Planar UltraLux Series
Warranty and Service Plans

Planar warranty and service plans will help you maximize your investment by providing great support, display uptime, and performance optimization. From post-sale technical support to a full suite of depot services, our services are performed by trained Planar employees. When you purchase a Planar product, you get more than a display, you get the service and support you need to maximize your investment. To find the latest warranty and service information regarding your Planar product, please visit:
http://www.planarcontrolroom.com/support

Warranty Features

- 3-year protection from defects in material and workmanship
- Advanced shipment of replacement part or product
- Access to 24/7 emergency phone support
- Please visit: http://www.planar.com/support/warranty/standard_warranties/ for a full warranty review.

RoHS Compliance Statement

All Planar UltraLux Series displays are fully RoHS compliant.

ADA Compliance Statement

All Planar UltraLux Series displays are compliant with the Americans with Disabilities Act.

Part Number: 020-1207-00 Rev E
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Introduction

The Planar UltraLux Series is a family of large format 70" and 80" displays which combine style and aesthetics with high performance display technology. From its sleek design to lasting 24 x 7 reliability, the Planar UltraLux is ideally suited for retail brand communications, advertising networks, conference rooms, wayfinding, and other commercial signage applications.

Offered in a wide range of configurations, the Planar UltraLux Series provides the flexibility to specify the ideal display for any environment. With value added features such as interactive touch, edge-to-edge glass front design, and unique mounting options, the UltraLux goes above and beyond for a truly stunning implementation of digital signage.

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

Planar UltraLux Series is wall mountable in portrait or landscape configurations. Each model within the Planar UltraLux Series is available with six-point multi-touch technology for interactive applications.
Planar UltraLux Series Features

The Planar UltraLux Series delivers superior 24/7 visual performance with features enabling easy service and installation.

**Caution:** AC power cord needs to be away from the component boxes shown here. This is due to the very low profile of the space between the back of the LCD and the wall.
Planar UltraLux Series Features

UltraLux Mounting System

The Planar Profile™ Mounting System allows for simplified installation. The Profile Mounting System includes two wall brackets and incorporates a kick-stand feature that tilts the display away from the wall for easy access to the electronics. Eliminating the need to completely remove the display from the wall reduces complexity and service time by up to 70%.

Control Module

On the back of the UltraLux display is a replaceable control module that contains the inputs and outputs shown below. The entire module is designed so that it can be easily replaced in the field without having to remove the LCD display.

Leave in “Run” position to ensure backlight power is reduced by 50% if a power supply fails.
Redundant Power Supply

A redundant power supply design ensures continuous operation. If one power supply fails, the remaining power supply will continue to power the display helping to ensure uninterrupted operation. Each power supply has an output of 24V.

Video Board

This contains HDMI, DisplayPort and VGA inputs. It also contains a LAN board with Ethernet and RS232 ports.

Power Board

This is used to generate the required voltages needed to run the control module.

Integrated Media Player Storage

Planar UltraLux displays incorporate a 1U media player compartment enabling a fully-integrated digital signage display system that can power a 5V or 12V media player up to 3A on each supply.

LED Technology

With edge-lit LED technology, the Planar UltraLux Series delivers reduced power consumption and lowered operating costs over the life of the display by up to 60% compared to CCFL technology.

RS232 and LAN With SNMP Monitoring

Control and status monitoring and integration with enterprise management solutions.
Remote Control

All on-screen functions can be accessed using the remote control. Note that only the buttons highlighted below are applicable to the UltraLux Series panels.

- **POWER**: Turns on/off the AC power to the LCD module.
- **MUTE**: Mutes the audio.
- **Four arrow keys**: Move the selector as shown: up, down, left or right.
- **MENU**: Press to access on-screen menus.
- **Source button**: Select this to choose a source. Also use as the **Back** button when navigating through menus.
Safety Information

This display was designed with safety in mind. If you don’t heed the safety warnings and cautions, you could get hurt. The safety warnings are on stickers in various places in and on the display.

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use any of the Planar UltraLux Series products near water.
6. Clean the optically bonded protection glass (ERO™) with a 50-50 mix of water and isopropyl alcohol with cheesecloth.
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 of the Planar UltraLux Series products.
10. The AC input is protected by a 5A slow blow fuse located in the AC inlet module. The fuse is replaceable and the recommended fuse is Schurter part number 0034.3124.
11. Only use the attachments/accessories specified by the manufacturer.
12. Unplug all Planar UltraLux Series products during lightning storms or when unused for long periods of time.
13. Ensure that the RUN/SVC switch on the control module is in the “Run” position unless the display is being serviced. This will ensure that if one power supply fails that the backlights will be reduced by 50% to save power.
14 You must follow all National Electrical Code regulations. In addition, be aware of local codes and ordinances when installing your system.

15 Refer all servicing to qualified service personnel. Servicing is required when any of the Planar UltraLux Series displays have been damaged in any way, such as the AC power cord or plug is damaged, liquid has been spilled or objects have fallen into the display, or if the displays have been exposed to rain or moisture, do not operate normally or have been dropped.

16 Keep the packing material in case the equipment should ever need to be shipped.

17 Wall mounts must be secure. The wall must be strong enough to hold all displays, mounts, brackets and cables.

18 Slight pressure on the LCD will cause distortion of the image. Heavier pressure will cause permanent damage. Planar UltraLux Series configurations should be mounted in a way that viewers cannot insert small objects in the openings that will create hazards by contacting bare conductive parts.
Disposal of old Electrical & Electronic Equipment (Applicable throughout the European Union and other European countries with separate collection programs)

This symbol found on your product or its packaging, indicates that this product should not be treated as household waste. Instead it should be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences to the environment and human health, which could otherwise be caused by inappropriate disposal of this product. The recycling of materials will help to conserve natural resources.

This symbol is only valid in the European Union. If you want to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.

Eliminação de equipamentos eléctricos e electrónicos usados (aplicável noutros países europeus com programas próprios de reciclagem de equipamentos eléctricos e electrónicos)

Este símbolo, colocado no produto ou na respectiva embalagem, indica que o produto não deve ser tratado como lixo doméstico quando desse descarte. Em alguns países, deve ser entregue no ponto de recolha de equipamento eléctrico e electrónico. A reciclagem de materiais ajudará a preservar os recursos naturais.

Este símbolo apenas é válido na União Europeia. Se deseja descarte do produto, entre em contacto com o distribuidor e peça informação sobre o método de disposição adequado.

