IEI Technology Corp.


# Model:
# iSignager LCD Series

**15” / 17” / 19” iSignager LCD with Wireless Module, IP 64 Compliant Front Panel, Video Input, Audio Input/Output, DVI-I, LAN, USB 2.0 and OSD**

# User Manual
## (Hardware)

Rev. 1.00, April 2008

RoHS Lead Free

# Revision

| Date | Version | Changes |
|---|---|---|
| 2008-04 | 1.00 | Initial Release |

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**WARNING!**

Warnings appear where overlooked details may cause damage to the equipment or result in personal injury. Warnings should be taken seriously. Warnings are easy to recognize. The word “warning” is written as “**WARNING**,” both capitalized and bold and is followed by text. The text is the warning message. A warning message is shown below:

**WARNING:**

This is an example of a warning message. Failure to adhere to warning messages may result in permanent damage to the iSignager LCD Series or personal injury to the user. Please take warning messages seriously.

**CAUTION!**

Cautionary messages should also be heeded to help reduce the chance of losing data or damaging the iSignager LCD Series. Cautions are easy to recognize. The word “caution” is written as “**CAUTION**,” both capitalized and bold and is followed. The italicized text is the cautionary message. A caution message is shown below:

**CAUTION:**

This is an example of a caution message. Failure to adhere to cautions messages may result in permanent damage to the iSignager LCD Series. Please take caution messages seriously.

**NOTE:**

These messages inform the reader of essential but non-critical information. These messages should be read carefully as any directions or instructions contained therein can help avoid making mistakes. Notes are easy to recognize. The word “note” is written as “**NOTE**,” both capitalized and bold and is followed by text. The text is the cautionary message. A note message is shown below:

**NOTE:**

This is an example of a note message. Notes should always be read. Notes contain critical information about the iSignager LCD Series. Please take note messages seriously.

# Packing List

**NOTE:**

If any of the components listed in the checklist below are missing, please do not proceed with the installation. Contact the IEI reseller or vendor you purchased the iSignager LCD Series from or contact an IEI sales representative directly. To contact an IEI sales representative, please send an email to sales@iei-ndsp.com.

The items listed below should all be included in the iSignager LCD Series package.

- 1 x iSignager LCD Series
- 1 x AC power adaptor
- 1 x Power cord
- 1 x 1GB demo CompactFlash® card
- 1 x OSD remote control
- 1 x Screw set
- 1 x DVI-I to VGA adapter
- 1 x RCA video cable
- 1 x Audio cable
- 1 x iSignager AdDesign software companion CD

Images of the above items are shown in **Section 1.10**.

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Chapter

1

# Introduction

## 1.1 Important Notice

**NOTE:**

This iSignager LCD Series user manual only contains the hardware information. For the detailed information of the iSignager AdDesign software that came with the iSignager LCD Series, please refer to the iSignager AdDesign user manual.

## 1.2 iSignager LCD Series Overview

The iSignager LCD Series is a multimedia display device developed by IEI to display dynamic, visual and audio contents for a target audience. The flat front panel of iSignager LCD Series provides IP 64 protection, which effectively wards off dust and water. The iSignager LCD Series comes with an application software, the iSignager AdDesign, to help users to design, schedule and transfer dynamic contents for iSignager LCD Series to display. The built-in wireless connection enables the display sources to be updated anytime anywhere. With the iSignager LCD Series, an advertising station is easily established and promotes the product and services in the simplest way.

## 1.3 iSignager LCD Series Model Variations

Three IEI iSignager LCD Series models are available. The models are listed in **Table 1-1**.

| Model | LCD | Brightness | Speakers | Wireless | OSD |
|---|---|---|---|---|---|
| iSignager LCD-15 | 15” | 350cd/m$^2$ | Two 1.5W | Built-in | Yes |
| iSignager LCD-17 | 17” | 300 cd/m$^2$ | Two 2W | Built-in | Yes |
| iSignager LCD-19 | 19” | 300 cd/m$^2$ | Two 3W | Built-in | Yes |

**Table 1-1: iSignager LCD Series Model Variations**

## 1.4 Features

Some of the iSignager LCD Series features are listed below.

- 15”/17”/19” TFT LCD
- Fully functional OSD remote control
- Built-in speakers
- Support wall/stand/arm mounting
- Integrated auto-dimming control sensor
- Built-in 802.11b/g wireless module and PIFA antenna
- Multi-zone layout supports full spectrum of media formats
- Flexible schedule management showing customized contents
- Real time A/V input to display video from DVD player, NTSC/ PAL TV signal, Digital Video Box, Cable TV within on large screen
- High-resolution displays, HDTV, to produce the best advertising results
- Contents can be stored in CompactFlash® disk, USB 2.0 flash drive or IDE/ USB hard disk drive
- Uploading content from remote to the iSignager LCD Series through Network management function
- IP 64 compliant front panel
- RoHS compliant

## 1.5 System Overview

### 1.5.1 Front View

The front of the iSignager LCD Series is a flat panel TFT LCD screen surrounded by an ABS/PC plastic frame. The iSignager LCD Series also includes two sensors and one LED on the front panel:

- **Ambient Light Sensor**
  The ambient light sensor detects the brightness of the ambient environment when the auto-dimming function is turned on.
- **Infrared Sensor**
  This sensor receives the signal from the remote control.

- **Power LED** lights up turned on in green when the LCD monitor is on.

**Figure 1-1** shows the front view of iSignager LCD-19.

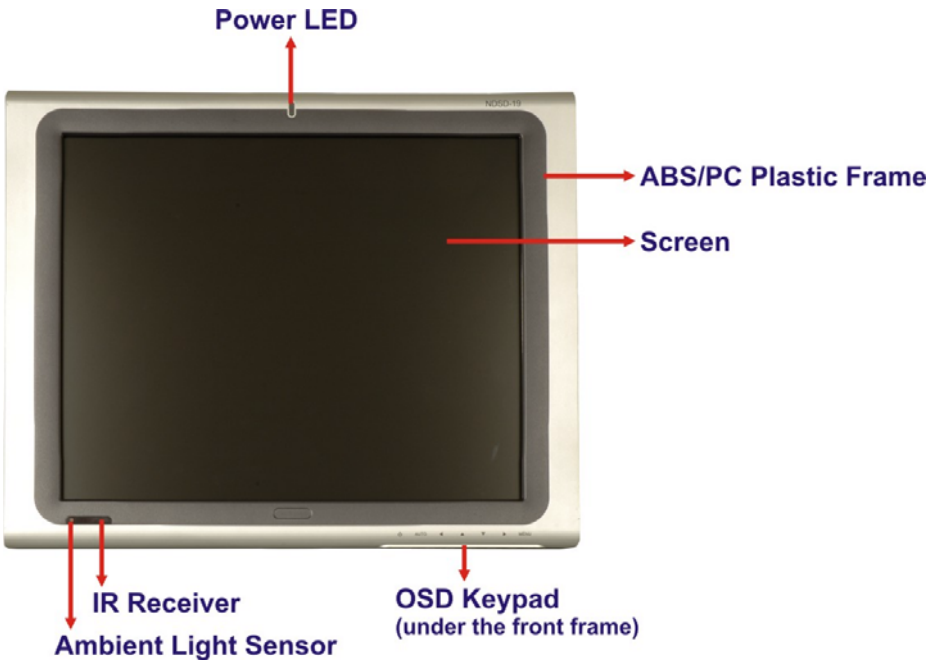


**Figure 1-1: iSignager LCD Series Front View**

A control button panel (OSD) with the following control buttons is located horizontally on the bottom of the front frame of iSignager LCD-15/17/19:

- LCD On/Off
- Auto
- Left
- Up
- Down
- Right
- Menu

Refer to **Chapter 3** for the detailed descriptions of each OSD function.

### 1.5.2 Bottom Panel

All peripheral device connectors are located on the bottom panel of the iSignager LCD Series. The following is a list of the bottom panel peripheral device connectors used on the iSignager LCD Series.

- Power switch
- 12V power connector
- RS-232 serial connector
- RJ-45 Ethernet connector
- USB connector
- Audio jacks (audio in, audio out)
- Composite BNC connector
- DVI-I connector
- CompactFlash® slot

**Figure 1-2** shows the bottom panel of the iSignager LCD-19 digital signage display.

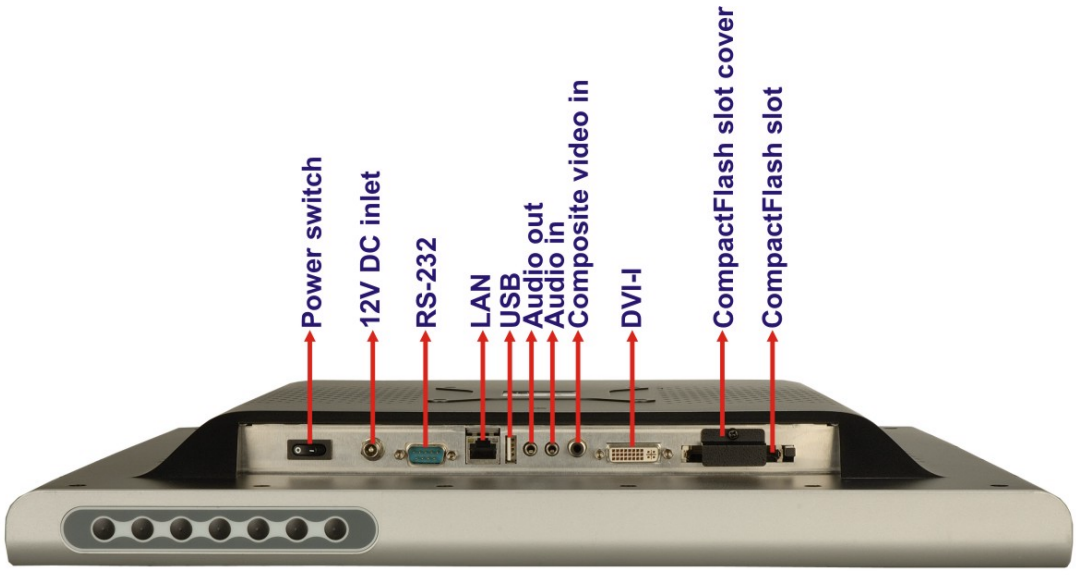


**Figure 1-2: iSignager LCD Series Bottom Panel View**

### 1.5.3 Rear View

The rear panel features fan ventilation holes and four retention screw holes that support a VESA FDMI (MIS-D 100) wall-mounting bracket, a stand or an arm. **Figure 1-3** shows the retention screw holes of the iSignager LCD-15.

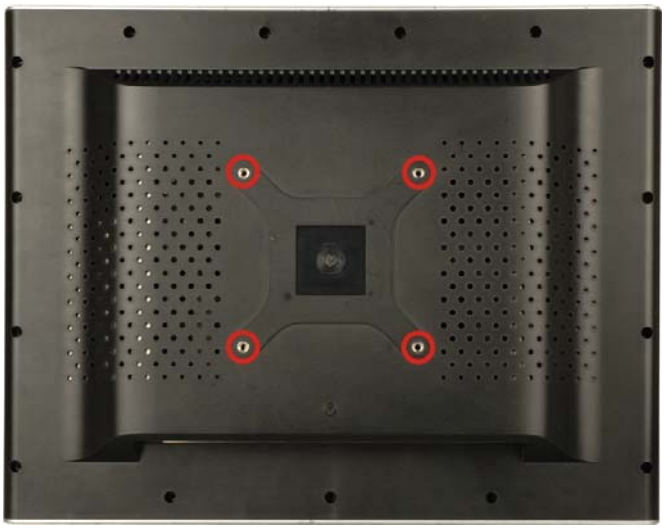

**Figure 1-3: iSignager LCD-15 Rear View**

## 1.6 Physical Dimensions

The following sections describe the physical dimensions for the iSignager LCD Series.

### 1.6.1 General Physical Dimensions

General physical dimensions for the iSignager LCD Series are shown in **Table 1-2**.

| Model | Width (mm) | Height (mm) | Depth (mm) |
|---|---|---|---|
| iSignager LCD-15 | 393.04 | 308.06 | 61.00 |
| iSignager LCD-17 | 428.00 | 350.00 | 65.00 |
| iSignager LCD-19 | 469.94 | 382.46 | 66.85 |

**Table 1-2: General Physical Dimensions**

### 1.6.2 iSignager LCD-15 Physical Dimensions

The physical dimensions of the iSignager LCD-15 are shown in **Figure 1-4**.

