

## Planar® UltraRes™ W Series



URW105 | URW105-ERO-T

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The Planar UltraRes W Series is fully RoHS compliant.

Part Number: 020-1420-00B

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# Introduction

The Planar® UltraRes™ W Series is a 105" 5K resolution (5120 x 2160) professional LCD display with 500-nit brightness. The display offers superior visual performance with Picture-in-Picture (PiP) and dual-source viewing and advanced processing ideal for applications ranging from collaborative meeting spaces to high-impact digital signage and media rooms. Interactive, optically-bonded projected capacitive touch model is also available.

The Planar UltraRes W Series supports native 5K resolution at up to 60Hz via DP1.4, USB-C and OPS, enabling smooth motion video and mouse tracking. The display's HDMI® 2.1 inputs are also HDCP 2.2 compliant. It also features Crestron drivers for versatility.

Features of the Planar UltraRes W Series displays include:

- 105" 4K LCD display
- 500-nit brightness
- Projected Capacitive Touch screen models, featuring optically-bonded protective glass, available
- PiP and dual-source viewing

**Caution:** This manual is intended for use by qualified service persons and end users with experience installing LCD displays.

# 1. Safety Information

Before using the Planar UltraRes W Series, please read this manual thoroughly to help protect against damage to property, and to ensure personnel safety.

- Be sure to observe the following instructions.
- For your safety, be sure to observe ALL the warnings detailed in this manual.
- For installation or adjustment, please follow this manual's instructions, and refer all servicing to qualified service personnel.

# 2. Safety Precautions

- **If water is spilled or objects are dropped inside the display, remove the power plug from the outlet immediately.** Failure to do so may result in fire or electrical shock. Contact your dealer for inspection.
- **If the display is dropped or the chassis is damaged, remove the power plug from the outlet immediately.** Failure to do so may result in fire or electrical shock. Contact your dealer for inspection.

**WARNING!** Wall mounts must be secure.

- **If the display is hung on a wall, the wall must be strong enough to hold it.** Simply mounting it to wallboard or wall paneling won't be adequate or safe.

**Caution:** For Non-Touch Model:

- The front polarizer of the non-touch URW model is soft and subject to scratches from sharp objects.
- Slight pressure on the LCD of the non-touch URW model will cause distortion of the image. Heavier pressure will cause permanent damage.

**Caution:** For All URW Models:

- Displays should be mounted where viewers cannot insert small objects in the openings that will create hazards by contacting bare conductive parts.
- If the power cord or plug is damaged or becomes hot, turn off the main power switch of the display. Make sure the power plug has cooled down and remove the power plug from the outlet. If the display is still used in this condition, it may cause a fire or an electrical shock. Contact your dealer for a replacement.

## 2.1 Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use the display near water.
6. Clean the LCD screens with an LCD screen cleaner or LCD wipes.
7. Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.
8. Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. When the provided plug does not fit into your outlet, consult an electrician for the replacement of the obsolete outlet.
9. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles and the point where they exit from any Planar large format LCD display.
10. Only use the attachments/accessories specified by the manufacturer.
11. Unplug all displays during lightning storms or when unused for long periods of time.
12. In instances where a power surge has occurred and a display no longer has an image, the display power will need to be reset.
13. You must follow all National Electrical Code regulations. In addition, be aware of local codes and ordinances when installing your system.
14. Refer all servicing to qualified service personnel. Servicing is required when any of the displays have been damaged in any way. For example, if the AC power cord or plug is damaged, liquid has been spilled or objects have fallen into a display, the displays have been exposed to rain or moisture, do not operate normally or have been dropped.
15. Keep the packing material in case the equipment should ever need to be shipped.
16. Wall mounts must be secure. The wall must be strong enough to hold displays brackets, cables and accessories. Seismic engineers should be consulted in areas prone to earthquakes.
17. **Caution:** There is a risk of explosion if the battery is replaced with incorrect type. Dispose of used batteries according to local regulations.

## 2.2 Informations sur la sécurité

Avant d'utiliser le Série Planar UltraRes W, veuillez lire attentivement ce manuel pour éviter tout dommage matériel et assurer la sécurité du personnel.

- Assurez-vous de respecter les instructions suivantes.
- Pour votre sécurité, veuillez respecter TOUS les avertissements détaillés dans ce manuel.
- Pour l'installation ou le réglage, suivez les instructions de ce manuel et confiez l'entretien à un personnel qualifié.

## 2.3 Précautions de sécurité

- **Si de l'eau est renversée ou si des objets sont tombés à l'intérieur de l'écran, débranchez immédiatement la fiche d'alimentation de la prise.** Le non-respect de cette consigne peut entraîner un incendie ou une électrocution. Contactez votre revendeur pour qu'il procède à une inspection.
- **Si l'écran est tombé ou si le châssis est endommagé, débranchez immédiatement la fiche d'alimentation de la prise.** Le non-respect de cette consigne peut entraîner un incendie ou une électrocution. Contactez votre revendeur pour qu'il procède à une inspection.

**AVERTISSEMENT!** Les supports muraux doivent être sécurisés.

- **Si l'écran est accroché à un mur, celui-ci doit être suffisamment solide pour le supporter.** Un simple montage sur une plaque de plâtre ou un panneau mural n'est ni suffisant ni sécuritaire.

**Attention :** Pour le modèle non tactile :

- Le polariseur avant du modèle URW non tactile est souple et peut être rayé par des objets pointus.
- Une légère pression sur l'écran LCD du modèle URW non tactile entraînera une distorsion de l'image. Une pression plus forte causera des dommages permanents.

**Attention :** Pour tous les modèles URW :

- Les écrans doivent être montés de manière à ce que les spectateurs ne puissent pas insérer de petits objets dans les ouvertures, ce qui créerait des dangers en touchant des pièces conductrices nues.
- Si le cordon d'alimentation ou la fiche est endommagé(e) ou devient chaud(e), éteignez l'interrupteur principal de l'écran. Assurez-vous que la fiche d'alimentation a refroidi et retirez-la de la prise de courant. Si vous continuez à utiliser l'écran dans cet état, vous risquez de provoquer un incendie ou une électrocution. Contactez votre revendeur pour un remplacement.



## 2.4 Consignes de sécurité importantes

1. Lisez ces consignes.
2. Conservez ces consignes.
3. Tenez compte de tous les avertissements.
4. Suivez toutes les consignes.
5. N'utilisez pas l'écran près de l'eau.
6. Nettoyez les écrans LCD avec un nettoyeur ou des lingettes prévus pour ce type d'appareil.
7. N'installez pas l'appareil près de sources de chaleur telles que radiateurs, bouches de chaleur, poêles ou autres appareils (y compris les amplificateurs) qui produisent de la chaleur.
8. Ne neutralisez pas le dispositif de sécurité de la fiche polarisée ou de mise à la terre. Une fiche polarisée possède deux lames, l'une plus large que l'autre. Une fiche de mise à la terre a deux lames et une troisième broche de mise à la terre. La lame large ou la troisième broche est prévue pour votre sécurité. Si la fiche fournie ne rentre pas dans votre prise, consultez un électricien pour remplacer la prise obsolète.
9. Protégez le cordon d'alimentation contre les piétinements et les pincements, en particulier au niveau des fiches, des prises de courant et du point de sortie de tout écran LCD grand format de Planar.
10. Utilisez uniquement les accessoires spécifiés par le fabricant.
11. Débranchez tous les écrans pendant les orages ou lorsque vous ne les utilisez pas pendant de longues périodes.
12. Dans les cas où une surtension s'est produite et qu'un écran n'a plus d'image, il faudra réinitialiser l'alimentation de l'écran.
13. Vous devez respecter toutes les règles du Code national de l'électricité. De plus, tenez compte des codes et des règlements locaux lors de l'installation de votre système.
14. Confiez toute réparation à un personnel qualifié. Une réparation est nécessaire lorsque l'un des écrans a été endommagé de quelque manière que ce soit. Par exemple, si le cordon ou la fiche d'alimentation CA est endommagé(e), si du liquide a été renversé ou si des objets sont tombés dans un écran, si les écrans ont été exposés à la pluie ou à l'humidité, s'ils ne fonctionnent pas normalement ou s'ils ont été échappés.
15. Conservez le matériel d'emballage au cas où l'équipement devrait être expédié.
16. Les supports muraux doivent être sécurisés. Le mur doit être suffisamment solide pour supporter les supports, les câbles et les accessoires des écrans. Des ingénieurs sismiques devraient être consultés dans les zones sujettes aux tremblements de terre.
17. **Attention** : Il existe un risque d'explosion si la pile est remplacée par un type incorrect. Éliminez les piles usagées conformément aux règlements locaux.

## 3. Recommended Usage

In order to get the most out of your LCD, use the following recommended guidelines to optimize the display.

### 3.1 Burn-In Versus Temporary Image Retention

Burn-in causes the screen to retain an image essentially forever, with little or no way to correct the problem. Under normal use, an LCD will not experience burn-in, as plasma displays do, nor will it retain images in any way.

Normal use of an LCD is defined as displaying continuously changing video patterns or images. However, LCDs can experience *temporary* image retention when recommended usage guidelines are not followed.

#### What is Temporary Image Retention?

Temporary image retention (TIR) can occur when a static image is displayed continuously for extended periods of time (12 hours or longer). An electrical charge differential may build up between the electrodes of the liquid crystal, which causes a negative-color video image (color-inverted and brightness-inverted version of the previous image) to be retained when a new image is displayed. This behavior is true for any LCD device from any LCD manufacturer.

TIR is not covered under warranty. See standard warranty terms and conditions for details. Here are some guidelines to help you avoid TIR:

- Use the LCD to show a screen saver, moving images or still pictures that change regularly. When using high-contrast images, reposition the images frequently.
- Turn off the LCD when it is not in use. To use your source computer's Power Options Properties, set up your computer to turn off the display when not in use.

### 3.2 Warranty Coverage

The following models are warranted for **24 x 7** usage:

- 105": URW105, URW105-ERO-T

Planar recommends turning off the power for **4 hours per day** for optimal performance.

For complete warranty details, please visit <http://www.planar.com/warranty>.

### 3.3 Important Waste Disposal Information

Please recycle or dispose of all electronic waste in accordance with local, state, and federal laws. Additional resources can be found online at <http://www.planar.com/about/green/>.

The crossed-out wheelee bin symbol is to notify consumers in areas subject to Waste Electrical and Electronic Equipment (WEEE) Directive 2012/19/EU that the product was placed on the market after August 13, 2005 and must not be disposed of with other waste. Separate collection and recycling of electronic waste at the time of disposal ensures that it is recycled in a manner that minimizes impacts to human health and the environment. For more information about the proper disposal of electronic waste, please contact your local authority, your household waste disposal service, or the seller from whom you purchased the product.



### 3.4 Normal Usage Guidelines

Normal use of the LCD is defined as operating in the open air to prevent heat buildup, and without direct or indirect heat sources such as lighting fixtures, heating ducts, or direct sunlight that can cause the displays to experience high operating temperatures. For all displays, do not block fans or ventilation openings. If the LCD display will be installed in a recessed area with an LCD surround or enclosure, ensure adequate openings are applied for proper air flow and ventilation.

It is up to the installer to ensure that display placement is changed, thermal shielding is provided and/or additional ventilation is provided to keep the display within its nominal operating parameters. Maximum ambient operating temperatures for the Planar UltraRes W Series are:

- 0-40°C at up to 3000 meters

#### Cooling Requirements

For optimal performance, active cooling by the installer should be planned for when the ambient temperature anywhere in the wall is predicted to be above the specified ambient temperature for the display.

### 3.5 ENERGY STAR Certified



ENERGY STAR is a program run by the U.S. Environmental Protection Agency (EPA) and U.S. Department of Energy (DOE) that promotes energy efficiency.

The following products qualify for ENERGY STAR in the factory default settings:

- URW105
- URW105-ERO-T

The factory default settings are those in which power savings will be achieved. Changing the factory default picture settings or enabling other features will increase power consumption that could exceed the limits necessary to qualify for ENERGY STAR rating.

For more information on the ENERGY STAR program, refer to [energystar.gov](http://energystar.gov).

## 4. Cleaning the Display

If dust has collected on the power plug, remove the plug from the outlet and clean off the dust. Dust build-up may cause a fire.


Remove the power plug before cleaning. Failure to do so may result in electrical shock or damage.

Keep the following points in mind when cleaning the surface of the display:





- When the surface of the display becomes dirty, wipe the surface lightly with a soft clean cloth.
- If the surface requires additional cleaning, use LCD screen cleaner or LCD wipes, which are available at most electronics stores.
- Do not let cleaner seep into the display, as it may cause electrical shock or damage.
- Refer to the Planar Display Cleaning Guidelines for more information.