Eliminazione degli attrezzatura elettrici e elettronici usati (applicabile nella Comunità Europea e in altri Paesi europei con programmi di recupero di apparecchiature elettriche ed elettroniche)

Questo simbolo trovato sul prodotto, o sulla sua confezione, indica che il prodotto non può essere trattato come residuo domestico quando viene gettato. È necessario consegnarlo al centro di raccolta specificato per il recupero degli apparecchiature elettrici ed elettronici. I materiali riciclati aiuteranno a conservare i risorse naturali.

Este símbolo solamente es válido en la Unión Europea. Si desea descarte de este producto, póngase en contacto con sus autoridades locales o con su distribuidor y pida información sobre el método de disposición adecuado.

Waste Electrical and Electronic Equipment (WEEE) Directive In the European Union, this label indicates that this product should not be disposed of with household waste. It should be deposited at an appropriate facility to enable recovery and recycling. EEE complies with Directive 'Regulation on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment'.

Waste Electrical and Electronic Equipment (WEEE) Directive in the European Union, this label indicates that this product should not be disposed of with household waste. It should be deposited at an appropriate facility to enable recovery and recycling. EEE complies with Directive 'Regulation on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment'.


Recommended Usage

The UltraLux series uses commercial grade LCD panels, and is designed for 24/7 operation. With certain static images and extreme conditions, a slight amount of temporary image retention may occur. To minimize this possibility, it is recommended that either static images be changed occasionally (for example to a different screen layout, or a black screen), or that a periodic display shutdown be programmed using RS232 commands or the UltraLux Remote Monitoring software. In order to get the most out of your LCD modules, use the following recommended guidelines to optimize the display.

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 module will not experience burn-in, as plasma displays do, nor will it retain images in any way.

Normal use of an LCD module is defined as displaying continuously changing video patterns or images. However, LCD modules 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. 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 module 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 UltraLux Series when it is not in use. There are a couple of ways to do this automatically. See "Powering On/Off Displays" on page 17 more information. To use serial commands, see "RS232 Communication" on page 34.
Normal Use Thermal Guidelines

Normal use of the LCD module and power supply module are 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 modules to experience high operating temperatures. For all modules, do not block fans or ventilation openings. If the LCD module will be installed in a recessed area with an LCD surround or enclosure, ensure adequate openings are applied for proper air flow and ventilation.

At 2000 meters or below, the maximum ambient operating temperature for the LCD module cannot be above 104° F (40° C) and 35° C for 80” portrait, nor below the minimum ambient operating temperature of (32° F) 0° C. If one of these conditions exists, it is up to the installer to ensure that module placement is changed, thermal shielding is provided and/or additional ventilation is provided to keep the display within its nominal operating parameters.

Cooling Requirements

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

Using the Display in Flat Orientation

The UltraLux 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, and a shortened life span.
Installing the Planar UltraLux Series

This section explains how to install a Planar UltraLux display. We suggest that you read this entire section before you attempt an installation.

Before You Begin

Make sure you have all the items in the following lists before you begin unpacking and installing your Planar UltraLux Series.

Tools/Equipment List

Depending on your installation, you may need one or more of the following items. Note that depending on the size of the display, this list may be different.

- #1 and #2 Phillips screwdriver
- Drill and bits
- Nut drivers
- Pencil
- Digital/laser level
- Ladders/lift
- Back brace
- Stud finder (if hanging LCD modules on a wall)

Other Things You May Need

- A 50-50 mix of water and isopropyl alcohol, as well as cheesecloth to clean the displays.
- At least two capable people to lift LCDs into place.

Plan Your Installation

You should have a detailed plan of how the UltraLux is to be installed. The plan should include calculations for the following:

- Floor/wall load. Make sure the floor/wall is strong enough to support the weight of the UltraLux Series.
- AC receptacle in safe zone where boxes are to be stored.
Powering On/Off Displays

There are several ways to turn the UltraLux Series on or off:

- Use the on/off switch on the AC power inlet
- Use the power button on the remote control
- Use the RS232 commands
- Use the UltraLux Remote Monitoring embedded software via Ethernet
Unpacking and Checking Accessories

The UltraLux includes the LCD and an accessory kit. A wall mount kit can be purchased separately.

**Note:** Screws should be no less than 1/4” in diameter. You will need a minimum of eight screws for the top mounting bracket and a minimum of four for the bottom kickstand bracket. Additional screws may be needed depending on your installation.

### Accessory Kit

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC power cord</td>
<td>90 degree low profile power cord.</td>
</tr>
<tr>
<td>Remote control</td>
<td>Used to turn on/off displays, as well as to navigate through on-screen menus.</td>
</tr>
<tr>
<td>Note: Batteries are included and installed.</td>
<td></td>
</tr>
<tr>
<td>USB drive</td>
<td>Contains the Planar UltraLux Series Installation Guide.</td>
</tr>
</tbody>
</table>
### Optional Planar-Supplied Accessories

The following optional items are available to order as part of your installation:

- Planar ContentSmart™ Media Player
- Profile™ Wall Mount

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IR extender cable</td>
<td>Used to receive signals from the remote</td>
</tr>
</tbody>
</table>
Wall Mounting LCD Using Planar Profile Mount

Before installation, keep the following points in mind:

- These displays are heavy. Make sure that you have adequate studs to support the weight of each display if installing on a wall.
- The UltraLux must be installed on a flat surface.
- Use supplied UltraLux mounting template for top and bottom bracket installation.
- The wall mounts for a landscape and portrait installation look different. However, the process to install them is exactly the same.
- The Planar Profile mount is not designed for tabletop installations.
Installing an UltraLux Display on a Wall

**Caution:** For whatever structure is used to mount the display, be sure that it is sufficiently engineered to handle the weight of the display. Also be sure to purchase the correct hardware needed to support the display mounted to that structure.

1. Find the center point of the display on the wall where you intend to install it.

2. Draw a short (about 1”) horizontal line and then a vertical line to match the edge of the display.
3 Use the provided template to determine the center points of the wall mounts. The “V” notches are labeled “L” for a landscape display or “P” for a portrait display. Use the appropriate “V” notch to align with the horizontal line drawn in the previous step.
4 In the hole marked “Top” on the template, mark the center of the hole on the wall.

**Note:** If you are installing a landscape display and the template is too long, you can break the template at the notch labeled “P.”

5 Let the template hang vertically so it is plumb, as the bottom hole in the template determines where the bottom mount will be installed.

6 Screw the appropriate hardware into the bottom hole of the template that corresponds with your display orientation.

7 Remove each screw and the template.
8  Line up the middle hole of the top wall mount with the screw hole drilled from the template.

Note: This picture shows mounts for a landscape installation.

9  Tighten the screw into the mount.

10 Use a level to make sure the mount is level.

11 Then install additional screws as needed.

Note: Screws installed near the mount hooks provide the best support.