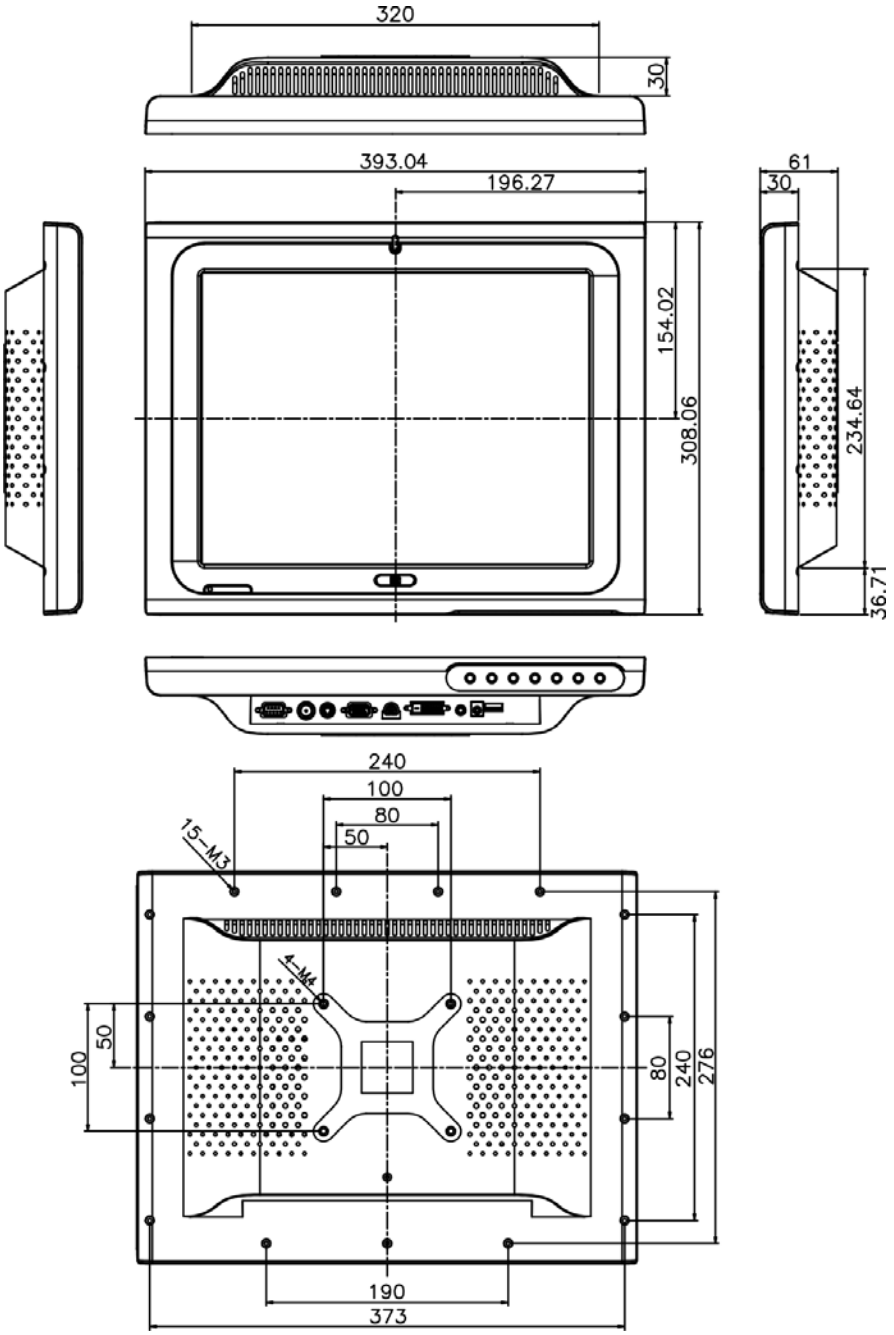


**Figure 1-4: iSignager LCD-15 Physical Dimensions (millimeters)**

### 1.6.3 iSignager LCD-17 Physical Dimensions

The physical dimensions of the iSignager LCD-17 are shown in **Figure 1-5**.

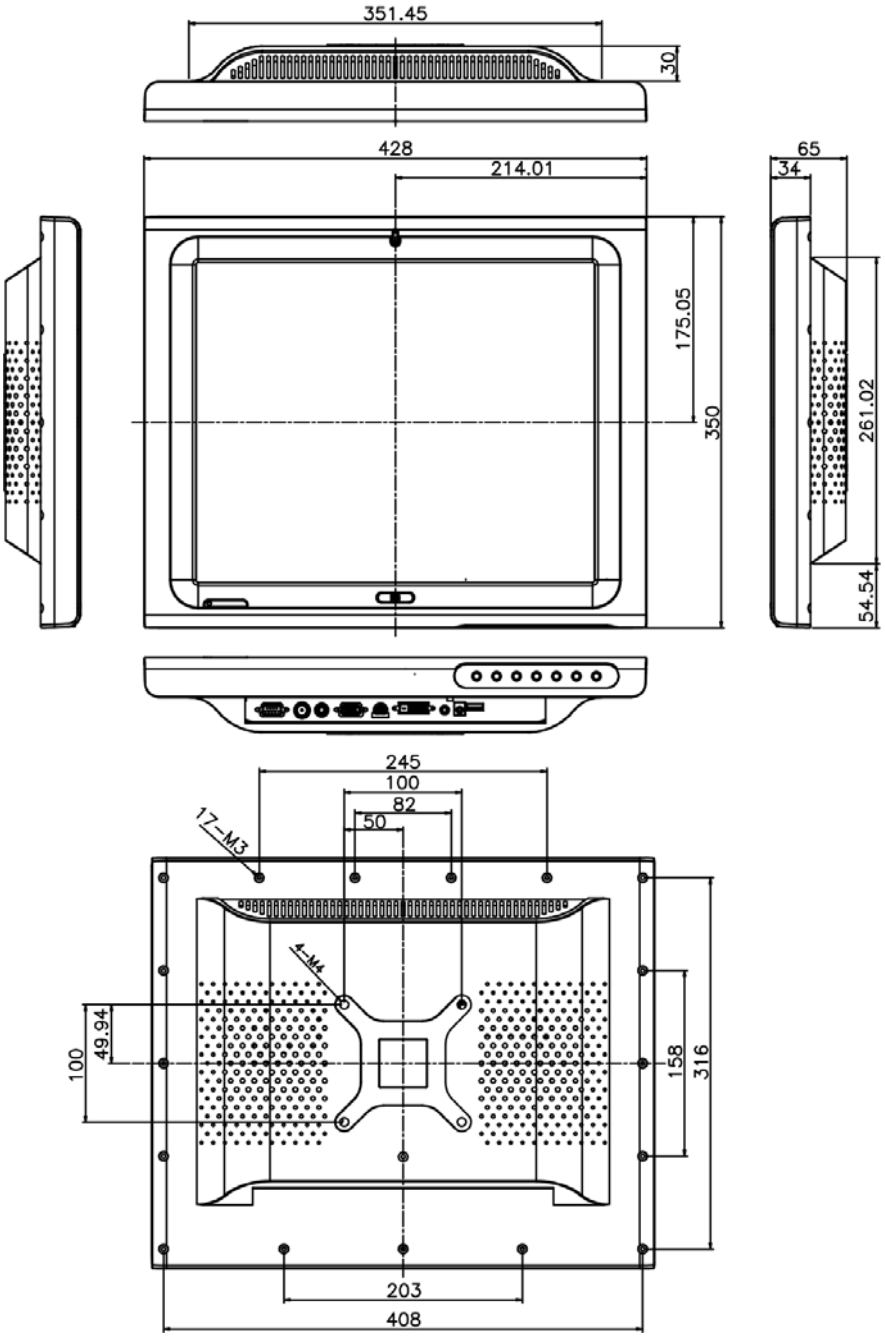


**Figure 1-5: iSignager LCD-17 Physical Dimensions (millimeters)**

### 1.6.4 iSignager LCD-19 Physical Dimensions

The physical dimensions of the iSignager LCD-19 are shown in **Figure 1-6**.

