver tical and horizontal frequency-select mode exists, select 60Hz (ver tical) and 31.5KHz (horizontal). In some cases, abnormal signals (such as stripes) might appear on the screen when the PC power is turned off (or if the PC is disconnected). If so, press the [**INPUT**] button to enter the video mode. Also, make sure that the PC is connected.
- When horizontal synchronous signals seem irregular in RGB mode, check PC power saving mode or cable connections.
- The display settings table complies to the IBM/VESA standards, and based on the analog input.
- The DVI suppor t mode is regarded as same to the PC suppor t mode.
- The best timing for the ver tical frequency to each mode is 60Hz.

9. Cleaning and Troubleshooting

9.1. Cleaning

When Using the Display

- Do not bring your hands, face or objects close to the ventilation holes of the display. The top of the display is usually very hot due to the high temperature of exhaust air being released through the ventilation holes. Burns or personal injuries may occur if any body parts are brought too close. Placing any object near the top of the display could also result in heat related damage to the object as well as the display itself.
- Be sure to disconnect all cables before moving the display. Moving the display with its cables attached may damage the cables and thus cause fire or electric shock.
- Disconnect the power plug from the wall outlet as a safety precaution before carrying out any type of cleaning or maintenance procedure.

Front Panel Cleaning Instructions

- The front of the display has been specially treated. Wipe the surface gently using only a cleaning cloth or a soft, lint-free cloth.
- If the surface becomes dirty, soak a soft, lint-free cloth in a mild detergent solution. Wring the cloth to remove excess liquid. Wipe the surface of the display to remove dirt. Then use a dry cloth of the same type to dry.
- Do not scratch or hit the surface of the panel with fingers or hard objects of any kind.
- Do not use volatile substances such as insert sprays, solvents and thinners.

Cabinet Cleaning Instructions

- If the cabinet becomes dirty, wipe the cabinet with a soft, dry cloth.
- If the cabinet is extremely dirty, soak a lint-free cloth in a mild detergent solution. Wring the cloth to remove as much moisture as possible. Wipe the cabinet. Use another dry cloth to wipe over until the surface is dry.
- Do not allow any water or detergent to come into contact with the surface of the display. If water or moisture gets inside the unit, operating problems, electrical and shock hazards may result.
- Do not scratch or hit the cabinet with fingers or hard objects of any kind.
- Do not use volatile substances such as insert sprays, solvents and thinners on the cabinet.
- Do not place anything made from rubber or PVC near the cabinet for any extended periods of time.

9.2. Troubleshooting

Symptom	Possible Cause	Remedy
No picture is displayed	1. The power cord is disconnected. 2. The main power switch on the back of the display is not switched on. 3. The selected input has no connection. 4. The display is in standby mode.	1. Plug in the power cord. 2. Make sure the power switch is switched on. 3. Connect a signal connection to the display.
Interference displayed on the display or audible noise is heard	Caused by surrounding electrical appliances or fluorescent lights.	Move the display to another location to see is the interference is reduced.
Color is abnormal	The signal cable is not connected properly.	Make sure that the signal cable is attached firmly to the back of the display.
Picture is distorted with abnormal patterns	1. The signal cable is not connected properly. 2. The input signal is beyond the capabilities of the display.	1. Make sure that the signal cable is attached firmly. 2. Check the video signal source to see if it is beyond the range of the display. Please verify its specifications with this display's specification section.
Display image doesn't fill up the full size of the screen	Zoom mode is not correctly set.	Use the Zoom mode or Custom zoom function in the Screen menu to fine tune display geometry and time frequency parameter.
Can hear sound, but no picture	Improperly connected source signal cable.	Make sure that both video inputs and sound inputs are correctly connected.
Can see picture but no sound is heard	1. Improperly connected source signal cable. 2. Volume is turned all the way down. 3. [**MUTE**] is turned on. 4. No external speaker connected.	1. Make sure that both video inputs and sound inputs are correctly connected. 2. Press [**VOL +**] or [**VOL -**] button to hear sound. 3. Switch MUTE off by using the [**MUTE**] button. 4. Connect external speakers and adjust the volume to a suitable level.
Some picture elements do not light up	Some pixels of the display may not turn on.	This display is manufactured using an extremely high level of precision technology: however, sometimes some pixels of the display may not display. This is not a malfunction.
After-Images can still be seen on the display after the display is powered off. (Examples of still pictures include logos, video games, computer images, and images displayed in 4:3 normal mode)	A still picture is displayed for an over extended period of time	Do not allow a still image to be displayed for an extended period of time as this can cause a permanent after-image to remain on the display.