12 Install the center screw in the bottom mount and repeat steps 10-11 for any additional screws that you want to install. Note that there are open mount channels on the brackets. So you can install the screws wherever necessary along those channels.
13 Install the kickstand bracket to the back of the display using four M4 x 8 panhead screws.
Using three strong people, carefully hang the back of the display onto the top wall mount bracket using the square brackets on the back of the display.

**Caution:** Be sure these are securely hung, as the top of the wall mount will hold most of the weight of the display.
15 On the bottom wall mount, there is locking hardware in the lower corners of the mount. Push the hardware up and finger tighten the captive screws on the bottom to secure the display to the wall.
Installing an UltraLux Display on a Wall

Using the Kickstand Bracket

The kickstand bracket is used for service mode, without having to remove the display from the wall. Use the following instructions to put the display in service mode.

1. Loosen the captive locking screws on both sides of the bottom mount.

2. Pull the display out and then swing out the kickstand to hold it in place. The kickstand will nest into the kickstand bracket notch.
Installing Cables

The two cables included with the UltraLux are the AC power cord and the IR sensor extender.

**AC power cord**

The AC cord is installed into the back of the control module. Depending on your setup, you may need additional cables for media player integration, as well as for sending RS232 commands.

**IR sensor extender**

In order for the remote control to work, you need to connect the wired IR module to the display, also on the bottom of the I/O panel. Then place the IR receiver in the desired place on or near the display.
Touchscreen Setup

USB and Power Hook-Up

1 Using the display service kickstand, swing out the display. If you are only using the mount, make sure you have at least 1” clearance to connect the USB and power.

2 Plug in the 5V, 4A Power supply connector to the touchscreen power connector.

Note: USB and Power connection to the touchscreen.

3 Connect the 5V line cord to the power adapter.

4 Plug one end of the USB cable to the USB connector on the touchscreen and the other end to the PC.

Note: USB and Power connection to the touchscreen.
**Touchscreen MultiTouch Driver Installation**

1. With the PC on, plug in the USB memory stick to the USB drive.
2. Locate and open the USB drive.
3. Double-click on the “mt_driver_kitV4.1212RC2” to install the driver.
4. Follow installation prompts until driver installation is complete.

Once driver installation is complete, the touchscreen is ready for use.

**Touchscreen (PQLabs) MultiTouch Platform Content**

The PQLabs Software is used for troubleshooting and calibration. The different menus are described below.

1. On the PC, select the **Start** menu, **All Programs** and then **PQLabs Software**.
2. Click on “MultiTouch Platform” to open the PQLabs MultiTouch Platform window.

**Touchscreen Information**

- **Serial Number** – Displays the serial number of the connected touchscreen.
- **Firmware Version** – Displays the firmware version of the touchscreen selected under the “Serial Number” dropdown menu.
- **Touch Points** – Displays the number of touch points for which the touchscreen is capable.
- **Status** – Displays the current status of the touchscreen.

**Calibration**

- **Calibration** – Starts a 4-point calibration of the touchscreen. Perform the programmed touchscreen calibration process. At the conclusion of the calibration routine your touchscreen device is ready to use and will perform with accurately positioned touch points.
- **Reset Calibration** – Resets calibration to factory default settings.

**Utility**

- **Diagnose** – Starts the “MultiTouchDoctor” program. This can be used to troubleshoot issues with the touchscreen.
Options

- Default settings on options have the following programs enabled: Tuio Support, Flash Tuio Support, Handwriting Optimization, Enable Windows Native Touch, Enable Mouse/Keyboard Simulation, and Launch When Windows Starts Up.
- Flexible Scan Rate is at a default setting.

Uninstalling the MultiTouch Driver

1. On the PC, select the Start menu, All Programs and then PQLabs Software.
2. Click on the MultiTouch Driver.
3. Select the Uninstall option.
External Control and Monitoring

In addition to using the UltraLux remote control and display, there are other methods of controlling the UltraLux externally:

- Using a serial (RS232) link to send commands and to receive responses to those commands.
- Using SNMP (Simple Network Management Protocol) to monitor the device status.
- Using Remote Monitoring software via a web browser.
RS232 Communication

RS232 control is not necessary for operation, but is a convenient way to control displays from a computer at a distance. If your installation will not use RS232 control, skip this section. Most things you can do with the remote, you can do with RS232 commands. Plus, you can send inquiries to the displays and find out the current settings and values. RS232 connections are made with standard straight-through cables.

Connecting the RS232 Cable

The RS232 cable will connect either to a PC or a media player, depending on your setup.
RS232 Commands

The following table provides the RS232 commands that can be used.

Keep the following points in mind:

- **Command length**: 8 bytes (64 bits) for "Set" Commands, 4 bytes for "Get" Commands
- **Required check sum for each command**: 100h (the last byte value is chosen to force the check sum to 100 hex)
- The baud rate is 19200 (8 data bit, 1 stop bit, no parity, no flow control)
- **Example in hex for "Set Backlight Brightness to 80"**: 08 22 00 00 00 00 50 86 (where green bytes are the command, blue is the value, red makes the check sum = 100h)

<table>
<thead>
<tr>
<th>Item</th>
<th>Command Description</th>
<th>Command Value in hex</th>
<th>Command Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Set Power to &quot;off&quot;</td>
<td>08 22 FE 00 00 00 00 D8</td>
<td>video board is set to soft power off mode; backlight off</td>
</tr>
<tr>
<td>2</td>
<td>Set Power to &quot;on&quot;</td>
<td>08 22 FD 00 00 00 00 D9</td>
<td>video board is set to soft power on mode; backlight on if video source is present or when first searching for video source</td>
</tr>
<tr>
<td>3</td>
<td>Get Power Status</td>
<td>04 21 16 C5</td>
<td>returns &quot;Power: ON&quot; if on; &quot;Power:&quot; if off; &quot;Power: OFF&quot; if on but no video source present</td>
</tr>
<tr>
<td>4</td>
<td>Set Backlight Brightness to &quot;X&quot; (1 to 100)</td>
<td>Set to 80: 08 22 00 00 00 00 50 86</td>
<td>backlight brightness set to commanded value</td>
</tr>
<tr>
<td>5</td>
<td>Get Backlight Brightness</td>
<td>04 21 08 D3</td>
<td>returns &quot;Backlight = value&quot;</td>
</tr>
<tr>
<td>6</td>
<td>Set Contrast to &quot;X&quot; (0 to 100)</td>
<td>Set to 40: 08 22 01 00 00 00 28 AD</td>
<td>contrast set to commanded value (note: contrast changes are not saved when hard power is turned off—known bug)</td>
</tr>
<tr>
<td>7</td>
<td>Get Contrast</td>
<td>04 21 09 D2</td>
<td>returns &quot;Contrast = value&quot;</td>
</tr>
<tr>
<td>8</td>
<td>Set Sharpness to &quot;X&quot; (~4 to 4)</td>
<td>Set to -4: 08 22 03 00 00 00 00 D3</td>
<td>sharpness set as commanded (for ~4 a value of 0 is used; for 4, 8 is used)</td>
</tr>
<tr>
<td>9</td>
<td>Get Sharpness</td>
<td>04 21 0A D1</td>
<td>returns &quot;Sharpness = value&quot; where value is Sharpness setting + 4</td>
</tr>
</tbody>
</table>
RS232 Commands

