

# XO<sup>®</sup> WIDE SCREEN

## User Guide



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## 1 INTRODUCTION

This User Guide is valid for:

Part no.	Description
XO-610	XO Wide Screen incl. articulating balanced double arm and handles
XO-611	XO Wide Screen incl. a short arm
MIO601	XO Wide Screen incl. power supply for standalone or on XO MIO (delivered without stand)

XO Wide Screen is a 19" healthcare screen specifically designed and certified for use in health care. Thanks to its excellent image quality, lightweight design and easy-to-wipe protective housing XO Wide Screen is a perfect solution for use in the dental clinic. The screen can be integrated with XO 4 workstations or used standalone in an office environment.

## 2 REGULATORY INFORMATION

The product has been designed to meet the following medical safety requirements, including UL60601-1 1st Ed, 2006-04-26; CAN/CSA-C22.2 No. 601.1-M90, 2005; EN 60601-1:1990 + A1:1993 + A2:1995; IEC 60601-1:1988 + A1:1991 + A2:1995 2nd Ed. ANSI/AAMI ES 60601-1: 2005, CAN /CSA –C22.2 No. 60601-1: 2008; IEC 60601-1:2005 3rd Ed. from July 2012.

The product is engineered to meet the following Electromagnetic Compatibility Standards: EN 60601-1-2 (2007), IEC 60601-1-2 (2007), FCC CFR 47 PART 15 AND 18 and can be placed next to other sensitive equipment with no risk of harmful interference.

Certifications of monitor also cover requirements for liquid ingress according to IP33 / IPx6 (Front Panel only) protection degree.

### 3 WARNING & SAFETY INFORMATION



#### DANGER OF ELECTRIC SHOCK

DO NOT ATTEMPT TO OPEN OR DISASSEMBLE. NO USER SERVICABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



DO NOT USE IN OXYGEN RICH ENVIRONMENTS. THIS EQUIPMENT DOES NOT HAVE A GAS-SEALED ELECTRONICS ENCLOSURE AND COULD IGNITE ANY FLAMMABLE OR EXPLOSIVE GASES PRESENT IN ITS ENVIRONMENT.

TO PREVENT DAMAGE WHICH MAY RESULT IN FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR EXCESSIVE MOISTURE.

THE ENCLOSURE HAS TO BE CHECKED UPON COLLISION DAMAGE; REFER TO QUALIFIED SERVICE PERSONNEL.

TO AVOID RISK OF ELECTRIC SHOCK ANY EQUIPMENT CONNECTED TO THE SCREEN MUST BE SUFFICIENTLY ISOLATED FROM MAINS VOLTAGE (IEC 60601-1 APPROVED).



#### IMPORTANT SAFETY NOTICE REGARDING THE SINGLE AND DOUBLE SUSPENSION ARMS FOR XO 4

THE SUSPENSION ARMS ARE DESIGNED TO BE USED WITH XO SCREEN AND XO WIDE SCREEN ONLY. USING ANOTHER DISPLAY (OR OTHER EQUIPMENT) MAY INTRODUCE A MECHANICAL HAZARD IF THE MAXIMUM LOAD OF THE ARM IS EXCEEDED.

DO NOT USE OTHER CABLES THAN THOSE SUPPLIED BY XO WITH THE ARMS. THE CABLES SUPPLIED BY XO ARE SPECIFICALLY DESIGNED TO WITHSTAND THE WEAR CAUSED BY REPEATED BENDING.

DO NOT, UNDER ANY CIRCUMSTANCES, ROUTE A HIGH-VOLTAGE CABLE THROUGH THE ARM. IF THE OUTER INSULATION OF THE CABLE BREAKS THERE IS A RISK OF FATAL ELECTRIC SHOCK!

DO NOT OVERTIGHTEN THE FRICTION BREAK (DOUBLE SUSPENSION ARM ONLY). IF THE FRICTION BREAK IS OVERTIGHTNED THERE IS A RISK THAT THE BALANCING MECHANISM MAY FAIL RESULTING IN A MECHANICAL HAZARD.

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## 4 INSTALLATION

For detailed instructions on how to install the screen on an XO 4 workstation please see YB-958 XO Widescreen, Installation.