# Unpacking and Checking Accessories

## 5. Package Contents

Part	Description	Number	Picture
LCD Display	One per box.	1	

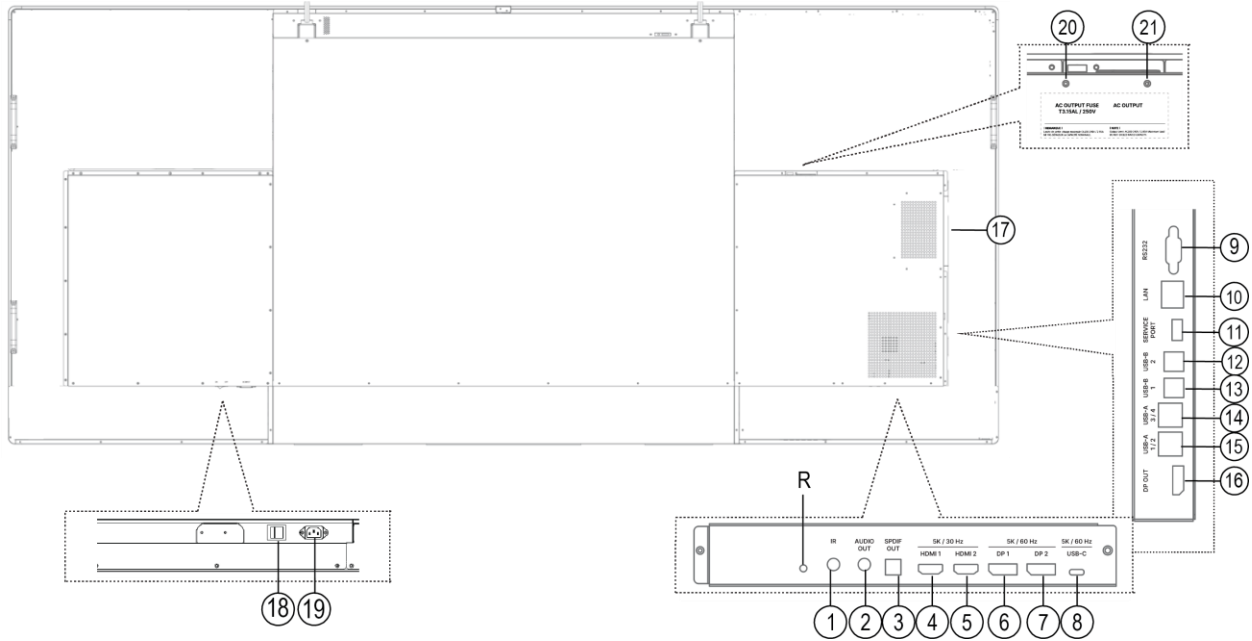
## 6. Accessory Kit

Part	Description	Number	Picture
AC power cord	US power cord.	1	
AC power cord	EU power cord	1	
IEC C14 to NEMA 5-15R adapter cable (optional)	AC Power adapter for an IEC C14 to US NEMA 5-15R AC cable.	1	
Universal power adapter (optional)	AC Power adapter for an IEC C14 to EU/UK AC cable.	1	

Part	Description	Number	Picture
IR sensor	Used to receive signals from the remote control.	1	
USB cable	Connects to a PC for touch functionality (touch model only).	1	
DP cable	DP cable.	1	
USB-C cable	USB-C cable.	1	
Quick Start Guide: Planar UltraRes W Series		1	
Remote control	Used to control the display. Two AAA batteries are included but not installed.	1	
Passive Stylus	Dual-tip stylus. 153mm (6in) length; 7.5mm and 2mm tips (touch model only).	1	

# 7. Planar UltraRes W Series – Standard Inputs

## 7.1 URW105 / URW105-ERO-T



URW105 / URW105-ERO-T	Description
R	Reset: Hold for 5 seconds to perform factory reset
1	IR: 3.5mm TRS (female)
2	Line Audio Out: 3.5mm TRS (female)
3	SPDIF Audio Out
4	HDMI 1: HDMI, 5K/30Hz, HDCP 2.2, HDR
5	HDMI 2: HDMI, 5K/30Hz, HDCP 2.2, HDR
6	DP 1: 5K/60Hz, HDR
7	DP 2: 5K/60Hz, HDR
8	USB-C: 5K/60Hz, HDR
9	RS232: DB9 (female)
10	LAN
11	USB-A Service
12	USB-B 2
13	USB-B 1
14	USB-A 3 / 4
15	USB-A 1 / 2
16	DP Out: 5K/60Hz, HDR
17	OPS: 5K/60Hz, HDR
18	AC ON/OFF
19	AC IN: IEC C14
20	AC OUT Fuse: T3.15AL/250V
21	AC OUT: IEC C13



# Installing the Display

This section explains how to install your display. We suggest that you read the entire section before you attempt to install the unit.

## 8. Before You Begin

Make sure you have all the items in these lists before you begin unpacking and installing your display(s).

### 8.1 Tools/Equipment List

Depending on your installation, you may need one or more of the following items:

- String/string level
- Digital/laser level
- Ladders/lift
- Power tools
- Back brace
- Stud finder (if hanging display on a wall)

### 8.2 Other Things You May Need

- LCD screen cleaner or LCD wipes - available at most electronics stores
- At least two very strong people to help lift unit into place

### 8.3 Plan Your Installation

You should have a detailed plan of how the units are to be configured. The plan should include calculations for the following:

- Power

Model	Max Current @ 120VAC (Excluding AC Output)	Max Current @ 120VAC (Including AC Output)
URW105	4.9A	7.9A

- Cable runs
- Ventilation and cooling requirements
- If hanging display on a wall, location of studs in the wall
- For touch model best performance, the display must be mounted in a vertical to slightly tilted back orientation.
- If the display is a touch model, it is important that the touch frame is not used to lift or support the display or touch performance may be compromised.

## 8.4 Prepare Your Installation Location

Prepare the area where you will install the unit. If custom enclosures are part of the installation, they must be fully designed to accommodate the installation of the displays, the installed units, and ventilation and cooling requirements.

If your installation includes a lot of construction or dust, it is **highly recommended** that you clean all of the screens after the wall installation and configuration are complete.

## 8.5 Cable Length Recommendations

Cable length performance may vary between different cables and sources. The recommended maximum cable lengths are as follows:

### HDMI

- 4K @ 50/60Hz: 5m (15 ft) maximum
- 4K @ 24/25/30Hz: 15m (50 ft) maximum
- 1080p @ 60Hz and lower resolutions: 20m (65 ft) maximum

### DisplayPort

- DP 1.4: 3m minimum using DP8K certified cable.
- DP 1.2: 3m (10 ft) maximum
- DP 1.1: 5m (15 ft) maximum

### USB-C

- 2m maximum

## 9. Mounting

### 9.1 Mounting Display with a VESA Mount

If you purchased a VESA mount, you should have received a separate box with mounting supplies and an Installation manual. Follow these instructions carefully.

Keep in mind the following general installation guideline:

- Screw length is crucial and will vary depending on the type of mount you use. Total screw length will include the penetration length plus the length required by the type of VESA mount in use.

**Caution:** Screws not sized to the depth specified can result in inadequate mounting strength or damage to the internal components in the display. To prevent injury, this device must be securely attached to the wall in accordance with the installation instructions supplied with the mount. The mount must be secured to the Planar UltraRes W Series display using the four M8-1.25 VESA mounting locations, and 10mm -15mm thread engagement is required for secure mounting. Select the correct screw/spacer combination for the mount.

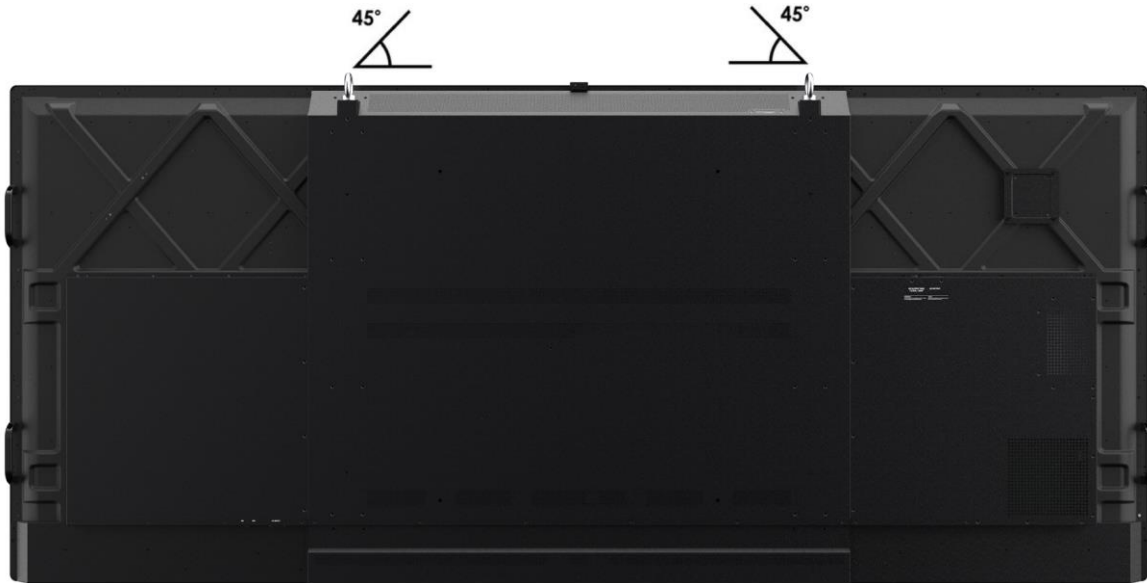
- Prior to installation, make sure you know where all of the mounting points are located.
- Follow all safety precautions outlined in the VESA Installation manual.
- Verify the parts received with the list shown in the VESA Installation manual.

### 9.2 Mounting a Peripheral Device

A 100 mm x 100 mm VESA mounting interface is located on the rear of the display to accommodate a third-party media player or computer. If needed, local power is available through the AC OUT connector.

### 9.3 Using the Lifting Eye Bolts

The lifting eyebolts can be used for moving the display from the packaging to its final installed position. The eye bolts should not be used for permanent installation or transportation of the display. When attaching to a lifting mechanism, the angle of the line between the eyehooks and the display must be  $45^\circ$  or greater.



## 9.4 Installing OPS Expansion

Planar UltraRes W displays are equipped with an expansion slot that supports the Intel® Open Pluggable Specification (OPS). The slot will support OPS devices such as PC's, SDI modules, HDBaseT receivers, etc.

To install an OPS device, remove the protective cover on the display and slide the OPS device firmly into position, and re-install any securing bolts. When installed, the OPS device will be connected internally to the display. No external video, USB or power cables are required.



# Operating the Display

## 10. OSD Keypad

The OSD keypad is located on the rear of the display.



**OSD Keypad Buttons**

Key	Descriptions
Power	Power on/Power off
Source	Source selection (toggle)
▶	Menu Right/Increase value
◀	Menu Left/Decrease value
▲	Menu Up
▼	Menu Down
Menu/Exit	Menu/Exit

## 11. Remote Control Receiver

The location of the IR remote control receiver is highlighted in the images below. An IR extender cable is included in the accessories package for additional flexibility.



## 12. LED Indicators

The LED indicator light is located on the rear of the display near the keypad. The following table explains what the different colors and blink patterns mean.

### LED On

Power Status	Condition
Green	Power on
Blinking Orange	No signal
Orange	Power saving mode
Off	AC off
Off	Power off



## 13. Using the Display in Portrait Mode

When using the display in the portrait position and looking at the rear of the display, it should be rotated according to the arrow stickers on the back of the display. This will allow for proper ventilation. Then select the OSD rotation of landscape or portrait on the OSD menu (MAIN MENU > ADVANCED SETTINGS > MENUS AND MESSAGES > OSD ROTATION).

For reference, the following list indicates the rotation direction of each display model when placed in portrait mode as viewed from the display side:

- URW105(-ERO-T): Counterclockwise

**Caution:** Failure to follow these instructions will void the warranty.

## 14. Using the Display in Flat or Tilted Orientation

The display is not recommended for use in flat orientation for tabletop, floor, or ceiling installations. LCD panels of this size are at risk of panel deflection, which can cause cosmetic sagging, brightness uniformity issues, a shortened life span, and malfunction of optional touch sensors. Installations where the display is tilted downward or upward at an angle may also be prone to these issues and are not recommended.

**Note:** Failure to follow these instructions will void the warranty.

# 15. Using the Remote Control

Below are pictures of the supported Planar remotes. See next section for Hex codes.



Included Remote (952-0088-00)



Optional Remote (952-0086-00)

## 16. IR Command Protocol

The Planar UltraRes W Series displays accept commands in the form of IR signals that conform to the NEC protocol. Each Planar UltraRes W Series remote control has an NEC control code associated with it. You can use these codes to program a third-party “universal” remote control to work with the Planar UltraRes W Series displays. These third-party products usually come with a computer software application for this purpose. For more information, consult the documentation provided with the remote control.

The IR control codes have the following characteristics:

- Each code consists of the following:
  - A leader pulse (a modulated pulse of 9 ms followed by a non-modulated pulse of 4.5 ms)
  - 16 address bits. The default address is 1785 (0x06F9, binary 00000110 11111001)
  - 16 data bits: eight (8) bits for the command followed by the logical inverse of the command
  - An end pulse (a modulated pulse of 0.56 ms, similar to the modulated pulse in the ‘0’ and ‘1’ bits). The end of the modulated pulse constitutes the end of the data transmission.
  - The carrier frequency is 38 kHz, with the modulated pulses having a 33% duty cycle.
  - Commands are sent at a maximum rate of 9 Hz.

For example, below is the NEC control code for the ON button of the Planar UltraRes W Series remote control (assuming the default address is used).






<b>Hex</b>	<b>06</b>	<b>F9</b>	<b>01</b>	<b>FE</b>
<b>Binary</b>	00000110	11111001	00000001	11111110
<b>Function</b>	<b>Address Byte 1</b>	<b>Address Byte 2</b>	<b>Command</b>	<b>Command (Logical Inverse)</b>
	<b>1</b>	<b>2</b>		

The following example shows the pulse train for this command.



## 16.1 Hex Codes

Below is a list of all hex codes supported by the URW105 models and those on the included IR remote (952-0088-00).

Function	Customer Code	Hex Code	Description
INFO	40AF	04FB	Provides source and resolution information
	40AF	1CE3	Turns the display on and off
VGA / USB-C	40AF	07F8	Selects the USB-C input for the currently selected zone
DP1	40AF	08F7	Selects the DP1 input
HDMI1	40AF	09F6	Selects the HDMI 1 input for the currently selected zone
DP2	40AF	0BF4	Selects the DP2 input for the currently selected zone
HDMI2	40AF	0CF3	Selects the HDMI 2 input for the currently selected zone
P- POSITION	40AF	1AE5	When in PiP (Picture-in-Picture) view, selects the PiP position
OPS	40AF	15EA	Selects the OPS source for the currently selected zone
HDMI3	40AF	10EF	Not used
PIP	40AF	11EE	Toggles between Single, Dual and PiP view modes
HDMI4	40AF	16E9	Not used
SWAP	40AF	06F9	When in a multi source view mode, swaps the sources displayed in Zone 1 and Zone 2
P-SOURCE	40AF	13EC	Displays the Zone 2 Source selection menu
	40AF	02FD	Navigates up through on screen menus
	40AF	01FE	Navigates left through on screen menus
MENU	40AF	0EF1	Opens the display's on-screen menu system. When the menu system is already open, pressing this button will exit the menu
	40AF	03FC	Navigates right through on screen menus
	40AF	19E6	Navigates down through on screen menus
Enter	40AF	12ED	Selects the current menu item

<b>Function</b>	<b>Customer Code</b>	<b>Hex Code</b>	<b>Description</b>
Exit	40AF	05FA	Closes the menu system
SCALING	40AF	14EB	Toggles between aspect ratios (Auto, 16:9, 4:3, Fill, Letterbox, Native)
FREEZE	40AF	43BC	Freezes and unfreezes the current source image displayed in Zone 1
MUTE	40AF	00FF	Audio mute
BRIGHT	40AF	1738	Adjusts the brightness of the currently selected Zone
CONTRAST	40AF	18E7	Adjusts the contrast of the currently selected Zone
AUTO	40AF	1EE1	Not used
SOURCE	40AF	0FF0	Displays the Zone 1 source selection menu
VOLUME -	40AF	1BE4	Volume decrease
VOLUME +	40AF	1DE2	Volume increase
ON	06F9	01FE	Power On
OFF	06F9	09F6	Power Off

The following NEC hex codes are also supported and included on the **optional** Planar IR Remote (see page 26).