<table>
<thead>
<tr>
<th></th>
<th>Command</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Set Color Temp to &quot;4200K&quot;</td>
<td>08 22 04 00 00 00 02 D0</td>
<td>color temp set to commanded value</td>
</tr>
<tr>
<td>11</td>
<td>Set Color Temp to &quot;5000K&quot;</td>
<td>08 22 04 00 00 00 03 CF</td>
<td>color temp set to commanded value</td>
</tr>
<tr>
<td>12</td>
<td>Set Color Temp to &quot;6500K&quot;</td>
<td>08 22 04 00 00 00 04 CE</td>
<td>color temp set to commanded value</td>
</tr>
<tr>
<td>13</td>
<td>Set Color Temp to &quot;7500K&quot;</td>
<td>08 22 04 00 00 00 05 CD</td>
<td>color temp set to commanded value</td>
</tr>
<tr>
<td>14</td>
<td>Set Color Temp to &quot;9300K&quot;</td>
<td>08 22 04 00 00 00 06 CC</td>
<td>color temp set to commanded value</td>
</tr>
<tr>
<td>15</td>
<td>Get Color Temp</td>
<td>04 21 0B D0</td>
<td>returns &quot;Color Temp = value&quot; where value is 2 for 4200K, 3 for 5000K, 4 for 6500K, 5 for 7500K, 6 for 9300K</td>
</tr>
<tr>
<td>16</td>
<td>Set Red to &quot;X&quot; (0 to 100)</td>
<td>08 22 0E 00 00 00 32 96</td>
<td>red set to commanded value (use the Red/Green/Blue set commands to get custom color temperatures)</td>
</tr>
<tr>
<td>17</td>
<td>Get Red</td>
<td>04 21 0C CF</td>
<td>returns &quot;Red Color = value&quot;</td>
</tr>
<tr>
<td>18</td>
<td>Set Green to &quot;X&quot; (0 to 100)</td>
<td>08 22 0F 00 00 00 14 B3</td>
<td>green set to commanded value</td>
</tr>
<tr>
<td>19</td>
<td>Get Green</td>
<td>04 21 0D CE</td>
<td>returns &quot;Green Color = value&quot;</td>
</tr>
<tr>
<td>20</td>
<td>Set Blue to &quot;X&quot; (0 to 100)</td>
<td>08 22 10 00 00 50 76</td>
<td>blue set to commanded value</td>
</tr>
<tr>
<td>21</td>
<td>Get Blue</td>
<td>04 21 0E CD</td>
<td>returns &quot;Blue Color = value&quot;</td>
</tr>
<tr>
<td>22</td>
<td>Set Input to &quot;DisplayPort&quot;</td>
<td>08 22 02 00 00 00 00 D4</td>
<td>set the input source to DP, which becomes the default source</td>
</tr>
<tr>
<td>23</td>
<td>Set Input to &quot;HDMI&quot;</td>
<td>08 22 05 00 00 00 00 D1</td>
<td>set the input source to HDMI, which becomes the default source</td>
</tr>
<tr>
<td>24</td>
<td>Set Input to &quot;VGA&quot;</td>
<td>08 22 06 00 00 00 00 D0</td>
<td>Set the input source to VGA, which becomes the default source</td>
</tr>
<tr>
<td>25</td>
<td>Set Volume to &quot;X&quot; (0-100)</td>
<td>08 22 09 00 00 00 64 69</td>
<td>Speaker volume set to commanded volume</td>
</tr>
<tr>
<td>26</td>
<td>Get Volume</td>
<td>04 21 0F CC</td>
<td>returns &quot;Volume = value&quot;</td>
</tr>
<tr>
<td>27</td>
<td>Set Mute to &quot;on&quot;</td>
<td>08 22 0A 00 00 00 01 CB</td>
<td>activates Mute, for no audio (note that this setting is not saved when hard power is turned off)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>28</td>
<td>Set Mute to &quot;off&quot;</td>
<td>08 22 0A 00 00 00 00 CC</td>
<td>deactivates Mute</td>
</tr>
<tr>
<td>29</td>
<td>Get Mute</td>
<td>04 21 14 C7</td>
<td>If Mute has been changed by OSD commands, returns &quot;Mute = value&quot; where 0 is mute off and 1 is mute on; may not reflect actual Mute settings if Mute settings were changed by serial commands (known bug)</td>
</tr>
<tr>
<td>30</td>
<td>Get Input Status</td>
<td>04 21 07 D4</td>
<td>returns &quot;HDMI&quot;, &quot;VGA&quot;, or &quot;DPRx&quot; (if no source is present, returns the last source searched...so use the Get Power Status command to check for active source)</td>
</tr>
<tr>
<td>31</td>
<td>Set Color Space to full color</td>
<td>08 22 12 00 00 00 00 C4</td>
<td>color space set to full color</td>
</tr>
<tr>
<td>32</td>
<td>Set Color space to sRGB</td>
<td>08 22 13 00 00 00 02 C1</td>
<td>color space set to sRGB</td>
</tr>
<tr>
<td>33</td>
<td>Get Color Space</td>
<td>04 21 15 C6</td>
<td>returns &quot;Color Space = value&quot;</td>
</tr>
<tr>
<td>34</td>
<td>Do an Auto Adjust</td>
<td>08 22 07 00 00 00 00 CF</td>
<td>if VGA (analog) source is present, a sync/timing auto adjust is done</td>
</tr>
<tr>
<td>35</td>
<td>Do Auto Color Adjust</td>
<td>08 22 08 00 00 00 00 CE</td>
<td>if VGA source is present, a gray level auto adjust is done</td>
</tr>
<tr>
<td>36</td>
<td>Do a Reset</td>
<td>08 22 11 00 00 00 00 C5</td>
<td>restores all settings to their factory defaults</td>
</tr>
<tr>
<td>37</td>
<td>Get Blacklevel Brightness</td>
<td>04 21 17 C4</td>
<td>returns &quot;Brightness = value&quot;, where value ranges from -350 to 350 (this scale is different from the 0-255 scale used in the OSD)</td>
</tr>
<tr>
<td>38</td>
<td>Set Blacklevel Brightness</td>
<td>Set to 50: 08 22 16 00 00 00 32 8E</td>
<td>sets the offset for the color range to allow adjustment of the definition of black (See HDMI Full Range commands)</td>
</tr>
<tr>
<td>39</td>
<td>Get Auto Scan Status</td>
<td>04 21 18 C3</td>
<td>returns &quot;Auto Scan = value&quot;, where value is 1 (on) or 0 (off)</td>
</tr>
<tr>
<td>40</td>
<td>Set Auto Scan to &quot;on&quot;</td>
<td>08 22 17 00 00 00 01 BE</td>
<td>Sets Auto Scan on, where the source inputs will continually be checked for activity beginning with the default or selected source</td>
</tr>
</tbody>
</table>
### RS232 Commands