### 4.1 PHYSICAL INSTALLATION

Do not install or leave the monitor:

- In places subject to extreme temperatures, for example near a radiator, heating vent, or in direct sunlight. Subjecting the LCD monitor to extreme temperatures, could cause deformations of the casing or malfunctions.
- In places subject to mechanical vibration or shock.
- In places subject to inordinate amounts of dust, dirt, or sand, for example near an open window or an outdoor exit.
- Near any equipment that generates a strong magnetic field.
- If setting up temporarily in an outdoor environment, be sure to take adequate precautions against airborne dust and dirt.

Provide adequate ventilation to the monitor.

Any external connection with other peripherals must follow the requirements of clause 16 of IEC60601-1 3rd ed. and Table BBB.201 of IEC 60601-1-1 for the medical electrical systems.

### 4.2 CONNECTING THE DISPLAY TO THE PC

The screen can be connected to the graphics card of a PC using a HDMI, DisplayPort or VGA cable. When integrated into an XO 4 workstation the HDMI cable supplied with the screen arm should be used. When used standalone or with the MIO organizer the choice of cable is free.

If the graphics card does not contain a suitable port then it may be possible use an adaptor (not supplied with the screen).

If you wish to use the two USB ports on the screen then the USB Type B port of the screen must be connected to a free USB Type A port on the PC. When used with an XO 4 workstation the USB cable supplied with the screen arm should be used.

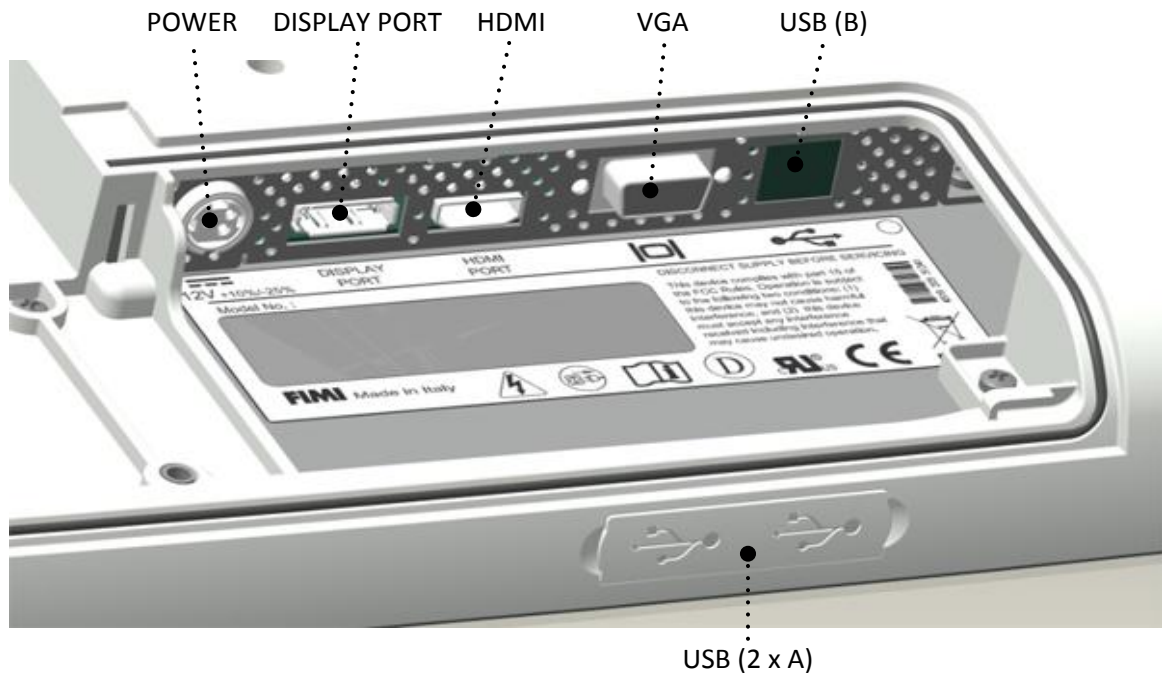


Figure 1: Overview of ports

## 4.3 SETTING THE SCREEN RESOLUTION

The optimal picture quality is achieved by using the native resolution of the screen (1366 x 768 pixels).

### 4.3.1 WINDOWS 7

- a. To set the resolution right click on the desktop and then click "Screen resolution" in the menu that appears.
- b. Select the screen in the list labeled "Display".
- c. Select the desired resolution in the list "Resolution".
- d. Click "OK" to save.