Key Name	Address	Data	NEC Data From Remote	Description
ON	1785	1	0x06F901FE	Power On
PRESET 1	1785	5	0x06F905FA	Applies Preset 1
PRESET 2	1785	7	0x06F907F8	Applies Preset 2
PRESET 3	1785	8	0x06F908F7	Applies Preset 3
OFF	1785	9	0x06F909F6	Power Off
PRESET 4	1785	10	0x06F90AF5	Applies Preset 4
MENU	1785	21	0x06F915EA	Opens the display's on-screen menu system
PREVIOUS	1785	22	0x06F916E9	Exits the menu
ENTER	1785	23	0x06F917E8	Selects the current menu item
▼	1785	24	0x06F918E7	Navigates down through on screen menus
▲	1785	26	0x06F91AE5	Navigates up through on screen menus
VOL +	1785	28	0x06F91CE3	Volume increase
◀	1785	29	0x06F91DE2	Navigate left through on screen menus
▶	1785	31	0x06F91FE0	Navigate right through on screen menus
MUTE	1785	32	0x06F920DF	Audio mute
VOL -	1785	33	0x06F921DE	Volume decrease
ZONE 1	1785	35	0x06F923DC	Displays the source status
PIP MODE	1785	37	0x06F925DA	Selects the Multi-Source View
PIP SWAP	1785	40	0x06F928D7	Swaps the main input source with source 2
HDMI 1	1785	41	0x06F929D6	Selects the HDMI 1 input for the currently selected zone
HDMI 2	1785	42	0x06F92AD5	Selects the HDMI 2 input for the currently selected zone
HDMI 3	1785	43	0x06F92BD4	Not used
HDMI 4	1785	44	0x06F92CD3	Not used
DP	1785	45	0x06F92DD2	Selects the DP 1 input for the currently selected zone

<b>Key Name</b>	<b>Address</b>	<b>Data</b>	<b>NEC Data From Remote</b>	<b>Description</b>
DVI	1785	46	0x06F92ED1	Selects the DP 2 input for the currently selected zone
VGA	1785	47	0x06F92FD0	Selects the USB-C input for the currently selected zone

## 16.2 Locking the Keypad and IR Remote

You can lock the keypad and IR remote functionality on the display. To lock the keypad, go to Main Menu -> Advanced Settings -> System Settings and select Keypad Lock. To lock the IR remote, go to Main Menu -> Advanced Settings -> System Settings and select IR Remote Lock.

## 16.3 Locking/Unlocking the OSD Menus

You can lock or unlock the OSD menus by pressing a series of key commands on the remote control. To **lock** the menu, press the following keys on the remote in the order listed: ENTER, ENTER, EXIT, EXIT, ENTER and EXIT. To **unlock** it, simply follow the same sequence.

Depending on whether you locked or unlocked the menu, you will see one of the following messages on the screen.



## 16.4 Turning the Display On

1. Insert the power cord into the display and into the power outlet.
2. Ensure the AC switch is set to “—”.
3. Press the ON button on the remote or the power button on the keypad.

## 16.5 Turning the Display Off

With the power on, press the OFF button on the remote or the power button on the keypad to put the LCD panel in a standby mode. To turn off power completely, turn the AC switch to “O” or disconnect the AC power cord from the power outlet.

**Note:** The display may automatically turn off the backlight or enter standby mode if no signal is present for a certain period of time. See the description of the Power Saving Mode setting on page 43 for more information.

## 16.6 Adjusting the Volume

1. Using the remote, press the vol + or vol - to increase or decrease the volume. You can also use the Up and Down keys on the remote and keypad to increase or decrease the volume.
2. Press the mute button to temporarily turn off all sound. To restore the sound, press the mute button again.

**Note:** The analog audio out is variable. S/PDIF is fixed.



## 16.7 Selecting Layouts and Input Sources

The Planar UltraRes W Series models can show 1 source or 2 sources at a time simultaneously (see multi source view on page 35). These sources are referred to as "Zone 1" and "Zone 2" in the Menu. Zone 1 and Zone 2 can be viewed simultaneously in either Picture-in-Picture (PiP) or Picture-by-Picture (PbP). The multi-source modes can be accessed through the Inputs and Views submenu (see page 35) or through direct commands from the IR remote or an RS232 control system. Different layouts can be saved and recalled with a single IR or RS232 command (see IR Command Protocol on page 27).

### Keypad

Press the Source button. The Zone 1 input source will be toggled sequentially.

### Remote

The following methods can be used to change the inputs being displayed using the IR Remote.

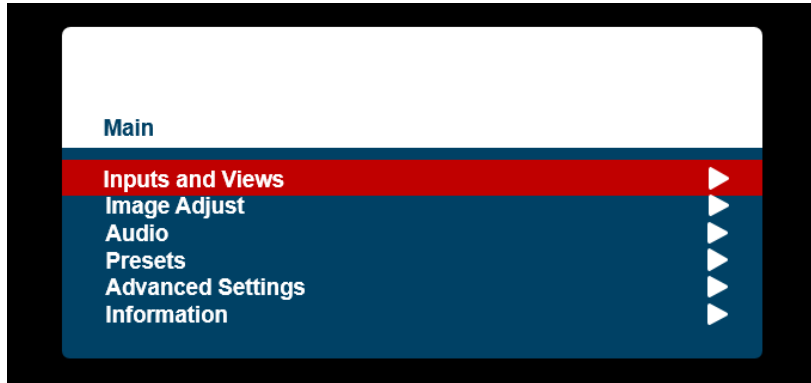
- Press the desired input on the remote to change the source displayed in Zone 1
- Press the Source button to display the Zone 1 Source Menu, and choose the input to display in Zone 1
- Press the PIP button to toggle between the Single, Dual, and PiP Multi Source view modes
- When 2 zones are being displayed, Press the P-Source button to display the Zone 2 source menu, and use the directional keypad choose the desired input to display in Zone 2

### Optional Remote (see page 30)

- When 1 zone is displayed, press the desired input button on the remote to change the source displayed in Zone 1
- When 2 sources are displayed, Press the Zone 1 or Zone 2 buttons on the remote, followed by the desired source button for the selected zone
- Press the PIP Mode button to toggle between the Single, PiP and PbP modes
- Press the SRC/Source button. The input source will be toggled sequentially.

## 16.8 Navigating Through the Menus

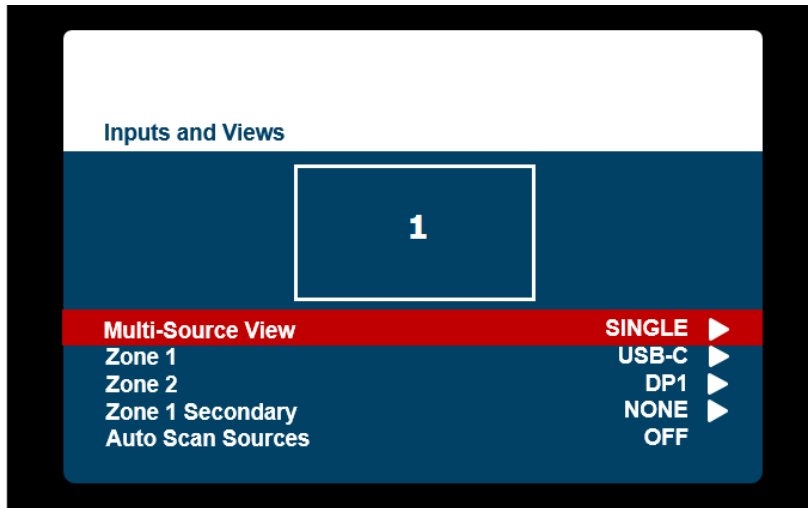
1. With the power on, press MENU. The MAIN menu appears.



2. Within the menu, use ▲, ▼, ◀, ▶, and ENTER to navigate through the menus and adjust options.
3. Press MENU on the remote control, or MENU/EXIT on the keypad, to return to the previous menu. To exit the menu system, press EXIT on the remote control, or continue to press MENU/EXIT on the keypad until the main menu is reached.

## 17. Inputs and Views Menu

This menu shows how the sources will be laid out on the screen based on the current Multi-Source View and Advanced Layouts selections.



### Multi-Source View

- Select the Multi-Source View mode
- **Options:** Single View, Dual View, PiP, Advanced Layouts; **Default:** Single
- **Note:** For the Advanced Layouts submenu, refer to the Advanced Layouts Submenu on page 36.
- **Note:** HDMI 1 and 2 cannot be viewed simultaneously.
- **Note:** DP 1 and DP 2 cannot be viewed simultaneously.

### Zone 1

- Select the source displayed in Zone 1
- **Options:** HDMI 1, HDMI 2, DP 1, DP 2, USB-C, OPS; **Default:** USB-C

### Zone 2

- Select the source displayed in Zone 2
- **Options:** HDMI 1, HDMI 2, DP 1, DP 2, USB-C, OPS; **Default:** DP 1

### Zone 1 Secondary

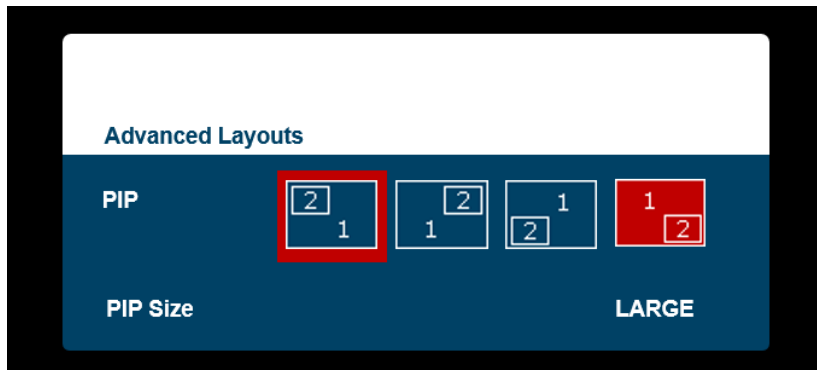
- Select the source to be displayed in Zone 1 when no signal is detected, and **Auto Scan Sources** is set to **Failover**.
- **Options:** None, HDMI 1, HDMI 2, DP 1, DP 2, USB-C, OPS; **Default:** None

## Auto Scan Sources

- Select whether the display will automatically scan for a valid source when one is not currently displayed. When **On** is selected, all sources will be scanned sequentially. When **Failover** is selected, Zone 1 will switch to the source set in **Zone 1 Secondary**.
- **Options:** Off, On, Failover; **Default:** Off

## Advanced Layouts Submenu

This submenu defines the layouts for each multi-source view type.



### PIP

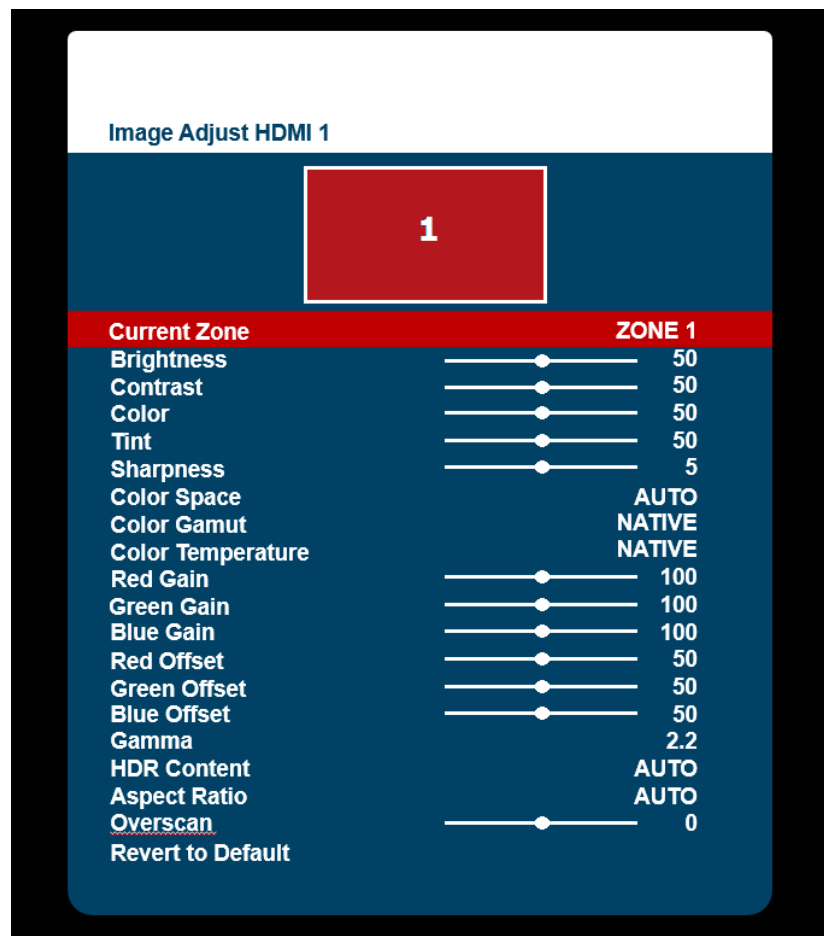
- Select from four PiP (Picture-in-Picture) layouts. The layout in orange will be the active layout displayed when the Multi-Source View is set to PiP.

### PIP Size

- Select the size of the PiP (Picture-in-Picture) window.

## 17.1 Image Adjust Menu

This menu is used for making common image adjustments for the current zone.



