

avocor




AVE-40 Series User Manual

AVE-5540 / AVE-6540 / AVE-7540 / AVE-8640

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COMPLIANCE INFORMATION

Declaration of Conformity

Avocor hereby declares that the following Product Model Number:

AVE-5540 / AVE-6540 / AVE-7540 / AVE-8640

conforms to the provisions of the following regulations:

- FCC:
 - FCC CFR Title 47 Part 15: Subpart B Class A,
 - ANSI C63.4
 - ICES-003
- CE:
 - EN55032
 - EN55035
 - EN61000-3-3
- cULus:
 - UL 62368-1
 - CAN/CSA-C22.2 No. 62368-14
- CB:
 - IEC 62368-1
- ERP

CAUTION

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

Industry Canada (ICES-003)

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

Product Disposal

The Product contains small amounts of tin, lead, and/or mercury. Disposal of these materials may be regulated due to environmental considerations.

Disposal of Old Electrical and Electronic Equipment

Applicable throughout the European Union and other European countries with separate collection programs



This symbol, found on your product or on its packaging, indicates that this product should not be treated as household waste when you wish to dispose of it. Instead, it should be handed over to an applicable collection point for the recycling of electrical and electronic equipment. By ensuring that 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 wish to discard this product, please contact your local authorities or dealer, and ask for the correct method of disposal.

INTRODUCTION

Your new Avocor AVE-xx40 series display is an ultra-high-definition interactive touch display supporting full range 4K@60hz resolution, up to 40 simultaneous touch points, multiple source inputs for your computers and peripheral devices, and our intuitive **UiQ** interface.

Our display follows our agnostic approach to interactive displays: they are compatible with a wide range of hardware and software, making it a great addition to any interactive meeting-room solution. Whether you need a virtual meeting space for your conference room, or a powerfully adaptive whiteboard or presentation hub for your classroom, the Avocor AVE-xx40 series will exceed your expectations.

About This Manual

This user manual was written to help you get the most out of your display.

In addition to detailed descriptions of the display and its features, this manual will guide you through the installation and setup processes and provide tips, tricks, and best practices on how best to utilize the display.

We make every effort to ensure that this manual is accurate as of the date it was printed. However, it may require periodic updating due to ongoing product improvements and customer feedback. Find the latest version of our manuals at Avocor.com.

Textual Conventions

The following textual conventions are used in this manual to denote certain actions or information for clarification purposes. Here are the details:

- Remote control and display keypad controls are set in CAPS. For example, "Press OK on the remote control to accept your changes."
- Menus in the OSD and computer interface are in **bold**. The ">" symbol is used to help denote submenu navigation. For example, "Open **Display > Picture > Advanced Settings** to adjust various picture settings."
- Keyboard keys with functional names are capitalized and set in <Angle Brackets>. For example, "press <Enter> to make your selection."
- In addition to the above, underlining, *italics*, or a combination of the two are used periodically to help emphasize key points in the text of this manual.

Graphic Conventions

The following symbols appear throughout this manual to emphasize key points. Keep these in mind not only to benefit from their advice, but also to avoid problems with the display or personal injury.



TIP

Highlights helpful guidelines and best practices for using certain features.



NOTE

Provides supplemental information and emphasize text of special significance.



CAUTION

Alerts that given actions may degrade the performance of the display or cause a malfunction.



WARNING

Alert that a given action may result in damage to equipment or personal injury.



DANGER

Alert that a given action may cause serious personal injury or death.

WHAT'S IN THE BOX?

- Avocor AVE-xx40, Interactive Display
- Quick Start Guide with QR code
- Remote Control & Batteries
- (2) Touch Stylus 3mm
- (6) Stylus replaceable nibs
- Power Cables
 - US Cable 2m
 - UK Cable 2m
 - European Cable 2m
 - Australian / New Zealand 2m
- (1) USB-C cable 1.8m
- (1) HDMI cable 3m
- (1) USB-A-B cable 3m
- (1) VESA 100 x 100 adapter plate

SPECIFICATIONS

	AVE-5540	AVE-6540	AVE-7540	AVE-8640
Diagonal Size (Inches)	55"	65"	75"	86"
Backlight	Backlit LED			
Aspect Ratio	16:9			
Resolution	3840 x 2160 @ 60Hz			
Response Time	8 ms			
Brightness	400 (cd/m2)			
Contrast Ratio	4000:1			
Viewing Angle	178°/178			
Supported Colors	30 Bit Deep Color			
Display Orientation	Landscape			
Touch System				
Touch	Up to 40 Point Avocor Intelligent Touch - Supports 1 fine tip stylus			
Glass	Zero Parallax, Bonded, Anti-Glare, Anti-Fingerprint Glass			
Supported OS	Windows 8 / 10; Mac OSX*; Linux*; Chrome			
Connectivity				
Guest Inputs	1x Type C (45W PD), 1x HDMI 2.0, 1x USB-B Touch, 1x USB-A 3.0 Hub			
Side Inputs	2x HDMI 2.0, 1x DisplayPort 1.2, 1x USB-B 3.0 Touch, 1x USB-A 3.0 Hub, 1x USB-A Service Port, 1x HDMI Out (Support 4k@60Hz, 1920x1080@60Hz)			
Audio	1x 3.5mm Audio Out, 1x Optical (SPDIF)			
Control	1x RS232, 1x LAN Ethernet (RJ-45) in, 1x LAN Ethernet (RJ-45) out,			
OPS Slot	Yes, 3840 x 2160 @ 60Hz			
Audio				
Built-in Speakers	2x 20W – Forward Facing			
Display Functions				
Auto-source detection, Source Preview, Blank, Freeze				

Physical Specifications

Product Dimensions	1286 x 802 x 78.4 mm 50.63 x 31.57 x 3.09 in	1513 x 938 x 99.5 mm 59.57 x 36.93 x 3.92 in	1735 x 1062 x 91 68.31 x 41.81 x 3.58 in	1981 x 1201 x 91 mm 77.99 x 47.28 x 3.58 in
Shipping Dimensions	1421 x 932 x 216 mm 55.94 x 43.70 x 8.50 in	1649 x 1110 x 216 mm 64.92 x 43.70 x 8.50 in	1886 x 1210 x 227 74.25 x 47.64 x 8.94 in	2130 x 1375 x 250 mm 83.86 x 54.13 x 9.84 in
Weight	Net 28 kg / 61.73 lbs Gross 41 kg / 90.39 lbs	Net: 39 kg / 85.98 lbs Gross: 52 kg / 114.64 lbs	Net: 52 kg / 114.64 lbs Gross: 64 kg / 141.10 lbs	Net: 66 kg / 145.51 lbs Gross: 81 kg / 178.57 lbs
Wall Mount (VESA)	400 x 400 mm 15.75 x 15.75 inches	600 x 400 mm 23.62 x 15.75 Inches	800 x 400 mm 31.50 x 15.75 Inches	800 x 400 mm 31.50 x 15.75 Inches
Handles	2	2	4	4

Power

Power Supply	AC100 - 240V (Worldwide), 50/60Hz			
Max Power Consumption	<220W	<220W	<340W	<520W
Standby	≤0.5W			

Environmental

Operating Temperature	0°C ~ 40°C / 32° F ~ 104° F			
Storage Temperature	-20° C ~ 60° C / -4° F ~ 140° F			
Humidity	20% ~ 85%			

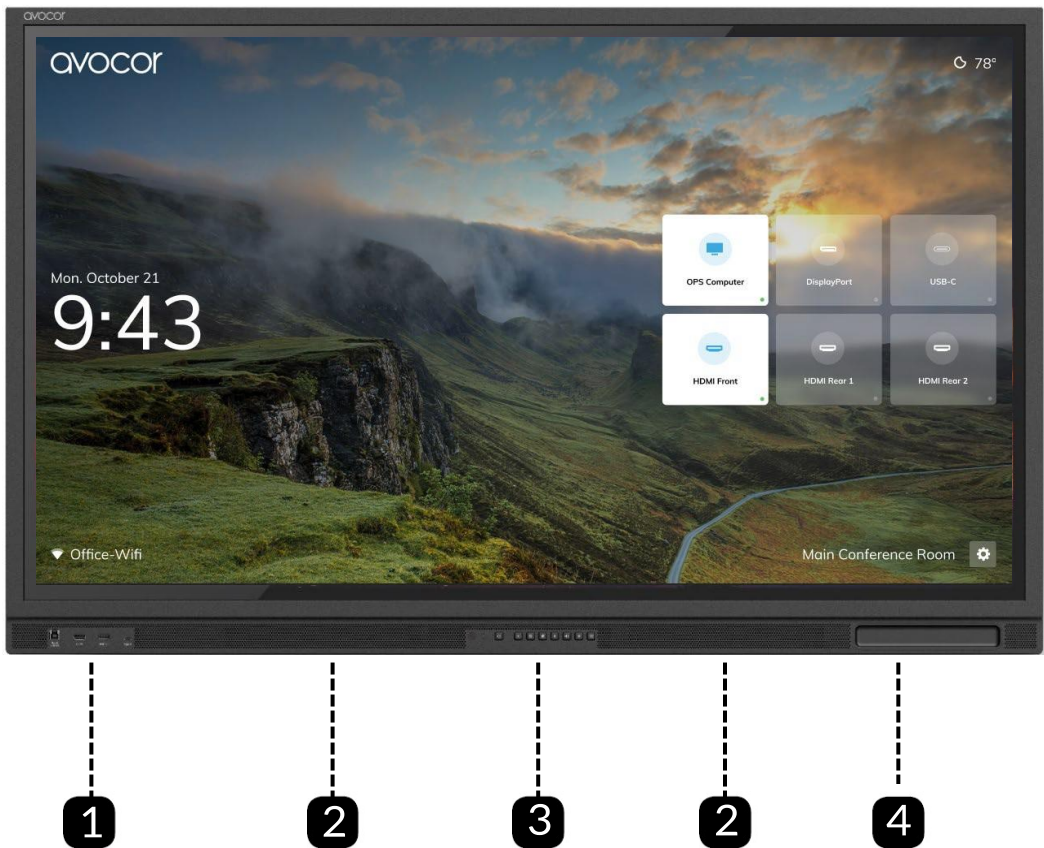
Warranty

Global	3 Year RTB with optional upgrades available (contact your reseller for more info)
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THE DISPLAY, AT A GLANCE