### 4.3.2 WINDOWS XP

- a. To set the resolution right click on the desktop and then click "Properties" in the menu that appears.
- b. Select "Settings".
- c. Select the desired resolution in the list "Resolution".
- d. Click "OK" to save.

The native resolution of 1366 x 786 may not be shown in the list. In this case it may still be possible to set the resolution by clicking the "Advanced settings" button and then the "List All Modes" button in the

window that appears. This will bring up a list of all the different modes supported by the graphics card. Locate the entry "1366 by 768, True Color (32 bit), 60 Hertz" or similar and click "OK" to force the resolution. If the list does not contain an entry with a resolution of 1366 x 768 then the graphics card most likely does not support the resolution.

## 5 CARE & CLEANING

Do not press on or scratch the LCD screen. Do not place a heavy object on the LCD screen. This may cause the screen to lose uniformity or cause LCD panel malfunctions.

Please note:

- If the monitor is used in a cold place, a residual image may appear in the screen. This is not a malfunction. The screen returns to normal as the temperature rises to a normal operating level.
- If a still picture is displayed for a long time, a residual image may appear for a while. The residual image will eventually disappear.

### 5.1 MAINTENANCE

Be sure to unplug the power cord from the mains when cleaning your LCD monitor.

Take care not to scratch the front surface with any hard or abrasive material. Dust, finger marks, grease etc. can be removed with a soft damp cloth (a small amount of mild detergent can be used on the damp cloth). Do not apply water or detergent directly to the front surface as this may cause staining or damage the electronic components. Never use any solvent on the front polarizer or module as this may cause permanent damage. Wipe off water drop immediately. Long contact with water may cause discoloration spots. When the panel surface is soiled, wipe it with absorbent cotton or other soft cloth.

### 5.2 SERVICE

The screen contains no user serviceable parts. Attempting to open or disassemble the monitor may expose the user to hazardous voltages, risk of excessive temperatures, fire or explosion from enclosed energy sources, or impairment of function.

This product is intended to be installed in a medical system only by trained system integrator. In the medical systems where the success of a clinical intervention depend from the image displayed by the screen, an adequate backup solution has to be provided at medical system level.

This monitor can be repaired only by trained service personnel (contact your local dealer to get assistance).

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## 5.3 CLEANING

Be sure to unplug the power cord from the mains when cleaning your LCD monitor. The monitor is not intended to be sterilized.

### Front panel

- Take care not to scratch the front surface with any hard or abrasive material. Dust, finger marks, grease etc. can be removed with a soft damp cloth (a small amount of mild detergent can be used on the damp cloth). Do not apply water or detergent directly to the front surface as this may cause staining or damage the electronic components. Never use any solvent on the front polarizer or module as this may cause permanent damage.
- Wipe with a soft cotton cloth.
- Wipe off water drop immediately. Long contact with water may cause discoloration spots. When the panel surface is soiled, wipe it with absorbent cotton or other soft cloth.

### Possible cleaning solutions:

- 70 percent isopropyl alcohol
- 1.6 percent aqueous ammonia
- Cidex® (2.4 percent glutaraldehyde solution)
- Sodium hypochlorite (bleach) 10 percent
- "Green soap" (USP)
- 0.5 percent Chlorhexidine in 70 percent isopropyl alcohol.
- Like Cleansafe® optical cleaning liquid

### Cabinet

- Clean the cabinet using a soft cotton cloth, lightly moistened with a recognized cleaning product for medical equipment
- Repeat with water only
- Wipe with a soft cotton cloth

IT MAY BE POSSIBLE THAT DUST PARTICLES HAVE ENTERED THE DISPLAY AND ARE STUCK BEHIND THE FRONT PANEL. DO NOT ATTEMPT TO DISSEMBLE THE DISPLAY YOURSELF! THIS KIND OF CLEANING MUST BE DONE AT A SERVICE CENTER.  
PLEASE CONTACT YOUR AUTHORIZED XO DEALER.

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## 6 TRANSPORTATION

Suitable mechanical support has to be provided in the final installation. If you drop the monitor, you may be injured or the monitor may be damaged.

During transportation of the monitor for repair or shipment, use the original cardboard box and packing materials.

Be sure that the monitor is stable and safe during transport.

The enclosure has to be checked upon collision damage; refer to qualified service personnel.