### Current Zone

- The zone that is currently being adjusted. All of the settings in this menu are saved per input. The zone's corresponding input source is shown in the title bar, and the graphic beneath that shows which zone is being adjusted in the current Multi-Source View mode and Advanced Layout setting (if applicable).

### Brightness

- Adjust the black level of the image
- **Range:** 0~100; **Default:** 50

### Contrast

- Adjust the white level of the image
- **Range:** 0~100; **Default:** 50

### Color

- Adjust the saturation of the image
- **Range:** 0~100; **Default:** 50

## Tint

- Adjust the hue of the image
- **Range:** 0~100; **Default:** 50

## Sharpness

- Adjust the sharpness of the image. Higher numbers are sharper
- **Range:** 0~10; **Default:** 5

## Color Space

- Set the color space of the image
- **Options:** REC601, REC709, RGB, RGB Video, Auto; **Default:** Auto

## Color Temperature

- Set the color temperature of the image
- **Options:** 3200K, 5500K, 6500K, 7500K, 9300K, Native; **Default:** Native

## Red Gain

- Adjust the red gain of the image
- **Range:** 0~200; **Default:** 100

## Green Gain

- Adjust the green gain of the image
- **Range:** 0~200; **Default:** 100

## Blue Gain

- Adjust the blue gain of the image
- **Range:** 0~200; **Default:** 100

## Red Offset

- Adjust the red offset of the image
- **Range:** 0~100; **Default:** 50

## Green Offset

- Adjust the green offset of the image
- **Range:** 0~100; **Default:** 50

## Blue Offset

- Adjust the blue offset of the image
- **Range:** 0~100; **Default:** 50

## Gamma

- Set the gamma of the image
- **Options:** 1.85, 1.9, 1.95, 2.0, 2.05, 2.1, 2.15, 2.2, 2.25, 2.3, 2.35, 2.4, 2.45, 2.5, 2.55, 2.6.
- **Default:** 2.2

## HDR Content

- Set the HDR image mode
- **Options:** Auto, On, Off; **Default:** Auto

## Aspect Ratio

- Set how the source is treated when the aspect ratio of the input is different than the aspect ratio of the zone it is in. If the image does not fill the zone completely, the extra margins are black.
- **Options:** Auto, 16:9, 4:3, Fill, Letterbox, Native; **Default:** Auto

## Overscan

- Set the percentage of the image to remove from each edge
- **Range:** 0~20; **Default:** 0

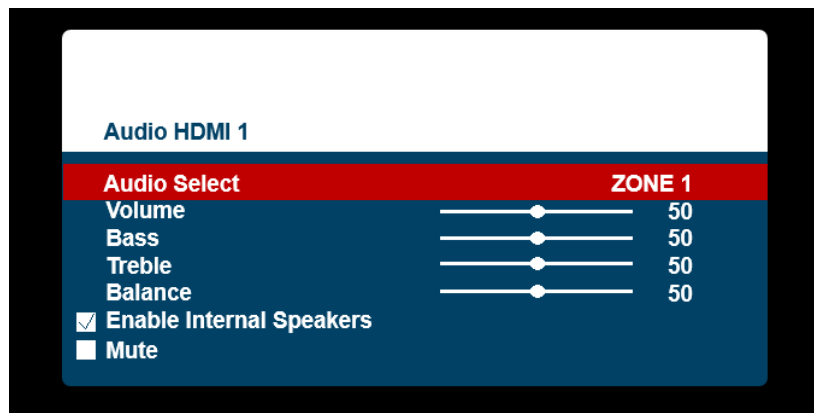
## Revert to Defaults

- Reset all settings in the Image Adjust menu to their factory defaults for the current zone only

## 17.2 Audio Menu

This menu enables you to make audio adjustments to the selected zone.

**Note:** Volume, Bass, Treble and Balance do not apply to the S/PDIF output.



### Audio Select

- The zone that is currently being adjusted and whose audio is being played. The zone's corresponding input source is shown in the title bar.
- **Options:** Zone 1, Zone 2, Zone 3, Zone 4; **Default:** Zone 1

### Volume

- Set the volume of the audio
- **Range:** 0~100; **Default:** 50

### Bass

- Set the bass level
- **Range:** 0~100; **Default:** 50
- **Note:** This setting applies only to the internal speakers, and cannot be adjusted for the Line Out connector.

### Treble

- Set the treble level
- **Range:** 0~100; **Default:** 50
- **Note:** This setting applies only to the internal speakers, and cannot be adjusted for the Line Out connector.

### Balance

- Set the audio balance
- **Range:** 0~100; **Default:** 50



## Enable Internal Speakers

- Disable or enable the built-in speakers
- **Options:** On, Off; **Default:** On

## Mute

- Mute or unmute the audio
- **Options:** On or Off; **Default:** Off

## 17.3 Presets Menu

This menu enables you to save Inputs and Views settings, Image Adjust settings, Audio settings, and the Backlight Intensity setting. You can save up to 10 presets using this menu (more can be saved via the serial command interface). If a preset is saved, it will appear as “Preset 1”, “Preset 2”, and so on. If it is not saved, it will appear as “<Empty>”.



### Recall

- Apply the setup from the selected preset
- **Range:** Preset 1~Preset 10

### Save

- Save the current setup for later recall
- **Range:** Preset 1~Preset 10

### Delete

- Delete the selected preset
- **Range:** Preset 1~Preset 10

## 17.4 Advanced Settings Menu

### Panel Brightness Submenu



#### Intensity

- Set the intensity of the LCD backlight
- **Range:** 0~100; **Default:** 70

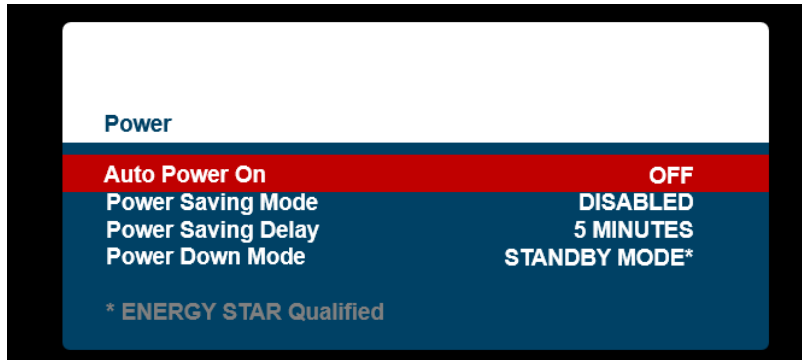
#### Smart Light Control

- Select how to control the backlight: DCR and Light Sensor.
- **Options:** Off, DCR, Light Sensor; **Default:** Off
  - **Off:** Uses Intensity value
  - **DCR:** Changes based on brightness of displayed content
  - **Light Sensor:** Changes based on environment's ambient light

#### Local Dimming

- Turn on or off local dimming function
- **Options:** On, Off; **Default:** On

## Power Submenu



### Auto Power On

- If set to On, the display will automatically leave standby after AC power is applied
- **Options:** On, Off; **Default:** Off
- **Note:** The UltraRes W Series also includes Previous State. If selected, when the display is on and loses power, it will go to the last operational state when power is restored.

### Power Saving Mode

- Set the action to take if there is no signal detected after the period of time specified by the **Power Saving Delay** setting
- **Options:** Disabled, Power Down, Wake on Signal; **Default:** Disabled
  - **Disabled:** Once powered on, the display will remain on even if no signal is present.
  - **Power Down:** The display will enter a standby state specified by the **Power Down Mode** setting.
  - **Wake On Signal:** The display will enter a standby sleep mode if no signal is detected. The display will wake when signal is restored.
    - **Note:** When signal is restored, a 10-15 second wait is typical to have an image displayed.
    - **Note:** The display must be allowed to enter sleep mode due to lack of signal for **Wake On Signal** to take effect. Sending an OFF command via Keypad, IR, CEC, RS232 or LAN will bypass **Wake On Signal** detection, and the display will enter the power state specified in the **Power Down Mode** setting.
    - **Note:** If **Auto Scan Sources** is enabled in the **Inputs and Views** menu, the display will sequentially scan all inputs before entering sleep mode. The display will leave sleep mode when a signal is detected on any input.
    - **Note:** If **Auto Scan Sources** is disabled in the **Inputs and Views** menu, the display leave sleep mode only when a signal is detected on the last selected input.
    - **Note:** When **Wake On Signal** is selected, the LAN port and **Remote Monitoring** web interface will remain accessible after the display enters sleep mode.

## Power Saving Delay

- Sets the amount of time before initiating the standby state specified in **Power Saving Mode** when no signal is present
- **Options:** 1 Minute, 5 Minutes, 15 Minutes, 30 Minutes, 60 Minutes; **Default:** 5 Minutes

## Power Down Mode

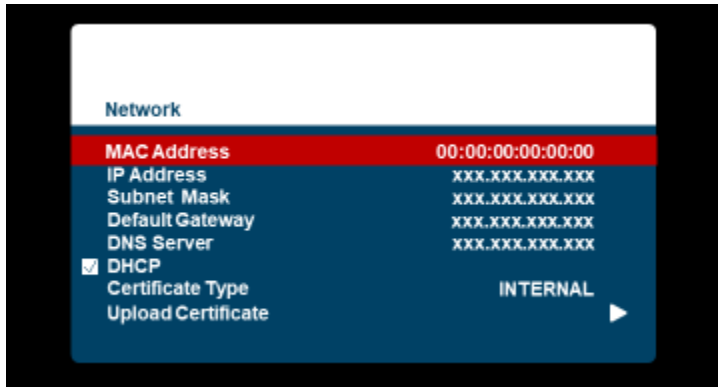
- Set the action to take when the display enters standby
- **Options:** Standby Mode, Networked Standby Mode, Fast Startup; **Default:** Standby Mode
- **Standby Mode:** The lowest power standby setting. CEC, LAN, DB9 RS232, and USB communication are disabled. IR, Keypad connector will remain active.
  - **Note:** To remove display from standby with the IR remote or keypad, IR Remote Lock or Keypad Lock must be disabled.
- **Networked Standby Mode:** The display will enter a low power standby state with LAN, DB9 RS232, USB and IR communications active.
- **Fast Startup:** The display will enter a standby state with partially reduced power, allowing for 3-5 second wait between an ON command being sent, and image being displayed. IR, Keypad, CEC, LAN, DB9 RS232, and USB communication will remain active.

## Network Submenu

The default static IP values are:

- IP Address: 192.168.12.12
- Subnet Mask: 255.255.255.0
- Default Gateway: 192.168.12.1

The static IP settings that you program will be used if a DHCP server cannot be found.



### MAC Address

- The MAC address of the system

### IP Address

- The current network address. You can use the number keys on the remote to enter this information.

### Subnet Mask

- The current subnet mask. You can use the number keys on the remote to enter this information.

### Default Gateway

- The current default gateway. You can use the number keys on the remote to enter this information.

### DNS Server

- The current DNS server. You can use the number keys on the remote to enter this information.
- **Note:** The specified DNS server is used when Use Network Time is checked for the Set Date and Time setting.

### DHCP

- Turn DHCP on or off
- **Options:** On, Off; **Default:** On

## Certificate Type

- Choose a certificate to use for HTTPS
- **Options:** Internal, User; **Default:** Internal
- **Internal:** Selects a self-signed certificate preinstalled in the display
- **User:** Selects the user-provided certificate. See “Uploading a Certificate.”

## Upload Certificate

- Provide your own certificate to use for HTTPS. See “Uploading a Certificate.”

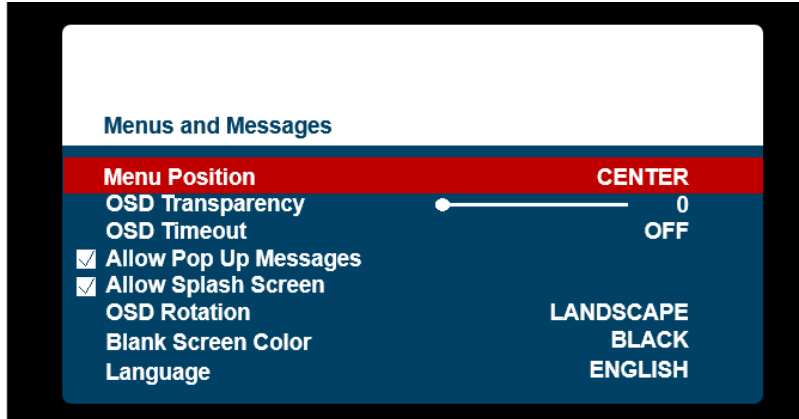
## Uploading a Certificate

You can upload your own certificate to use for HTTPS. To do this, you will need the following files on a USB flash drive that is FAT32 formatted:

- https\_cert.pem: The server certificate in PEM format
  - https\_key.pem: The private key in PEM format
1. Insert the USB flash drive into the USB Service port.
  2. Open the OSD and navigate to **Advanced Settings > Network > Upload Certificate**.
  3. Press enter on the remote and press OK to start upload process.

To use your uploaded certificate, change Certificate Type to User (see above).