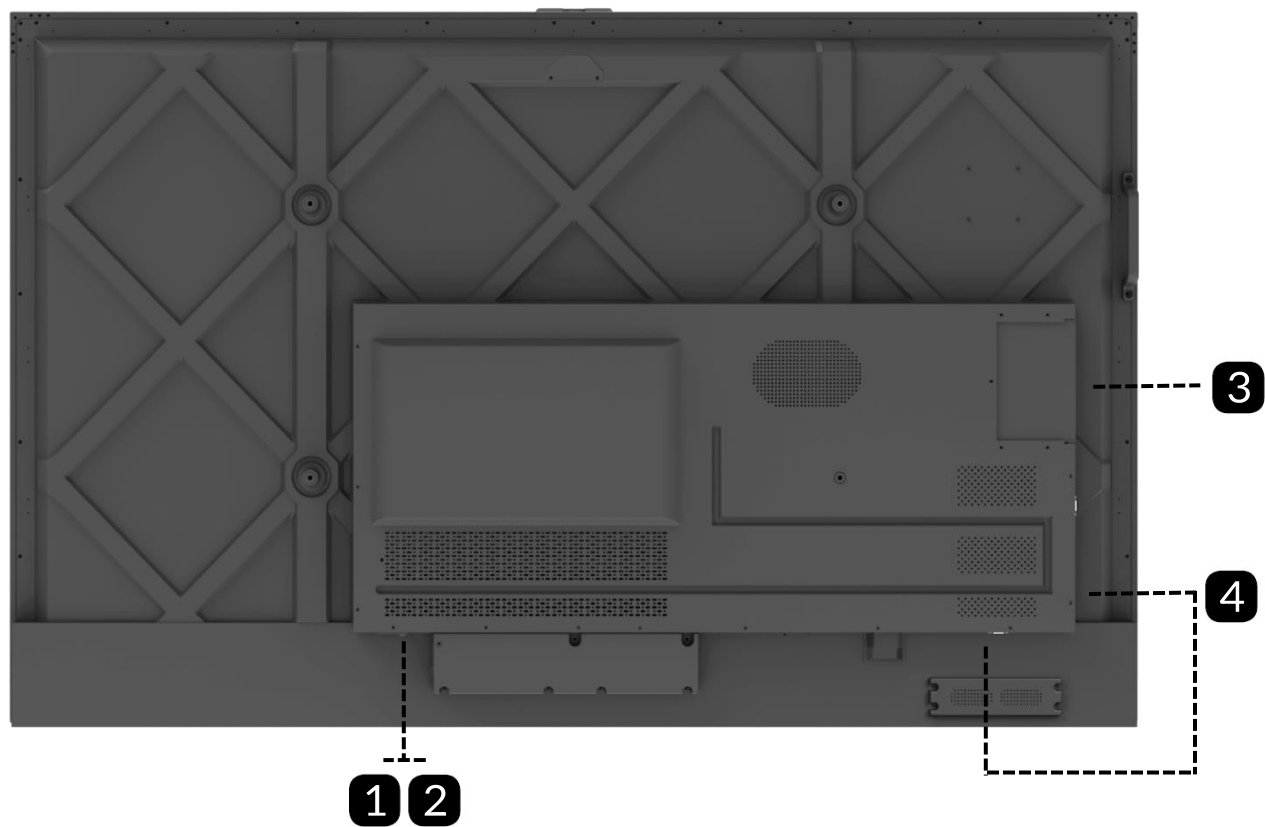
The following diagrams depict the front, side, and bottom panels of the display. The physical interface and connections are labeled, and then described in the tables that follow.

Display Front



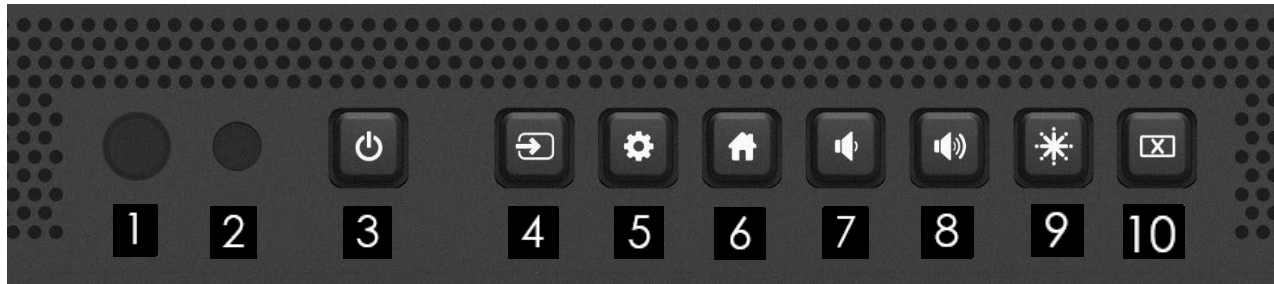
1	Front Panel Interface/Guest Inputs	Type C, HDMI 2.0, Touch USB-B 3.0, USB-A 2.0 (Accessory Port)
2	Front Panel Speakers	2 X 20W Forward-Facing Speakers.
3	Display Buttons	On-panel keypad control. See Page 12 for more details.
4	Pen Tray	Magnetized pen storage

Display Rear



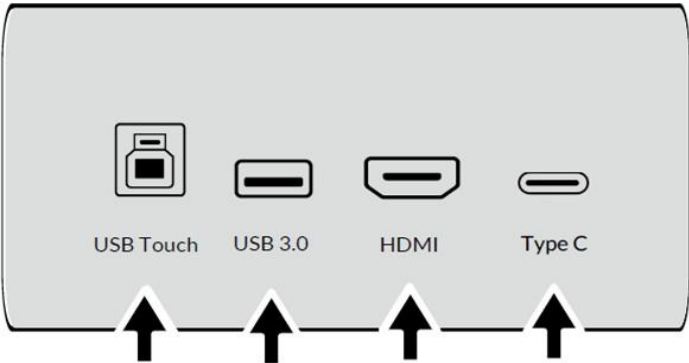
1	Main Power Switch	A/C Rocker Switch; toggles all power to the display.
2	Power Socket	Three-pin A/C Jack.
3	OPS Slot	TX25A-80P standard OPS input; compatible with non-standard OPS-C structure.
4	Rear Source Inputs	Side — 2x HDMI 2.0, 1x DisplayPort 1.2, 1x USB-B Touch, 1x USB-A 3.0, 1x USB Service Port, 1x 3.5 Audio out, 1x HDMI Out (4K@60Hz) Bottom —SPDIF, RS232 Female Input, Ethernet In, Ethernet Out.

Display Keypad



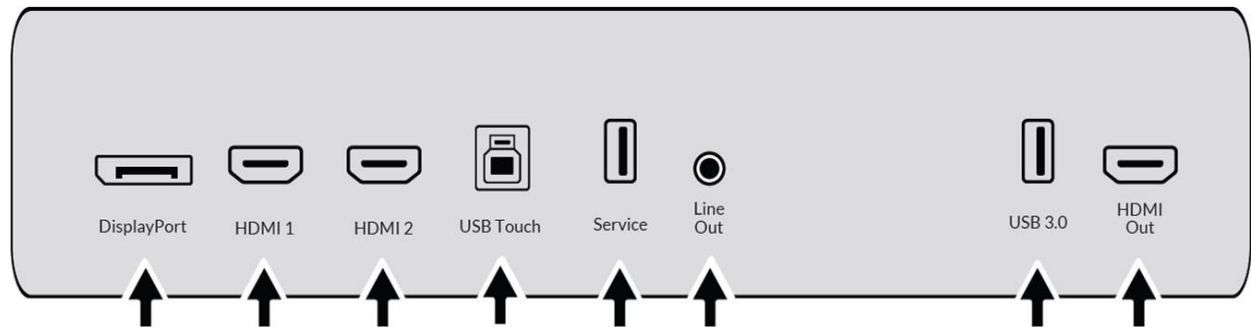
1	Power LED	Indicates the power status of the display.
2	Light sensor	Ambient light detector.
3	Power	Turn the display on/off.
4	Source	Switch sources.
5	Menu settings	Open UiQ Settings.
6	Home	Access the UiQ Home screen.
7	Volume -	Short press to reduce one level of volume; Long press, continue to reduce the volume.
8	Volume +	Short press to increase the volume; Long press, continue to increase the volume.
9	Freeze	"Freeze" the active image on the display; press again to resume normal operation.
10	Blank	Disables the backlight.

Guest Inputs



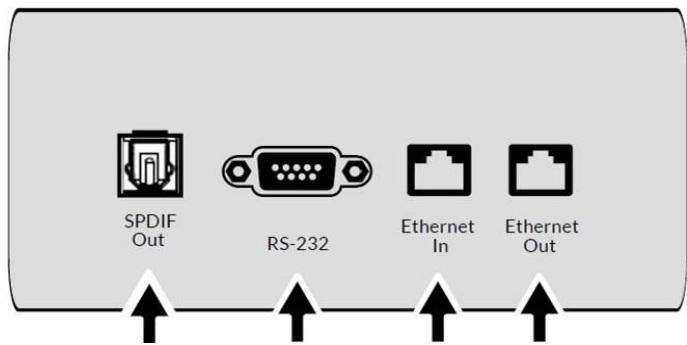
1	USB Touch	USB Touch 3.0 Guest Input.
2	USB 3.0	USB Accessory Input.
3	HDMI	HDMI Guest Input.
4	Type C	USB Type C, Guest Input for video and Touch

Side Inputs




1	DisplayPort	DP1.2 & HDCP2.2.
2	HDMI1	HDMI2.0B & HDCP2.2.
3	HDMI2	HDMI2.0B & HDCP2.2.
4	USB Touch	USB 3.0 Type B for touch control.
5	USB 2.0	USB 2.0 accessory port
6	Line out	3.5mm audio output (no mic).
7	USB 3.0	USB 3.0 accessory port.
8	HDMI Out	HDCP compliant HDMI out @ 4K@60Hz; duplicate screen only.