<table>
<thead>
<tr>
<th></th>
<th>Command Description</th>
<th>RS232 Code</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>41</td>
<td>Set Auto Scan to &quot;off&quot;</td>
<td>08 22 17 00 00 00 00 BF</td>
<td>Sets Auto Scan off, so that only the default or selected source can be active (thus suppressing the pop up search windows on the LCD)</td>
</tr>
<tr>
<td>42</td>
<td>Get HDMI Full Range</td>
<td>04 21 1A C1</td>
<td>returns &quot;HDMI Full Range = value&quot;, where value is 1 (full range on) or 0 (limited range on) or 2 (user-selected contrast or brightness settings in effect, or input source is VGA)</td>
</tr>
<tr>
<td>43</td>
<td>Set HDMI Full Range to &quot;on&quot;</td>
<td>08 22 19 00 00 00 01 BC</td>
<td>sets the standard HDMI Full Range, where for each color the range is 0 for black and 255 for full brightness (white)--note that this impacts both HDMI and DisplayPort sources</td>
</tr>
<tr>
<td>44</td>
<td>Set HDMI Full Range to &quot;off&quot;</td>
<td>08 22 19 00 00 00 00 BD</td>
<td>sets HDMI Full Range to “limited range” (useful for maintaining good contrast with cinema-type sources) where for each color the range is 15 for black and 235 for full brightness (white)--note that this impacts both HDMI and DisplayPort sources</td>
</tr>
</tbody>
</table>
The current settings and status of UltraLux units can be remotely monitored using SNMP (Simple Network Management Protocol), if the SNMP option is enabled through the web browser settings. The MIB (Management Information Base) used for all Planar display products is available by electronic distribution in the file `PLANAR-DISPLAY-MIB.txt`. The table below shows the objects that can be monitored – all Planar SNMP objects are read-only, and no traps are used. The default read-only community string for all Planar SNMP objects is “public”. Once the PLANAR-DISPLAY-MIB is loaded in your SNMP manager, you can walk all the available objects from the top-level object `PlanarSystems(1.3.6.1.4.1.19125)` or its sub-object `PlanarDisplayProduct(1)`.

Most object values are integer type, except where noted. Generally, for integer types, the value -1 is returned if there is any internal system or communication error, and normal return values are zero or positive integers.

<table>
<thead>
<tr>
<th>Object Name</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>plnrModel</td>
<td>Model name (string)</td>
<td>UltraLux</td>
</tr>
<tr>
<td>plnrInputSelect</td>
<td>User-selected input source</td>
<td>1 = HDMI, 2 = DisplayPort, 3 = VGA</td>
</tr>
<tr>
<td>plnrInputStatus</td>
<td>Input source status</td>
<td>0 = Source Absent, 1 = Source Present</td>
</tr>
<tr>
<td>plnrDisplayBacklight</td>
<td>Backlight on/off state</td>
<td>1 = On, 0 = Off</td>
</tr>
<tr>
<td>plnrDisplayBrightness</td>
<td>User-selected brightness value</td>
<td>0-100</td>
</tr>
<tr>
<td>plnrDisplayContrast</td>
<td>User-selected contrast value</td>
<td>0-100</td>
</tr>
<tr>
<td>plnrDisplaySharpness</td>
<td>User-selected sharpness value</td>
<td>0-8</td>
</tr>
<tr>
<td>plnrDisplayColorSpace</td>
<td>User-selected color space</td>
<td>0 = full color, 2 = sRGB</td>
</tr>
<tr>
<td>plnrDisplayColorTemp</td>
<td>User-selected color temperature</td>
<td>2 = 4200K, 3 = 5000K, 4 = 6500K, 5 = 7500K, 6 = 9300K, 7 = user</td>
</tr>
<tr>
<td>plnrDisplayGainRed</td>
<td>User-selected red gain value</td>
<td>0-100</td>
</tr>
<tr>
<td>Note: Gain values apply only when color temperature setting is 7 or user.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>plnrDisplayGainGreen</td>
<td>User-selected green gain value</td>
<td>0-100</td>
</tr>
<tr>
<td>plnrDisplayGainBlue</td>
<td>User-selected blue gain value</td>
<td>0-100</td>
</tr>
<tr>
<td>plnrAudioVolume</td>
<td>User-selected volume setting</td>
<td>0-100</td>
</tr>
<tr>
<td>plnrAudioMute</td>
<td>User-selected audio mute</td>
<td>1 = On, 0 = Off</td>
</tr>
<tr>
<td>plnrPower1</td>
<td>Power supply #1 status</td>
<td>1 = OK, 0 = Failed</td>
</tr>
<tr>
<td>plnrPower2</td>
<td>Power supply #2 status</td>
<td>1 = OK, 0 = Failed</td>
</tr>
</tbody>
</table>
Sending RS232 Commands Via UDP

The UDP port 57 accepts the same command sets as RS232. It is convenient for IP control applications and can be tested with a UDP terminal program such as the Hercules SETUP utility available from [www.HW-group.com](http://www.HW-group.com)

**Note:** Ensure that the **Enable ASCII command service (UDP port 57)** box is checked on the Access Control page of the Remote Monitoring software.

Notice the following in the example below:

- The Module IP address must match the Planar device server’s IP address
- Enter **57** in the **Port** box.
- “04 21 16 C5” in the **Send** box corresponds to the Get Power Status RS232 command.
Using WallNet Assistant

WallNet Assistant is a software program that finds Planar hardware on a network. This will help you find the IP address needed to access the Remote Monitoring functions.

1. WallNet Assistant is distributed as Planar_WallNet_Assistant_(version).zip. Extract all files to a new folder in your "Program Files" folder (or another convenient location).