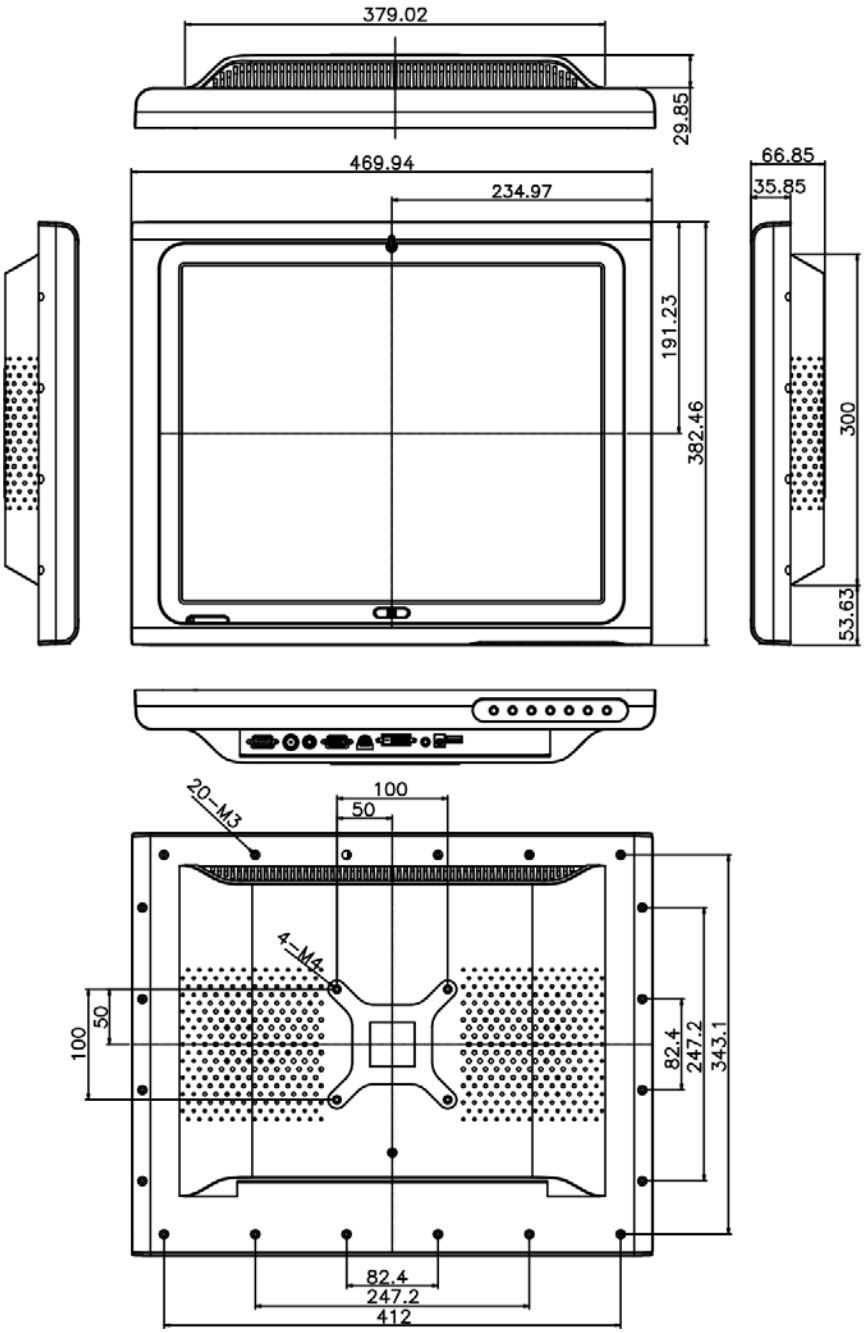


**Figure 1-6: iSignager LCD-19 Physical Dimensions (millimeters)**

## 1.7 iSignager LCD Series Specifications

**Table 1-3** shows the iSignager LCD Series specifications.

| Model | iSignager LCD-15 | iSignager LCD-17 | iSignager LCD-19 |
|---|---|---|---|
| LCD Size | 15" | 17" | 19" |
| Max. Resolution | 1024x768 | 1280x1024 | 1280x1024 |
| Brightness (cd/m2) | 350 | 300 | 300 |
| Contrast | 400:1 | 800:1 | 800:1 |
| LCD Color | 262K | 16.7M | 16.7M |
| Pixel Pitch (mm) | 0.297 | 0.264 | 0.294 |
| View Angle (H / V) | 120/100 | 160/160 | 160/160 |
| Backlight MTBF (Hrs) | 50000 | 50000 | 50000 |
| Front Frame | ABS/PC | ABS/PC | ABS/PC |
| Secondary Display | 1 x DVI-I (DVI/VGA) | 1 x DVI-I (DVI/VGA) | 1 x DVI-I (DVI/VGA) |
| Video In | 1 x Composite BNC connector | | |
| Audio In | 1 x Audio jack | 1 x Audio jack | 1 x Audio jack |
| Audio Out | 2 x AMP 1.5W speakers<br>1 x Audio jack | 2 x AMP 2W speakers<br>1 x Audio jack | 2 x AMP 3W speakers<br>1 x Audio jack |
| USB | 1 x USB 2.0 port | 1 x USB 2.0 port | 1 x USB 2.0 port |
| Serial Port | 1 x RS-232 | 1 x RS-232 | 1 x RS-232 |
| Ethernet | 1 x 10/100BASE-T | 1 x 10/100BASE-T | 1 x 10/100BASE-T |
| 802.11b/g Wireless | Built-in | Built-in | Built-in |
| Storage | 1 x CF Type II<br>1 x 2.5” HDD (internal) | 1 x CF Type II<br>1 x 2.5” HDD (internal) | 1 x CF Type II<br>1 x 2.5” HDD (internal) |
| Power Adapter | 60W | 60W | 60W |
| Power Consumption | 27W | 41W | 42W |
| Mounting | Wall<br>Stand<br>Arm | Wall<br>Stand<br>Arm | Wall<br>Stand<br>Arm |
| OSD function | Yes (7-Keypad) | Yes (7-Keypad) | Yes (7-Keypad) |
| IR Sensor/Remote Control | Yes | Yes | Yes |
| Ambient Light Sensor | Yes | Yes | Yes |
| Dimension (WxHxD) (mm) | 393.06 x 308.06 x 61 | 428 x 350 x 65 | 469.94 x 382.46 x 67 |

| | | | |
|---|---|---|---|
| **Operation Temperature** | 0°C ~50°C | 0°C ~50°C | 0°C ~50°C |
| **IP Level** | IP 64 | IP 64 | IP 64 |
| **N/G Weight** | 3.2 kg | 3.8 kg | 4.4 kg |

**Table 1-3: iSignager LCD Series Specifications**

# 1.8 LCD Specifications

## 1.8.1 LCD Overview

The iSignager LCD Series uses the following LCD panels.

- **iSignager LCD-15**: AUO G150XG01 15" XGA TFT LCD
- **iSignager LCD-17**: AUO M170EG01 17" SXGA TFT LCD
- **iSignager LCD-19**: AUO M190EG02 19" SXGA TFT LCD

Detailed specifications for the LCD screens are listed in the following sections.

## 1.8.2 iSignager LCD-15 LCD Specifications

**Table 1-4** lists the LCD specifications of the iSignager LCD-15.

| Model | **iSignager LCD-15** |
|---|---|
| **Size** | 15" |
| **MFR/Model** | AUO/G150XG01 |
| **Resolution** | XGA (1024 x 768) |
| **Active Area (mm)** | 304.1 x 228.1 |
| **Pixel Pitch (mm)** | 0.297 |
| **Number of Colors** | 262K |
| **View Angle (H/V)** | 130/120 |
| **Brightness (cd/m2)** | 350 |
| **Contrast Ratio** | 400:1 |
| **Response Time (ms) (at 25C)** | 16 (Tr+Tf) |
| **Power Consumption (W)** | 11.5 |
| **Interface** | LVDS |

| | |
|---|---|
| **Supply Voltage (V)** | 3.3 |
| **Backlight** | 2 CCFL |
| **Lamp Life (hrs)** | 50000 |
| **Operating Temperature** | 0℃~+50℃ |
| **Operating Humidity** | 20%~85%RH |
| **Storage Temperature** | -20℃~+60℃ |
| **Storage Humidity** | 5%~95%RH |
| **Shock (Non-Operating)** | 50G, 20ms, Half-sine wave |
| **Vibration (Non-Operating)** | 1.5G, 10~200Hz,<br>Sine wave 30mins/axis, 3 direction |

**Table 1-4: iSignager LCD-15 LCD Specifications**

### 1.8.3 iSignager LCD-17 LCD Specifications

**Table 1-5** lists the LCD specifications of the iSignager LCD-17.

| Model | **iSignager LCD-17** |
|---|---|
| **Size** | 17” |
| **MFR/Model** | AUO/M170EG01 |
| **Resolution** | SXGA (1280 x 1024) |
| **Active Area (mm)** | 337.9 x 270.3 |
| **Pixel Pitch (mm)** | 0.264 |
| **Number of Colors** | 16.7M |
| **View Angle (H/V)** | 160/160 |
| **Brightness (cd/m2)** | 300 |
| **Contrast Ratio** | 800:1 |
| **Response Time (ms) (at 25C)** | 5 (Tr+Tf) |
| **Power Consumption (W)** | 25.8 |
| **Interface** | 2ch LVDS |
| **Supply Voltage (V)** | 5 |
| **Backlight** | 4 CCFL |
| **Lamp Life (hrs)** | 50,000 |
| **Operating Temperature** | 0℃~+50℃ |

| | |
|---|---|
| **Operating Humidity** | 5%~90%RH |
| **Storage Temperature** | -20℃~+60℃ |
| **Storage Humidity** | 5%~90%RH |
| **Shock (Non-Operating)** | 50G, 20ms, Half-sine wave |
| **Vibration (Non-Operating)** | 1.5G, 10~200~10Hz,<br>Sine wave 30mins/axis, 3 direction |

**Table 1-5: iSignager LCD-17 LCD Specifications**

### 1.8.4 iSignager LCD-19 LCD Specifications

**Table 1-6** lists the LCD specifications of the iSignager LCD-19.

| Model | **iSignager LCD-19** |
|---|---|
| **Size** | 19” |
| **MFR/Model** | AUO/M190EG02 |
| **Resolution** | SXGA (1280 x 1024) |
| **Active Area (mm)** | 376.32 x 301.06 |
| **Pixel Pitch (mm)** | 0.294 |
| **Number of Colors** | 16.7M |
| **View Angle (H/V)** | 160 / 160 |
| **Brightness (cd/m2)** | 300 |
| **Contrast Ratio** | 800:1 |
| **Response Time (ms) (at 25C)** | 5 (Tr+Tf) |
| **Power Consumption (W)** | 24.71 |
| **Interface** | 2ch LVDS |
| **Supply Voltage (V)** | 5 |
| **Backlight** | 2 CCFL |
| **Lamp Life (hrs)** | 50,000 |
| **Operating Temperature** | 0℃~+50℃ |
| **Operating Humidity** | 5%~90%RH |
| **Storage Temperature** | -20℃~+60℃ |

| | |
|---|---|
| **Storage Humidity** | 5%~90%RH |
| **Shock (Non-Operating)** | 50G, 20ms, Half-sine wave |
| **Vibration (Non-Operating)** | 1.5G, 10~200~10Hz,<br>Sine wave 30mins/axis, 3 direction |

**Table 1-6: iSignager LCD-19 LCD Specifications**

## 1.9 Power Adapters

All iSignager LCD Series comes with a 60W AC/DC adapter. **Table 1-7** lists the AC/DC power adapter specifications.

| | |
|---|---|
| **Power** | 60 Watt AC/DC Adapter |
| **Output Voltage** | 12V |
| **Input Voltage Range** | 90-264VAC |
| **Input Frequency** | 47-63 Hz |
| **Inrush Current** | 220V@100A |
| **Hold-up Time** | 8mS |
| **Leakage Current** | 0.75mA max. (at 240Vac 60Hz) |
| **Short Circuit Protection** | Continuous |
| **Over-voltage Protection** | Yes |
| **MTBF** | 60000hrs |
| **Efficiency** | 80% |
| **Operating Temperature** | 0°C ~40°C |
| **Storage Temperature** | -20°C ~65°C |

**Table 1-7: Power Adapter Specifications**

## 1.10 Packing List

The iSignager LCD Series is shipped with the following components. Should there be any missing parts or defects in the package, please contact IEI immediately.

| Quantity | Item | Image |
|---|---|---|
| 1 | iSignager LCD Series |  |
| 1 | AC power adaptor |  |
| 1 | Power cord |  |
| 1 | 1GB demo CompactFlash® card |  |
| 1 | OSD remote control |  |
| 1 | Screw set |  |
| 1 | DVI-I to VGA adapter |  |
| 1 | RCA video cable |  |
| 1 | Audio cable |  |

| | | |
|---|---|---|
| 1 | iSignager AdDesign software companion CD |  |

## 1.11 Before Start

### 1.11.1 Choose Mass Storage Device - CF Card or HDD

Before using the iSignager LCD Series, choose either a CF card or a HDD as the mass storage device for the iSignager LCD Series. Device settings and display content are saved in the mass storage device. The mass storage device (CF card or HDD) has to be formatted as **FAT 32** format for initial use.

### 1.11.2 The Concept of the iSignager AdDesign

The iSignager AdDesign is the software the user can use to design display contents for the iSignager LCD Series. Two essential components of the display content are the layout and the sequence. The following descriptions help the user to understand the concepts of the iSignager AdDesign. For more information please refer to iSignager AdDesign user manual.

**Layout**

To design a layout is to arrange what and where the content is displayed. A layout can contain several display items, including:

- Pictures
- Crawling banners
- Rolling banners
- A video
- A digital clock

Multiple files can be added into each display item.

### Sequence

A sequence decides the broadcast sequence and the broadcast time of the created layout. After creating a layout, the layout must be added into a sequence. A sequence can include several layouts.

### Export Layout/Sequence

To copy the individual layout or sequence to another directory or computer, please use the "Export Layout/Sequence" function to export the file.

## 1.12 Supported Formats

The iSignager LCD Series supports many kinds of video, audio and graphic formats. The supported formats are listed in **Table 1-8**. Detailed descriptions of each format can be found in **Appendix B**.

**NOTE:**

The video in .mpe format can be run by iSignager LCD Series, but the video length information will not be available.

| iSignager LCD Series Supported Formats | |
|---|---|
| Video | MPEG-1 VCD format (1.15 Mbps CBR) [.mpg, .mpe, .mpeg, .dat, .m1v]<br>SD and HD MPEG-2 up to 15 Mbps [.mpg, .mpe, .mpeg, .m2v, .vob, .vro]<br>SD and HD MPEG-4 (OpenDivX, XviD, RMP4) [.avi, .divx, .mp4]<br>AVI audio codec: MP3, AC3, PCM, WMA |

| | |
|---|---|
| Audio | MPEG-1 Layer 1 (MP1) [.mp1, .mpa]<br>MPEG-1 Layer 2 (MP2) [.mp2]<br>MPEG-1 Layer 3 (MP3) [.mp3]<br>Microsoft® PCM Wave (WAV) [.wav]<br>Advanced Audio Coding (AAC, ADIF, ADTS) [.aac]<br>Apple MPEG-4 AAC Audio (M4A) [.m4a]<br>Microsoft® Windows® Media Audio version 1 and version 2 (WMA) [.wma, .asf]<br>Microsoft® Windows® Media Audio Professional (WMA Pro) [.asf] |
| Graphic | 16/24/32-bit color BMP, GIF, PNG, JPEG |

**Table 1-8: iSignager LCD Series Supported Formats**

Chapter

2

# Installation

## 2.1 Hardware Installation

### 2.1.1 iSignager LCD Series Set-Up

To set up the iSignager LCD Series (the player), follow the steps below:

**Step 1:** Connect audio and video input to the player (if available).

**Step 2:** To transfer player settings or sequences to the player via the network, connect the iSignager LCD Series to the same LAN of the PC via an Ethernet cable (optional step).