Rear Lower Inputs



1	SPDIF Out	Sony/Phillips Digital Interface. Connect external and digital powered speakers, or an audio receiver or amplifier.	
2	RS232	DB9 Female Input	For interfacing with a PC or automation/control system.
3	Ethernet In	RJ45 Input	Lan In, 10/100Mbps.
4	Ethernet Out	RJ45 Output	Lan Out, 10/100Mbps.

INSTALLATION

 Please read the following precautions carefully before installing your new Avocor AVE-xx40 display. Failure to comply may result in damage to the display and equipment and may result in personal injury or death.

- DO NOT install the display in a high temperature environment or near any apparatus that produce heat.
 - This may cause damage to the panel and equipment. It may also cause personal injury due to electrical shock resulting from overheating.
- DO NOT install the display in a high humidity environment or an environment where it can come into contact with water.
 - This may cause damage to the panel and equipment. It may also cause personal injury due to electrical shock resulting from overheating.
- DO NOT overload outlets or cables beyond their electrical capacity.
- DO NOT insert the power plug into an outlet rated outside the range of 100~240V A/C.
- DO NOT insert the power plug into a damaged outlet.
- DO NOT use a worn or damaged A/C power cable.
- DO NOT use an improper or mismatched A/C power cable.
- DO NOT place the display on an unstable shelf or surface.
- DO NOT place objects on the display as instructed below:
 - Do not cover the vents on the display.
 - Do not allow liquid or small particles to enter the vents or other parts of the display.
 - Do not put heavy objects on the display.
- Please allow room between the wall and the display panel to maintain proper ventilation and avoid overheating.
- Make sure you use the handles on the back of the display while lifting or moving the display, to avoid touching the front panel during the move.
- When unpacking, and carrying the display please follow these guidelines:
 - 2 people are needed to move displays of 65"
 - 3 people are needed to move displays of 75" - 86"

Before installing, please make sure the wall is strong enough to hold the necessary weight of the display and the mount.

Ambient Considerations

Environmental and ambient factors play a considerable role in determining your viewing experience and the functional operation of the display. Make sure to follow these guidelines carefully to get the most out of your display.

AMBIENT LIGHT

For the best viewing experience, make sure to minimize or remove light sources directed at the screen, especially sunlight.

Any direct light may make images on the screen appear washed out and less vibrant, and direct sunlight may even affect touch control operation.


AMBIENT TEMPERATURE

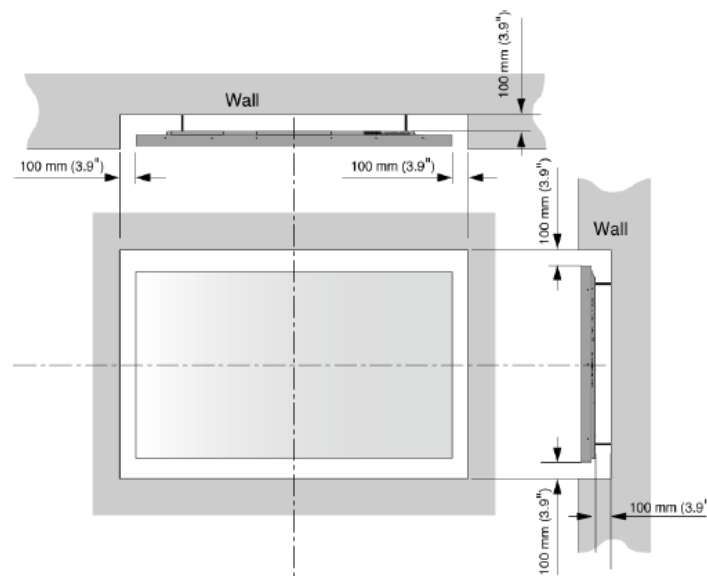
Maintain the ambient temperature of the room at a consistent level. This will ensure that the display continues to operate smoothly.

Do not place the display near heat sources or air conditioning vents, and do not operate or store the display in temperatures above 40 degrees Celsius (104 degrees Fahrenheit).

VENTILATION

The display should maintain a proper operating temperature provided that the ambient temperature is not too high, and that the vents on the display have enough room to disperse any heat emanating from the display.

 Do not block the vents on the display! Leave a space of about 4 inches between all sides of the display and surrounding walls or objects, as shown in the figure, below.



Mounting the Display

The three primary types of mounting solutions are Stationary Stands, Rolling Carts, and Wall Mounts. This chapter will examine each type and how they might fit into your installation.



NOTE

- Leave mounting to the installation specialists.
- Always make sure that your stand, or mount/wall is rated to hold the weight of your display.
- Make sure that the surface you place the mount or stand upon can support the weight of your display.
- Make sure the tilt degree of the display does not exceed 2°.
- Always get help when moving or mounting the display.
 - 2 people are needed to move displays of 55" – 65"
 - 3 people are needed to move displays of 75" – 86"

STATIONARY STANDS

Stationary stands can come in the form of tabletop stands or floor stands. These stands are worthwhile for either permanent or temporary installations; they are less mobile than rolling carts but are a bit more flexible than wall mounts.

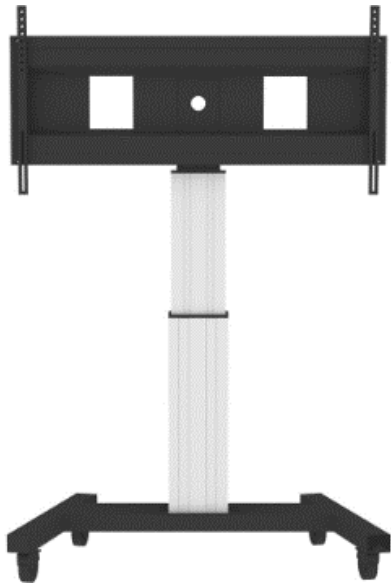


WARNING

- If you decide to implement a tabletop stand, make sure that the table or surface you plan to place the display on can support the weight of both the display and the stand.

ROLLING CART

As the most mobile of mounting solutions, the rolling cart is perfect for those who want a flexible setup that can be taken to different rooms.



WARNING

- At least two people are needed to move a rolling cart with a mounted display.
- When moving your cart, make sure that you have a clear path to your destination and be sure to warn other people around you.

WALL MOUNT

Though immobile and possibly the most time-consuming install, wall mounts benefit from the fact that they take up much less space than their counterparts. This is a great option for those who want a permanent sleek-looking setup, especially if extra time is taken to route any cabling through the wall.



WARNING

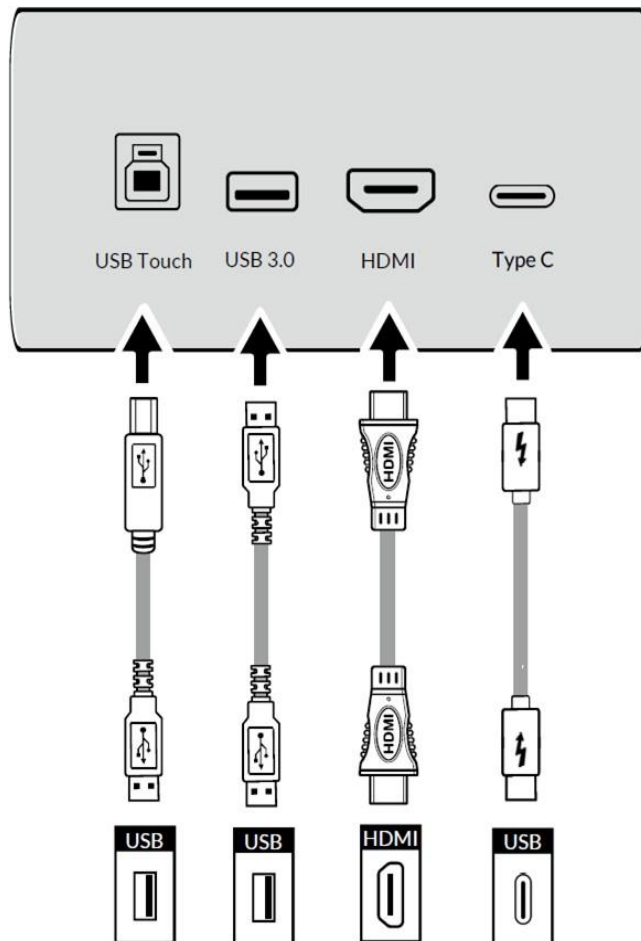
- The wall must be capable of supporting a redundant weight factor of 3x the weight of the display or be reinforced to support a 3x redundant weight factor.
- Use only approved wall-mounting kits; talk to the installation experts for their recommendations and advice.

Peripheral Connections

Your Avocor AVE-xx40 display supports connections to multiple peripheral devices, from computers, to wireless presentation systems, to external control systems.

The below diagrams demonstrate how to connect your peripherals for the best possible results.