10. Technical Specifications

Display:

Item	Specifications
Screen Size (Active Area)	127 cm / 50 inch
Aspect Ratio	16:9
Number of Pixels	3840 (H) x 2160 (V)
Pixel Pitch	0.2854 (H) x 0.2854 (V) [mm]
Displayable Colors	10bit,(8bit+FRC) 1.07 Billion colors
Brightness	350 cd/m²
Contrast Ratio (Typical)	4000:1
Viewing Angle	178 degrees

In/Out Terminals:

Item		Specifications
Speaker Output	Internal Speakers	10W (L) + 10W (R) [RMS]/8Ω 1 Way 1 Speaker System 82 dB/W/M/160 Hz ~ 13 KHz
Audio Output	RCA R/L x 1	0.5V [rms] (Normal) / 2 Channel (L+R)
Audio Input	3.5mm phone jack x 1	0.5V [rms] (Normal) / 2 Channel (L+R)
RS232C	2.5mm Phone jack x 2	RS232C in/RS232C out
RJ-45	RJ-45 Jack x 1 (8 pin)	10/100 LAN Port
HDMI Input	HDMI Jack x 2 (Type A) (19 pin)	Digital RGB: TMDS (Video + Audio) MAX: Video: 720p, 1080p, 1920 × 1080/60 Hz (WUXGA) Audio: 48 KHz / 2 Channel (L+R) Supports LPCM only
VGA Input	D-SUB jack (15pin)	Digital RGB:TMDS (Video) Analog RGB: 0.7V [p-p] (75Ω), H/CS/V:TTL (2.2kΩ), SOG: 1V [p-p] (75Ω) MAX: 1920 x 1080/60 Hz (WUXGA)
DVI-D Input	DVI-D Jack x 1	Digital RGB:TMDS (Video)
IR Input/Output	3.5mm x 2	IR pass through or IR daisy chain
USB Input	USB x 2 (Type A)	USB 2.0, Multimedia play and service port / USB 3.0, Multimedia play only

General:

Item	Specifications
Power Input	100 - 240V~, 50 - 60Hz, 2.5A
Power Consumption (Max)	175 W
Power Consumption (typ.)	140 W
Power Consumption (Standby & Off)	<0.5 W (RS232 in active)
Dimensions (Without Stand) [W x H x D]	1123.6 x 646.7 x 67.8 mm
Weight (Without Stand)	12.6 Kg
Gross Weight (Without Stand)	16.5 Kg

Environmental Condition:

Item		Specifications
Temperature	Operational	0 ~ 40°C
	Storage	-20 ~ 60°C
Humidity	Operational	20 ~ 80% RH (No condensation)
	Storage	5 ~ 95% RH (No condensation)
Altitude	Operational	0 ~ 3,000 m
	Storage	0 ~ 9,000 m

Internal Speaker:

Item	Specifications
Type	1 Way 1 Speaker
Input	10 W (RMS)
Impedance	8Ω
Output Sound Pressure	82 dB/W/M
Frequency Response	160 Hz ~ 13 KHz

11. RS232 Protocol

11.1. Introduction

This document describes the hardware interface spec and software protocols of RS232 interface communication between ViewSonic Commercial TV / Digital Signage and PC or other control unit with RS232 protocol.

The protocol contains three sections command:

- Set-Function
- Get-Function
- Remote control pass-through mode

* In the document below, “PC” represents all the control units that can send or receive the RS232 protocol command.

11.2. Description

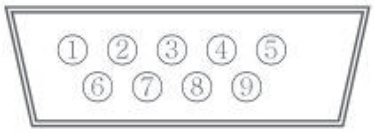
11.2.1. Hardware specification

Viewsonic TV communication port on the rear side:

(1) Connector type: DSUB 9-Pin Male

(2) Pin Assignment

Male DSUB 9-Pin
(outside view)



Pin #	Signal	Remark
1	NC	
2	RXD	Input to Commercial TV or DS
3	TXD	Output from Commercial TV or DS
4	NC	
5	GND	
6	NC	
7	NC	
8	NC	
9	NC	
frame	GND	

* Use of crossover (null modem) cable required for use with PC

[Special case] 2.5mm barrel connector

Pin #	Signal	Remark
Tip	TXD	Output from Commercial TV or DS
Ring	RXD	Input to Commercial TV or DS
Sleeve	GND	

11.2.2. Communication Setting

- Baud Rate Select: 9600bps (fixed)
- Data bits: 8 bits (fixed)
- Parity: None (fixed)
- Stop Bits: 1 (fixed)

11.2.3. Command Message Reference

PC sends to Monitor command packet followed by “CR”. Every time PC sends control command to the Monitor, the Monitor shall respond as follows:

1. If the message is received correctly it will send “+” (02Bh) followed by “CR” (00Dh)
2. If the message is received incorrectly it will send “-” (02Dh) followed by “CR” (00Dh)

11.3. Protocol

11.3.1. Set-Function Listing

The PC can control the TV/DS for specific actions. The Set-Function command allows you to control the TV/DS behavior in a remote site through the RS232 port. The Set-Function packet format consists of 9 bytes.