**Step 3:** Connect the player to the power supply.

**NOTE:**

After the hardware installation, a formatted CF card/HDD with display content and player settings generated by iSignager AdDesign has to be installed in the iSignager LCD Series for broadcasting.

### 2.1.2 HDD Installation (Optional)

A hard drive disk (HDD) can be used as the storage device on the iSignager LCD Series instead of the CF card. The HDD provides larger data storage capacity. Before installing the HDD, please install the iSignager AdDesign first and design the layout and sequence with the iSignager AdDesign (see iSignager AdDesign user manual). After designing the display content in the iSignager AdDesign, follow the steps below to install IDE HDD.

**Step 1:** **Format the HDD as FAT 32 format.** Connect the HDD to a computer with an IDE-USB cable and format the HDD.


**Figure 2-1: Format the HDD via IDE-USB Cable**

**Step 2:** **Generate a playable disk to the HDD.** Follow the steps described in **Generate Playable Disk Section** of the iSignager Design user manual to copy the player settings and the sequence to the HDD. Disconnect the HDD from the computer.

**Step 3:** **Remove the plastic back cover of the iSignager LCD Series.** The plastic back cover is secured to the chassis with few retention screws. Remove the retention screws and lift the back cover off the iSignager LCD Series.

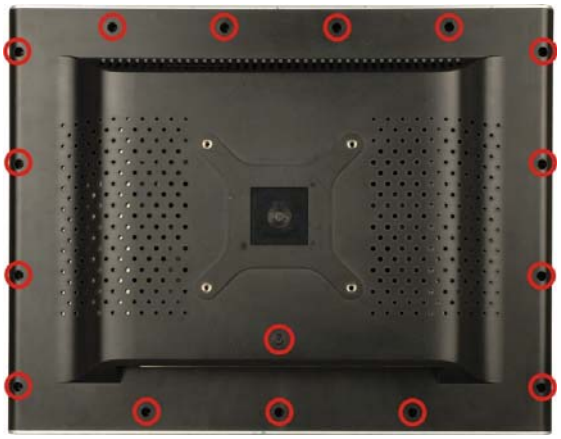

**Figure 2-2: iSignager LCD-15 Back Cover Retention Screws**

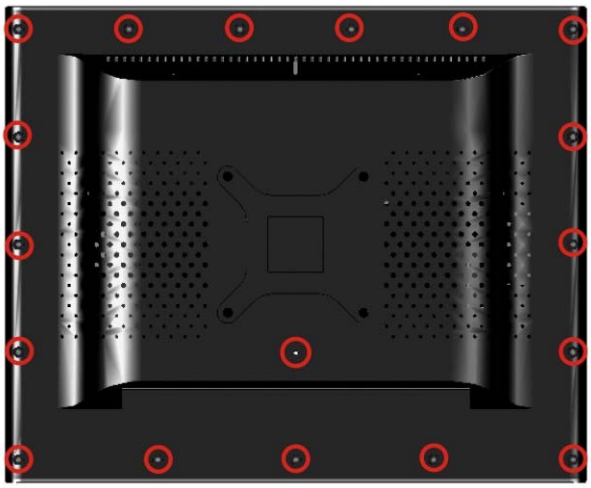

**Figure 2-3: iSignager LCD-17 Back Cover Retention Screws**

**Figure 2-4: iSignager LCD-19 Back Cover Retention Screws**

**Step 4:** **Remove the aluminum back cover** by removing the retention screws.

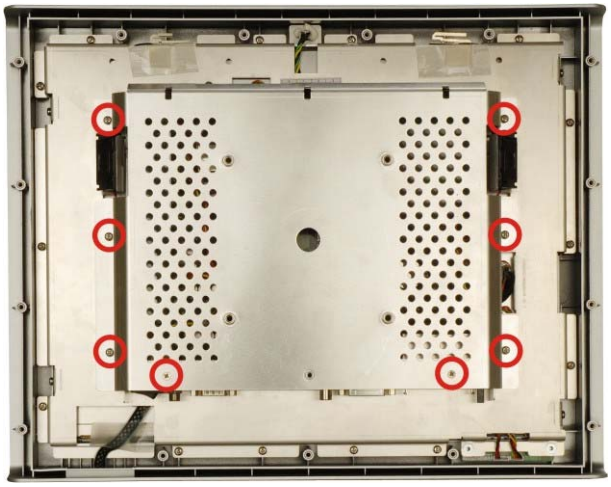

Figure 2-5: iSignager LCD-15 Aluminum Back Cover Retention Screws

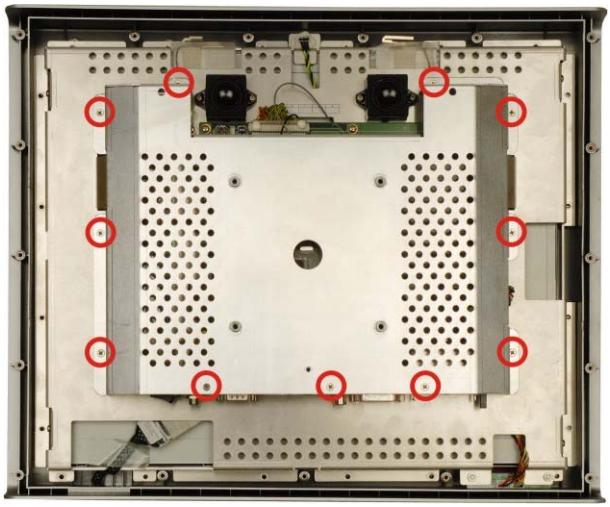

Figure 2-6: iSignager LCD-17 Aluminum Back Cover Retention Screws

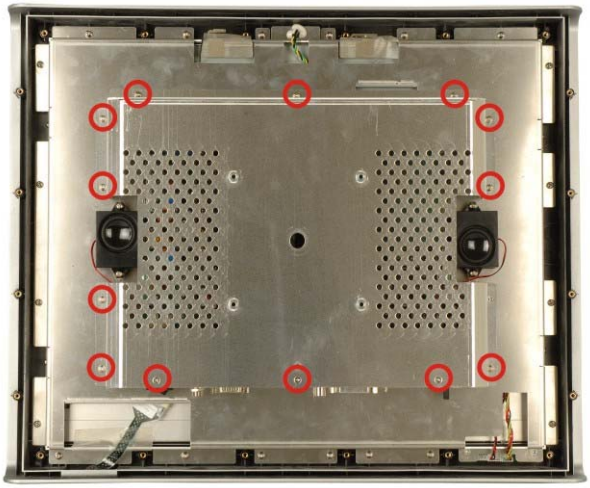

**Figure 2-7: iSignager LCD-19 Aluminum Back Cover Retention Screws**

**Step 5:** **Locate the IDE connector on the board.** The location of the IDE connector of the iSignager LCD Series is shown below.

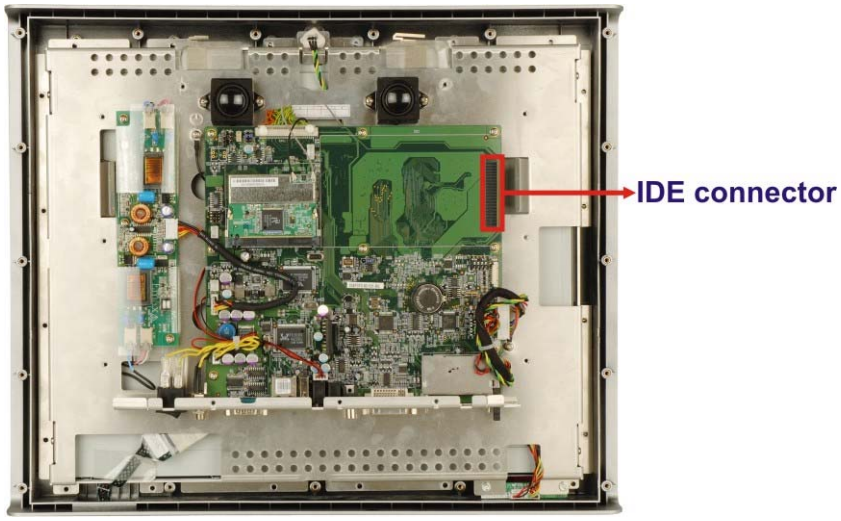


**Figure 2-8: IDE Connector Location**

**Step 6:** **Install the HDD into the iSignager LCD Series** by inserting the HDD to the IDE connector on the board.

**Figure 2-9: IDE HDD Installation**

**Step 7:** Replace the aluminum cover and the plastic back cover.

### 2.1.3 DVI/VGA Connection

The iSignager LCD Series supports dual display via the DVI-I connector on the bottom panel. To connect the iSignager LCD Series to a second display device, follow the instructions below.

**Step 1:** **DVI:** Connect the DVI cable to the DVI port on the bottom panel of the iSignager LCD Series. Connect the other side of the DVI cable to the second display device.

**VGA:** Connect the DVI-I to VGA adapter to the DVI port on the bottom panel of the iSignager LCD Series. Connect the VGA cable to the iSignager LCD Series and the second display device.

**Step 2:** Connect the audio cable to the audio output port on the bottom panel of the iSignager LCD Series. Connect the other side of the audio cable to the audio input port of the second display device.


**Figure 2-10: Second Display Device Connection**

**Step 3:** Make sure the display device is set to **DVI (DVI/VGA Dual)** in the device settings in the player manager of the iSignager AdDesign. Please refer to iSignager AdDesign user manual for more details.

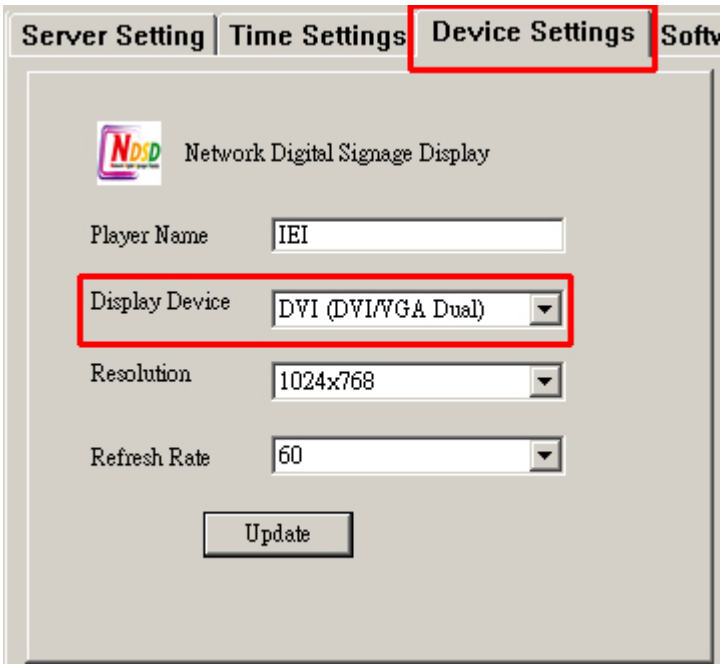


**Figure 2-11: Device Settings**

### 2.1.3.1 Supported Output Ports and Resolutions

The iSignager LCD Series supports multiple resolutions for the second display device. The supported display resolutions are listed in **Table 2-1**.

| Output Port | Output Mode | Resolution |
|---|---|---|
| DVI | DVI | 640x480, 848x480, 800x600, 1024x768, 1152x864, 1280x768, 1280x960, 1280x1024, 1360x768, 1400x1050, 1600x1200, 1920x1200 |
| | HDMI | 480p(720x480), 720p(1280x720), 1080i(1920x1080), 1080p(1920x1080) |
| VGA | 640x480, 848x480, 800x600, 1024x768, 1152x864, 1280x768, 1280x960, 1280x1024, 1360x768, 1400x1050, 1600x1200, 1920x1200 | |

**Table 2-1: Supported Resolutions for the Second Display Device**

## 2.2 Mounting the iSignager LCD Series

The iSignager LCD Series can be mounted on a wall, stand or arm. The mounting methods are described below.