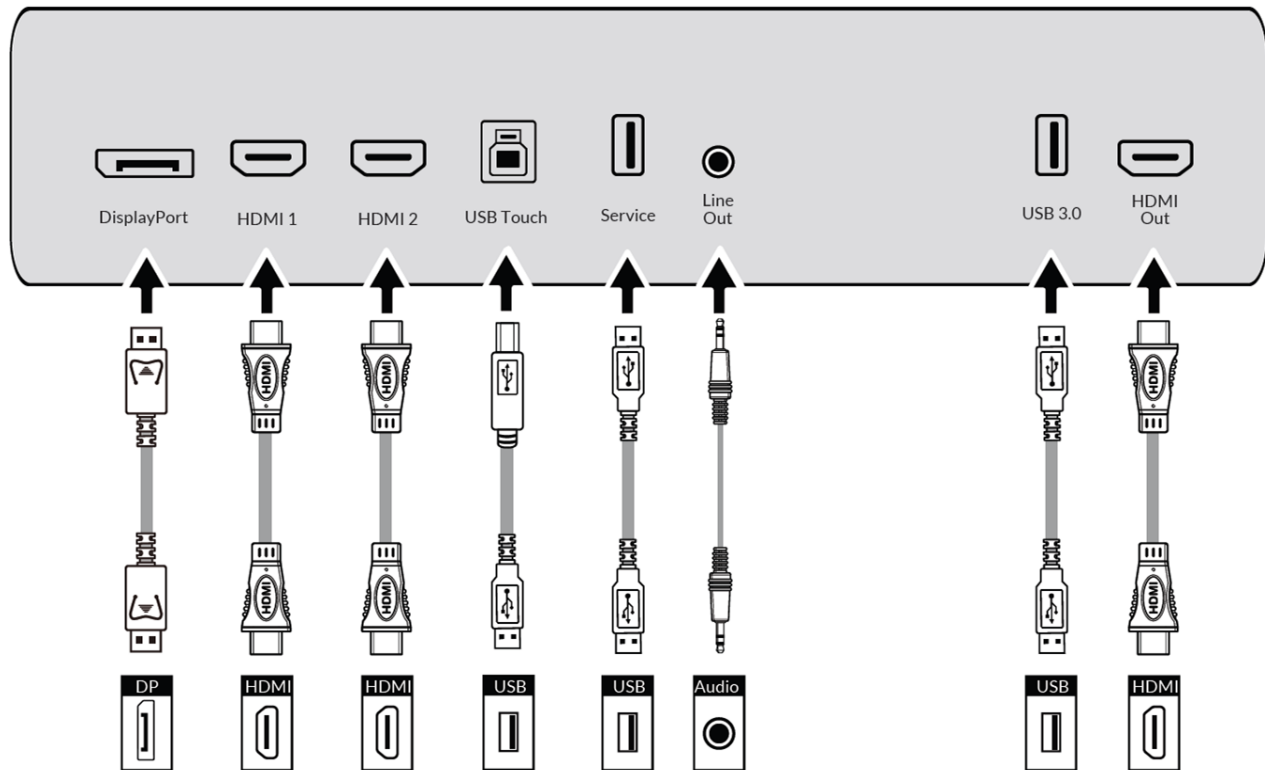
GUEST INPUTS



NOTES

- The front ports on your AVE-xx40 display are great for a plug-and-play session for an HDMI compatible source.
- Add a USB Type-B connection to the **Touch** port to enable touch control.
- The USB 2.0 accessory port is a convenient plug-in for a flash drive, mouse and/or keyboard, or other USB peripheral device.

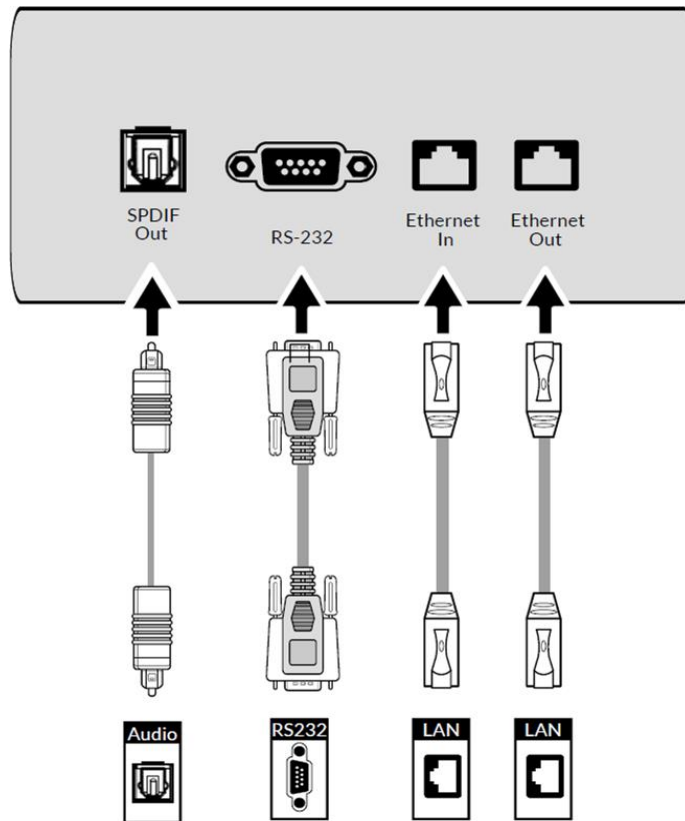
SIDE INPUTS



NOTES

- The side inputs on your AVE-xx40 display will support up to three primary sources, two USB accessories, an audio system analog or optical out, and an HDMI Out to an additional, non-touch monitor (Duplicate Screen ONLY).
- The Service Port is used to upload user **Wallpapers** (see page 33), or manual firmware updates (see page 43).

REAR LOWER INPUTS



NOTES

- Here, connect your AVE-xx40 to a Local Area Network (LAN) and/or a RS232 or TCP/IP control system.
- *Use a straight through DB9 connector to properly connect your control system to the RS-232 port on the display.*

OPS Module

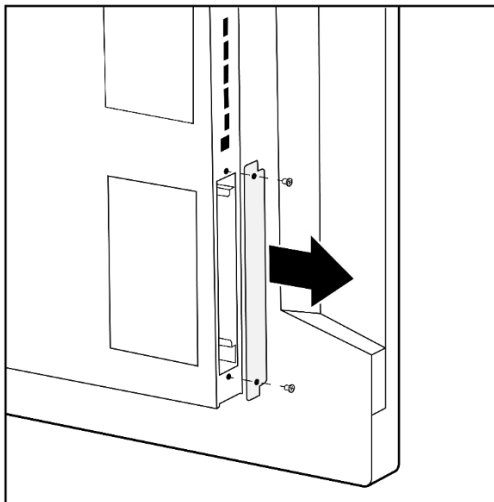
Your Avocor AVE-xx40 is compatible with any Open Pluggable Standard (OPS) computer module. Avocor offers its own OPS PC module, which is optimized for the display, for a separate purchase.



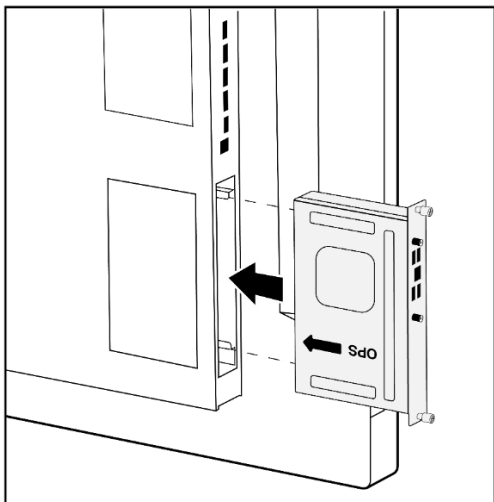
Installing an Avocor OPS module is a relatively simple process, but one that still needs a level of care and attention. Improper installation may cause malfunction or even damage the OPS module or the OPS Slot-Connector on the display. *Please follow these instructions carefully.*

OPS INSTALLATION STEP-BY-STEP

- I. Turn off the main power switch on the display.
- II. **Remove the OPS slot shield** on the display input panel



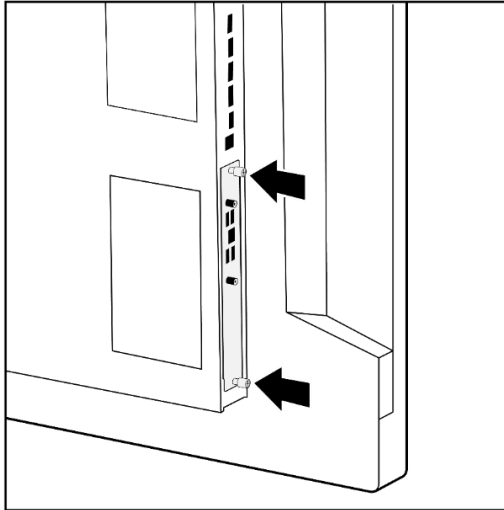
- II. **Install the Avocor OPS computer** by carefully sliding it into the OPS slot as pictured below.





If installing an Avocor OPS module, the "OPS ==>" imprint should be upside down and facing the back panel of the display. If there is no imprint, then the small square fan vent should be facing the same direction as the back panel.

III. Secure the OPS computer into the slot using the screws that were removed earlier



That's it! Your OPS should be ready to go. Turn the main power of the display back on and hit the power button on the OPS module to begin operation.

Remote Control



	POWER	Power on/off the display
	OPS	Navigate to the OPS input
	BLANK	Blanks the display. Press again to restore.
	FREEZE	Freezes the display. Press again to restore.
	OK/Direction keys	Menu navigation and selection
	RETURN	Go back to the previous menu
	HOME	Navigate to the UiQ home screen
	MENU	Open the OSD menu
	BRIGHTNESS -	Decreases the Brightness
	BRIGHTNESS +	Increases the Brightness
	MUTE	Toggle Mute on/off
	VOL. -	Decreases the volume
	VOL. +	Increases the volume
	SOURCE	Open the Source selection menu
	SETTING	Open display Settings
	FRONT	Switch to the HDMI Front input source
	DP	Switch to the DisplayPort input source
	HDMI 1	Switch to the HDMI 1 input source
	HDMI 2	Switch to the HDMI 2 input source
	Type C	Switch to the Type C input source AVE-5530 Only

REMOTE CONTROL BATTERIES

To install batteries in the remote control:

1. Press down the tab on the cover plate and pull the cover plate up.
2. Insert the included batteries. Ensuring that the polarities correctly match the (+) and (-) markings inside the battery compartment.
3. Insert the lower tab of the cover into the opening and press down the cover until it clicks in place.