## Menus and Messages Submenu



### Menu Position

- Move the OSD menu to a different location on the screen
- **Options:** Center, Upper Left, Upper Right, Lower Left, Lower Right; **Default:** Center

### OSD Transparency

- Set the transparency of the OSD so that the image behind it can be seen. Higher values mean greater transparency.
- **Range:** 0~10; **Default:** 0

### OSD Timeout

- Set the amount of time in seconds since the last keypress before the OSD menu automatically closes. If set to Off, the menu never automatically closes.
- **Options:** Off, 10 Seconds, 30 Seconds, 60 Seconds, 120 Seconds, 240 Seconds; **Default:** 60 Seconds

### Allow Pop Up Messages

- Suppress messages that pop up automatically. When set to No, the source status message and the volume slider bar will not be displayed.
- **Options:** Yes or No; **Default:** Yes

### Allow Splash Screen

- Enable or disable the splash screen during startup
- **Options:** On, Off; **Default:** On

### Language

- Select the OSD language
- **Options:** English, French, German, Italian, Portuguese, Spanish, Chinese (Traditional), Chinese (Simplified), Japanese; **Default:** English

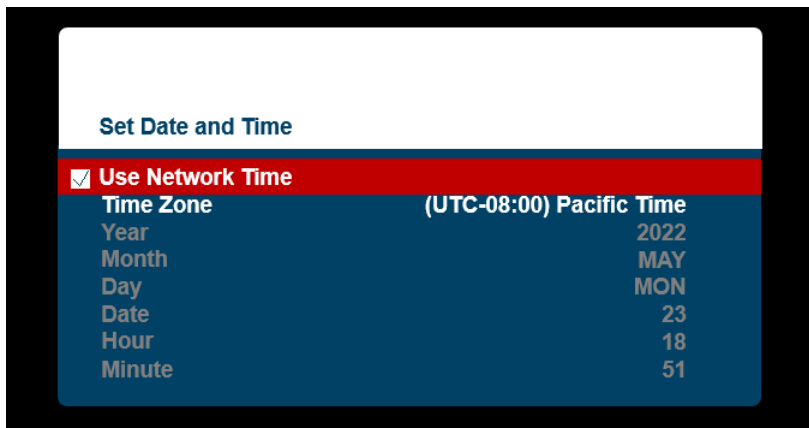
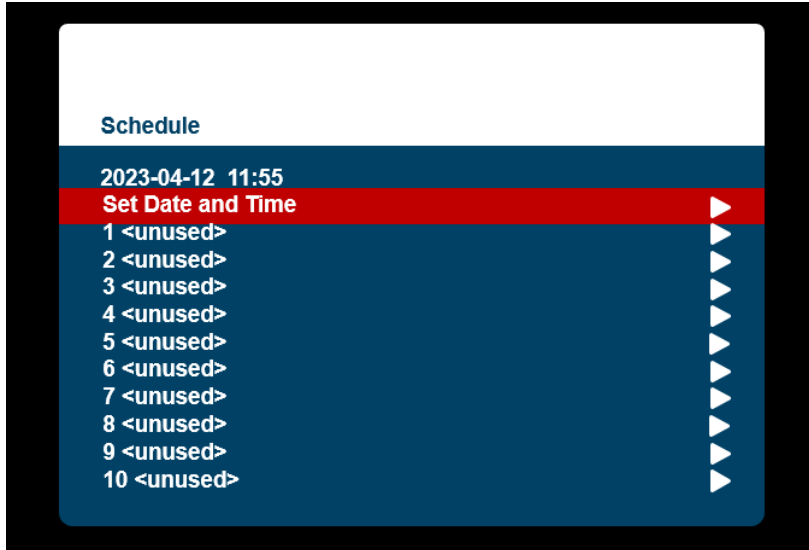
### OSD Rotation

- Rotate the OSD menu so that it is readable if the display is mounted in portrait orientation
- **Options:** Landscape or Portrait; **Default:** Landscape

## Blank Screen Color

- Select the color to display when there is no signal in a zone
- **Options:** Black, White, Gray, Red, Green, Blue, Cyan, Magenta, Yellow
- **Default:** Black

## Schedule Submenu

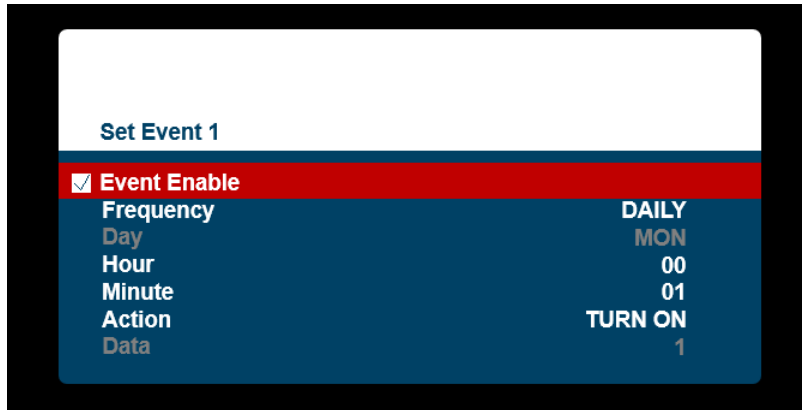




**Note:** The UltraRes W Series shows only 10 events.

### Set Date and Time

- Set the internal system clock. If Use Network Time is unchecked, you can set the following settings individually: Time Zone, Year, Month, Day, Date, Hour, and Minute.
- **Note:** If Use Network Time is checked and DHCP is unchecked, the display will be unable to obtain the network time unless a DNS server is programmed. This is done via the DNS Server setting in the Network menu or the serial command interface.

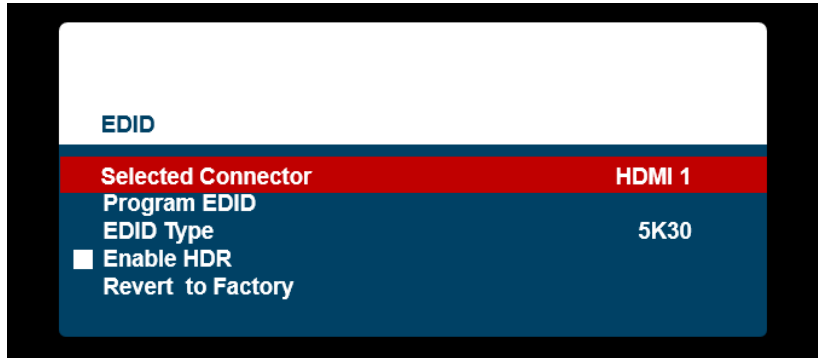


### Set Event 1~Event 20

- **Event Enabled:** Turns on the event. If disabled, the settings are saved so that the event can be re-enabled.
- **Frequency:** The frequency of the event. Options are Daily, Weekly, Weekdays, Weekends.
- **Action:** The action to take for the event. Options are Turn On, Turn Off, Recall, Panel Brightness.
- **Data:** The preset to recall when the Action is set to Recall, or the backlight setting when the Action is set to Panel Brightness.

## EDID Submenu

This menu specifies the EDID format and preferred timing for the selected connector.



### Selected Connector

- Set which connector is used
- **Options:** HDMI 1, HDMI 2, DP 1, DP 2, USB-C, OPS

### Program EDID

- Program the EDID information for the selected connector based on the selections in the EDID submenu

### EDID Type

- Set the EDID type to determine the base EDID used for the current connector:
- **Options:** 5K60,5K30, 4K60, 4K30, 3840x1600, 3440x1440, 2560x1080, 1080P
  - 5K60 selects an EDID format compliant with DP 1.4
  - 5K30 selects an EDID format compliant with HDMI 2.1 and DP 1.4
  - 4K60 selects an EDID format compliant with HDMI 2.0 and DP 1.2
  - 4K30 selects an EDID format compliant with HDMI 1.4b and DP 1.1
  - 3840x1600 selects an EDID format compliant with HDMI 1.4b and DP1.1
  - 3440x1440 selects an EDID format compliant with HDMI 1.4b and DP1.1
  - 2560x1080 selects an EDID format compliant with HDMI 1.4b and DP1.1
  - 1080P selects an EDID format compliant with HDMI 1.3 and DP 1.1

### Enable HDR

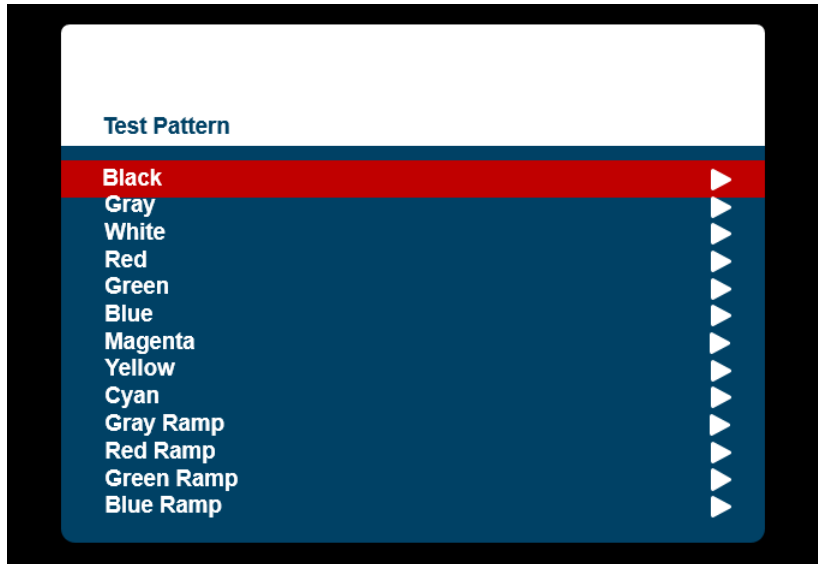
- Indicates to the source specified in **Selected Connector** that HDR content is supported
- **Options:** On, Off; **Default:** On (HDMI 1, HDMI 2); **Default:** Off (DP 1, DP 2, OPS, USB-C)
- **Note:** Displaying HDR content requires an HDR compatible source and HDR encoded content.
- **Note:** HDR sources connected via HDMI require high speed (18Gbps) compatible cables.

### Revert to Factory

- Reset the EDID type and timings to the default values for the selected connector

## Test Patterns Submenu

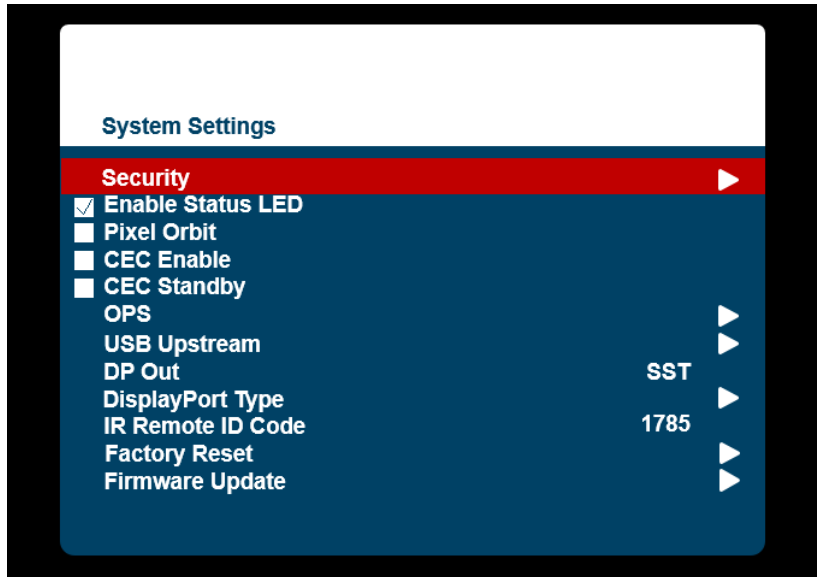
This menu selects a test pattern to show on the display for diagnostic purposes.



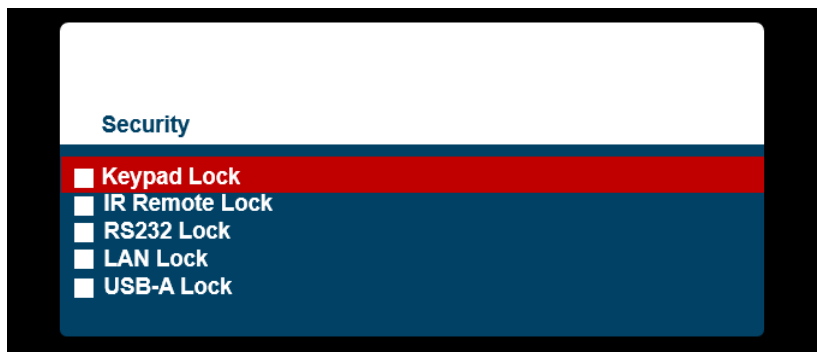
### Test Patterns

- **Options:** Black, Gray, White, Red, Green, Blue, Magenta, Yellow, Cyan, Gray Ramp, Red Ramp, Green Ramp, Blue Ramp

## System Settings Submenu



## Security



- Keypad Lock: When enabled, locks keypad
- IR Remote Lock: When enabled, locks IR Remote
- RS232 Lock: When enabled, RS232 communication is disabled
- LAN Lock: When enabled, LAN communication is disabled
- USB-A Lock: When enabled, USB-A port is disabled
- **Note:** To unlock the IR Remote press the following keys on the remote: ENTER, ENTER, EXIT, EXIT, ENTER and EXIT
- **Note:** Locking the keypad and/or IR Remote does not disable the power on command button on the IR Remote

## Enable Status LED

- When enabled, the status LEDs on the back of the display behave as indicated on page 24. When disabled, the status LEDs are always turned off.
- **Options:** On, Off; **Default:** On

## Pixel Orbit

- Create slight frame motion to help avoid image retention
- **Options:** On, Off; **Default:** On

## CEC Enable

- Enables HDMI-CEC (Consumer Electronics Control) with compatible external devices
- **Options:** On, Off: **Default:** Off

## CEC Standby

- Enables compatible external devices to put this display into standby with HDMI-CEC command Standby
- **Options:** On, Off: **Default:** Off

The CEC commands listed in the tables below are implemented:

Command	Value
Image View On	0x04
Text View On	0x0D
Standby	0x36
User Control Pressed	0x44
Routing Change	0x80
Active Source	0x82
Give Physical Address	0x83
Report Physical Address	0x84
Request Active Source	0x85
Give Device Power Status	0x8F
Report Power Status	0x90
Inactive Source	0x9D
CEC Version	0x9E
Get CEC Version	0x9F
Give Features	0xA5
Report Features	0xA6

## OPS

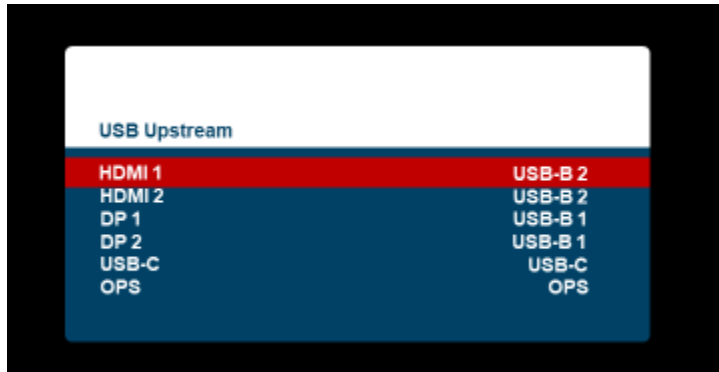
### OPS Power Down Check

- When enabled, the system will wait for an indication from the OPS module that it has finished its power down sequence, before going into the standby state specified in **Power Down Mode**
- **Options:** On, Off: **Default:** Off

## OPS Port

- Changes max resolution for OPS; HDMI for 5K30 and DP for 5K60
- **Options:** HDMI, DP; **Default:** HDMI

## USB Upstream



- Provides mapping for the USB ports to each video input. In addition to other USB peripheral devices, the USB-B ports are used to connect the Planar UltraRes W Series touch sensor to touch-capable sources that are connected to the HDMI and Display Port inputs.
- **Note:** In addition to video, audio and power, the USB-C port provides communication between the Planar UltraRes W Series USB ports and any compatible device connected to the USB-C input.