To prevent damage which may result in fire or shock hazard, do not expose this appliance to rain or excessive moisture.

## 7 DISPOSAL

During the design of MSMD 1119 LCD monitor, special attention has been placed to the environmental impact of the product: packaging, product's weight and energy consumption have been optimized. Then, please consider the following notes in the disposal of the product. The monitor's packaging is re-usable, please retain the packaging for future use. Do not dispose of this monitor with general household waste!

DISPOSE OF IT AS REQUIRED BY LOCAL ORDINANCES OR REGULATIONS.

Directive 2002/96/EC on waste of electrical and electronic equipment (WEEE).

### *Product disposal information*

#### *For countries in the European Union*

This product (including the cables, plugs and accessory) must not be disposed of with the other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, or your supplier's office.

#### *For countries outside the European Union*

Disposal of electrical products in countries outside the European Union should be done in line with local regulations.

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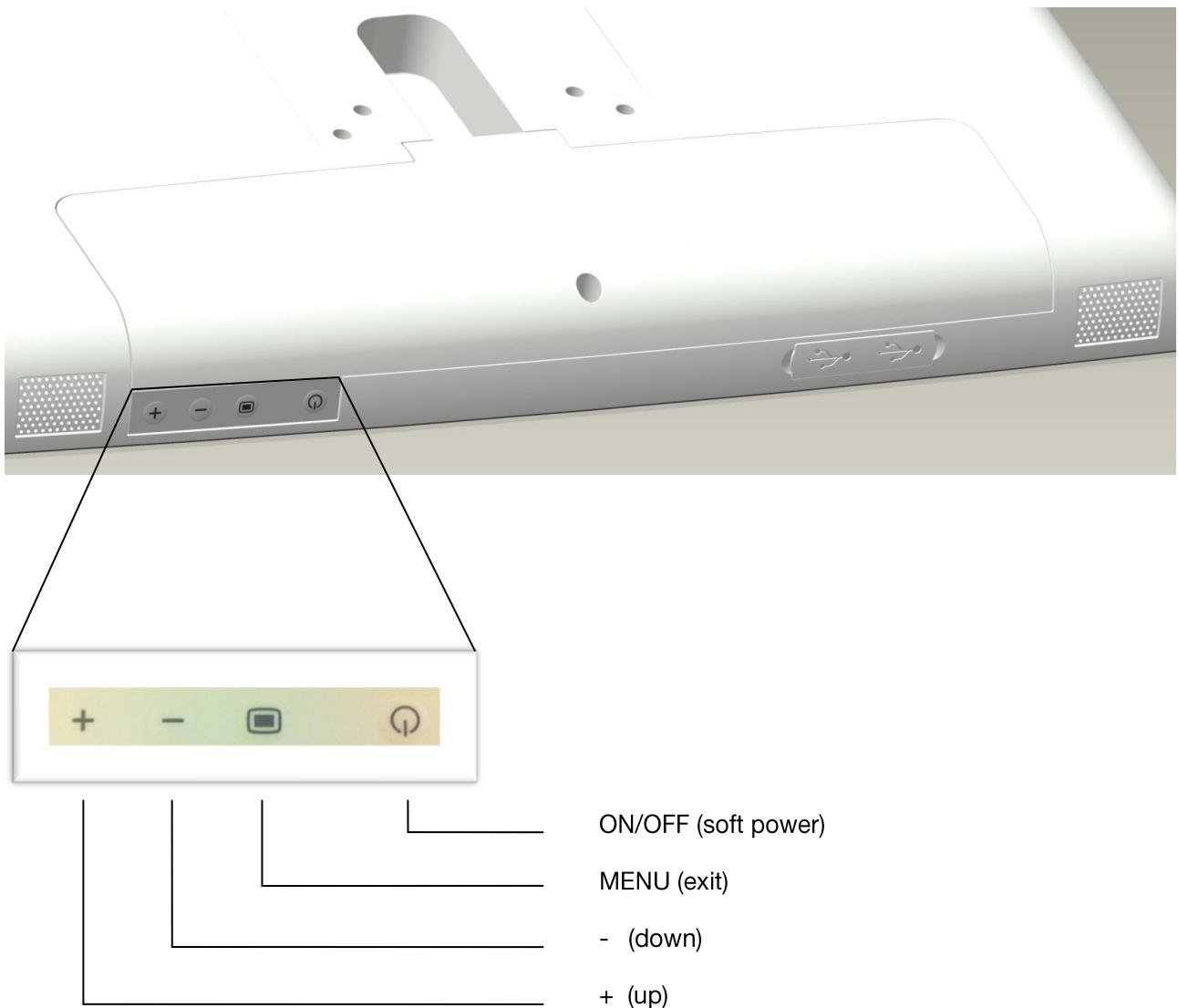
This product consists of devices that may contain mercury, which must be recycled or disposed of in accordance with local, state, or federal laws. Within this system, the backlight lamps in the monitor display contain mercury.