Notes on Batteries

- Please only use approved AAA type batteries.
- Do not mix an old battery with a new one or different types of batteries.
- If you will not use the remote control for a long time, remove the batteries to avoid damage from battery leakage.
- Do not expose batteries to excessive heat such as from sunshine, fire, or the like.
- Don't recharge, heat, disassemble, short, or throw batteries into a fire.



Notes on Remote Control Operation

- Make sure that there is nothing obstructing the infrared beam between the remote control and the IR receiver on the display.
- If the effective range of the remote-control decreases, or it stops working, replace the batteries with new ones.
- The remote control may fail to operate if the infrared remote sensor is exposed to bright sunlight or fluorescent lighting.
- Ambient conditions may possibly impede the operation of the remote control. If this happens, point the remote control at the display, and repeat the operation.



Remote Control Sensor

The effective area of the remote control includes the vertical distance within five metres in front of the display, and the area within an angle of 30 degrees from the vertical point to the left and the right.

Using Discreet IR Codes

The display accepts commands in the form of infrared (IR) signals that conform to the **NEC protocol**. Each display remote control button has an IR control code associated with it.

IR Command Protocol

Each IR control code has the following characteristics:

- A leader pulse (a modulated pulse of 9ms followed by a non-modulated pulse of 4.5 ms).
- 16 address bits (also called a “customer code”): eight (8) bits for the address followed by the logical inverse of the address. The customer code for the E40 display is 02FF.
- 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 9Hz.

IR Command List

Customer Code	Data Code	Function
02FF	0X0B	POWER
02FF	0X31	OPS
02FF	0X0A	BLANK
02FF	0X22	FREEZE
02FF	0X2B	UP
02FF	0X2D	LEFT
02FF	0X2F	OK
02FF	0X2E	RIGHT
02FF	0X2C	DOWN
02FF	0X24	BACK
02FF	0X15	HOME
02FF	0X27	MENU
02FF	0X3A	BRIGHTNESS-
02FF	0X39	BRIGHTNESS+
02FF	0X14	MUTE
02FF	0X12	VOL -
02FF	0X13	VOL +
02FF	0X1C	SOURCE
02FF	0X45	SETTINGS
02FF	0X34	FRONT
02FF	0X3E	DP
02FF	0X3F	HDMI 1
02FF	0X40	HDMI 2
02FF	0X35	TYPE-C

OPERATION

The Avocor AVE-xx40 features an intuitive touch interface for source navigation and OSD menu configuration. This chapter will provide information and best practices for operating the home-screen and the various on-screen display (OSD) menu settings to help facilitate the best possible user experience.

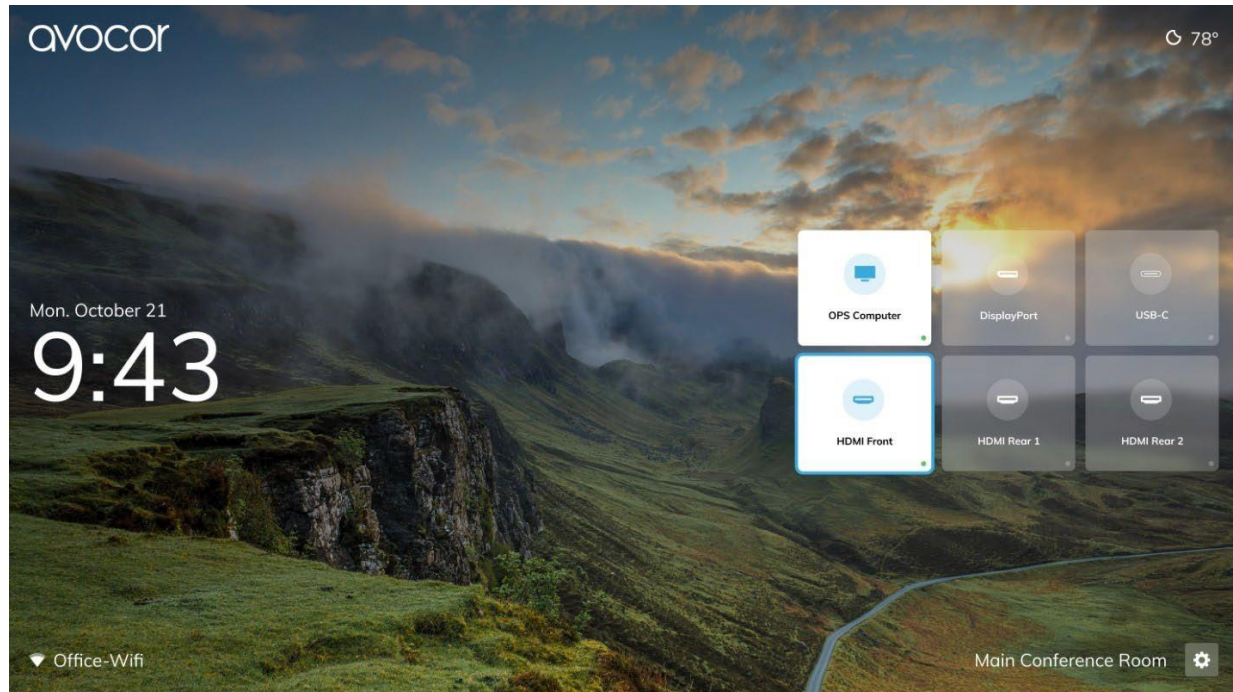
Precaution

Please read the following precautions regarding normal operation carefully. Failure to follow the cautionary points therein may cause damage to the screen not covered by Avocor's warranty policy.



- If you encounter a problem during installation, please contact your dealer or Avocor support for assistance. **DO NOT** attempt to repair or open the display yourself.
- Always avoid placing the display flat face-down or face-up. **DO NOT** attempt to use the display lying flat on its back at any time.
- **DO NOT** set a static (non-moving) image on the display for an extended period of time, as this may cause image retention, or "burn-in" which is not covered by warranty.
- **RECOMMENDED USAGE HOURS:**
 - Turn off the display for at least **8 hours** after every 16 hours of usage in a 24-hour period.


The UiQ Home Screen



The Home Screen is the default landing page and general hub for the AVE-xx40's touch interface. Here, you can configure the display's settings via the OSD and select an input source without having to use the remote control.



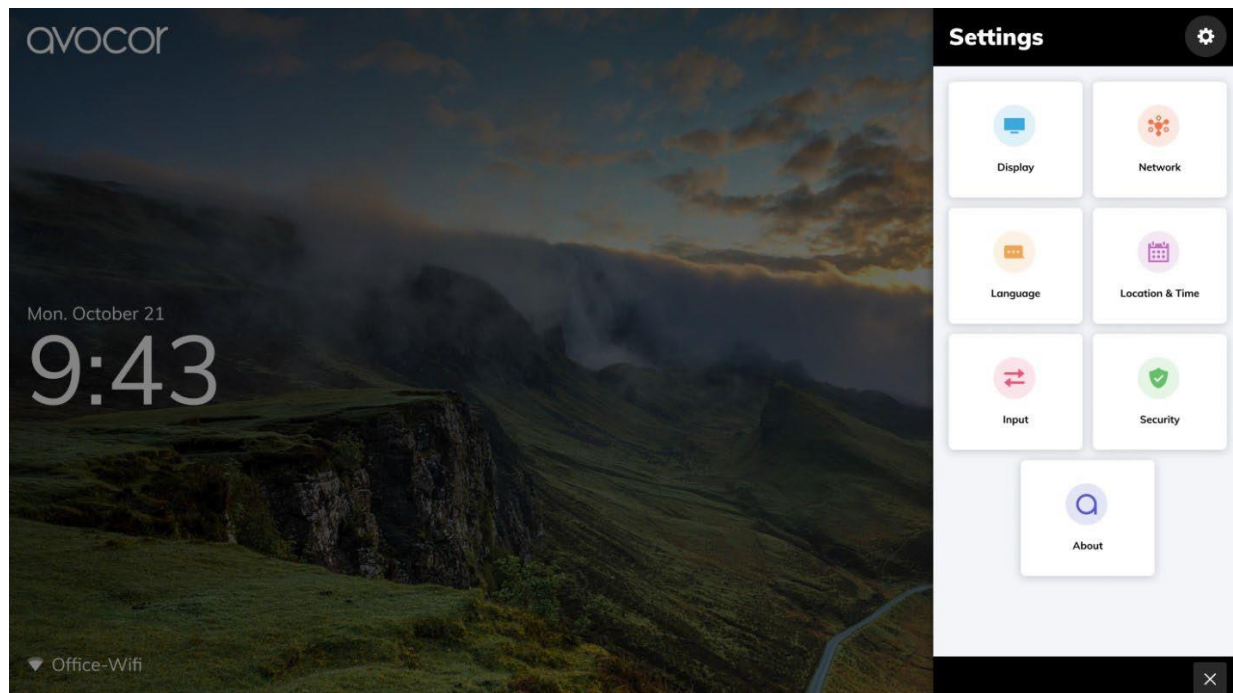
UIQ Settings

To access the **UiQ**, touch the gear icon  on the home screen, or press the **Menu**  key on your remote control.

You can access the various menu settings by touching the icon squares in this interface (see the image above). Each menu will have  a button that will return to the previous menu.

Press the  button on the bottom right of the interface or touch the **Menu**  key on the remote control again to exit the OSD menu.

Read on for more information on each menu setting.