2. Double-click "WallNet Assistant.exe" to launch Planar WallNet Assistant. If any error messages appear, then download and install (or update) Microsoft .NET Framework version 2.0, and then try launching "WallNet Assistant.exe" again.
3 When WallNet Assistant starts, it looks for all Planar device servers on the network and lists them in the window.

- Each Planar device found on the local network is listed with its name, IP address, date and time.
- New device servers just out of the box are listed with default names. The date and time shown are from the device's own clock. Both of these can be changed later.
- WallNet Assistant uses a very simple broadcast protocol to discover Planar device servers on the local network. Most networks do not route broadcast packets, so it is very possible to have properly configured, reachable devices on your network that WallNet Assistant won't find. Consult with your network administrator if you are having trouble using WallNet Assistant to find Planar devices. Also see the information about the Route Add Command at the end of this section if you are trying to find a device at the factory static IP address.

4 You can double-click any Planar device server in the list to open your default browser pointed at that device.
When your browser connects to a Planar network device, you should see a page similar to the following.
Route Add Command

If you are trying to connect to a Planar device server that you believe is at the factory default IP address, and your computer is not on the 192.168.12.0 network, then you can use the route add command to establish a connection from your computer to that device server. This method only works if your computer and the Planar device are connected to the same network switch or hub.

1. When you click the **Route Add Cmd** button, the route add command window (shown above) opens.

2. The area circled in the example above shows the syntax of the route add command. The final IP address on the command line must be the IP address of your computer's network interface that is connected to the same hub/switch as the Planar device.

3. You can either type this command into a command prompt or click the **Run the “route add...” command now** button to launch the routeadd.bat script, which will run the command exactly as shown.

4. When the route add is successful, it establishes a temporary network route from your computer to the 192.168.12.0 network. This allows your computer to communicate with the Planar device server located at 192.168.12.12.
Planar UltraLux Remote Monitoring

Planar UltraLux Remote Monitoring is software that displays information about the LCD display via a web browser. It is used primarily for monitoring, reporting and some control (for example, powering the displays on and off either manually or per a pre-defined schedule).

Remote Monitoring Home

This is the first page you will see when you open the Planar UltraLux Remote Monitoring software. Launch a web browser. If you are using DHCP, enter in the IP address shown on the Info tab of UltraLux Remote Monitoring. If you are not using DHCP, enter \texttt{http://192.168.12.12} in the address bar. For either web address entered, you should see a page similar to the following.
Unit Status

The Unit Status page shows a list of the different system settings for the LCD. It also shows whether or not the two power supplies contained in the control module are on or off.
Display Control

The Display Control page contains two sub-pages: Power On/Off and Custom Commands Setup. These are described in the following pages.
Power On/Off

Power On/Off buttons control the backlight power, not the AC power. You cannot control AC power through Planar UltraLux Remote Monitoring.

This section has four options for which you can schedule an automatic power on/off. The options are: no automatic power on/off, same daily schedule, Monday-Friday same schedule and weekends off. Or each day has its own schedule. You can only select one of the schedule types. The default is No automatic power on/off.
Custom Commands Setup

The Custom Commands Setup page allows you to establish what the ten Custom Command buttons will do.

1. Type a label for the button in **Button 1 Text**.

2. In **ASCII Command(s)**, enter a binary protocol such as hex commands. An example is shown above.

3. Click **Test button 1 commands** to send the commands immediately. You will see an output page showing the commands sent and replies received (if any). Use the browser’s **Back** button to return from this results page to avoid losing unsaved changes. If you select the Custom Commands Setup page again, you will lose unsaved changes.

4. Scroll to the bottom of the Custom Commands Setup page and click **Change Custom Command Buttons**. This applies what you have done to the custom buttons accessed from Custom Commands Setup at the top of the left menu.

**Note:** It is suggested that you only send one command at a time. If you want to send additional commands, repeat the steps in this section.
Admin Setup

The Admin Setup page contains three sub-pages: Network Setup, Time and Date, Access Control and Software Update. These are described in the following pages.
Network Setup

This page allows you to configure network settings and whether or not you use DHCP.

1. In the **Hostname** box it now says Planar. Change this name to something more appropriate. This will be the name for this particular server. The hostname is limited to 16 characters: alphanumeric, dash, or underscore only.

2. If you want to enter a domain name for server name lookups, type it in the **Domain name** box.

3. Do one of the following:
   - If you will use DHCP, go to step 4.
   - If you will **not** use DHCP, go to step 5.

4. Under the DHCP section, choose **Yes, use DHCP**.
   a. Change the default DHCP timeout (ten seconds) only if instructed by your network administrator.
b You do no need to fill in anything under the Static (non-DHCP) Network Settings section. However, if you do, these settings will be used in the event that the DHCP attempts to time out.

c Go to step 6.

5 Under the DHCP section, choose No, use static settings.

a In the Static (non-DHCP) Network Settings section, enter the IP address given to you by the network administrator.

b Enter the Network mask, DNS server(s), and Gateway as instructed by the network administrator.

c Go to step 6.

6 Scroll to the bottom of the page and click Confirm and apply new network settings to receive the Confirm Network Change page.

7 Review the settings to make sure they are correct. Click OK, apply changes now to receive the Applying Network Changes page. This shows the network settings to be used.

Note: If you have changed the static IP address or changed from static to DHCP setup, you may need to point your browser at the new address.

8 You may have to click the Refresh button on your browser to see the new name in the upper left corner of the page.
Date and Time

Use this page to change date and time information as needed.

1. Set the date and time manually in the box under the Manual Date and Time section. The date format is very exact. Fill in the current date and time using exactly the format shown on the page. Click Set date and time.

2. If you want to have the server periodically check the time from a network source, fill in the NTP server name or address, and poll interval in the Date and Time Server section. Click Apply new date and time server settings.

Note: If you don’t have a preferred NTP server, then www.pool.ntp.org is a reasonable choice for most installations.

3. Carefully read the instructions in the Local Time Zone section. Fill in the text box and click Set time zone.

Note: The start and end of daylight saving time default to the first Sunday of April and the last Sunday of October. As of 2007, U.S. locales that observe daylight saving time must enter start and end dates in this section. For example, EST5EDT,M3.2.0,M11.1.0 is correct for U.S. Eastern time zone as of 2007.
Access Control

The Access Control page allows you to set parameters needed to access the web, the Remote Monitoring network, RS232 commands, as well as select the correct baud rate.
Software Setup

This page allows you to upload the latest UltraLux Remote Monitoring software. You can also reset all of your settings to the factory defaults, as well as choose the web page link that is associated with the Planar logo in the top right corner of the page.