## DP Out

- Configures downstream port of the DP out
- **Options:** SST, MST; **Default:** SST

## DisplayPort Type

- Set the version of DisplayPort that is used by DP 1, DP 2, USB-C and OPS
- **Options:** 1.1, 1.2, 1.4; **Default:** 1.4

## IR Remote ID Code

- Selects the IR remote code set accepted by the display.
- **Note:** The remote that ships with the Planar UltraRes W Series models (952-0088-00) only supports the default IR code of 01785. Use of any other IR code requires the use of the optional Planar remote (952-0086-00).
- **Options:** 00000-65535; **Default:** 01785

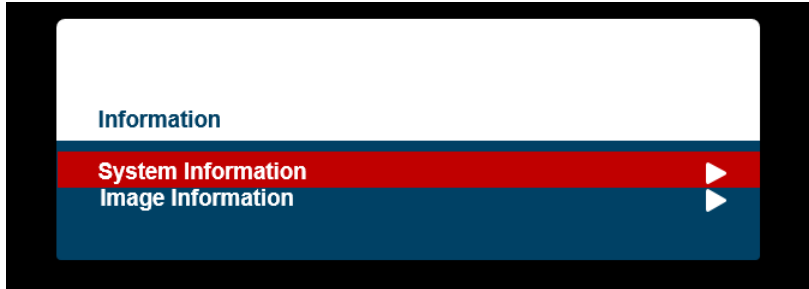
## Factory Reset

- Return the saved settings in a system to their factory defaults.

## Firmware Update

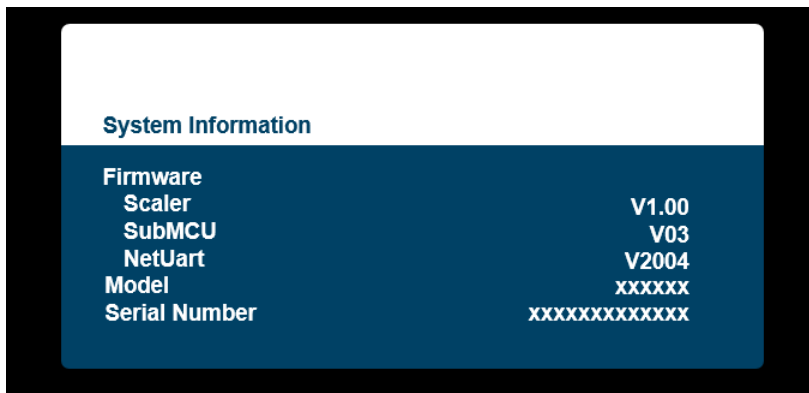
- Update the firmware for the display. Refer to the instructions on the firmware release package for more information.

## 17.5 Information Menu



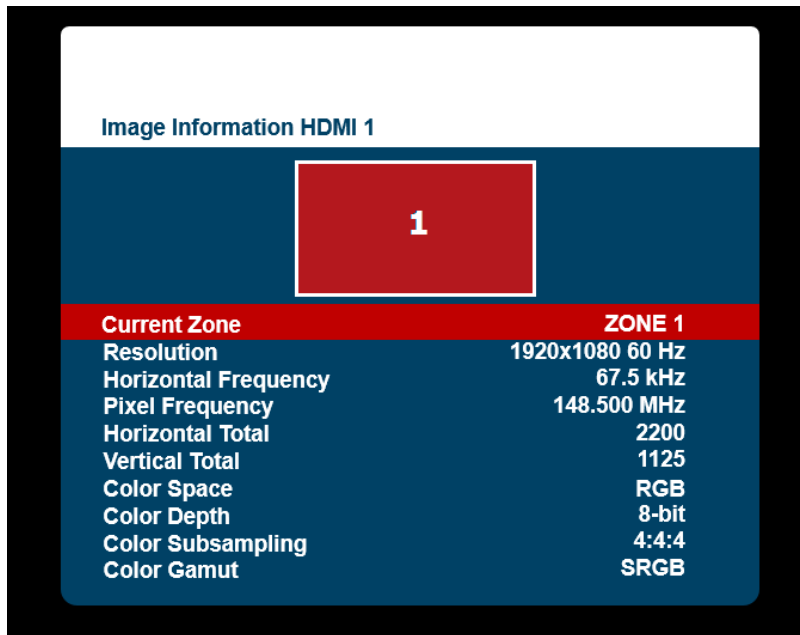
### System Information Submenu

This menu displays version information for all programmable parts in the system. It also contains the model and serial number.



## Image Information Submenu

This menu displays image details for the current zone. If more than one zone is available, you can change zones by setting the **Current Zone** option.





## 18. Using the Touch Screen

You can use the touch screen to control your Windows, Mac or Linux operating system. The Planar UltraRes W Series is HID compliant, delivering up to 50 points of touch on the URW105 touch model on both Windows and Linux without a driver. Single touch only is supported for Mac operating systems. To achieve more than single touch Mac support, drivers will need to be installed, which can be found on <http://www.planar.com/support>.

### 18.1 Connecting a Touch-capable source

- OPS: Connection from the touch sensor to the OPS device is enabled by default.
- USB-C: USB-C sources can carry power, video, audio and touch signals over a single USB-C cable. Connection from the touch sensor to the USB-C input is enabled by default
- HDMI: HDMI sources require a USB cable to connect the touch sensor to the HDMI source.
- DisplayPort: DisplayPort sources require a USB cable to connect the touch sensor to the DisplayPort source
- **Note:** See USB Upstream section (page 54) for USB configuration settings

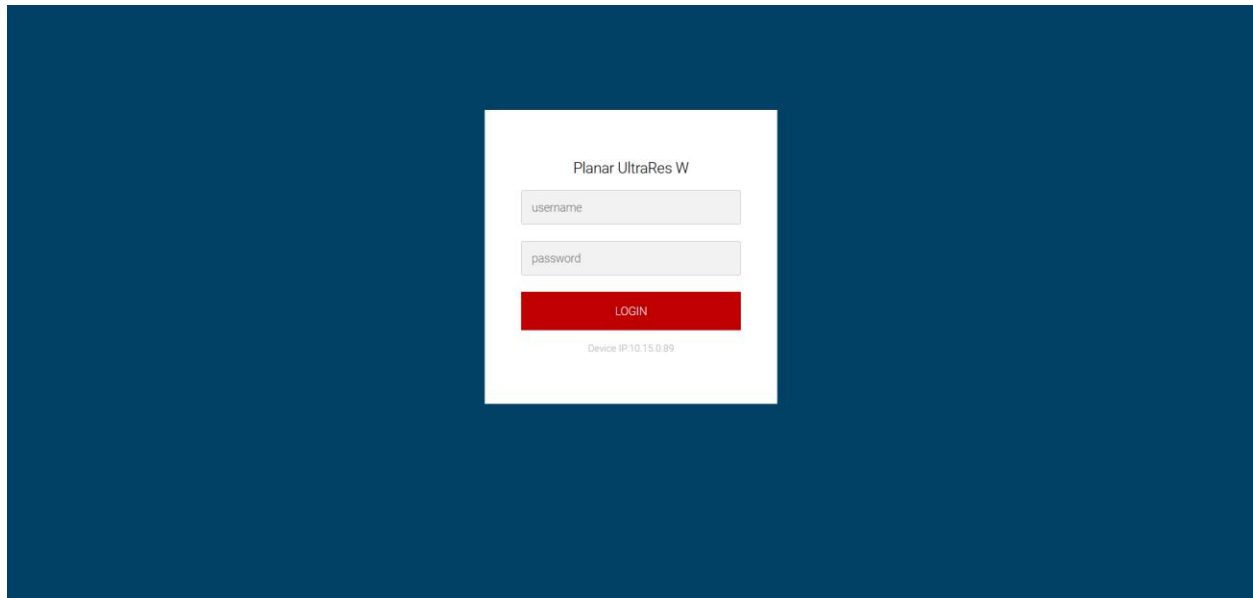
# Planar UltraRes W Series Remote Monitoring Software

Planar UltraRes W Series Remote Monitoring is a software tool that displays information about the display via a web browser. It is also used to configure email alerts.

## 19. Login

Launch a web browser. Enter the IP address, shown in the Network submenu.

The default username is Admin. The default password is on a label on the back of the display. Once logged in, the username and password can be changed.



## 20. Information

This page displays serial number, model number and firmware version.

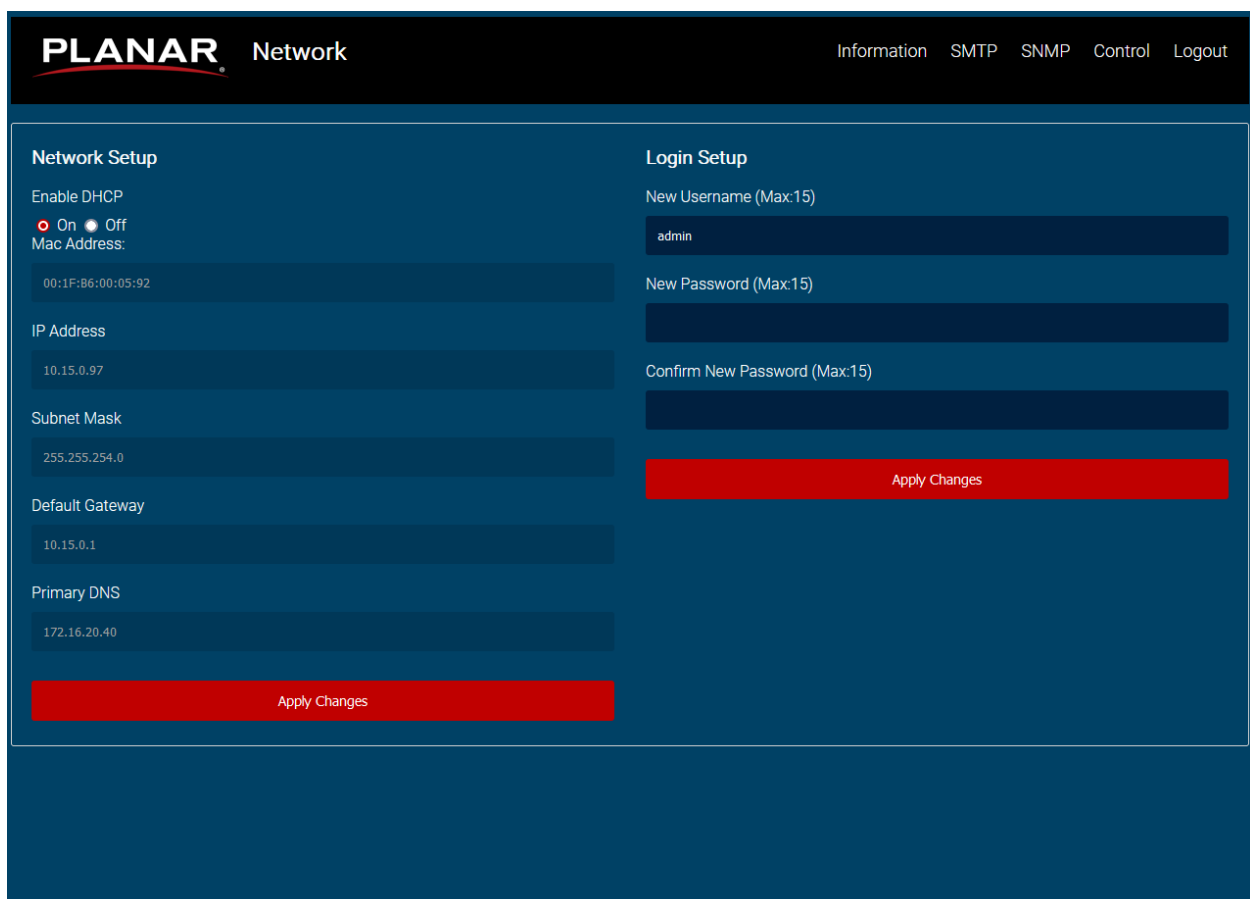


The screenshot shows the PLANAR Information page. The header includes the PLANAR logo and the word "Information". On the right side of the header, there are links for "Network", "SMTP", "SNMP", "Control", and "Logout". The main content area is a table with four columns: "Display S/N", "Display Model", "Firmware Version", and "Notices".

Display S/N	Display Model	Firmware Version	Notices
000502A32D003	URW105	V2008	<a href="#">View Detail</a>

## 21. Network

This page allows for network configuration and changing the admin user name and password.



The screenshot shows the PLANAR Network configuration page. The header includes the PLANAR logo and the word "Network". On the right side of the header, there are links for "Information", "SMTP", "SNMP", "Control", and "Logout". The main content area is divided into two sections: "Network Setup" and "Login Setup".

**Network Setup**

- Enable DHCP:  On  Off
- Mac Address: 00:1F:86:00:05:92
- IP Address: 10.15.0.97
- Subnet Mask: 255.255.254.0
- Default Gateway: 10.15.0.1
- Primary DNS: 172.16.20.40

**Login Setup**

- New Username (Max:15): admin
- New Password (Max:15): [Redacted]
- Confirm New Password (Max:15): [Redacted]

Both sections have an "Apply Changes" button at the bottom.

## 22. SMTP

This page allows configuration of SMTP and email alerts.

**PLANAR** SMTP Information Network SNMP Control Logout

### SMTP Setup

Enable SMTP  
 On  Off

SMTP Port:  
25

SMTP Server Address (Max 60 chars):  
smtp.xxx.yyy

SMTP Connection Encryption  
 NONE  TLS  STARTTLS

SMTP Authentication  
 NONE  AUTO  PLAIN  LOGIN

Username (Max 30 chars):  
username

Password (Max 30 chars):  
\*\*\*\*\*

Mail To (Max 100 chars):  
xxx@yyy.zzz

Mail From (Max 60 chars):  
xxx@yyy.zzz

Apply Changes

Some SMTP setup information (username and password, to- and from- addresses) may be considered personal data with regard to privacy and cyber security protection regulations. The data entered here is used solely for the purpose of sending information about the display health to the indicated email addresses using the given SMTP server. This information is never transmitted to any other service, and can be cleared by deleting it from this page or by a Factory Reset from the System Settings menu (see pages 52-54) or via the Reset button (see page 16).