**CAUTION:**

*When mounting the iSignager LCD Series take care to tighten the retention screws or bolts until fully secure, but do not over tighten. Over tightening the retention screws or bolts may cause them to become stripped, rendering them useless.*

### 2.2.1 Mounting Kits

**Table 2-2** lists the various optional mounting kits available for each model of the iSignager LCD Series.

| Model | iSignager LCD-15 | iSignager LCD-17 | iSignager LCD-19 |
|---|---|---|---|
| Wall Mounting Kit | AFLWK-15 | AFLWK-17 | AFLWK-19 |
| Stand | STAND-A19/ STAND-B19 | | |

**Table 2-2: iSignager LCD Series Mounting Kits**

### 2.2.2 Wall Mounting

The iSignager LCD Series has Video Electronics Standards Association (VESA) standard mounting holes tapped into the rear panel. The standard holes are M4 set at 100mm x 100mm apart and support wall, arm or stand mount. To mount the iSignager LCD-15/17/19 onto the wall, please follow the steps below.

**Step 1:** Select the location on the wall for the wall-mounting bracket.

**Step 2:** Carefully mark the locations of the four brackets screw holes on the wall.

**Step 3:** Drill four pilot holes at the marked locations on the wall for the bracket retention screws.

**Step 4:** Align the wall-mounting bracket screw holes with the pilot holes.

**Step 5:** Secure the mounting-bracket to the wall by inserting the retention screws into the four pilot holes and tightening them (**Figure 2-12**).

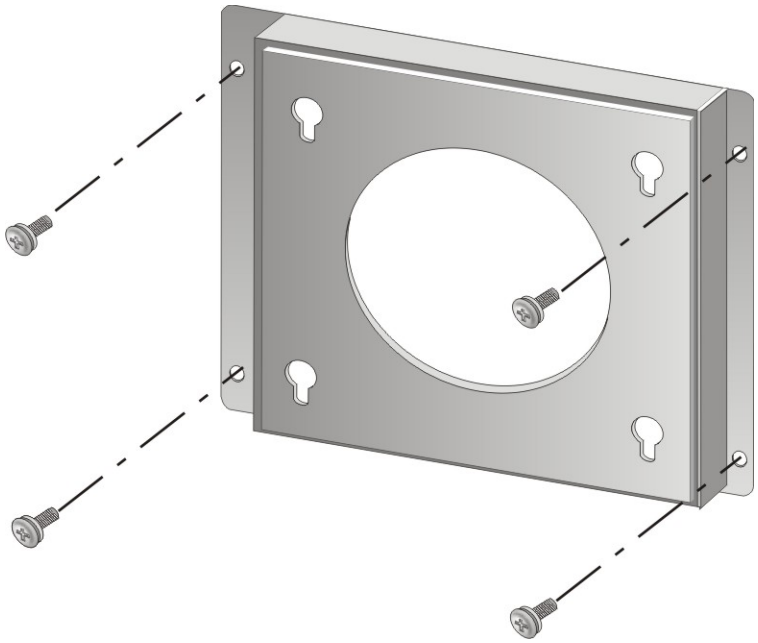

**Figure 2-12: Wall-mounting Bracket**

**Step 6:** Insert the four monitor mounting screws provided in the wall mounting kit into the four screw holes on the real panel of the monitor and tighten until the screw shank is secured against the rear panel (**Figure 2-13**).

**Step 7:** Align the mounting screws on the monitor rear panel with the mounting holes on the bracket.

**Step 8:** Carefully insert the screws through the holes and gently pull the monitor downwards until the monitor rests securely in the slotted holes (**Figure 2-13**). Ensure that all four of the mounting screws fit snuggly into their respective slotted holes.

**NOTE:**

In the diagram below the bracket is already installed on the wall.

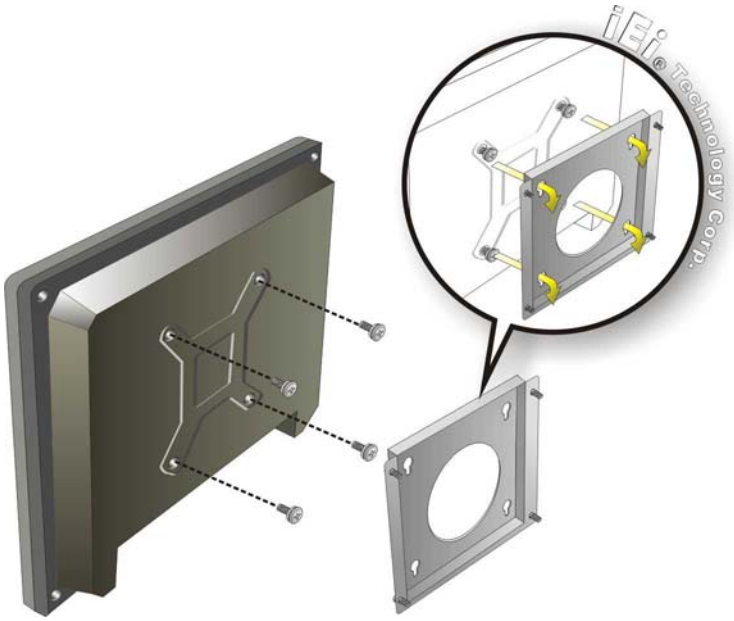

**Figure 2-13: Chassis Support Screws**

### 2.2.3 Stand Installation

The iSignager LCD Series has Video Electronics Standards Association (VESA) standard mounting holes tapped into the rear panel. The stand mounting plate has a matching VESA hole pattern. To mount the iSignager LCD Series onto a stand, please follow the steps below.

**Step 1:** Line up the threaded holes on the iSignager LCD Series rear panel with the screw holes on the stand mounting plate.

**Step 2:** Secure the iSignager LCD Series to the stand with the supplied retention screws (**Figure 2-14**).

**Figure 2-14: Stand Mounting**

### 2.2.4 Arm Mounting

The iSignager LCD Series is VESA (Video Electronics Standards Association) compliant and can be mounted on an arm with a 100mm interface pad. To mount the iSignager LCD Series on an arm, please follow the steps below.

**Step 1:** The arm is a separately purchased item. Please correctly mount the arm onto the surface it uses as a base. To do this, refer to the installation documentation that came with the mounting arm.

**NOTE:**

When purchasing the arm please ensure that it is VESA compliant and that the arm has a 100mm interface pad. If the mounting arm is not VESA compliant it cannot be used to support the iSignager LCD Series.

**Step 2:** Once the mounting arm has been firmly attached to the surface, lift the iSignager LCD Series onto the interface pad of the mounting arm.

**Step 3:** Align the retention screw holes on the mounting arm interface with those in the rear of the iSignager LCD Series. The iSignager LCD Series arm mount

retention screw holes are shown in **Figure 2-15**.

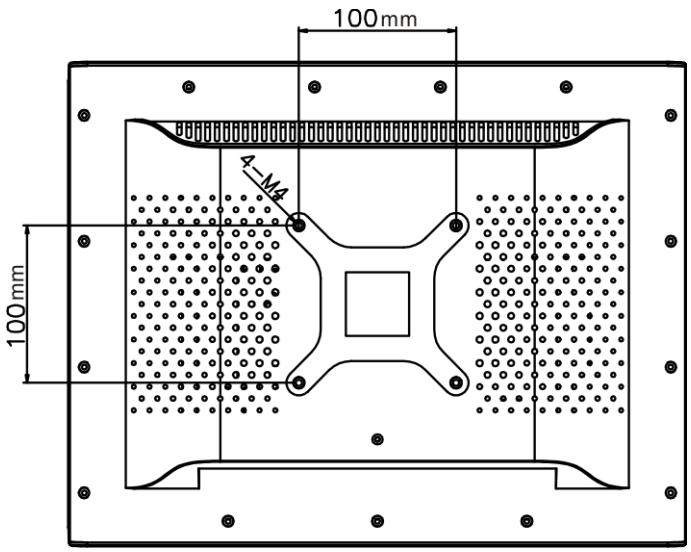


**Figure 2-15: Arm Mounting Retention Screw Holes**

**Step 4:** Secure the iSignager LCD Series to the interface pad by inserting four retention screws through the bottom of the mounting arm interface pad and into the iSignager LCD Series.

Chapter

3

# On-Screen-Display (OSD) Controls

## 3.1 User Mode OSD Structure

### 3.1.1 OSD Buttons

There are several on-screen-display (OSD) control buttons oriented either vertically on the bottom of the iSignager LCD Series front panel. **Figure 3-1** shows a typical arrangement of OSD controls.

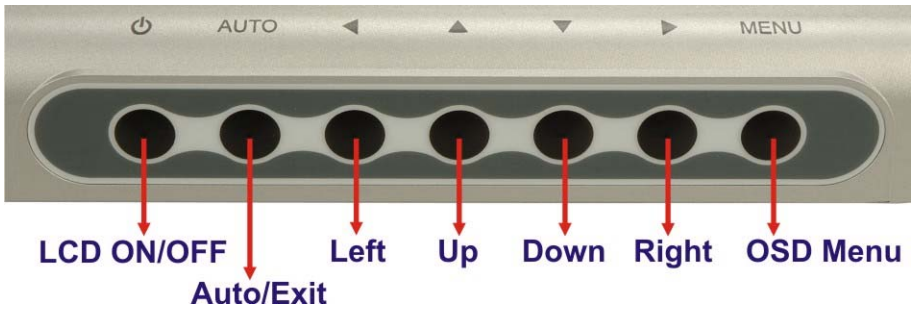


**Figure 3-1: OSD Control Buttons**

- **LCD ON/OFF Button**

  Press this button to turn the LCD monitor on or off. When the LCD monitor is on, the power LED is turned on in green.
- **Auto/Exit Button**

  Press this button to enable auto-configuration, apply default values or exit the menu.
- **Up Button**

  Press this button to scroll up or to switch from one selected item to another.
- **Down Button**

  Press this button to scroll down or to switch from one selected item to another.
- **Left Button**

  Press this button to scroll to the left, to decrease the value, or to switch from one selected item to another.
- **Right Button**

  Press this button to scroll to the right, to increase the value, or to switch from one selected item to another.
- **Menu/Enter Button**

Press this button to open the OSD window. When inside a menu, press this button to confirm the function adjustment or selection of the item. There may be several levels in one item. As you select an item in the menu, the sub-items will be displayed.

### 3.1.2 OSD Menu Structure

**Table 3-1** shows the OSD menu structure for all models of the iSignager LCD Series.

| Level 0 | Level 1 | Value | |
|---|---|---|---|
| Image Menu | Brightness | 0 to 100 | |
| | Contrast | 0 to 100 | |
| | Sharpness | 0 to 100 | |
| Display Menu | Auto Adjust | Select | |
| | Phase | 0 to 100 | |
| | Clock | 0 to 100 | |
| | Display Control | Display Image | Auto, 1:1, Aspect |
| | | Aspect Ratio | Auto, 4x3, 14x9, 16x9, >16x9 |
| | | Display Position | Select |
| Color Menu | Auto Color | Select | |
| | Color Temperature | USER | Red (0 to 100)<br>Green (0 to 100)<br>Blue (0 to 100) |
| | | 4200K, 5000K, 6500K, 7500K, 9300K | |
| | sRGB | Off, On | |
| System Menu | Audio | Mute | On, Off |
| | | Volume | 0 to 100 |
| | Factory Reset | Select | |
| | Information | Select | |
| | Input Select | VGA, YpbPr, DVI, Svideo, CVBS | |
| | Language | English | |
| | Misc | | |

| | | | |
|---|---|---|---|
| | OSD Configuration | OSD Timer | Off, 5 sec, 10 sec, 15 sec, 20 sec, 25 sec, 30 sec |
| | | OSD Position | Select |
| | | OSD Transparency | 0 to 100 |
| | | OSD Zoom | 0 to 100 |
| | Auto Brightness | Auto Brightness | On |
| | | | Off |

**Table 3-1: OSD Menus**

## 3.2 Using the OSD

OSD menu options are described below.

### 3.2.1 Image Menu

Image menu options are shown in **Figure 3-2**.


**Figure 3-2: Image Menu**

| | |
|---|---|
| Brightness | Adjusts the brightness of screen. This function adjusts the offset value of ADC. Setting this value too high or too low will affect the quality of image. When the auto dimming function is turned on, the brightness control is not effective. |
| Contrast | Adjusts the gain value of ADC. Adjusting this value too high or too low will worsen the quality of image. |
| Sharpness | Adjusts the sharpness level. This option may help reduce the softening edges around the displayed objects. |

### 3.2.2 Display Menu

Display options are shown in **Figure 3-3**.