Display

Name		Changes the name assigned to the display, which is visible on the UIQ Home Screen.
Wallpaper		Set a default or custom user wallpaper for the UIQ Home Screen. A Slideshow option is available.
Avocor Logo	On	Toggles the presence of the Avocor logo on the Home Screen. Options: On, Off ; Default: On
	Off	
Slideshow	On	Toggles the slideshow of wallpapers on the UiQ Home Screen. When Slideshow is toggled on this will cycle through selected images every 15 minutes Options: On, Off ; Default: On To upload bespoke wallpapers, insert a USB drive into the Service port of the display with wallpapers located inside a folder called WALLPAPER. Please use JPG and PNG and recommend image resolution is 1920x1080 or larger
	Off	
Energy Saving		
Auto Power On	On	Select Auto Power On mode Options: On, Off ; Default: Off
	Off	
Power On Time		Select Time and Day of week for the display to turn on
Power Off Time		Select Time and Day of week for the display to shut down
Eco Mode	On	Toggle Eco Mode for automatic Energy Star rated picture settings. Options: On , Off; Default: Off
	Off	
OPS Always On	On	Select the OPS power state. Options: On , Off; Default: Off
	Off	
Display Sleep	On	Use the slider to set your Display Sleep timer to activate after a set period of inactivity. Options: 1 Min, 15 Mins, 30 Mins, 45 Mins, 1Hr. 2Hrs, 3Hrs, Never. Default; Never
	Off	
Picture		
Scheme	Custom	Select one of the following Schemes when an active source is connected to the display: Options: Custom, Vivid, Cinema, Game, Sport; Default: Custom
	Vivid	
	Cinema	
	Game	
	Sport	

Backlight	0-100	Increase or decrease the intensity of the LCD backlight. Select the desired level, and then press OK. Range: 0~100; Default: 80
Contrast	0-100	Increase or decrease the contrast of picture. Select the desired level, and then press OK. Range: 0~100; Default: 50
Sharpness	0-100	Increase or decrease the picture sharpness of the display Range: 0~100; Default: 40
Saturation	0-100	Adjust the brilliance and brightness. Select the desired level, and then press OK. Range: 0~100; Default: 50
Hue	0-100	Increase or decrease the green hue. Select the desired level, and then press OK. Range: 0~100; Default: 50
Brightness	0-100	Increase or decrease the green hue. Select the desired level, and then press OK. Range: 0~100; Default: 56
Color Temperature		Select the color temperature . Options: Cold, Standard, Warm; Default: Cold
HDMI RGB Range		Press to select the Colour Range of the display Options: Auto / 0~255 / 16~235 Default: Auto
Audio		
Speaker Mute	On	Toggle to mute audio Options: On , Off; Default: Off
	Off	
Treble	-10-10	Adjust the sound in high tones (treble). Select the desired level, and then press OK. Range: -10~10; Default: 0
Bass	-10-10	Adjust the sound in low tones (bass). Select the desired level, and then press OK. Range: -10~10; Default: 0
Auto Close	On	Select Auto Close to Auto Close the UiQ Settings. Options: On , Off; Default: Off
	Off	

DISPLAY SETTINGS TIPS

The **Display** settings submenu contains configuration options for various picture and audio settings for your AVE-xx40. Navigating the menus is straightforward and intuitive, but we'll provide some tips and knowhow to help you get started.

Custom Wallpapers

The AVE-xx40 already comes with some gorgeous high-resolution wallpapers, but you can easily upload your own. Just follow these steps...

- I. **Take a USB flash drive**
- II. Open the USB flash drive's *file directory* on a computer.
- III. Create a new folder with the name **WALLPAPER**.
- IV. Save any wallpapers you want into that **WALLPAPER** folder.
- V. **On the Display** - Open **Settings>Display>Wallpaper** on the Home Screen.
- VI. Under *User Images*, touch the blank tile containing the "+" symbol (see image).
- VII. Plug your USB flash drive into the USB 2.0 accessory port on the front of the display.

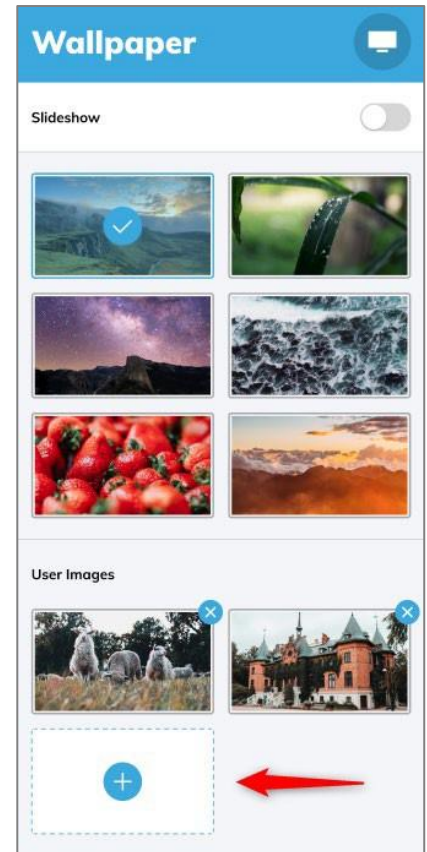
That's it! Your custom wallpapers will upload automatically.



Only 1920x1080 images or higher are supported.



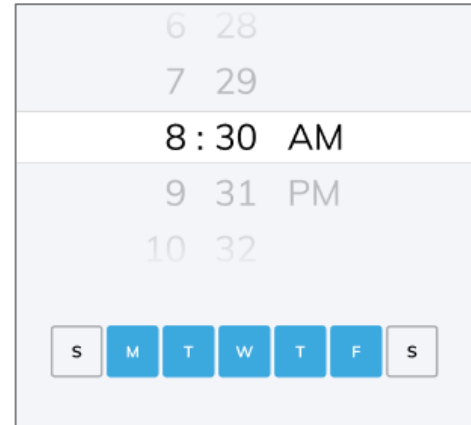
You can delete a custom wallpaper by touching the blue "x" button located on the right corner of the image preview.



Energy Saving

This submenu provides options for helping you maximize power efficiency for your AVE-xx40. Here you can...

- Schedule an **Auto Power On*** cycle for every day of the week.
- Toggle **Eco Mode** for automatic *Energy Star* rated picture settings.
- Toggle **OPS Always On** to keep the OPS port live or have it shut off with the display's normal automatic or manual power cycles.
- Set your **Display Sleep** timer to activate after a set period of inactivity.



Auto Power On*

Your automatic power schedule is divided into three items in the UiQ:

- **Auto Power On** – a slider which toggles your automatic power schedule on or off.
- **Power On Time** – sets the time your display will power on.
- **Power Off Time** – sets the time your display will power off.

Open either **Power On Time** or **Power Off Time** options and a clock wheel and seven tiles representing the days of the week will appear, just as in the image to the right ----- >

Simply adjust the clock to your preferred time of day and touch the days of the week to choose which days your Power On or Power Off will occur; **Blue** means active, **White** means inactive.

For example, if you set your **Power On Time** to 8:30 AM and highlight the M, T, W, T, F tiles, then your display will automatically power on at 8:30 AM, Monday thru Friday, while skipping Saturday and Sunday, every week.



Utilizing these settings is highly recommended if you expect heavy use and long hours for your AVE-xx40 display, as this will help maintain its longevity.

Network

Status		Shows Network and LAN status (Cable Connected, Not Connected).
LAN	DHCP	Set a DHCP or Static IP .
	Static	
	IP Address	Display dynamic IP or the static IP address of the display’s Ethernet port Default: 0.0.0.0
	Mask	Set the subnet mask address. Default: 0.0.0.0
	Gateway	Set the Gateway mask address. Default: 0.0.0.0
	DNS 1	Set the DNS 1 mask address. Default: 0.0.0.0
	DNS 2	Set the DNS 1 mask address. Default: 0.0.0.0
Wi-Fi On	On	Configure Wi-Fi settings (additional USB device required); locate the MAC Address. Options: On , Off; Default: Off
	Off	
	Wi-Fi Available Networks	
Wake On Lan	On	The Wake on LAN (WOL) feature wakes a computer from a low-power state when a network adapter detects a WOL event. Options: On , Off; Default: Off
	Off	
LAN USB	On	Toggle LAN USB passthrough of the display. Options: On , Off; Default: Off
	Off	

Network Settings Tips

The AVE-xx40 supports wired LAN or Wi-Fi configurations required to **enable Auto Date & Time, Weather,** and Over-the-Air (OTA) Firmware Updates. You also need to configure your **LAN** settings to be able to enable TCP/IP control. Here are some tips to help get you started.

LAN

For a wired connection to either the **Ethernet In** or **Ethernet Out** port

Here you can assign an IP address and other necessary network parameters for your display. You can set your parameters manually by choosing the **Static** option or automatically via **DHCP**, if available. *Consult your network administrator to see if DHCP is an option!*

Wi-Fi

An Avocor Wi-Fi USB adapter (AVC-USB-WIFI) is required to enable a Wi-Fi connection to the AVE-xx40 display.

Once a Wi-Fi adapter has been connected to one of the **USB Accessory ports** on the display, navigate to **Network>WiFi**, choose your network, and enter the network authentication to connect to the wireless network.