For more information about Planar's privacy policy, please see <http://www.planar.com/privacy>

## 23. SNMP

This page allows configuration of SNMP and Trap.

**PLANAR** SNMP Information Network SMTP Control Logout

---

### SNMP Setup

Enable SNMP  
 Off  V1/V2c  V3

SNMP Port:  
161

SNMP Community (Max 15 chars):  
public

SNMP Write Community (Max 15 chars):  
private

User Name (Max 15 chars):  
admin

Security Level  
 NoAuthNoPriv  AuthNoPriv  AuthPriv

Authentication Protocol  
 MD5  SHA

Authentication Password (8~15 chars):  
\*\*\*\*\*

Privacy Protocol  
 CBC-DES  CFB-AES-128

Privacy Password (8~15 chars):  
\*\*\*\*\*

Engine ID:  
80004AB5001FB6000592

**Apply Changes**

---

### Trap Setup

Enable Trap  
 On  Off

Trap Port:  
162

Trap IP:  
192.168.2.10

Trap Community (Max 15 chars):  
public

Trap for Power Status Change  
 On  Off

Trap for Source Change  
 On  Off

Trap for Signal Lost  
 On  Off

**Apply Changes**

## 24. Control

This page allows configuration of the control connection type.

**Options:** Disabled, Telnet, SSH. **Default:** SSH

**PLANAR** Control

Information Network SMTP SNMP Logout

### Control Setup

Connection Type

Disabled  Telnet  SSH

SSH Port:

22

Username (Max 30 chars):

admin

Password (Max 30 chars):

\*\*\*\*\*

Idle Session Timeout (1~255 minutes):

3

Apply Changes

# External Control

In addition to using the Planar UltraRes W Series remote control and display, there are other methods of controlling the Planar UltraRes W Series display externally:

- Using a serial link to send ASCII commands and to receive responses to those commands. The same set of commands can be sent over RS-232, USB, TCP or UDP. See the Planar UltraRes W Series RS232 User Manual for more information.
- Using discrete infrared (IR) codes to program a third-party remote control. See "IR Command Protocol" on page 27.
- Using the Planar UltraRes W Series Remote Monitoring software to access the settings in the OSD as well as some additional features via a web browser. See "Planar UltraRes W Series Remote Monitoring Software" on page 58.
- Using HDMI-CEC with compatible devices. See "CEC" on page 53.

# Signal Compatibility

Signal Type	Resolution	Frame Rate (Hz)	Line Rate (kHz)	Pixel Rate (MHz)	HDMI 1-2	DP 1-2	USB-C	OPS	References
PC	640x480	59.94	31.469	25.175	x	x	x	x	VESA DMT, CEA-861-F Format 1
	640x480	72.809	37.861	31.5	x	x	x	x	VESA DMT
	640x480	75	37.5	31.5	x	x	x	x	VESA DMT
	640x480	85.008	43.269	36	x	x	x	x	VESA DMT
	800x600	60.317	37.879	40	x	x	x	x	VESA DMT
	800x600	72.188	48.077	50	x	x	x	x	VESA DMT
	800x600	75	46.875	49.5	x	x	x	x	VESA DMT
	800x600	85.061	53.674	56.25	x	x	x	x	VESA DMT
	848x480	59.659	29.83	31.5	x	x	x	x	VESA CVT
	848x480	74.769	37.684	41	x	x	x	x	VESA CVT
	848x480	84.751	42.969	46.75	x	x	x	x	VESA CVT
	1024x768	60.004	48.363	65	x	x	x	x	VESA DMT
	1024x768	70.069	56.476	75	x	x	x	x	VESA DMT
	1024x768	75.029	60.023	78.75	x	x	x	x	VESA DMT
	1024x768	84.997	68.677	94.5	x	x	x	x	VESA DMT
	1152x864	70.012	63.851	94.5	x	x	x	x	VESA DMT
	1152x864	75	67.5	108	x	x	x	x	VESA DMT
	1152x864	84.999	77.094	121.5	x	x	x	x	VESA DMT
	1280x768	49.929	39.593	65.25	x	x	x	x	VESA CVT
	1280x768	59.995	47.396	68.25	x	x	x	x	VESA CVT-R
	1280x768	59.87	47.776	79.5	x	x	x	x	VESA CVT
	1280x768	74.893	60.289	102.25	x	x	x	x	VESA CVT
	1280x768	84.837	68.633	117.5	x	x	x	x	VESA CVT



Signal Type	Resolution	Frame Rate (Hz)	Line Rate (kHz)	Pixel Rate (MHz)	HDMI 1-2	DP 1-2	USB-C	OPS	References
PC	1280x960	60	60	108	x	x	x	x	VESA DMT
	1280x960	75	75	126	x	x	x	x	VESA DMT
	1280x960	85.002	85.938	148.5	x	x	x	x	VESA DMT
	1280x1024	60.02	63.981	108	x	x	x	x	VESA DMT
	1280x1024	75.025	79.976	135	x	x	x	x	VESA DMT
	1280x1024	85.024	91.146	157.5	x	x	x	x	VESA DMT
	1366x768	59.79	47.712	85.5	x	x	x	x	VESA DMT
	1400x1050	49.965	54.113	100	x	x	x	x	VESA CVT
	1400x1050	59.948	64.744	101	x	x	x	x	VESA CVT-R
	1400x1050	59.978	65.317	121.75	x	x	x	x	VESA CVT
	1400x1050	74.867	82.278	156	x	x	x	x	VESA CVT
	1600x1200	60	75	162	x	x	x	x	VESA DMT
	1920x1080	49.929	55.621	141.5	x	x	x	x	VESA CVT
	1920x1080	59.963	67.158	173	x	x	x	x	VESA CVT
	1920x1080	59.95	66.587	138.5	x	x	x	x	VESA CVT-R
	1920x1200	49.932	61.816	158.25	x	x	x	x	VESA CVT
	1920x1200	59.95	74.038	154	x	x	x	x	VESA CVT-R
	1680x1050	49.974	54.121	119.5	x	x	x	x	VESA CVT
	1680x1050	59.954	65.29	146.25	x	x	x	x	VESA CVT
	1920x2160	60	135	297	x	x	x	x	CEA-861-F, VIC 16, with vertical parameters doubled
	1920x2160	59.988	133.293	277.25	x	x	x	x	VESA CVT-R
	2560x1440	59.951	88.787	241.5	x	x	x	x	VESA CVT-R
	2560x1600	59.972	98.713	268.5	x	x	x	x	VESA CVT-R
	3840x2160	23.999	52.438	209.75	x	x	x	x	VESA CVT-R

Signal Type	Resolution	Frame Rate (Hz)	Line Rate (kHz)	Pixel Rate (MHz)	HDMI 1-2	DP 1-2	USB-C	OPS	References
PC	3840x2160	29.981	65.688	262.75	x	x	x	x	VESA CVT-R
	3840x2160	49.977	110.5	442	x	x	x	x	VESA CVT-R
	3840x2160	59.997	133.313	533.25	x	x	x	x	VESA CVT-R
Apple Mac	640x480	66.59			x	x	x	x	
	832x624	75.087	49.107	55	x	x	x	x	
	1024x768	59.278	48.193	64	x	x	x	x	
	1024x768	74.927	60.241	80	x	x	x	x	
	1152x870	75.062	68.681	100	x	x	x	x	
SDTV	480i	60			x				SMPTE 125M, CEA-861-F Formats 6 & 7
	576i	50			x				ITU-R BT.601, CEA-861-F Formats 21 & 22
EDTV	480p	60	31.469	27	x	x	x	x	ITU-R BT.1358, CEA-861-F Format 17 & 18
	576p	50	31.25	27	x	x	x	x	SMPTE 125M, CEA-861-F Format 6 & 7
HDTV	1080i	50	28.125	74.5	x	x	x	x	SMPTE 274M, CEA-861-F Format 20
HDTV	1080i	60	33.75	74.25	x	x	x	x	SMPTE 274M, CEA-861-F Format 5
	720p	50	37.5	74.25	x	x	x	x	SMPTE 296M, CEA-861-F Format 19
	720p	60	45	74.25	x	x	x	x	SMPTE 296M, CEA-861-F Format 4
	1080p	24	27	74.25	x	x	x	x	SMPTE 274M, CEA-861-F Format 32
	1080p	25	28.125	74.25	x	x	x	x	SMPTE 274M, CEA-861-F Format 33
	1080p	30	33.75	74.25	x	x	x	x	SMPTE 274M, CEA-861-F Format 34
	1080p	50	56.25	148.5	x	x	x	x	SMPTE 274M, CEA-861-F Format 31
	1080p	60	67.5	148.5	x	x	x	x	SMPTE 274M, CEA-861-F Format 16
UHDTV	3840x2160	24	54	297	x	x	x	x	CEA-861-F Format 93, HDMI 1.4b VIC 1
	3840x2160	25	56.25	297	x	x	x	x	CEA-861-F Format 94, HDMI 1.4b VIC 2
	3840x2160	30	67.5	297	x	x	x	x	CEA-861-F Format 95, HDMI 1.4b VIC 3

Signal Type	Resolution	Frame Rate (Hz)	Line Rate (kHz)	Pixel Rate (MHz)	HDMI 1-2	DP 1-2	USB-C	OPS	References
UHDTV	3840x2160	50	56.25	297	x				CEA-861-F Format 96, 4:2:0 sub-sampling
	3840x2160	50	112.5	594	x	x	x	x	CEA-861-F Format 96
	3840x2160	60	67.5	297	x				CEA-861-F Format 97, 4:2:0 sub-sampling
	3840x2160	60	135	594	x	x	x	x	CEA-861-F Format 97
	4096x2160	24	54	297	x	x	x	x	CEA-861-F Format 98
	4096x2160	25	56.25	297	x	x	x	x	CEA-861-F Format 99
	4096x2160	30	67.5	297	x	x	x	x	CEA-861-F Format 100
21:9	2560x1080	60	66.636	181.250	x	x	x	x	VESA CVT-R
	3440x1440	60	88.819	319.750	x	x	x	x	VESA CVT-R
	3840x1600	60	98.750	395.000	x	x	x	x	VESA CVT-R
	5120x2160	60	133.367	693.510		x	x	x	VESA CVT-R V2
	5120x2160	24	52.800	396.000	x	x	x	x	CTA-861-G Format 121
	5120x2160	25	55.000	396.000	x	x	x	x	CTA-861-G Format 122
	5120x2160	30	66.000	396.000	x	x	x	x	CTA-861-G Format 123
	5120x2160	50	112.500	742.500		x	x	x	CTA-861-G Format 125
	5120x2160	60	135.000	742.500		x	x	x	CTA-861-G Format 126

# Color Subsampling Report

Video Timing	Input	RGB 4:4:4 Supported	YUV 4:4:4 Supported	YUV 4:2:2 Supported	YUV 4:2:0 Supported
5K @ 50/60 Hz	DP 1-2	X	X	X	
4K @ 50/60 Hz	DP 1-2	X	X	X	
5K @ 50/60 Hz	USB-C	X	X	X	
4K @ 50/60 Hz	USB-C	X	X	X	
5K @ 50/60 Hz	OPS	X	X	X	
4K @ 50/60 Hz	OPS	X	X	X	
5K @ 30 Hz	HDMI 1-2	X	X	X	
4K @ 50/60 Hz	HDMI 1-2	X	X	X	X
All Other Supported Timings	Any	X	X	X	

# Power Consumption

The power consumption values stated in the Specifications table are calculated under the typical conditions of viewing a single source with default settings. The “Power Consumption: Backlight Max (Typ.)” value is calculated by increasing the default backlight value of 70 to 100, and multiplying the wattage by approximately 1.33.

The power consumption will increase above these specified values if:

- Default settings are changed
- OPS device is connected
- USB devices are connected
- Accessories attached to the C13 AC outlet

and should be taken into account when calculating power draw for your unique installation.