**Figure 3-3: Display Menu**

| | |
|---|---|
| Auto Adjust | Automatically adjusts the LCD screen position. |
| Phase | Adjusts the input signal (Analog only) |
| Clock | Adjusts the dot clock position |
| Display Control | This item allows adjustment of the following items.<br>▪ **Display Image** – Adjusts the size of the display image<br>▪ **Display Position** – Adjusts the horizontal and vertical position of the display screen |

### 3.2.3 Color Menu

Color options are shown in **Figure 3-4**.


**Figure 3-4: Color Menu**

Color options are described below.

| | |
|---|---|
| Auto Adjust | Automatically adjusts the color hues |
| Color Temperature | Fine-tunes the palette of color hues |
| sRGB | Fine-tunes the balance among the Red, Green, and Blue color hues if images look garish or unrealistic |

### 3.2.4 System Menu

System options are shown in **Figure 3-5**.


**Figure 3-5: System Menu**

System options are described below.

| | |
|---|---|
| Audio | Mutes the audio or adjusts audio volume. |
| Factory Reset | Restores the default OSD settings. Note that this will restore all default display settings. |
| Information | Provides information on the LCD monitor, such as model number, input device, and resolution |
| Input Select | Allows selection of input device to use |
| Language | Provides options for selecting OSD screen legends in a preferred language |
| Misc | Provides options for OSD configuration and auto-brightness (auto-dimming) |

### 3.2.4.1 OSD Configuration

OSD configurations are shown in **Figure 3-6**.


**Figure 3-6: OSD Configuration**

OSD configuration options are described below.

| | |
|---|---|
| OSD Timer | Determines how many seconds the OSD screen stays on screen before it disappears when OSD is left unattended. |
| OSD Position | Adjusts the OSD position on the screen. Use the arrow buttons on the OSD control panel to move the OSD screen |
| OSD Transparency | Adjusts the transparency of the OSD screen |
| OSD Zoom | Turns the OSD zoom feature on or off |

### 3.2.4.2 Auto-Brightness (Auto-Dimming) Configuration

The iSignager LCD Series features an auto-dimming function. Use the OSD to turn this function on or turn off. The auto-dimming screen is shown in **Figure 3-7**. Refer to **Appendix 3.3A** for details.

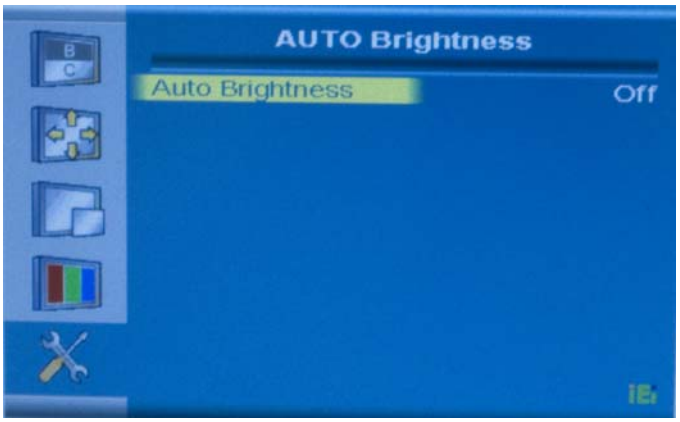


**Figure 3-7: Auto Brightness Configuration**

Auto Brightness configuration options are described below.

| | |
|---|---|
| On | Turns the auto-dimming function on. When auto-dimming is turned on, the auto-dimming LED on the OSD panel is on and the monitor automatically adjusts the brightness depending on ambient light conditions. |
| Off | Turns the auto-dimming function off. |

## 3.3 Remote Control

The iSignager LCD Series comes with a remote control for easy configuration of OSD settings. **Figure 3-8** shows the remote control and its function keys.

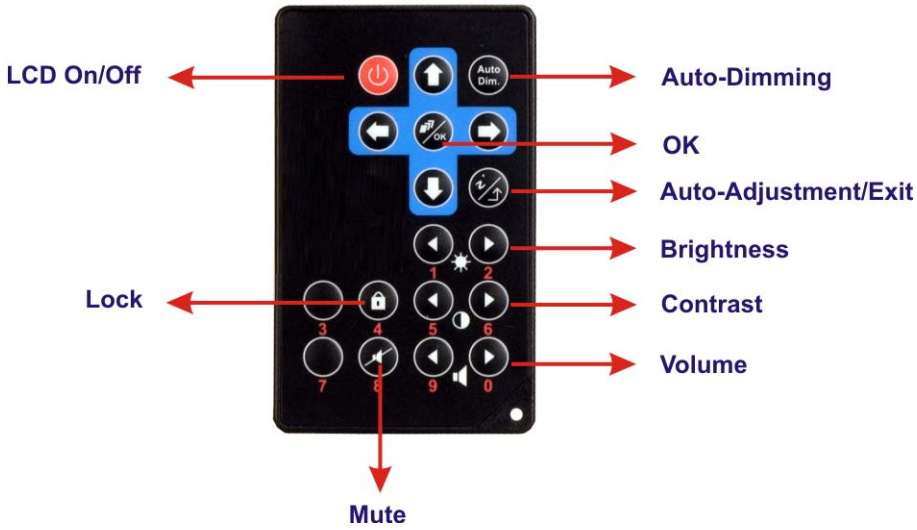


**Figure 3-8: Remote Control**

- **LCD On/Off**. Press this button to turn the LCD monitor on or off.
- **Lock**. This function is currently unavailable.
- **Mute**. Press this button to turn off the audio.
- **Auto-Dimming**. Press this button to turn the auto-dimming function on or off.
- **OK**. Press this button to confirm a setting or an adjustment made.
- **Auto-Adjustment/Exit**. Press this button to let the system automatically configure the OSD settings or to exit the current menu.
- **Brightness**. Use these control buttons to adjust the brightness of the LCD screen.
- **Contrast**. Use these control buttons to adjust the contrast values.
- **Volume**. Press this button to adjust the audio volume level.

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Appendix

A

# Auto-Dimming

## A.1 Auto-Dimming Configurations

The iSignager LCD Series features an auto-dimming LCD that can automatically adjust the backlight brightness according to the ambient light. If the auto-dimming function is turned on, the backlight turns brighter when the ambient illuminance is high. The backlight dims automatically when the ambient illuminance level is low.

The SI unit of illuminance is “lux.” Lux measures the intensity of light. **Table B-1** lists the illuminance (LUX measurement) of everyday light sources.

| Light Source | Brightness (LUX) |
|---|---|
| **Night without moonlight** | <10 |
| **Night with moonlight** | <100 |
| **Office desk lighting** | 500~1000 |
| **Overcast day** | 1000~2000 |
| **Sunny day** | 10,000 |
| **Direct sunlight** | 100,000 |

**Table A-1: LUX Measurement of Everyday Light Source**

### A.1.1 Default Settings

The auto-dimming default settings of the iSignager LCD Series industrial monitor is shown in **Figure A-1** below. When the sensor detects the ambient illuminance as 2000 LUX or above, the iSignager LCD Series adjusts the LCD brightness to 100%.

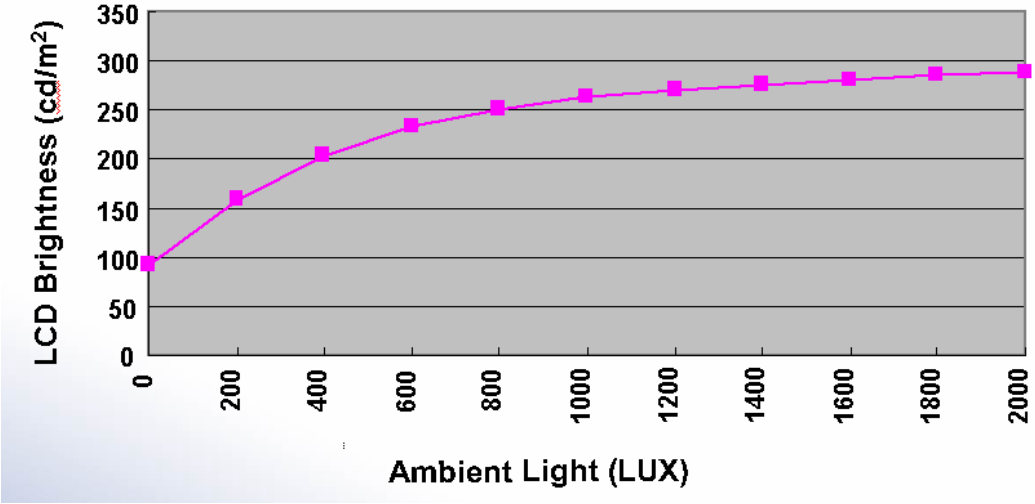


**Figure A-1: Default Linearity of the LCD Backlight and Ambient Light**

### A.1.2 OSD Control

The auto-dimming configurations are shown in **Section 3.2.4.2**.

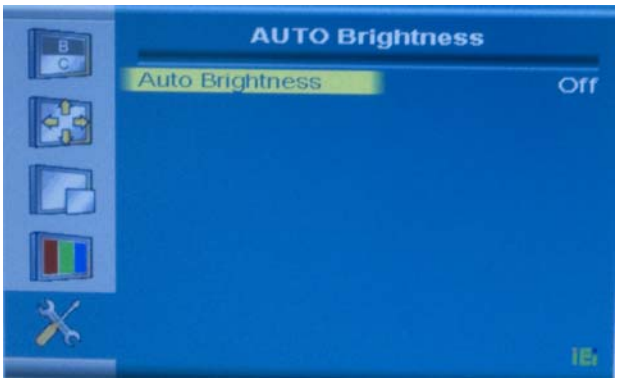


**Figure A-2: Auto-Dimming Configurations Menu**

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Appendix

B

# Video, Audio and Graphic Formats

# B.1 Overview of Video Formats

## B.1.1 MPEG-1

MPEG-1 is a standard used to compress audio and video (AV) digital data. MPEG-1 defines a group of AV coding standards agreed upon by MPEG (Moving Picture Experts Group). MPEG-1 video is used by the Video CD format. The output quality at usual VCD bit rates is roughly that of a VCR. MPEG-1 audio layer 3 is the full name for the popular audio format MP3. The MPEG-1 AV format was later extended into the MPEG-2 and MPEG-4 formats. These extensions allow for greater compression for the same size of data.

## B.1.2 MPEG-2

MPEG-2 is a standard used primarily to compress audio and video (AV) digital data. MPEG-2 is the designation for a group of coding standards for AV, agreed upon by MPEG (Moving Pictures Experts Group), and published as the ISO/IEC 13818 international standard. MPEG-2 is typically used to encode audio and video for broadcast signals, including direct broadcast satellite and Cable TV. MPEG-2, with some modifications, is also the coding format used by standard commercial DVD movies.

## B.1.3 MPEG-4

MPEG-4 is a standard used primarily to compress audio and video (AV) digital data. It is the designation for a group of audio and video coding standards and related technology agreed upon by the ISO/IEC Moving Picture Experts Group (MPEG). The uses for the MPEG-4 standard are web (streaming media) and CD distribution, conversational (videophone), and broadcast television, all of which benefit from compressing the AV stream.

## B.1.4 DivX® and XviD

DivX is a video codec created by DivX, Inc. which has become popular due to its ability to compress lengthy video segments into small sizes while maintaining relatively high visual

quality. DivX uses lossy MPEG-4 Part 2 compression, where quality is balanced against file size for utility.

XviD is a free and open source MPEG-4 video codec. XviD features MPEG-4 Advanced Simple Profile features such as b-frames, global and quarter pixel motion compensation, lumi masking, trellis quantization, and H.263, MPEG and custom quantization matrices.

### B.1.5 DVD .ISO

An ISO image (.iso) is an informal term for a disk image of an ISO 9660 file system. Most CD/DVD authoring utilities can deal with ISO images: Producing them either by copying the data from existing media or generating new ones from existing files, or using them to create a copy on physical media.