LAN

TYPE

Static

DHCP

IP Address

10.7.15.77

>

Subnet

255.255.0.0

>

Gateway

10.7.15.1

>

DNS 1

1.1.1.1

>

DNS 2

8.8.8.8

>

Language

Language	English	<div>Select the language UiQ interface</div> <div>Options: English, French, German, Spanish, Italian, Dutch ; Default: English</div>
	French	
	German	
	Spanish	
	Italian	
	Dutch	

Location & Time

Time Zone		Set Timezone based on city and region. Tap and onboard keyboard will launch
Auto Date & Time	On	Toggle set Date and Time automatically, (only available if there is internet connection). Options: On , Off; Default: Off
	Off	
Set Date		Select to Manually set the Date
Set Time		Select to Manually set the Time
24 Hour Clock	On	Toggle to select 24 Hour Time . Options: On , Off; Default: Off
	Off	
Date Format	Fri, October 21	Set date format.
	21-Oct 2019	
	10-21-2019	
	Fri, 21-Oct	
Location		Set the region for accurate weather information. Tap and onboard keyboard will launch
Temperature Unit	F	Set unit for measure of temperature Options: °F, °C; Default: °F
	C	

Input

Favorite Source	Home Screen	Select the Input Source for HOME key Options: Home Screen, OPS Computer, HDMI Front, HDMI 1, HDMI 2, DisplayPort, USB-C ; Default: Home Screen
	OPS Computer	
	HDMI Front	
	HDMI Rear 1	
	HDMI Rear 2	
	Display Port	
	USB-C	
Starting Source	Home Screen	Select the Input Source for Starting Source key Options: Home Screen, OPS Computer, HDMI Front, HDMI 1, HDMI 2, DisplayPort, USB-C ; Default: Home Screen
	OPS Computer	
	HDMI Front	
	HDMI Rear 1	
	HDMI Rear 2	
	Display Port	
	USB-C	
Auto Detect New Input	On	Toggle Auto Detect New Input; determines whether the display will automatically switch to a new connection. Options: On, Off; Default: Off
	Off	
Source Preview	On	Toggle to enable Source Preview on UIQ Homescreen Options: On, Off; Default: Off
	Off	
Rename Sources		Set custom names for the display's input sources. Rename OPS Computer, Rename HDMI Front, Rename HDMI Rear 1, Rename HDMI Rear 2, Rename Display Port, Rename USB-C

Advanced Settings		
Wake On Input	On	Toggle to select Wake On Input Options: On, off; Default: Off
	Off	Note: The display wakes up when input HDMI, DisplayPort & Type C & RS232 command.
EDID	4K@60	Select EDID (Extended Display Identification Data) of the HDMI 1~3, DisplayPort, Type C inputs. Options: 1080p, 4K2K@60; Default: 4K2K@60
	1080p	Note: Use the 1080p setting for the broadest support of lower resolution sources. Use 4K 2K setting to support high resolution sources such as 3840x 2160.
Current Source		Detects the Current source connected to the display
Detected Resolution		Detects the Resolution of the display
Detected Refresh Rate		Detects the Refresh Rate of the display

Input Settings Tips

Advanced Settings & EDID

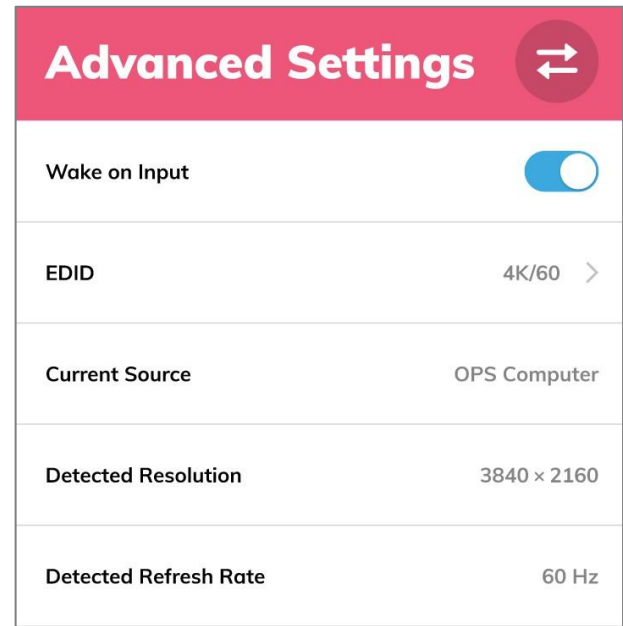
Wake on Input simply means that if the display is in a soft-powered off state (by pressing POWER) or timed out into a sleep state, and a new source is plugged into any input, the display will wake up and switch to the newly connected source.

EDID

Without going into too much detail, EDID (Extended Display Identification Data) is essentially the handshake that happens between a display and source device regarding resolution and frame rate to get a proper image on the screen: the display says, "I can accept a maximum of 4K@60Hz signal," and the source says, "I will give you a 4K@60Hz signal." Finally, a 4K@60Hz image appears on the screen.

Like the above scenario, the AVE-xx40 display supports a maximum 4K@60Hz signal by default, but what if a source device can only output standard HD (1080p)? More than likely, the display will accept the 1080p signal without additional configuration or issues, but the image may come out blurry and upscaled depending on several factors outside the scope of this user manual...


If you get a blurry image on your Avocor AVE-xx40 from a 1080p source device, simply navigate to **Input>Advanced Settings**, select **EDID**, and set it to **1080p**. This simply reduces the limit of the display's EDID range to 1080p, which should solve any image-upscaling problems.



Security

Require Passkey	On	Toggle Require Passkey . Options: On , Off; Default: Off
	Off	
Set Passkey		Set a custom Passkey to access display settings. Tap to enter
Lock Front Button	On	Locks the buttons on the front panel of the display. Options: On , Off; Default: Off
	Off	

About

Name	The full name and model of the display.
Firmware Version	The active firmware version number
Serial Number	The unique serial number for the display.
Model Number	The model number of the display.
Update System	If  Up To Date is visible, then the most up to date firmware is already in installed If Update Available is visible, please select and follow on screen prompts
USB Inserted	<ol style="list-style-type: none"> 1. Download the firmware from https://www.avocor.com/support and then copy the latest firmware onto a USB stick 2. enter the setting/about/update system/ USB Update 3. Insert the USB stick into the Service Port on the display 4. When inserted into the display "Insert USB" with change to "Apply Update" 5. Click "Apply Update" and then select "Confirm" to update the new firmware
Factory Reset	Are you sure you want to reset this device to its original factory settings Options: Yes or No

Update System - Firmware

OTA Updates

"Over-the-air" updates are the preferred and recommended method for updating your AVE-xx40 displays. All that's required is a stable internet connection, preferably a wired ethernet connection.

Any new updates will automatically be prompted once a network connection has been established.

1. Tap "Install" to begin the update process.
2. The display will download and install the update.
3. Do not touch the power buttons until the display resets automatically.

USB Updates

Please contact Avocor for assistance with manual USB firmware updates

EXTERNAL CONTROL

RS232 Connection and Port Configuration

Connect your control system or PC to the RS232 input of the display via a 9-pin NULL modem connector cable and set the baud rate to 19200 on your controller device.

TCP/IP Control Configuration

Connect your network, control system, or PC to the display's **Ethernet In** or **Ethernet Out** port via a CAT5 cable. The display must be connected to the network and must have a valid IP address. Configure your control system to run through **TCP port 4664**.

Command and Response Format

Any commands sent from an automation/control system or PC to an Avocor display must have the following format:

[STX] [IDT] [TYPE] [CMD] [VALUE]/[REPLY] [ETX]

- [STX] indicates the start of the command data (always 07).
- [IDT] is the display ID (always 01).
- [TYPE] is the command type:
 - 00 = return to host (response from the LCD panel)
 - 01 = read / action
 - 02 = write
- [VALUE] is the parameter setting for the command.
- [REPLY] is the parameter setting for the command, acknowledged by the display in its response to a command.
- [ETX] indicates the end of the command data (always 08).

Serial Command List

Main Item	Control Item	CMD HEX	Type HEX	Value HEX	Reply HEX	Content	CMD (ASCII)
Power Control	Power	POW	W/R	0	0	Off	50 4F 57
				1	1	On	
	IPC Control	IPC	W/R	0	0	Off	49 50 43
				1	1	On	
Input Source	Source Selection	MIN	W/R	9	9	HDMI 1	4D 49 4E
				0A	0A	HDMI 2	
				0B	0B	HDMI 3 (Front)	
				0C	0C	Type C	
				0D	0D	DisplayPort	
				0E	0E	OPS	
Picture Settings	Backlight	BRI	W/R	00~64	00~64	Backlight	42 52 49
		BRL		00~64	00~64	Digital Brightness Level	42 52 4C
		BLC		0	0	Off (Backlight)	42 4C 43
				1	1	On (Backlight)	
		CON		00~64	00~64	Contrast	43 4F 4E
		HUE		00~64	00~64	Hue	48 55 45
		SAT		00~64	00~64	Saturation	53 41 54
	Noise Reduction	NOR	W/R	0	0	Noise Reduction Off	4E 4F 52
				1	1	Noise Reduction: Low	
				2	2	Noise Reduction: Medium	
				3	3	Noise Reduction: High	
	Color Gain/Offset	USR	W/R	00~64	00~64	Red Gain	55 53 52
		USG		00~64	00~64	Green Gain	55 53 47
Picture Settings	Color Gain/Offset	USB	W/R	00~64	00~64	Blue Gain	55 53 42

		UOR		00~64	00~64	Red Offset	55 4F 52
		UOG		00~64	00~64	Green Offset	55 4F 47
		UOB		00~64	00~64	Blue Offset	55 4F 42
	Sharpness	SHA		00~64	00~64	Sharpness	53 48 41
Other Control	Scaling	ASP	W/R	0	0	Point to Point	41 53 50
				1	1	Full Screen (16:9)	
				2	2	Pillarbox (4:3)	
				3	3	Letterbox	
				4	4	Auto	
	Remote Control	RCU	W	0	0	MENU Key	52 43 55
				1	1	INFO Key	
				2	2	UP Key	
				3	3	DOWN Key	
				4	4	LEFT Key	
				5	5	RIGHT Key	
				6	6	OK Key	
				7	7	EXIT Key	
				0A	0A	HDMI1 Key	
				0B	0B	HDMI2 Key	
				1C	1C	AUTO Key	
				1D	1D	VOLUME+ Key	
				1E	1E	VOLUME- Key	
				1F	1F	HDMI Front Key	
				17	17	SCALING Key	
				18	18	FREEZE Key	
				19	19	MUTE Key	