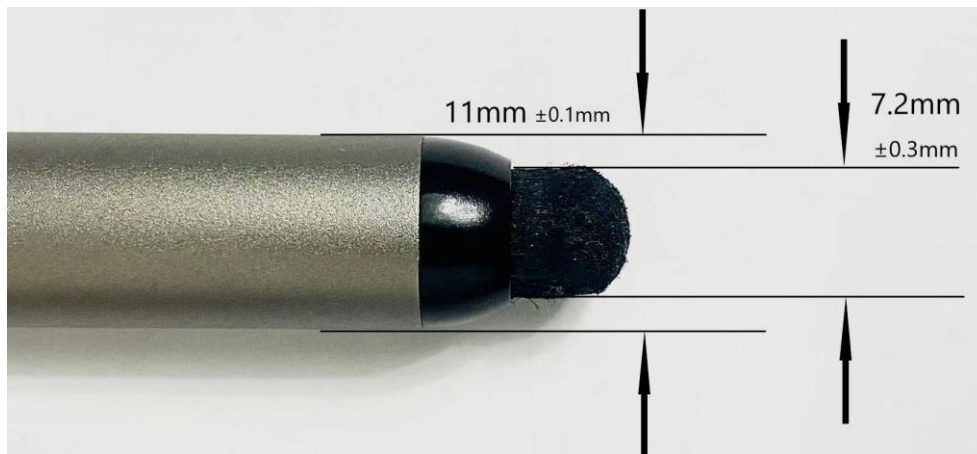
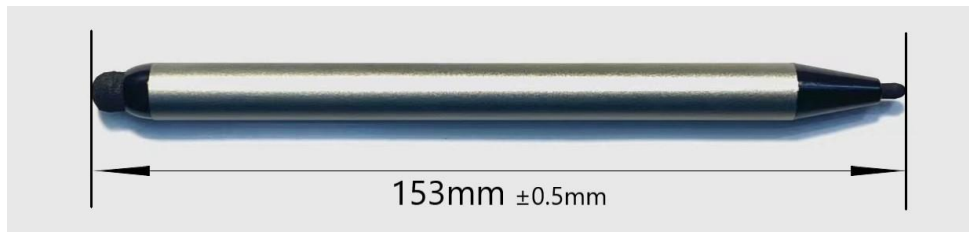
# Specifications

Item	URW105	URW105-ERO-T
<b>LCD Panel</b>		
Display Technology	Direct-lit LED LCD	
Resolution	5K (5120 x 2160)	
Aspect Ratio	21:9	
Screen Size	105 in. (diagonal)	
Orientation	Landscape/Portrait	
Brightness (Typ.)	500	400
Auto Brightness Control	Ambient light sensor	
Contrast Ratio (Typ.)	1200:1	1000:1
Viewing Angle (Typ.)	178°	
Response Time (Typ.)	8 ms	
Color Gamut	88% NTSC	
HDR (High Dynamic Range)	HDR10	
Display Color	>1 billion colors. Full 10 bit data path	
Haze	25%	
Surface Treatment	AG	AG and AF
Display Active Area	96.4" x 40.7" (2449.2mm x 1033.6mm)	
Frame Rate	60Hz	
Pixel Pitch	0.479 mm	
<b>Connectivity</b>		
Standard Inputs	DisplayPort 1.4 in x 2, HDMI 2.1 x 2 (HDCP 2.2), USB-C x 1, OPS x1, USB-A x4, USB-B x2	
Standard Output	DisplayPort out	
HDCP 2.2	Yes (HDMI 2.1)	
Audio Output	PC Line Out, S/PDIF	
Control and Monitoring	IR, RS-232, LAN, HDMI-CEC, Keypad	
<b>Mechanical</b>		
Cabinet Dimensions with Handles (W x H x D)	98.7" x 43.0" x 3.5" (2507.5mm x 1091.2mm x 88.6mm)	99.1" x 43.8" x 3.6" (2517.5mm x 1112.0mm x 90.6mm)
Cabinet Dimensions (W x H x D)	98.7" x 43.0" x 3.5" (2507.5mm x 1091.2mm x 88.6mm)	99.1" x 43.8" x 3.6" (2517.5mm x 1112.0mm x 90.6mm)
Display Edge to Active Area	1.1" (28.8mm)	1.3" (31.8mm) left and right, 1.3" (32.2mm) top and 1.7" (42.2mm) bottom

Item	URW105	URW105-ERO-T
Bezel Width	1.1" (27.5mm)	0.1" (2.5mm)
Weight	158.7 lbs (72 kg)	218.3 lbs (99 kg)
Mounting	VESA: 1000mm x 600mm	
Fanless	Yes	
Speakers	15W x 2 built-in	
Recommended Usage	Up to 24x7	
Backlight	LED	
Backlight life (1/2 brightness)	30,000 hrs (min)	
Power Consumption (Typ.)	372W (standby: <0.5W)	
Power Consumption Max Backlight (Typ.)		
BTU/hr (Typ.)		
Standby Power Consumption		
AC Output Current (max)	3A	
Input Voltage / Frequency	100-240V; 50/60Hz	
AC Inlet Type	C14	
Storage Temperature		
Operating Temperature	0° to +40°C (32° to 104°F) up to 3000m	
Humidity	20 - 85% RH (non-condensing)	
Approvals	FCC Class A, CE, cTUVus, RoHS	
ENERGY STAR Certified	TBD	TBD
TAA Compliance	Yes	
<b>Touch (ERO-T model only)</b>		
Surface Treatment	N/A	AG+AF
Protective Glass		3mm with AG+AF coating
Touch Technology		Projected Capacitive: 50 points
Touch Interface		USB-B
Supporting OS		Windows 8, 10, 11, Mac OSX and Linux

## Passive Pen

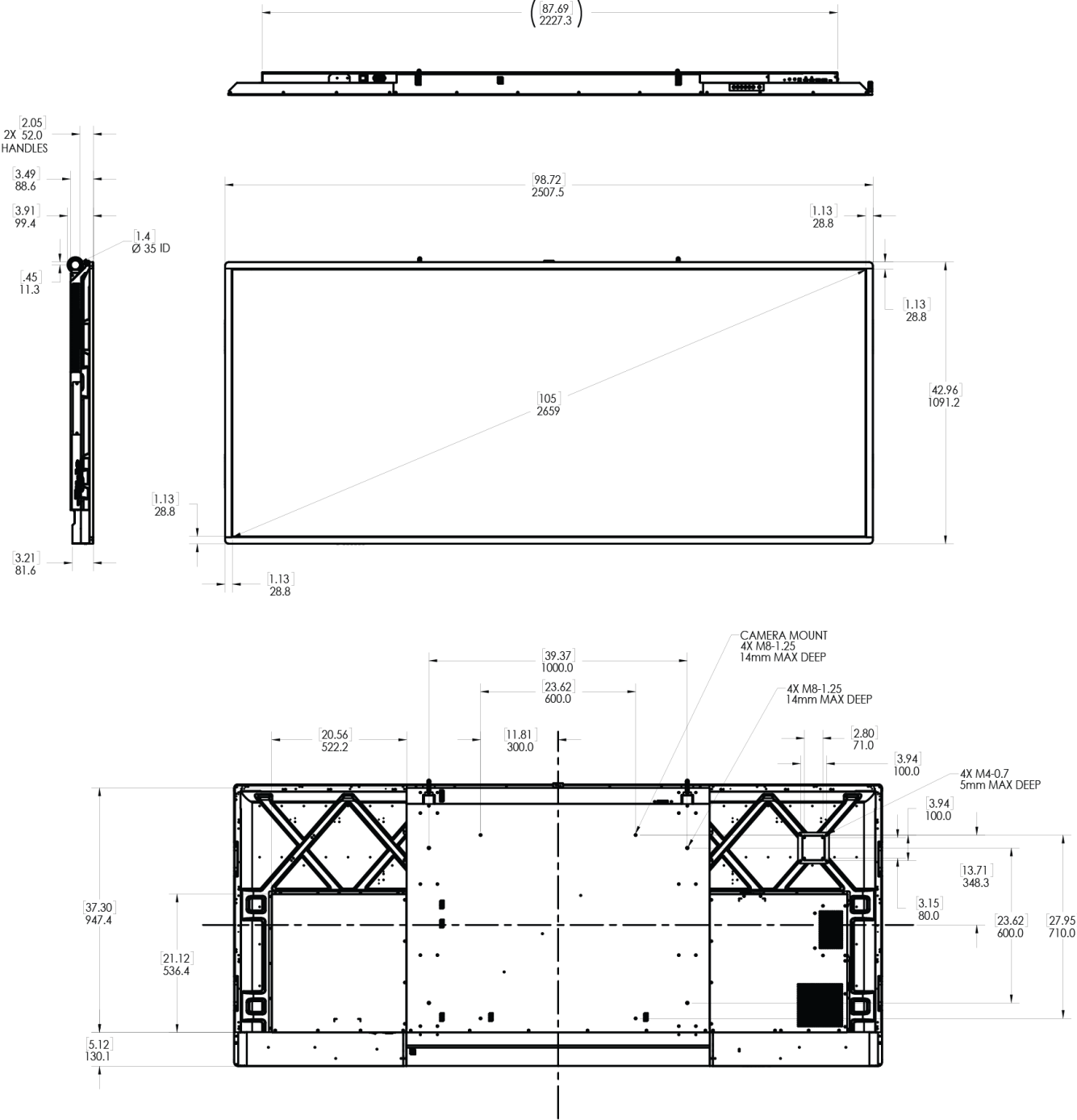
Item	Specification
Weight	15g (0.5 oz)
Length	153mm (6in)
Stylus Tips	2 tips, 2mm and 7mm
Tips Active Force	250 ± 50g



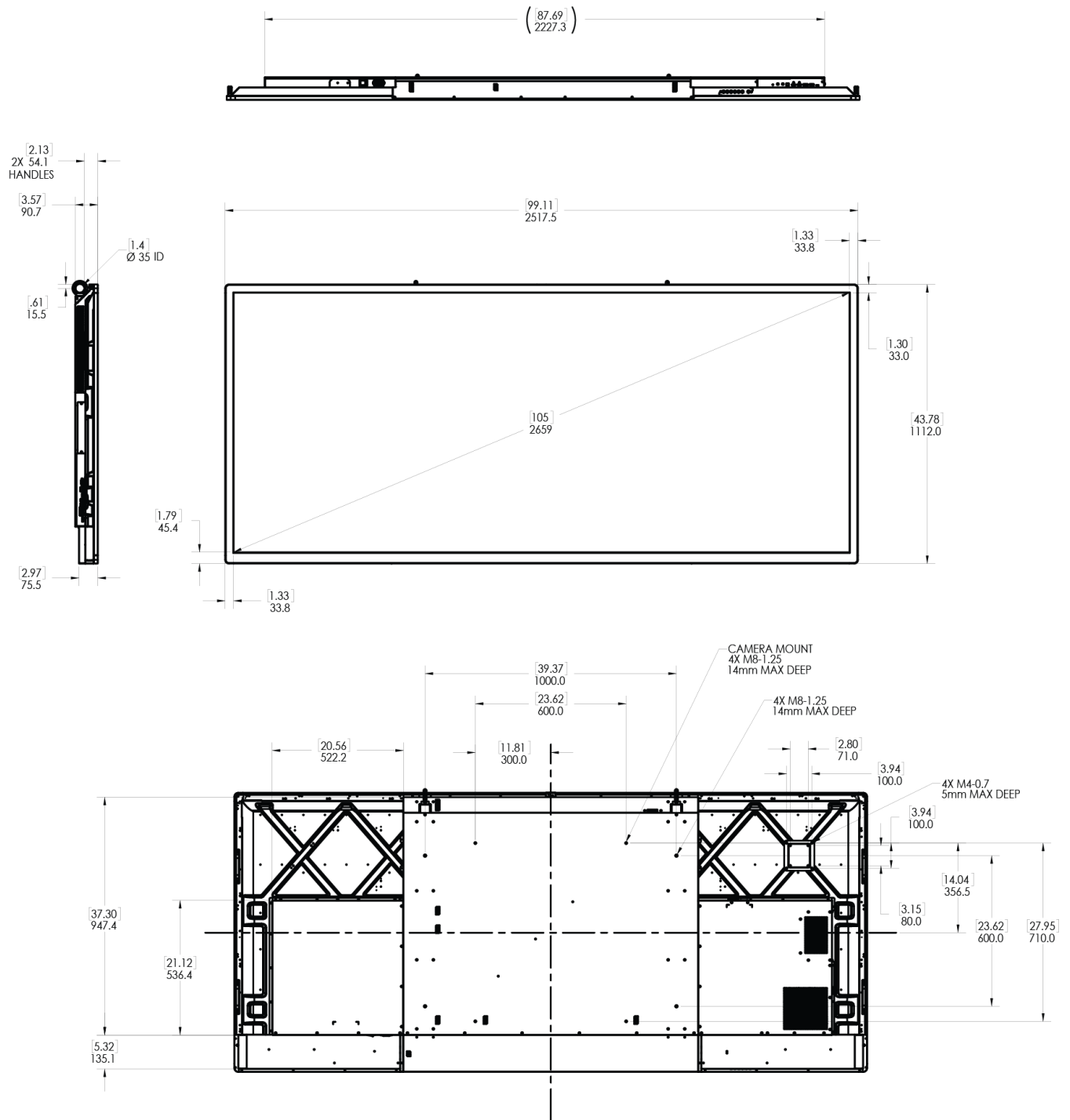


# Dimensions

## 25. URW105



# 26. URW105-ERO-T



# Troubleshooting During Installation

This section includes troubleshooting information about different issues you may encounter during the installation process or after your display has been running for some time. If you are not able to solve your issue in this section, please contact Planar's Technical Support team for assistance.

## 27. Symptoms, Possible Causes and Solutions

Below are different symptoms that you might encounter as you install your Planar UltraRes W Series display. First look at the different symptoms to see if you can find your issue. And then look at the possible cause and try the suggested solution(s). If you still are not able to resolve your issue, please contact Planar's Technical Support Department.

### 27.1 Symptom: Display Doesn't Respond to External Control System Solution

Confirm the **Power Down Mode** setting. **Networked standby** or **Fast Startup** are required to enable the use of external control devices. **Standby** disables all external control except IR, allowing the display to be in the lowest power setting. See "Power Down Mode" on page 44.

## 27.2 Symptom: Can't Get PC to Output 4K @ 24/30/60 Hz

### Solution

Confirm that DisplayPort-to-HDMI adapters are not being used. These adapters do not support outputting 4K content.

### Solution

Make sure you are using a high-speed HDMI or a Certified Premium HDMI cable. Standard HDMI cables might work but are not guaranteed.

### Solution

Verify that the selected **EDID Type** setting in the OSD is **4K60** or **4K30**. If you change the EDID setting, you may need to disconnect and reconnect the cable.

### Solution

If you are trying to use 4K @ 60 Hz on HDMI, the display must be connected to HDMI 1 or HDMI 2.

### Solution

If you are trying to display 4K @ 60 Hz on HDMI 1 or HDMI 2, the Multi-Source View setting must be Single.

## 27.3 Symptom: Can't Get PC to Output 4K @ 24/30/60 Hz

### Possible Cause

The connector overmold is too large, which can cause the pins not to contact properly on some cards.

### Solution

If using DisplayPort, make sure the connector overmold isn't too large.



## 27.4 Symptom: IR Isn't Working Properly

### Possible Cause

The wired IR module may not be fully connected.

### Solution

Make sure the IR is fully connected by pressing hard to ensure it is inserted as far as possible.

### Possible Cause

The wired IR module cable is not being used.

### Solution

Make sure that the wired IR module cable is being used.



## 27.5 Symptom: Touch Has Broken Response Near Middle/Bottom of Display

### Possible Cause

The display is mounted tilted forward.

### Solution

Reposition the display so it is vertical to slightly tilted back.

### Possible Cause

There are items blocking the IR sensors from emitting or receiving

### Solution

Clean display and sensor windows around the display.

# Accessing Planar's Technical Support Website

Go to <http://www.planar.com/support/> to access the following support documents and resources:

- User Manual
- RS232 User Manual
- Outline drawings
- Standard warranties
- Planar support hotline number and email
- Firmware (contact Planar support via email or phone)