**Directive 2002/95/EC on the restriction of certain hazardous substances in electrical and electronic equipment (RoHS).**

According to what declared by our components supplier, this product is RoHS compliant.

## 8 CONTROL PANEL DESCRIPTION

On the bottom side of the screen the following controls are placed:



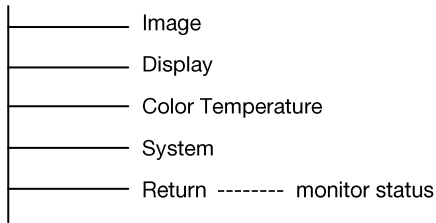
- The **ON/OFF** button switches the display on/off after 3 sec. pressure. With a short press it switches between the input signals HDMI/DP/VGA.
- The **MENU** button is used to enter the main On-Screen Display (OSD) menu and to make the selection of the item inside the menu.  
When pressed for more than 3 sec. it locks the keyboard.
- The Adjust + and Adjust – buttons can be used either to adjust the brightness of the display when using them outside the OSD menu or to select and adjust individual parameters within the OSD menu.

The keyboard can be locked and unlocked by pressing the Menu key for more than 3 sec.

## 8.1 MAIN OSD MENU

Press the Menu key to display the main menu.

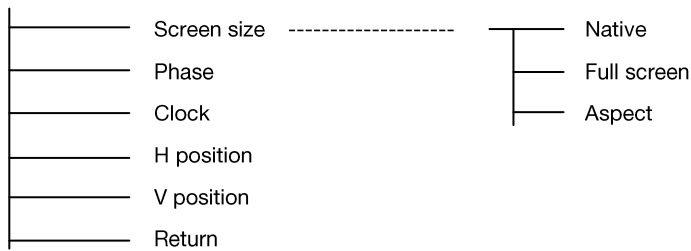
### Menu



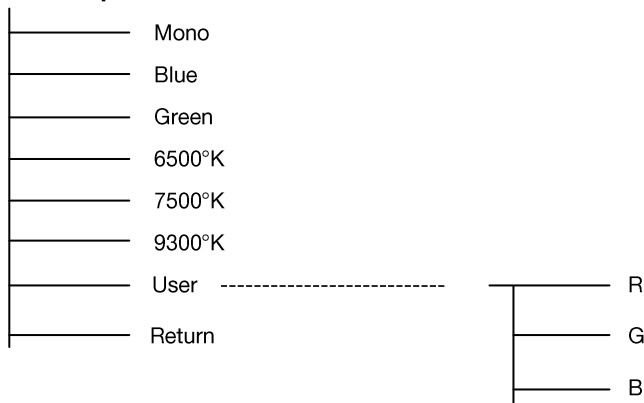
### Image

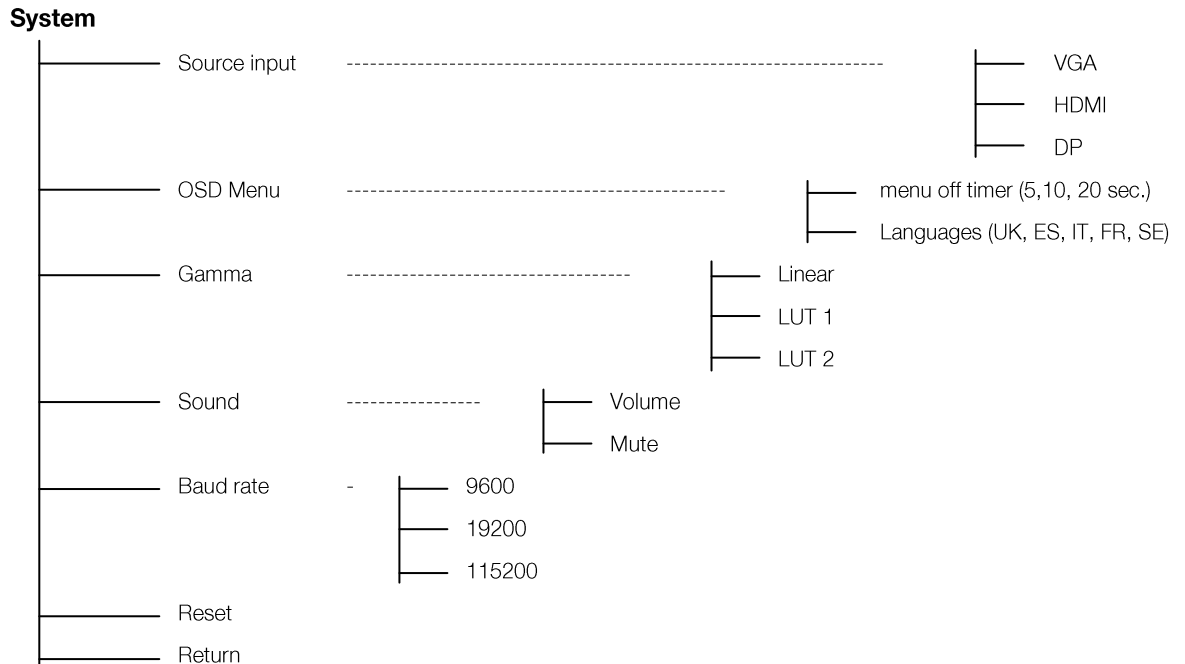


### Display



### Color Temperature





Move inside Menu with + and – keys and select the submenu by pressing the Menu key when the required submenu is selected.

## 8.2 SUBMENU

When entered in one of the submenus, move inside the submenu with + and – keys and select the parameter by pressing the Menu key when the required parameter is selected.

When the parameter is selected, it is possible to change the value of the parameter by pressing the + and – Keys.

Once reached the wished value press again the Menu Key and return in the submenu where it is possible to select another parameter and so continue to adjust the parameters values or to return to the main menu by selecting Return and pressing the Menu key.