### B.1.6 DVD .VOB and .IFO

A VOB file (DVD-Video Object) is a file type contained in DVD-Video media. It contains the actual Video, Audio, Subtitle and Menu contents in stream form. VOB files are encoded very much like standard MPEG-2 files. When the extension is renamed from .vob to .MPG or .MPEG the file is still readable and continues to hold all information, although most players supporting MPEG-2 don't support subtitle tracks.

IFO file is a DVD information file that stores information about chapters, subtitles and audio tracks. IFO files contain the formatting information of the VOB files, which tells the DVD player how the DVD should be played.

### B.1.7 .TS

Transport stream (TS) is used in MPEG-1, MPEG-2, and MPEG-4 systems protocols. TS has features for error correction for transportation over imperfect media, and are used in broadcast applications. The MPEG-2 transport stream is defined in the ISO/IEC standard (13818-1).

## B.2 Overview of Audio Formats

### B.2.1 Dolby® Digital

Dolby® Digital, or AC-3, is the common version containing 6 total channels of sound, with 5 channels for normal-range speakers (right front, center, left front, right rear and left rear) and one channel for the LFE, or subwoofer. The Dolby Digital format supports Mono and Stereo usages as well.

### B.2.2 MP3

MPEG-1 Audio Layer 3, more commonly referred to as MP3, is a popular digital audio encoding and lossy compression format. MP3 is compression format. It provides a representation of pulse-code modulation-encoded (PCM) audio data in a much smaller size by discarding portions that are considered less important to human hearing.

### B.2.3 AAC

AAC (Advanced Audio Coding) is one of the audio compression formats defined by the MPEG-2 standard. AAC is a higher quality codec than the MP3, therefore requiring less data for the same audio reproduction. As a result, an AAC file encoded at 96kbps bit rate may actually sound better than an MP3 encoded at 128kbps bit rate.

### B.2.4 WAV or WAVE

WAV (or WAVE), short for Waveform audio format, is a Microsoft® and IBM audio file format standard for storing audio on PCs. It is a variant of the RIFF bitstream format method for storing data in "chunks", and thus also close to the IFF and the AIFF format used on Macintosh computers. WAV files store digital music data in a lossless format, meaning the file is digitally identical to its source. However, the result is a very large, uncompressed file.

### B.2.5 WMA

WMA, or Windows Media Audio, is proprietary audio codec of Microsoft®. WMA offers the same quality as MP3 for half the bit rate (i.e., half the file size). WMA is now

positioning itself as the main competitor to AAC (Advanced Audio Codec), MP3's successor.

## B.3 Overview of Graphic Formats

### B.3.1 JPEG and JPG

JPEG (pronounced as jay-peg) is a commonly used standard method of lossy compression for photographic images. JPEG is designed for compressing full-color or gray-scale images of natural, real-world scenes. It works well on photographs, naturalistic artwork, and similar material; not so well on lettering, simple cartoons, or line drawings. The file format which employs this compression is commonly also called JPEG; the most common file extensions for this format are .jpeg, .jfif, .jpg, .JPG, or .JPE although .jpg is the most common on all platforms.

### B.3.2 BMP

The name is short for bitmap and these files can be saved at various bit-depths. It is a bitmapped graphics format used internally by the Microsoft® Windows® graphics subsystem (GDI), and used commonly as a simple graphics file format on that platform. Images are generally stored with a color depth of 2 (1-bit), 16 (4-bit), 256 (8-bit), 65,536 (16-bit), or 16.7 million (24-bit, referred to as true-color) colors (the bits represent the bits per pixel). 8-bit images can also be gray scale instead of indexed color. 24-bit BMP files are lossless but are much larger in file size than JPEGs.

### B.3.3 GIF

GIF (Graphics Interchange Format) is a bitmap image format for pictures with up to 256 distinct colors from the over 16 million representable in 24 bit RGB.

A GIF file employs lossless data compression so that the file size of an image may be reduced without degrading the visual quality, provided the image fits into 256 colors. Therefore GIF is normally used for diagrams, buttons, etc., that have a small number of colors, while the JPEG format is used for photographs.

### B.3.4 PNG

PNG (Portable Network Graphics) is a lossless compressed bitmap image format. PNG was created to both improve upon and replace the GIF format with an image file format not requiring a patent license to use. PNG is officially pronounced "ping" and, like GIF and BMP, reduces file size by reducing the number of colors. PNG can also be 24-bit true-color and maintain all the original image information, but file sizes are large.

## B.4 Standard Definition (SD) Introduction

### B.4.1 SDTV

Standard-definition television or SDTV refers to television systems that have a lower resolution than HDTV systems. The term is usually used in reference to digital television, in particular when broadcasting at the same (or similar) resolution as analog systems.

In ATSC, SDTV can be broadcast in 704 pixels × 480 lines with 16:9 aspect ratio (40:33 rectangular pixel), 704 pixels × 480 lines with 4:3 aspect ratio (10:11 rectangular pixel) or 640 pixels × 480 lines with 4:3 ratio (and square pixels). The refresh rate can be any of 24, 30 or 60 pictures per second.

Digital SDTV in 4:3 aspect ratio has the same appearance as the regular analogue TV (NTSC, PAL, PAL2, SÉCAM) minus the ghosting, snowy images and static noises. However, if the reception is poor, the user may encounter various other artifacts such as blockiness and stuttering.

Standards that can broadcast digital SDTV include DVB, ATSC and ISDB. The latter two were originally developed for HDTV, but they have proved to be more often used for their ability to deliver multiple SD video and audio streams via multiplexing, than to use the entire bitstream for one HD channel.

## B.5 High Definition (HD) Introduction

High-definition video or HDTV generally refers to any video system of higher resolution than standard-definition (SD), i.e. NTSC, SÉCAM and PAL. HDTV is broadcast digitally,

and therefore its introduction sometimes coincides with the introduction of digital television (DTV). High-definition signals require a high-definition television or computer monitor in order to be viewed. High-definition video generally has an aspect ratio of 16:9 (1.78:1). The aspect ratio of regular widescreen film shot today is typically 1.85:1 or 2.40:1. Standard-definition television (SDTV) has a 4:3 (1.33:1) aspect ratio.

High-definition television (HDTV) resolution is 1080 or 720 lines. In contrast, regular digital television is 480 lines (NTSC-like) or 576 lines (PAL/SECAM-like).

### B.5.1 Notation

In the context of HDTV, the formats of the broadcasts are referred to using a notation describing:

720p60
720: The number of lines in the display resolution.
P: Progressive frames (p) or interlaced fields (i).
60: Number of frames or fields per second.

For example, the format 720p60 is 1280x720 pixels, progressive encoding with 60 frames per second (60 hertz known as Hz). The format 1080i50 is 1920x1080 pixels, interlaced encoding with 50 fields (25 frames) per second. Often the frame or field rate is left out. It can then usually be assumed to be either 50 or 60, except for 1080p which is only supported as 1080p24, 1080p25 or 1080p30 by consumer HDTV displays.

A frame or field rate can also be specified without a resolution. For example 24p means 24 progressive frames per second and 50i means 50 interlaced frames per second.

### B.5.2 Progressive Scan vs. Interlaced Scan

Interlaced scan is the way a television decodes an image–a frame is broken into two fields, odd (1, 3, 5, 7…) and even (2, 4, 6, 8…). A television scans 60 fields per second with 30 odd and 30 even fields created. By combining the two fields every 1/30 of a second, a frame is created thus creating 30 frames per second.

Progressive scan differs from interlaced scan in that the image is displayed on a screen by scanning each line (or row of pixels) in a sequential order rather than an alternate order. Therefore, in progressive scan, the image lines are scanned in numerical order (1, 2, 3) down the screen from top to bottom, instead of in an alternate order (lines or rows 1, 3, 5, etc. followed by lines or rows 2, 4, 6). By progressively scanning the image onto a screen every 60th of a second rather than "interlacing" alternate lines every 30th of a second.

Appendix

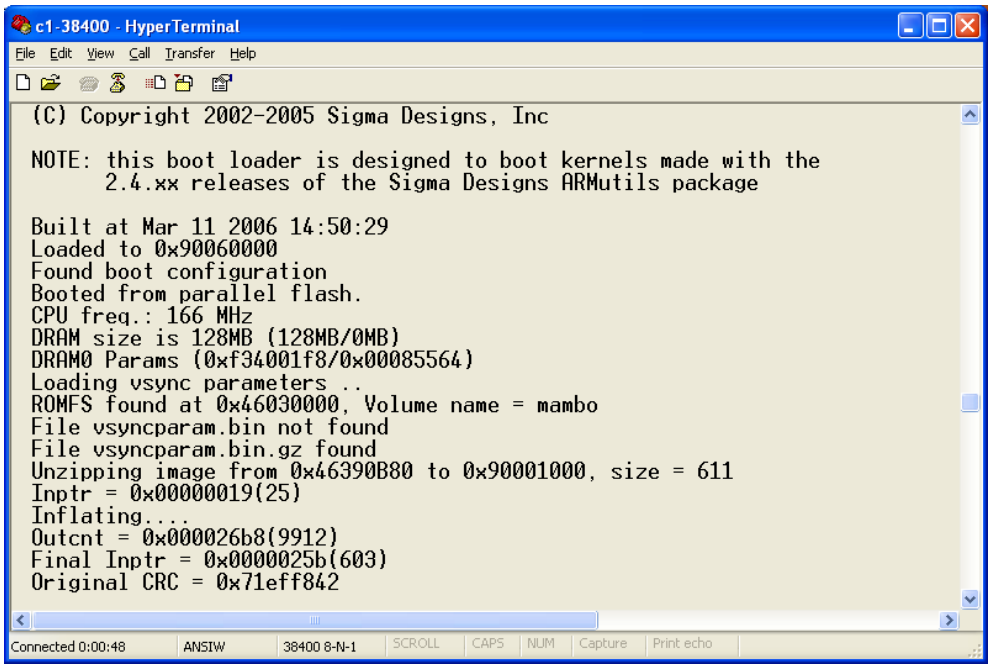
C

# Check and Modify the Player Status by Serial Port

## C.1 Check and Modify the iSignager LCD Series Status by Serial Port

Follow the following steps and command to check and modify the iSignager LCD Series status by RS-232 serial port.

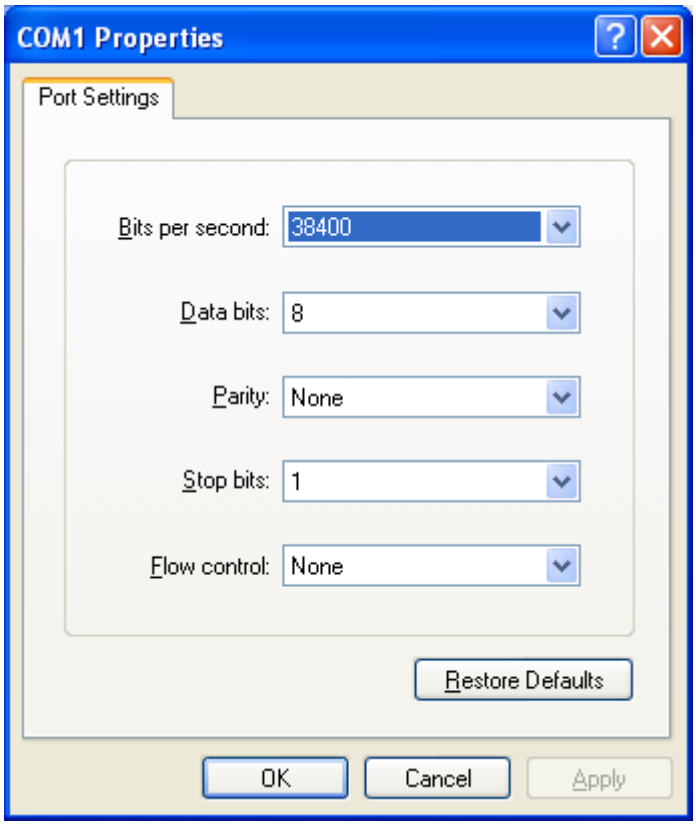
**Step 1:** In Windows® XP/ Windows® 2000 OS, create a HyperTerminal session and prepare a null modem cable to connect the PC and the iSignager LCD Series.




**NOTE:**

All these settings can be done in the iSignager AdDesign.