<table>
<thead>
<tr>
<th>Planar</th>
<th>UltraLux</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software Setup</td>
<td></td>
</tr>
<tr>
<td>Software Update</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Version: Pre-release 2012-06-29 for UltraLux</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>(Click browse to select software image file to load)</td>
<td></td>
</tr>
<tr>
<td>After browsing to select software image file, click here to load</td>
<td></td>
</tr>
<tr>
<td>Load Software</td>
<td></td>
</tr>
</tbody>
</table>

1. Click the **Choose File** button to locate the latest UltraLux software that you downloaded from Planar's website.

**Note:** Make sure the software is downloaded to a local drive.

2. Click the **Load Software** button to load the new software. This process can take a few minutes, depending on the speed of the network update. It is **very important** that you do not interrupt the load process once it begins.

3. If you want to reset **ALL** settings to the factory default, click the **Reset ALL to Factory Default** button. This includes network settings, date and time, etc., as well as display settings.

**Caution:** Using this option will reset all of your configurations and reboot the remote monitor. Because this includes network settings, be aware that the UltraLux Remote Monitoring software may not configure to the same network address after the system reboots.
4 When you click **Reset ALL to Factory Default**, you receive the Confirm Factory Reset page. Click **OK, Reset to Factory Defaults and Reboot** if you are sure you want to reset ALL settings to the factory default.

5 The top of each page shows the Planar logo, which is a link to http://www.planar.com. You can change this link to refer to any URL that you find useful by typing it into the **Product ID Link** box.

6 To make this link live, click **Change Product ID Link**.

7 In normal operations, Remote Monitoring polls the displays at a rate of one per second to look for user requests that have been made using the IR remote control and the on-screen menus. In some situations, this polling can have a noticeable performance impact. If you want to disable this polling, select the **Disable polling for alert conditions** checkbox. When you are finished, click **Change Advanced Settings**.

---

### Reboot

Click **Reboot now** to reboot your system. This copies everything in flash memory to RAM. RAM memory is used for all current operations. When power is applied to Remote monitoring, flash memory is copied to RAM. Reboot takes about 90 seconds.
**On-Screen Display Menus**

On-screen menus can be accessed using the remote control. These menus allow you to adjust image brightness, contrast, sharpness, color, sound, and various System Settings. Below are pictures of the menus and a menu tree that shows the options on each menu.
Image Menu
Note: Some settings are not always active and may be grayed out.

For instance, “auto” is a color adjustment available only when the active video source is an analog source.
Display Menu

Note: The Display Menu is active only for analog video sources.
Sound Menu

![Sound Menu](image)

**Note:** For Mute, a caret (>) indicates Mute is off (which means sound is on). A power symbol (ʘ) means the mute is on. Use the left and right arrow keys on the remote to adjust.
System Menu
## Specifications

<table>
<thead>
<tr>
<th></th>
<th>UltraLux 70”</th>
<th>UltraLux 80”</th>
<th>UltraLux 70” Touch</th>
<th>UltraLux 80” Touch</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Screen Active Area</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>70 inch</td>
<td>80 inch</td>
<td>70 inch</td>
<td>80 inch</td>
</tr>
<tr>
<td><strong>Power Consumption</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(typical)</td>
<td>230W</td>
<td>350W</td>
<td>230W</td>
<td>350W</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(including mount)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Screen Size</td>
<td>62.2” x 36.2” x 3.2”</td>
<td>72.2” x 41.7” x 3.2”</td>
<td>62.5” x 36.4” x 3.6”</td>
<td>72.4” x 41.9” x 3.6”</td>
</tr>
<tr>
<td>(1581mm x 920mm x 80mm)</td>
<td>(1835mm x 1060mm x 80mm)</td>
<td>(1588mm x 926mm x 91mm)</td>
<td>(1840mm x 1065mm x 91mm)</td>
<td></td>
</tr>
<tr>
<td>Bezel Width</td>
<td>1.0” (24mm)</td>
<td>1.2” (29mm)</td>
<td>1.1” (28mm)</td>
<td>1.4” (34mm)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard:</td>
<td>133 lbs (60 kg)</td>
<td>174 lbs (79 kg)</td>
<td>171 lbs (78 kg)</td>
<td>219 lbs (99 kg)</td>
</tr>
<tr>
<td>With ERO:</td>
<td>164 lbs (74 kg)</td>
<td>210 lbs (95 kg)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mounting</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planar Profile</td>
<td>Planar Profile mounting or VESA: 400x400; 4 holes</td>
<td>Planar Profile mounting or VESA: 600x600; 4 holes</td>
<td>Planar Profile mounting or VESA: 400x400; 4 holes</td>
<td>Planar Profile mounting or VESA: 600x600; 4 holes</td>
</tr>
<tr>
<td>Orientation</td>
<td>Portrait/Landscape</td>
<td>Portrait/Landscape</td>
<td>Portrait/Landscape</td>
<td>Portrait/Landscape</td>
</tr>
<tr>
<td><strong>Recommended Usage</strong></td>
<td></td>
<td></td>
<td>24/7</td>
<td></td>
</tr>
<tr>
<td><strong>Aspect Ratio</strong></td>
<td></td>
<td></td>
<td>16:9</td>
<td></td>
</tr>
<tr>
<td><strong>Brightness (typical)</strong></td>
<td></td>
<td></td>
<td>700 nits</td>
<td></td>
</tr>
<tr>
<td><strong>Backlight</strong></td>
<td></td>
<td></td>
<td>Edge-lit LED</td>
<td></td>
</tr>
<tr>
<td><strong>Contrast Ratio</strong></td>
<td></td>
<td></td>
<td>5000:1</td>
<td></td>
</tr>
<tr>
<td>(typical)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Response Time</strong></td>
<td></td>
<td></td>
<td>4 ms</td>
<td></td>
</tr>
<tr>
<td>(typical)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Frame Rate</strong></td>
<td></td>
<td></td>
<td>120 Hz</td>
<td></td>
</tr>
<tr>
<td><strong>Viewing Angle</strong></td>
<td></td>
<td></td>
<td>176° H,V</td>
<td></td>
</tr>
<tr>
<td><strong>Native Resolution</strong></td>
<td>FHD 1920 x 1080 (1080p)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Display Colors</strong></td>
<td>&gt; 1 billion, full 10-bit data path</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Surface Treatment</strong></td>
<td>Optional ERO™ Optically Bonded Glass</td>
<td>ERO™ Optically Bonded Glass</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Control and</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitoring</td>
<td>RS232/LAN with SNMP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Line Voltage</strong></td>
<td>Universal 120/240V, 50/60Hz</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>External</strong></td>
<td>HDMI, DisplayPort, VGA, AC Power IEC C14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Connections</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Operating Temperature</strong></td>
<td>32°F to + 104°F (0°C to + 40°C)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Storage Temperature</strong></td>
<td>-4°F to + 140°F (-20°C to + 60°C)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Humidity</strong></td>
<td></td>
<td></td>
<td>20 to 90% RH</td>
<td></td>
</tr>
<tr>
<td><strong>Approvals</strong></td>
<td></td>
<td></td>
<td>FCC Class A, EN60950, CE</td>
<td></td>
</tr>
<tr>
<td><strong>Options</strong></td>
<td>Landscape wall mount, Portrait wall mount, 6-point multi-touch</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Warranty</strong></td>
<td>3 Years Advanced Exchange</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The UltraLux Series supports the following factory preset modes:

<table>
<thead>
<tr>
<th>Mode</th>
<th>Resolution</th>
<th>Refresh Rate</th>
<th>Horizontal Frequency</th>
<th>Pixel Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>VGA</td>
<td>640 x 480</td>
<td>60 Hz</td>
<td>31.5 kHz</td>
<td>25.157 MHz</td>
</tr>
<tr>
<td>SVGA</td>
<td>800 x 600</td>
<td>56 Hz</td>
<td>35.2 kHz</td>
<td>36 MHz</td>
</tr>
<tr>
<td>SVGA</td>
<td>800 x 600</td>
<td>60 Hz</td>
<td>37.9 kHz</td>
<td>40 MHz</td>
</tr>
<tr>
<td>XGA</td>
<td>1024 x 768</td>
<td>60 Hz</td>
<td>48.4 kHz</td>
<td>65 MHz</td>
</tr>
<tr>
<td>WXGA</td>
<td>1280 x 720</td>
<td>60 Hz</td>
<td>45 kHz</td>
<td>74.25 MHz</td>
</tr>
<tr>
<td>SXGA</td>
<td>1280 x 1024</td>
<td>60 Hz</td>
<td>64 kHz</td>
<td>108 MHz</td>
</tr>
<tr>
<td>UXGA</td>
<td>1600 x 1200</td>
<td>60 Hz</td>
<td>75 kHz</td>
<td>162 MHz</td>
</tr>
<tr>
<td>WUXGA</td>
<td>1920 x 1080</td>
<td>50 Hz</td>
<td>56.25 kHz</td>
<td>148.5 MHz</td>
</tr>
<tr>
<td>WUXGA</td>
<td>1920 x 1080</td>
<td>60 Hz</td>
<td>67.5 kHz</td>
<td>148.5 MHz</td>
</tr>
</tbody>
</table>
UltraLux Dimensions

70” Display Dimensions - Front and Side Views
70” Display Dimensions - Rear View

DIMENSIONS SHOWN ARE ABSOLUTE MAXIMUMS MEDIA PLAYER SHOULD LEAVE ROOM FOR APPLICABLE CABLE CONNECTION AND ROUTING

DETAIL G
SCALE 1:4
MEDIA PLAYER RECESS DIMENSIONS VIEW SHOWN WITH COVER REMOVED

MAX DEPTH: 43.5 [1.71]
70” Rear View - Wall Mount Hangers and Service Panel Locations

I/O COVER

SERVICE COVER

KEEP PERFORATED AREAS CLEAR FOR AIR FLOW

LANDSCAPE WALL MOUNT HANGERS

PORTRAIT WALL MOUNT HANGERS
70” Landscape Wall Mounts - Front and Bottom Views

Note: Shown from the bottom of the panel.
70” Landscape Wall Mounts - Side Views
Note: Shown from the bottom of the panel.
70” Portrait Wall Mounts - Side Views

Installed position

Service position - with kickstand supporting display
70” Touch Front and Side Views

Note: All other dimensions are the same as non-touch 70”.
80” Display Dimensions - Front and Side Views
80” Display Dimensions - Rear View
80” Rear View - Wall Mount Hangers and Service Panel Locations

80” Rear View - Wall Mount Hangers and Service Panel Locations

[Diagram showing wall mount hangers and service panels]
80” Landscape Wall Mounts - Front and Bottom Views
80” Landscape Wall Mounts - Side Views
80” Portrait Wall Mounts - Front View
80” Portrait Wall Mounts - Side Views
**80” Touch Front and Side Views**

*Note:* All other dimensions are the same as non-touch 80”.
Regulatory Information

Manufacturer’s Name: Planar Systems, Inc.
Manufacturer’s Address: 1195 NW Compton Drive
Beaverton, OR 97006

Declares that the products Model Numbers: Planar UltraLux Series 70”/80” large format LCDs.

Conforms with the provisions of:


EN55022:2010 Radiated and Conducted Emissions from IT Equipment

EN55024:1998 Immunity of IT Equipment
- Including: EN61000-4-2 Electrostatic Discharge
- EN61000-4-3 Radiated Immunity
- EN61000-4-4 Electrical Fast Transients
- EN61000-4-5 Line Surge
- EN61000-4-6 RF Conducted Susceptibility
- EN61000-4-8 Magnetic Field Immunity
- EN61000-4-11 Voltage Dips and Interrupts

And: EN61000-3-2 Harmonic Current Emissions
- EN61000-3-3 Voltage fluctuations and Flicker


EN60950:2006+A11 Safety of IT Equipment

The Technical Construction File required by this Directive is maintained at the corporate headquarters of Planar Systems, Inc., 1195 NW Compton Drive, Beaverton, OR 97006.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Industry Canada (ICES-003): This Class A digital apparatus complies with Canadian ICES-003.
- Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

Any changes or modifications to the display not expressly approved by Planar could void the user’s authority to operate this equipment.

Other Certifications

CISPR 22
Customer Support Information

24/7 Online Technical Support is available at http://www.planar.com/support

Customer Support Contact Information and Hours of Operation

Tel: 1-866-PLANAR1 (866-752-6271) or +1 503-748-1100

Hours: M-F, 8am - 8pm Eastern Time | M-F, 5am - 5pm Pacific Time

Warranty and Service Plans

Planar warranty and service plans will help you maximize your investment by providing great support, display uptime, and performance optimization. From post-sale technical support to a full suite of depot services, our services are performed by trained Planar employees. When you purchase a Planar product, you get more than a display, you get the service and support you need to maximize your investment. To find the latest warranty and service information regarding your Planar product, please visit: http://www.planar.com/support/warranty/standard_warranties/

Warranty Features

- 3-year protection from defects in material and workmanship
- Advanced shipment of replacement part or product
- Access to 24x7 emergency phone support
- Please visit: http://www.planar.com/support/warranty/standard_warranties/ for a full warranty review

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Technical information in this document is subject to change without notice.
Accessing Planar’s Technical Support Website

Go to www.planar.com/support for warranty information, user manuals, touch drivers, and other support information.
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