Set-Function description:

Length: Total Byte of Message excluding “CR”.

TV/DS ID Identification for each of TV/DS (01~98; default is 01)
If we want to set all TV/DS settings, use the TV/DS ID “**99**”, and it will not have **Reply** command on this function.
The TV/DS ID can be set via the OSD menu for each TV/DS set.

Command Type Identify command type,
“s” (0x73h) : Set Command
“+” (0x2Bh) : Valid command Reply
“-“ (0x2Dh) : Invalid command Reply

Command: Function command code: One byte ASCII code.

Value[1~3]: Three bytes ASCII that defines the value.

CR 0x0D

Set-Function format

Send: (Command Type=”s”)

Name	Length	ID	Command Type	Command	Value1	Value2	Value3	CR
Byte Count	1 Byte	2 Byte	1 Byte	1 Byte	1 Byte	1 Byte	1 Byte	1 Byte
Bytes order	1	2~3	4	5	6	7	8	9

NOTE: For VT2405LED-1 and VT3205LED, the set “Power on” command is the exception

Reply: (Command Type=”+” or “-”)

Name	Length	ID	Command Type	CR
Byte Count	1 Byte	2 Byte	1 Byte	1 Byte
Bytes order	1	2~3	4	5

NOTE:

1. The reply for “Power on” command is the exception for VT2405LED-1 and VT3205LED.
   It’s 0x322B0D (2+<CR>).
2. When PC applies command to all displays (ID=99), only the #1 set needs to reply by the name of ID=1.

Example1: Set Brightness as 76 for TV-02 and this command is valid

Send (Hex Format)

Name	Length	ID	Command Type	Command	Value1	Value2	Value3	CR
Hex	0x38	0x30 0x32	0x73	0x24	0x30	0x37	0x36	0x0D

Reply (Hex Format)

Name	Length	ID	Command Type	CR
Hex	0x34	0x30 0x32	0x2B	0x0D

Example2: Set Brightness as 176 for TV-02 and this command is NOT valid Send (Hex Format)

Name	Length	ID	Command Type	Command	Value1	Value2	Value3	CR
Hex	0x38	0x30 0x32	0x73	0x24	0x31	0x37	0x36	0x0D

Reply (Hex Format)

Name	Length	ID	Command Type	CR
Hex	0x34	0x30 0x32	0x2D	0x0D

Set function table:

Basic function

Set Function	Length	ID	Command	Command		Value Range	Comments
			Type (ASCII)	Code (ASCII)	Code (Hex)	(Three ASCII bytes)	
Power on/off (standby)	8		s	!	21	000: STBY 001: ON	
Input Select	8		s	“	22	000: TV 001: AV 002: S-Video 003: YPbPr 004: HDMI1 014: HDMI2 024: HDMI3 034: HDMI4 005: DVI 006: VGA1 016: VGA2 026: VGA3 007: Slot-in PC (OPS/SDM)/HDBT 008: Internal memory 009: DP 00A: Embedded/Main (Android)	1. No need for USB 2. For the case of two more same sources, the 2nd digital is used to indicate the extension. 3. The HEX of 00A is 30 30 41.
Brightness	8		s	$	24	000 ~ 100	
Power lock	8		s	4	34	000: Unlock 001: Lock	*See note in details
Volume	8		s	5	35	000 ~ 100 900: Volume down(-1) 901:Volume up(+1)	
Mute	8		s	6	36	000: OFF 001: ON (mute)	
Button lock	8		s	8	38	000: Unlock 001: Lock	*See note in details
Menu lock	8		s	>	3E	000: Unlock 001: Lock	*See note in details
Remote Control	8		s	B	42	000: Disable 001: Enable 002: Pass through	Disable: RCU will be no function Enabled: RCU controls normally Pass through: Display will bypass the RC code to connected device via the RS232 port, but not react itself.