## 9 SOUND

Monitor is equipped with two speakers that receive the audio signal through the USB connection. When USB is connected the operating system will search for and automatically install the audio USB driver. If this doesn't happen the user has to install an audio USB driver manually.

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## 10 TECHNICAL SPECIFICATIONS

### DISPLAY CHARACTERISTICS

Screen type	LCD TFT panel
Screen size	18.5" / 469.9 mm diagonal
Backlight	LED backlight
Brightness	Typical 200 cd/m <sup>2</sup>
Contrast	Typical 1.000 : 1
Color	16,7 million colors
Viewing angle (CR > 10)	170° horizontal, 160° vertical

### SUPPORTED RESOLUTIONS

4:3 aspect ratio	16:9 aspect ratio
640 x 480	1280 x 720
800 x 600	1366 x 768 (native)
1024 x 768	1600 x 900
1280 x 1024	1920 x 1080
1400 x 1050	
1600 x 1200	

### POWER

DC input	12 V (+1,2V/-3V)
AC adaptor	Required for standalone
Typ. power consumption	24 W
Power save mode	2 W

### OPERATING ENVIRONMENT

Temperature:	10° C to 40° C (max)
Humidity:	20 % to 80 % (no condensation)

### PROTECTION

Shatterproof heavy duty casing with rounded edges for extra safety  
 Shatterproof front PMMA cover to protect the LCD panel  
 IP33 ingress protection rating for the entire screen  
 IP66 ingress protection rating for the front panel

## VIDEO CONNECTION

VGA  
Display Port  
HDMI

## MOUNTING

- Industry standard VESA 75 mm and 100 mm mounting (standalone)
- XO 4 mounting with double arm
- XO 4 mounting with single arm
- MIO mounting with wall mount

## EXTRA FEATURES

- Stereo speakers (power and audio via USB)
- USB 2.0 built-in hub (2 user ports)

## RECOMMENDATIONS

- Video card capable of outputting a 1366 x 768 resolution for a generic (non-plug and play) VGA monitor.
- Use high quality VGA cable for connecting XO 4 VGA outlet to video card.

## 11 IDENTIFICATION LABEL

Rating label position and content.







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