**Step 2:** Modify COM1 Settings as below.




**Step 3:** Connect RS-232 cable to COM1 of iSignager LCD Series:

```
vick[/]#
run vick[/]# cd /bin
```

**Step 4:** Display Playerinfo function:

```
vick[/bin]# ./playerinfo
BINFMT_FLAT: Loading file: ./playerinfo
```

Usage:

`./playerinfo -i:` To display all information

`./playerinfo -sh hostname:` To change PC host name

`./playerinfo -ch hostname:` To change client host name

`./playerinfo -ddev <val>:` To change device type

`./playerinfo -si ip:` To change PC IP

`./playerinfo -ci ip:` To change client IP

`./playerinfo -d 1/0:` To enable DHCP(1) or to disable DHCP(0)

./playerinfo -pstop: To stop playlist

./playerinfo -pstart: To start playlist

./playerinfo -cstart: To restart client

./playerinfo -time <val>: To change time

./playerinfo -wal : To display wireless info

./playerinfo -reboot : To reboot system

**Step 5:** Examples:

Example 1.1 Use command playerinfo-i and show the information of the player is connected via LAN:

```
Glob1[/]# playerinfo -i
BINFMT_FLAT: Loading file: /new/part1/bin/playerinfo
**************Information************************
Romfs Version     : 107
Client Hostname   : Glob1
Client Ip eth0    : 10.10.19.253
Server Hostname   : RD-VICKWU-NB
Server Ip         : 10.10.18.37
Display Device    : VGA 1024x768 60
Apps Version      : 106

WIFI :
BINFMT_FLAT: Loading file: /new/part1/bin/playerinfo
no wireless extensions
```

Example 1.1 Use command playerinfo-i and show the information of the player is connected via Wifi

```
vick[/]# playerinfo -i
BINFMT_FLAT: Loading file: /new/part1/bin/playerinfo
**************Information************************
Romfs Version     : 200
Client Hostname   : vick
Client Ip eth0    : 192.168.10.7
Server Hostname   : RD-VICKWU-NB
Server Ip         : 192.168.10.5
```

```
Dhcp              : disable
Display Device    : VGA 1360x768 60
Apps Version      : 200

WIFI :
BINFMT_FLAT: Loading file: /new/part1/bin/playerinfo
Client ra0 Ip         : 192.168.10.3
Access Point          : 00:13:46:87:EA:02
Encryption key        : 132-3334-3536-3738-3930-6162-63
ESSID                 : "iei_sw2"
vick[/]#
```

Example 2. Set iDSServer hostname to client system

```
vick[/bin]# ./playerinfo -sh RD-VICKWU-NB

BINFMT_FLAT: Loading file: ./playerinfo
Changing server hostname
Done
```

Example 3. Set client hostname to client system

```
vick[/bin]# ./playerinfo -ch vick

BINFMT_FLAT: Loading file: ./playerinfo
Changing client hostname
```

Example 4. Set device display mode type

```
vick[/bin]# ./playerinfo -ddev VGA 1360x768 60

BINFMT_FLAT: Loading file: ./playerinfo
Display Device: VGA 1360x768 60
```

Example 5. Set iDSServer IP to client system

```
vick[/bin]# ./playerinfo -si 10.10.10.58

BINFMT_FLAT: Loading file: ./playerinfo
```

```
Changing server IP
Done
```

Example 6. Set client IP to client system

```
vick[/bin]# ./playerinfo -ci 10.10.10.74

BINFMT_FLAT: Loading file: ./playerinfo
Changing client IP 10.10.10.74
74
eth0: link up, 100Mbps, full-duplex, lpa 0x45E1
vick[/bin]# interface < eth0 > is up and running

================================================
the systems IP address is :10.10.10.74
connecting to windows server.............
windows server ip address is : 10.10.10.58
windows server hostname is : RD-VICKWU-NB
connection = Y
CONNECTED TO WINDOWS SERVER!

================================================
gateway: Unable to read gateway from interface

================================================
Mac address of the board is: #00:0b:6a:36:a3:10
Default gateway of the board is: 0.0.0.0
Subnet mask is: 255.255.254.0
Host name is: vick
DNS of the board is: 172.16.2.6

================================================
#00:0b:6a:36:a3:10#10.10.10.74#172.16.2.6#vick#0.0.0
.0#255.255.254.0#0#0#0#0#0##
```

Example 7. Set DHCP action

```
vick[/bin]# ./playerinfo -d 1

BINFMT_FLAT: Loading file: ./playerinfo
Changing dhcp.txt
Done
```

Example 8. Stop playing

```
vick[/bin]# ./playerinfo -pstop

BINFMT_FLAT: Loading file: ./playerinfo
killall: pictureplayer: no process killed
killall: play0: no process killed
killall: play1: no process killed
killall: play2: no process killed
munmap of non-mmaped memory by process 1811
(play_animate): 17e02000
munmap of non-mmaped memory by process 1812
(play_animate): 17e02000
killall: play_rotate: no process killed
killall: nano-X: no process killed
killall: audioplayer: no process killed
killall: audio: no process killed
killall: saver: no process killed
munmap of non-mmaped memory by process 1806 (banner):
17e02000
munmap of non-mmaped memory by process 1807 (banner):
17e02000
munmap of non-mmaped memory by process 1808 (banner):
17e02000
killall: mbanner: no process killed
killall: videoin: no process killed
```

Example 9. Restart Play action

```
vick[/bin]# ./playerinfo -pstart
```

```
BINFMT_FLAT: Loading file: ./playerinfo
vick[/bin]# ********************PLAYING
/new/playlist5.txt************************Fading:
disabled
Alpha0: 255
Alpha1: 255
D 0
Running check
iEi WCODE 1 0x05 0x02
iEi RCODE 1 0x05 0x02
```

Example 10. Restart client connect

```
vick[/bin]# ./playerinfo -cstart

BINFMT_FLAT: Loading file: ./playerinfo
vick[/bin]# interface < eth0 > is up and running
================================================
the systems ip address is :10.10.10.74
connecting to windows server..............
windows server ip address is : 10.10.10.58
windows server hostname is : RD-VICKWU-NB
connection = Y
CONNECTED TO WINDOWS SERVER!
================================================
================================================
Mac address of the board is :#00:0b:6a:36:a3:10
Default gateway of the board is :10.10.10.1
Subnet mask is :255.255.254.0
Host name is :vick
DNS of the board is :172.16.2.6
================================================
#00:0b:6a:36:a3:10#10.10.10.74#172.16.2.6#vick#10.10
.10.1#255.255.254.0#0#0#0#0#
```

Example 11. Set system time

```
vick[/bin]# ./playerinfo -time 072211142006

BINFMT_FLAT: Loading file: ./playerinfo
Setting the date
Sat Jul 22 11:14:00 MDT 2006
```

Example 12. Reboot the player

```
vick[/bin]# ./playerinfo -reboot
```

**Step 6:** Use the following command to modify LAN settings:

- `ifconfig eth0 IP` : set client IP value
- `ifconfig eth0 netmask` : set client mask

  e.g. `ifconfig eth0 netmask 192.168.1.255`
- `ifconfig eth0 broadcast`: set client broadcast

  e.g. `ifconfig eth0 broadcast 255.255.255.0`

**Step 7:** Use the following command to modify Wifi settings:

- `ifconfig ra0 IP` : set client IP value
- `ifconfig ra0 netmask` : set client mask

  e.g. `ifconfig ra0 netmask 192.168.1.255`
- `ifconfig ra0 broadcast`: set client broadcast

  e.g. `ifconfig ra0 broadcast 255.255.255.0`

### C.1.1 Successful Message—LAN Connection

If LAN is successfully connected, the following messages are shown.

```
******************PLAYING/new/playlist7.txt*****************************
        Fading : disabled
        vick[/]# Alpha0 : 255
        Found RT61 Wifi Card
        Alpha1 : 255
        D 0
        Runing check
```

```
killall: rcli: no process killed
killall: client: no process killed
interface < eth0 > is up and running
================================================
the systems ip address is :192.168.1.10
connecting to windows server.............
windows server ip address is : 192.168.1.5
windows server hostname is : RD-VICKWU-NB
error status-w: Contact iEi code=0x05 failed
connection = Y
CONNECTED TO WINDOWS SERVER!
================================================
iEi WCODE 1 0x05 0x02
iEi RCODE 1 0x05 0x02
================================================
Mac address of the board is :#00:9b:6b:36:a8:70
Default gateway of the board is :192.168.1.1
Subnet mask is :255.255.255.0
Host name is :vick
DNS of the board is :127.0.0.1
================================================
#00:9b:6b:36:a8:70#192.168.1.10#127.0.0.1#vick#192.168.1.1#255.255.255.
0#0#0#0##read returned : 20
```

### C.1.2 Successful Message—Wifi Connection

If Wifi is successfully connected, the following messages are shown.

```
eth0: link down
ra0
killall: udhcpc: no process killed
Found RT61 Wifi Card
12:34:56:78:90:00:00:00:00:00:00:00:00:00:00:
RT61: RfIcType= 3
Probing for Wifi Card......
```

```
inf_name ra0
WiFi IP                 { 10.10.88.100 }
WiFi Encryption Enable    { Y }
WiFi Key type            { open }
WiFi cipher type          { WEP }
WiFi key index                  { 1 }
WiFi Key Length          { 128 }
WiFi Key                { 1234567890abc }
WiFi Essid              { iei_sw2 }
WiFi Network Type         { infra }
Setting WiFi Ip Address......
Setting Network Type......
Command :iwpriv ra0 set NetworkType=infra
Setting Authenticaion Mode....
Command :iwpriv ra0 set AuthMode=open
Setting Encryption Type....
Command :iwpriv ra0 set EncrypType=WEP
Setting Default Key ID....
Command :iwpriv ra0 set DefaultKeyID=1
Setting Key .....
Command :iwpriv ra0 set Key1=1234567890abc
31:32:33:34:35:36:37:38:39:30:61:62:63:00:00:00:
Setting SSID....
Command :iwpriv ra0 set SSID=iei_sw2

interface < eth0 > is Down
interface < ra0 > is up and running
new complied on Sep 21 2006 19:02:59
```

## C.2 Checking Connection

There are several ways to check if the connection exists between the iSignager LCD Series and PC.

### C.2.1 Check the LED

Check the LEDs on the top of the LAN port in the bottom panel of the iSignager LCD Series. The green LED on the right side indicates LAN or Wifi is linked on the port. The orange LED on the left side indicates transmission activity.

### C.2.2 Ping in DOS Environment or Hyper Terminal Session

#### C.2.2.1 PC

To check if the specific IP connection exists in the server side, check in DOS environment of the server. In DOS environment, type “ping” followed by the LAN IP or WLAN IP, e,g. ping 10.10.12.82. Press Enter. If the reply message is shown, the connection exists, e.g.

```
Reply from 10.10.12.82: bytes=32 time<10ms TTL=128
Reply from 10.10.12.82: bytes=32 time<10ms TTL=128
Reply from 10.10.12.82: bytes=32 time<10ms TTL=128
```

#### C.2.2.2 iSignager LCD Series

To check if the specific IP connection exists in the client side, check in a Hyper Terminal session of the iSignager LCD Series. To create a Hyper Terminal session, please refer to **Section C.1**. In Hyper Terminal session, type “ping” followed by the LAN IP or WLAN IP, e,g. ping 10.10.19.253. Press Enter. If the reply message is shown, the connection exists, e.g.

```
64 bytes from 10.10.19.253: icmp_seq=0 ttl=64 time=1.3 ms
64 bytes from 10.10.19.253: icmp_seq=1 ttl=64 time=0.7 ms
64 bytes from 10.10.19.253: icmp_seq=2 ttl=64 time=0.5 ms
```

### C.2.3 Check the Status in the Player Manager

The iSignager AdDesign detects the player status automatically and shows the player status in the “Status” column in the Player Manager window. The status of the player is either On-Line, Off-Line or Playing.

## C.3 iSignager LCD Series Network Behavior

The user can setup LAN and Wifi settings in the iSignager LCD Series at the same time. However, the iSignager LCD Series takes LAN as the first priority by default when booting up. If the LAN is successfully activated, the iSignager LCD Series does not activate the Wifi settings. The Wifi settings is activated only when the LAN activation process is failed.

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