Optional function

Set Function	Length	ID	Command	Command		Value Range	Comments
			Type (ASCII)	Code (ASCII)	Code (Hex)	(Three ASCII bytes)	
Contrast	8		s	#	23	000 ~ 100	
Sharpness	8		s	%	25	000 ~ 100	
Color	8		s	&	26	000 ~ 100	
Tint	8		s	‘	27	000 ~ 100	
Color mode	8		s	)	29	000: Normal 001: Warm 002: Cold 003: Personal	
Surround sound	8		s	-	2D	000: Off 001: On	
Bass	8		s	.	2E	000 ~ 100	
Treble	8		s	/	2F	000 ~ 100	
Balance	8		s	0	30	000 ~ 100	050 is central
Picture Size	8		s	1	31	000: FULL (16:9) 001: NORMAL (4:3) 002: REAL (1:1) *3.1.0	
OSD language	8		s	2	32	000: English 001: French 002: Spanish	Could be extended for more supported languages by model
PIP-Mode	8		s	9	39	000: OFF 001: PIP(POP) 002: PBP	
PIP-Sound select	8		s	:	3A	000: Main 001: PIP(POP)	
PIP-Position	8		s	;	3B	000: Up 001: Down 002: Left 003: Right	
PIP-Input	8		s	7	37 *2.9	000: TV 001: AV 002: S-Video 003: YPbPr 004: HDMI1 014: HDMI2 024: HDMI3 034: HDMI4 005: DVI 006: VGA1 016: VGA2 026: VGA3 007: Slot-in PC (OPS/ SDM)/HDBT 008: Internal memory 009: DP 00A: Embedded/Main (Android)	Value range is same as SET-Input select
Number	8		s	@	40	000~009	

Key Pad	8		s	A	41	000: UP 001: DOWN 002: LEFT 003: RIGHT 004: ENTER 005: INPUT 006: MENU/(EXIT) 007: EXIT	
Tiling-Mode	8		s	P	50	000: OFF 001: ON	(for video wall)
Tiling-Compensation	8		s	Q	51	000: OFF 001: ON	(for video wall) Bezel width compensation
Tiling-H by V Monitors	8		s	R	52	01x~09x: H 0x1~0x9: V	(for video wall) 1. 2nd digital for H monitors 2. 3rd digital for V monitors
Tiling-Position	8		s	S	53	001~025	(for Video wall) Copy the screen of Position# to identified display
Date: Year	8		s	V	56	Y17~Y99	Last 2 digits (20)17~(20)99
Date: Month	8		s	V	56	M01~M12	2 digits
Date: Day	8		s	V	56	D01~D31	2 digits
Time: Hour	8		s	W	57	H00~H23	24-hr format. 2 digits.
Time: Min	8		s	W	57	M00~M59	2 digits
Time: Sec	8		s	W	57	S00~S59	2 digits

11.3.2. Get-Function Listing

The PC can interrogate the TV/DS for specific information. The Get-Function packet format consists of 9 bytes which is similar to the Set-Function packet structure. Note that the “Value” byte is always = 000

Get-Function description:

Length: Total Byte of Message excluding “CR”.

TV/DS ID Identification for each of TV/DS (01~98; default is 01).

Command Type Identify command type,
“g” (0x67h) : Get Command
“r” (0x72h) : Valid command Reply
“-“ (0x2Dh) : Invalid command Reply

Command: Function command code: One byte ASCII code.

Value[1~3]: Three bytes ASCII that defines the value.

CR 0x0D

Get-Function format

Send: (Command Type=”g”)

Name	Length	ID	Command Type	Command	Value1	Value2	Value3	CR
Byte Count	1 Byte	2 Byte	1 Byte	1 Byte	1 Byte	1 Byte	1 Byte	1 Byte
Bytes order	1	2~3	4	5	6	7	8	9

NOTE: “Power STBY status” is the exception for VT2405LED-1 and VT3205LED.

Reply: (Command Type=”r” or “-”)

If the Command is valid, Command Type =”r”

Name	Length	ID	Command Type	Command	Value1	Value2	Value3	CR
Byte Count	1 Byte	2 Byte	1 Byte	1 Byte	1 Byte	1 Byte	1 Byte	1 Byte
Bytes order	1	2~3	4	5	6	7	8	9

NOTE: The reply for “Power STBY status” command is the exception for VT2405LED-1 and V3205LED. It’s 0x36 72 6C 30 30 30 0D (6rl000<CR>).

If the Command is Not valid, Command Type=”-“

Name	Length	ID	Command Type	CR
Byte Count	1 Byte	2 Byte	1 Byte	1 Byte
Bytes order	1	2~3	4	5

Example1: Get Brightness from TV-05 and this comm and is valid. The Brightness value is 67.