				21	21	OPS Key	
				22	22	DisplayPort Key	
				23	23	TYPE C	
	Factory Reset	ALL	W	0	0	Reset all	41 4C 4C
				1	1	Reset all but communication	
	Display Information	SER	R		13 bytes	Read Serial Number	53 45 52
		MNA	R		13 bytes	Read Model Name	47 56 45
		GVE	R		6 bytes	Read Firmware Ver.	4D 4E 41
	Audio	VOL	W/R	00~64	00~64	Volume	56 4F 4C
		BAS	W/R	00~14	00~14	Bass (-10~10)	42 41 53
		TRE	W/R	00~14	00~14	Treble (-10~10)	54 52 45
		BAL	W/R	00~14	00~14	Balance (-10~10)	42 41 4C
		VOL	W/R	00~64	00~64	Volume Set	56 4F 4C
		VOD	W	0	0	Volume Decrease by 5	56 4F 44
		VOI	W	1	1	Volume Increase by 5	56 4F 49
		MUT	W/R	0	0	Mute Off	4D 55 54
				1	1	Mute On	
	Scheme Selection	SCM	W/R	0	0	User	53 43 4D
				1	1	Vivid	
				2	2	Cinema	
				3	3	Game	
				4	4	Sport	
	EcoMode WakeUpFromSleep	WFS	W/R	1	1	Set DIGITAL, RS232, Ethernet	57 46 53
		WFS	W/R	2	2	Set Never Sleep	
Other Control	RTC	RTY	W/R	00~63	00~63	Set Real time Year	52 54 59
		RTM		01~0C	01~0C	Set Real time Month	52 54 4D

		RTD		01~1F	01~1F	Set Real time Day	52 54 44
		RTH		00~17	00~17	Set Real time Hour	52 54 48
		RTN		00~3B	00~3B	Set Real time Minute	52 54 4E
	Freeze	FRE	W/R	00	00	Unfreeze	46 52 45
				01	01	Freeze	
	Auto Scan	ATS	W/R	0	0	Auto Scan Off	41 54 53
				1	1	Auto Scan On	
	All EDID	EDA	W/R	0	0	4Kx2K 60Hz	45 44 48
				2	2	1080P	
	HDMI EDID	EDH	W/R	0	0	4Kx2K 60Hz	45 44 48
				2	2	1080P	
	DisplayPort EDID	EDP	W/R	0	0	4Kx2K 60Hz	45 44 50
				2	2	1080P	
	RGB Color Range	HCR	W/R	0	0	Auto Detect	48 43 52
				1	1	0-255	
				2	2	16-235	
OSD Control	OSD Language	OSL	W/R	0	0	English	4F 53 4C
				1	1	French	
				2	2	German	
				10	10	Spanish	
				0D	0D	Italian	
				3	3	Dutch	
	OSD Timeout	OSO	W/R	05~3C	05~3C	OSD Timeout (5, 10, 20, 30, 60 sec)	4F 53 4F
Ethernet Setup	Network Enable	NWE	W/R	0	0	No	4E 57 45
				1	1	Yes	4E 57 45
	MAC ID Query	MAC	W	00~05	00~FF	Querying MAC ID #0~#5	4D 41 43

Warranty Information

COVERAGE

Avocor warrants to the first end user customer that the product, when shipped in its original container, will be free from defective workmanship and materials, and agrees that it will, for a period of **three (3) years** from the date of purchase, repair or replace the defective product or part thereof, at Avocor's discretion, with a new or equivalent at no charge to the customer. Advanced Field Replacement (AFR) service is included as part of this warranty.

Except as specified herein, this warranty covers all defects in material or workmanship in the product. AVOCOR'S LIABILITY FOR ANY DEFECTIVE PRODUCT IS LIMITED TO THE REPAIR OR REPLACEMENT OF THE PRODUCT AT AVOCOR'S DISCRETION. REPLACEMENT PARTS OR PRODUCTS MAY BE NEW OR 'LIKE NEW' UNDER THE CONDITIONS SPECIFIED BELOW. All parts

or products removed under this warranty become the property of Avocor.

The replacement part or product is warranted for the remainder of the original limited warranty period or thirty days from shipment, whichever is longer.

LIMITATIONS ON WARRANTY COVERAGE, DURATION, AND SERVICES MAY SOMETIMES VARY BASED ON THE LAWS OF SPECIFIC REGIONS, STATES, AND COUNTRIES. THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY HAVE OTHER RIGHTS WHICH VARY FROM JURISDICITON TO JURISDICTION.

EXCLUSIONS

This warranty does not apply to any cosmetic or consumable items of the Product or if the serial number or model number affixed to the Product has been removed, defaced, changed, altered, or tampered with.

This warranty does not cover installation, signal reception problems, potential incompatibility with peripheral devices, or acts of nature. Avocor does not warrant, nor shall it be liable for Products which have been subject to abuse, including, but not limited to, improper voltage, accident, misuse, negligence, lack of reasonable care, alteration, modification, tampering, improper installation, shipping damage, operation or maintenance or any damages or defects caused by repairs or attempted repairs performed by anyone other than Avocor personnel or an Avocor-authorized servicer.

Please refer to Avocor's pixel policy for warranty guidelines on pixel related issues.

This warranty also excludes any damage to product glass due to pressure, abrasion, scratches, or actions otherwise beyond normal operation of the product that would cause screen Mura and image retention.

CONCEALED DAMAGE

It is the customer's responsibility to inspect new product(s) at the time of delivery.

If packaging is found damaged *at the time of delivery*, the Customer should refuse delivery and note on the delivery receipt the product and details pertaining to damage. The Customer may accept packages with minor damage but must take note of product details and damage on the delivery receipt.

If patent or obvious physical damage is detected *after delivery is accepted* and a "clean" or unmarked delivery receipt was returned, it is the customer's responsibility to file an insurance claim to the shipping provider according to the requirements set forth in the shipping provider's policy.

If the product packaging is clean and undamaged, but patent or obvious physical damage is found on the product, the customer must report the damages to their product distributor, shipper, or seller, within the policy guidelines of the distributor, shipper, or seller.

If freight was arranged by Avocor, and patent or obvious physical damage to the packaging is not detected but found on the product or product accessories upon inspecting the product, the customer must report the damages to Avocor within 10 calendar days after the delivery date to receive warranty services.

CUSTOMER DATA

If the customer's product is capable of storing software programs, data, and other information, it is the customer's responsibility to protect its contents against operational failure. It is also the customer's responsibility to keep a separate backup of the contents and remove all personal information and disable security passwords prior to delivering a product for warranty service. ANY PERSONAL CONTENT WILL BE DELETED AND STORAGE MEDIA WILL BE REFORMATTED IN THE COURSE OF WARRANTY SERVICE.

AVOCOR SHALL NOT BE LIABLE, OR IN ANY WAY RESPONSIBLE, FOR ANY INCIDENTAL OR CONSEQUENTIAL ECONOMIC OR PROPERTY DAMAGE. SOME REGIONS DO NOT ALLOW LIMITS ON WARRANTIES OR ON REMEDIES FOR BREACH IN CERTAIN TRANSACTIONS; IN SUCH REGIONS, THE LIMITS HEREIN MAY NOT APPLY. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. AVOCOR DISCLAIMS ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE.

SERVICES

Technical Support: The Customer must contact Avocor Technical Support, via email at service@avocor.com in order to initiate an RMA or another warranty service. Customer agrees to cooperate with Avocor: (A) to notify Avocor promptly of any defect, error or Hardware Product malfunction and to submit to Avocor such information that Avocor may reasonably require to reproduce the error or Hardware Product malfunction and the operating conditions under which the

error or Hardware Product malfunction was discovered; (B) to follow Avocor's guidelines to troubleshoot reported faults on the defective product(s); (C) to install, if requested by Avocor and within Customer security guidelines, a network connection that will be made available to Avocor for the purpose of resolving problems, reviewing Customer use of software, or for any other reasonable purpose; (D) to have a certified technician repair or replace defective parts under Avocor's guidance; (E) to notify Avocor of any additional hardware or software not purchased from Avocor that may be used in conjunction with the Hardware Product.

Onsite Repair: If Avocor deems the Product repairable, it will, at its discretion, send a technical support representative and/or technician to provide onsite repair or replacement service for any repairable or replaceable parts. Customer may be asked to provide access to, and to assist in the handling of, the Product, as deemed necessary by Avocor, under the instruction of the field representative or technician.

Advance Field Replacement (AFR): Avocor will ship a like-new or refurbished replacement product to the customer, at its discretion, if the product defect is determined to be unrepairable. The Customer must provide the display model and serial number and will be asked to provide contact details for the shipment. Upon approval, Avocor will ship the replacement product to the customer's site.

AFR Guidelines: At the time of the new product's arrival to the customer, it is the customer's responsibility to facilitate the deinstallation of the defective product, installation of the replacement product, and packing of the defective product in either its original packaging or the packaging of the replacement, and then send the defective back with the same driver that delivered the replacement product on that same day. If the customer is not able to perform the same day swap, they will incur the cost of freight. Additionally, if the product is not returned within 15 business days, the customer will be invoiced in full for the replacement product.

SHIPMENTS TO CERTAIN INTERNATIONAL LOCATIONS MAY NOT BE SUBJECT TO THE ABOVE AFR GUIDELINES. CONTACT SUPPORT FOR FURTHER DETAILS.

Defective on Arrival (DOA): If the Product is determined by Avocor to be defective within the first 90 days of the initial purchase by the Customer, it is deemed Defective on Arrival (DOA). In the case of a DOA, the Customer will be provided a brand-new equivalent Product. In the case that an RMA is issued after the 90 DOA period, the defective product will be replaced with a refurbished "like new" equivalent product, if available.

Repair with Expired Warranty: Avocor offers repair services, at cost to the Customer based on time and materials, for products with expired warranty. Customer will be responsible for all shipment costs.

For more information, please email at service@avocor.com.