Send (Hex Format)

Name	Length	ID	Command Type	Command	Value1	Value2	Value3	CR
Hex	0x38	0x30 0x35	0x67	0x62	0x30	0x30	0x30	0x0D

Reply (Hex Format)

Name	Length	ID	Command Type	Command	Value1	Value2	Value3	CR
Hex	0x38	0x30 0x35	0x72	0x62	0x30	0x36	0x37	0x0D

Example2: Get Brightness from TV-05, but the Brightness command ID is error and it is NOT in the command table.

Send (Hex Format)

Name	Length	ID	Command Type	Command	Value1	Value2	Value3	CR
Hex	0x38	0x30 0x35	0x67	0XD3	0x30	0x30	0x30	0x0D

Reply (Hex Format)

Name	Length	ID	Command Type	CR
Hex	0x34	0x30 0x35	0x2D	0x0D

Get function table:

Basic function

Get Function	Length	ID	Command Type	Command		Response Range	Comments
				Code (ASCII)	Code (Hex)	(Three ASCII bytes)	
Get-Contrast	8		g	a	61	000 ~ 100	Gets Contrast value
Get-Brightness	8		g	b	62	000 ~ 100	Gets Brightness value
Get-Sharpness	8		g	c	63	000 ~ 100	Gets Sharpness value
Get-Color	8		g	d	64	000 ~ 100	Gets Color value
Get-Tint	8		g	e	65	000 ~ 100	Gets Tint value
Get-Volume	8		g	f	66	000 ~ 100	Gets Volume value
Get-Mute	8		g	g	67	000: OFF (unmuted) 001: ON (muted)	Gets Mute ON/OFF status
Get-Input select	8		g	j	6A	000~	See Set-function table
Get-Power status: ON/STBY	8		g	l	6C	000: STBY 001: ON	
Get-Remote control	8		g	n	6E	000 : Disable 001 : Enable 002 : Pass through	
Get-Power Lock	8		g	o	6F	000 : Unlock 001 : Lock	
Get-Button Lock	8		g	p	70	000 : Unlock 001 : Lock	
Get-Menu Lock	8		g	q	71	000 : Unlock 001 : Lock	
Get-Tiling Mode	8		g	v	76	000 : OFF 001 : ON	
Get-Tiling Compensation	8		g	w	77	000 : OFF 001 : ON	
Get-Tiling H by V monitors	8		g	x	78	01x~09x: H monitors 0x1~0x9 : V monitors	1. 2nd digital for H monitors 2.3rd digital for V monitors
Get-Tiling Position	8		g	y	79	000 : OFF 001~025	
Get-ACK	8		g	z	7A	000	This command is used to test the communication link.
Get-Thermal	8		g	0	30	000~100: 0~+100 deg C -01~-99: -1~-99 deg C	For specific models only
Get-Power on/ off log	8		g	1	31	000 (See below note)	For specific models only
Get-Date	8		g	2	32	000 (See the Set-Date command)	For specific models only
Get- Time	8		g	3	33	000 (See the Set-Time command)	For specific models only

Optional function

Get Function	Length	ID	Command Type	Command		Response Range	Comments
			(ASCII)	Code (ASCII)	Code (Hex)	(Three ASCII bytes)	
Get-Contrast	8		g	a	61	000 ~ 100	
Get-Sharpness	8		g	c	63	000 ~ 100	
Get-Color	8		g	d	64	000 ~ 100	
Get-Tint	8		g	e	65	000 ~ 100	

Get-PIP mode	8		g	t	74	000: OFF 001: PIP (POP) 002: PBP	
Get-PIP input	8		g	u	75	000 ~	See Set-input select
Get-Tiling Mode	8		g	v	76	000: OFF 001: ON	(for Video wall)
Get-Tiling Compensation	8		g	w	77	000: OFF 001: ON	(for Video wall) Bezel width compensation
Get-Tiling H by V monitors	8		g	x	78	01x~09x: H monitors 0x1~0x9: V monitors	(for Video wall) 1. 2nd digital for H monitors 2. 3rd digital for V monitors
Get-Tiling position	8		g	y	79	000: OFF 001~025	(for Video wall) Copy the screen of Position# to identified display
Get-Date: Year	8		g	2	32	Y00~Y00	Last 2 digits (20)17~(20)99
Get-Date: Month	8		g	2	32	M00~M00	2 digits
Get-Date: Day	8		g	2	32	D00~M00	2 digits
Get-Time: Hour	8		g	3	33	H00~H00	24-hr format. 2 digits
Get-Time: Min	8		g	3	33	M00~M00	2 digits
Get-Time: Sec	8		g	3	33	S00~S00	2 digits
Get-RS232 version	8		g	6	36	001~	Version 0.0.1~9.9.9

11.3.3. Remote Control Pass-through mode

When the PC sets the TV/DS to Remote Control Pass through mode, the TV/DS will send a 7-byte packet (followed by “CR”) in response to RCU button activation. Note, that in this mode the RCU shall have no effect on the TV/DS function. For example: “Volume+” will not change the volume in the LCD but only sends “Volume+” code to PC over the RS232 port.

IR Pass Through-Function format

Reply: (Command Type=”p”)

Name	Length	ID	Command Type	RCU Code1 (MSB)	RCU Code2 (LSB)	CR
Byte Count	1 Byte	2 Byte	1 Byte	1 Byte	1 Byte	1 Byte
Bytes order	1	2~3	4	5	6	7

Example1: Remote Control pass-through when “VOL+” key is pressed for TV-05 Send (Hex Format)

Name	Length	ID	Command Type	Command	Value1	CR
Hex	0x36	0x30 0x35	0x70	0x31	0x30	0x0D

Key	Code (HEX)
1	01
2	02
3	03
4	04
5	05
6	06
7	07
8	08
9	09
0	0A
-	0B
RECALL (LAST)	0C
INFO (DISPLAY)	0D
	0E
ASPECT (ZOOM, SIZE)	0F
VOLUME UP (+)	10
VOLUME DOWN (-)	11
MUTE	12
CHANNEL/PAGE UP (+)/ BRIGHTNESS+	13
CHANNEL/PAGE DOWN (-)/ BRIGHTNESS-	14
POWER	15
SOURCES (INPUTS)	16
	17
	18
SLEEP	19
MENU	1A
UP	1B
DOWN	1C
LEFT (-)	1D
RIGHT (+)	1E
OK (ENTER, SET)	1F
EXIT	20
	21
	22
	23
	24
	25
	26
	27
	28
	29
	2A
	2B
RED ■ (F1)	2C
GREEN ■ (F2)	2D
YELLOW ■ (F3)	2E
BLUE ■ (F4)	2F

NOTE:

1. This IR-pass-through code is different from the RCU key code.
2. Special control sequence for POWER key under IR-pass through mode.
   2-1. When TV/DS is OFF and receives the IR POWER code: TV/DS will turn itself on, then forward the POWER code to the host via RS232.
   2-2. When TV/DS is ON and receives the IR POWER code: TV/DS will forward the POWER code to the host via RS232, then turn off itself.
   2-3. When SET-POWER LOCK is enabled, the TV/DS will not respond to POWER key pressing.
3. The VOLUME UP and VOLUME DOWN code will repeatedly output when you press and hold the keys.

12. Other Information

Customer Support

For technical support or product service, see the table below or contact your reseller.

NOTE: You will need the product serial number.

Country/Region	Website	T = Telephone C = CHAT ONLINE	Email
Australia New Zealand	www.viewsonic.com.au	AUS= 1800 880 818 NZ= 0800 008 822	service@au.viewsonic.com
Canada	www.viewsonic.com	T= 1-866-463-4775	service.ca@viewsonic.com
Europe	www.viewsoniceurope.com	http://www.viewsoniceurope.com/eu/support/call-desk/	
Hong Kong	www.hk.viewsonic.com	T= 852 3102 2900	service@hk.viewsonic.com
India	www.in.viewsonic.com	T= 1800 419 0959	service@in.viewsonic.com
Korea	ap.viewsonic.com/kr/	T= 080 333 2131	service@kr.viewsonic.com
Latin America	www.viewsonic.com/la/	C= http://www.viewsonic.com/la/soporte/servicio-tecnico	soporte@viewsonic.com
Macau	www.hk.viewsonic.com	T= 853 2840 3687	service@hk.viewsonic.com
Middle East	ap.viewsonic.com/me/	Contact your reseller	service@ap.viewsonic.com
Puerto Rico & Virgin Islands	www.viewsonic.com	T= 1-800-688-6688 (English) C= http://www.viewsonic.com/la/soporte/servicio-tecnico	service.us@viewsonic.com soporte@viewsonic.com
Singapore/ Malaysia/ Thailand	www.viewsonic.com.sg	T= 65 6461 6044	service@sg.viewsonic.com
South Africa	ap.viewsonic.com/za/	Contact your reseller	service@ap.viewsonic.com
United States	www.viewsonic.com	T= 1-800-688-6688	service.us@viewsonic.com

Limited Warranty

ViewSonic® LCD Commercial Display

What the warranty covers:
ViewSonic warrants its products to be free from defects in material and workmanship, under normal use, during the warranty period. If a product proves to be defective in material or workmanship during the warranty period, ViewSonic will, at its sole option, repair or replace the product with a like product. Replacement product or parts may include remanufactured or refurbished parts or components.

Who the warranty protects:
This warranty is valid only for the first consumer purchaser.

What the warranty does not cover:
1. Any product on which the serial number has been defaced, modified or removed.
2. Damage, deterioration or malfunction resulting from:
   a. Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
   b. Any damage of the product due to shipment.
   c. Removal or installation of the product.
   d. Causes external to the product, such as electrical power fluctuations or failure.
   e. Use of supplies or parts not meeting ViewSonic's specifications.
   f. Normal wear and tear.
   g. Any other cause which does not relate to a product defect.
3. Any product exhibiting a condition commonly known as "image burn-in" which results when a static image is displayed on the product for an extended period of time.
4. Removal, installation, one way transportation, insurance, and set-up service charges.

How to get service:
1. For information about receiving service under warranty, contact ViewSonic Customer Support (Please refer to Customer Support page). You will need to provide your product's serial number.
2. To obtain warranty service, you will be required to provide (a) the original dated sales slip, (b) your name, (c) your address, (d) a description of the problem, and (e) the serial number of the product.
3. Take or ship the product freight prepaid in the original container to an authorized ViewSonic service center or ViewSonic.
4. For additional information or the name of the nearest ViewSonic service center, contact ViewSonic.

Limitation of implied warranties:
There are no warranties, express or implied, which extend beyond the description contained herein including the implied warranty of merchantability and fitness for a particular purpose.

Exclusion of damages:
ViewSonic's liability is limited to the cost of repair or replacement of the product. ViewSonic shall not be liable for:

1. Damage to other property caused by any defects in the product, damages based upon inconvenience, loss of use of the product, loss of time, loss of profits, loss of business opportunity, loss of goodwill, interference with business relationships, or other commercial loss, even if advised of the possibility of such damages.
2. Any other damages, whether incidental, consequential or otherwise.
3. Any claim against the customer by any other party.
4. Repair or attempted repair by anyone not authorized by ViewSonic.

Effect of state law:
This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow limitations on implied warranties and/or do not allow the exclusion of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

Sales outside the U.S.A. and Canada:
For warranty information and service on ViewSonic products sold outside of the U.S.A. and Canada, contact ViewSonic or your local ViewSonic dealer.
The warranty period for this product in mainland China (Hong Kong, Macao and Taiwan Excluded) is subject to the terms and conditions of the Maintenance Guarantee Card.
For users in Europe and Russia, full details of warranty provided can be found in www.viewsoniceurope.com under Support/Warranty Information.

Mexico Limited Warranty

ViewSonic® LCD Commercial Display

What the warranty covers:
ViewSonic warrants its products to be free from defects in material and workmanship, under normal use, during the warranty period. If a product proves to be defective in material or workmanship during the warranty period, ViewSonic will, at its sole option, repair or replace the product with a like product. Replacement product or parts may include re-manufactured or refurbished parts or components.

Who the warranty protects:
This warranty is valid only for the first consumer purchaser.

What the warranty does not cover:
1. Any product on which the serial number has been defaced, modified or removed.
2. Damage, deterioration or malfunction resulting from:
   a. Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
   b. Any damage of the product due to shipment.
   c. Removal or installation of the product.
   d. Causes external to the product, such as electrical power fluctuations or failure.
   e. Use of supplies or parts not meeting ViewSonic's specifications.
   f. Normal wear and tear.
   g. Any other cause which does not relate to a product defect.
3. Any product exhibiting a condition commonly known as "image burn-in" which results when a static image is displayed on the product for an extended period of time.
4. Removal, installation, one way transportation, insurance, and set-up service charges.

How to get service:
For information about receiving service under warranty, contact ViewSonic Customer Support (Please refer to the attached Customer Support page). You will need to provide your product's serial number, so please record the product information in the space provided below on your purchase for your future use. Please retain your receipt of proof of purchase to support your warranty claim.

For Your Records
Product Name: _____
Document Number: _____
Purchase Date: _____

Model Number: _____
Serial Number: _____
Extended Warranty Purchase? _____(Y/N)
If so, what date does warranty expire? _____

1. To obtain warranty service, you will be required to provide (a) the original dated sales slip, (b) your name, (c) your address, (d) a description of the problem, and (e) the serial number of the product.
2. Take or ship the product in the original container packaging to an authorized ViewSonic service center.
3. Round trip transportation costs for in-warranty products will be paid by ViewSonic.

Limitation of implied warranties:
There are no warranties, express or implied, which extend beyond the description contained herein including the implied warranty of merchantability and fitness for a particular purpose.

Exclusion of damages:
ViewSonic's liability is limited to the cost of repair or replacement of the product. ViewSonic shall not be liable for:
1. Damage to other property caused by any defects in the product, damages based upon inconvenience, loss of use of the product, loss of time, loss of profits, loss of business opportunity, loss of goodwill, interference with business relationships, or other commercial loss, even if advised of the possibility of such damages.
2. Any other damages, whether incidental, consequential or otherwise.
3. Any claim against the customer by any other party.
4. Repair or attempted repair by anyone not authorized by ViewSonic.
5.
6.
7.

Contact Information for Sales & Authorized Service (Centro Autorizado de Servicio) within Mexico:	
Name, address, of manufacturer and importers: México, Av. de la Palma #8 Piso 2 Despacho 203, Corporativo Interpalmas, Col. San Fernando Huixquilucan, Estado de México Tel: (55) 3605-1099 http://www.viewsonic.com/la/soporte/index.htm	
NÚMERO GRATIS DE ASISTENCIA TÉCNICA PARA TODO MÉXICO: 001.866.823.2004	
Hermosillo: Distribuciones y Servicios Computacionales SA de CV. Calle Juarez 284 local 2 Col. Bugambilias C.P: 83140 Tel: 01-66-22-14-9005 E-Mail: disc2@hmo.megared.net.mx	***Villahermosa:*** Compumantenimietnos Garantizados, S.A. de C.V. AV. GREGORIO MENDEZ #1504 COL, FLORIDA C.P. 86040 Tel: 01 (993) 3 52 00 47 / 3522074 / 3 52 20 09 E-Mail: compumantenimientos@prodigy.net.mx
Puebla, Pue. (Matriz): RENTA Y DATOS, S.A. DE C.V. Domicilio: 29 SUR 721 COL. LA PAZ 72160 PUEBLA, PUE. Tel: 01(52).222.891.55.77 CON 10 LINEAS E-Mail: datos@puebla.megared.net.mx	***Veracruz, Ver.:*** CONEXION Y DESARROLLO, S.A DE C.V. Av. Americas # 419 ENTRE PINZÓN Y ALVARADO Fracc. Reforma C.P. 91919 Tel: 01-22-91-00-31-67 E-Mail: gacosta@qplus.com.mx
Chihuahua Soluciones Globales en Computación C. Magisterio # 3321 Col. Magisterial Chihuahua, Chih. Tel: 4136954 E-Mail: Cefeo@soluglobales.com	***Cuernavaca*** Compusupport de Cuernavaca SA de CV Francisco Leyva # 178 Col. Miguel Hidalgo C.P. 62040, Cuernavaca Morelos Tel: 01 777 3180579 / 01 777 3124014 E-Mail: aquevedo@compusupportcva.com
Distrito Federal: QPLUS, S.A. de C.V. Av. Coyoacán 931 Col. Del Valle 03100, México, D.F. Tel: 01(52)55-50-00-27-35 E-Mail : gacosta@qplus.com.mx	***Guadalajara, Jal.:*** SERVICRECE, S.A. de C.V. Av. Niños Héroes # 2281 Col. Arcos Sur, Sector Juárez 44170, Guadalajara, Jalisco Tel: 01(52)33-36-15-15-43 E-Mail: mmiranda@servicrece.com
Guerrero Acapulco GS Computación (Grupo Sesicomp) Progreso #6-A, Colo Centro 39300 Acapulco, Guerrero Tel: 744-48-32627	***Monterrey:*** Global Product Services Mar Caribe # 1987, Esquina con Golfo Pérsico Fracc. Bernardo Reyes, CP 64280 Monterrey N.L. México Tel: 8129-5103 E-Mail: aydeem@gps1.com.mx
MERIDA: ELECTROSER Av Reforma No. 403Gx39 y 41 Mérida, Yucatán, México CP97000 Tel: (52) 999-925-1916 E-Mail: rrrb@sureste.com	***Oaxaca, Oax.:*** CENTRO DE DISTRIBUCION Y SERVICIO, S.A. de C.V. Murguía # 708 P.A., Col. Centro, 68000, Oaxaca Tel: 01(52)95-15-15-22-22 Fax: 01(52)95-15-13-67-00 E-Mail. gpotai2001@hotmail.com
Tijuana: STD Av Ferrocarril Sonora #3780 L-C Col 20 de Noviembre Tijuana, Mexico	***FOR USA SUPPORT:*** ViewSonic Corporation 10 Pointe Dr. Suite 200. Brea, CA. 92821 UY.S.A Tel: 800-688-6688 E-Mail: http://www.viewsonic.com

ViewSonic®