



iNDS Technology, Inc.



**MODEL:  
iS-810WL**

**1080p Video Playback, HDMI/VGA/S-Video/Component,  
LAN, Wireless LAN, USB 2.0  
Remote Control**

# **User Manual (Hardware)**

Rev. 1.00 –2011



# Revision

---

Date	Version	Changes
24 Jan, 2011	1.00	Initial release

# Copyright

---

## **COPYRIGHT NOTICE**

The information in this document is subject to change without prior notice in order to improve reliability, design and function and does not represent a commitment on the part of the manufacturer.

In no event will the manufacturer be liable for direct, indirect, special, incidental, or consequential damages arising out of the use or inability to use the product or documentation, even if advised of the possibility of such damages.

This document contains proprietary information protected by copyright. All rights are reserved. No part of this manual may be reproduced by any mechanical, electronic, or other means in any form without prior written permission of the manufacturer.

## **TRADEMARKS**

All registered trademarks and product names mentioned herein are used for identification purposes only and may be trademarks and/or registered trademarks of their respective owners.

# Table of Contents

---

<b>REVISION</b> .....	<b>II</b>
<b>COPYRIGHT</b> .....	<b>III</b>
<b>TABLE OF CONTENTS</b> .....	<b>IV</b>
<b>LIST OF FIGURES</b> .....	<b>VI</b>
<b>LIST OF TABLES</b> .....	<b>VII</b>
<b>1 INTRODUCTION</b> .....	<b>1</b>
1.1 IMPORTANT NOTICE.....	2
1.2 iS-810WL OVERVIEW.....	2
1.3 FEATURES.....	3
1.4 SYSTEM OVERVIEW.....	4
1.4.1 iS-810WL System Overview (Front View).....	4
1.4.2 iS-810WL System Overview (Rear View).....	4
1.5 iS-810WL SPECIFICATIONS.....	5
1.6 DIMENSIONS.....	6
1.7 PACKING LIST.....	8
1.8 BEFORE START.....	9
1.8.1 Understand the Display Device.....	9
1.8.2 Mass Storage Device – HDD, CF Card or SD Card.....	9
1.8.3 Web Management Console.....	10
1.8.4 The Concept of the iSignager AdMinistrator.....	12
1.9 SUPPORTED FORMATS.....	13
<b>2 INSTALLATION</b> .....	<b>15</b>
2.1 HARDWARE INSTALLATION.....	16
2.1.1 iS-810WL Set-Up.....	16
2.1.2 CF Card Installation (Optional).....	17
2.1.3 SD Card Installation (Optional).....	18
2.1.4 Wireless LAN Antenna Installation.....	19

# iS-810WL Digital Signage Player



2.1.5 PCIe mini TV Card Installation (Optional) .....	20
2.1.6 Mounting the iS-810WL.....	21
2.2 IS-810WL AND DISPLAY DEVICE CONNECTION .....	26
2.2.1 VGA Connection .....	26
2.2.2 HDMI Connection.....	27
2.2.3 TV Connection.....	28
2.2.4 Supported Output Ports and Resolutions.....	30
<b>3 SYSTEM MAINTENANCE .....</b>	<b>31</b>
3.1 SYSTEM MAINTENANCE INTRODUCTION .....	32
3.2 ANTI-STATIC PRECAUTIONS .....	32
3.3 TURN OFF THE POWER .....	33
3.4 OPENING THE SYSTEM.....	33
3.4.1 Removing the Top Panel.....	33
3.5 REPLACING COMPONENTS.....	35
3.5.1 HDD Replacement .....	35
3.5.2 Memory Module Replacement .....	37
3.5.3 Internal CF Card Replacement.....	38



# List of Figures

---

Figure 1-1: iS-810WL Boot-up Screen .....	10
Figure 1-2: Player Web Management Console .....	11
Figure 2-1: CF Card Location (Front Panel) .....	17
Figure 2-2: SD Card Location (Front Panel) .....	18
Figure 2-3: PCIe mini Wireless Module .....	19
Figure 2-4: Wireless Antenna Installation .....	19
Figure 2-5: PCIe mini Socket Access Panel Removal.....	20
Figure 2-6: Open Antenna Connector Hole .....	20
Figure 2-7: TV Card and Antenna Connector Installation.....	21
Figure 2-8: Wall-mounting Bracket.....	22
Figure 2-9: Chassis Support Screws .....	23
Figure 2-10: Secure the Panel PC.....	24
Figure 2-11: Mounting Bracket Retention Screws .....	25
Figure 2-12: Wall Mount .....	25
Figure 2-13: TV-out to Component Video/S-Video Cable .....	28
Figure 3-1: Top Cover Retention Screws (Side Panels).....	34
Figure 3-2: Top Cover Retention Screws (Front Panel and Rear Panel).....	34
Figure 3-3: Front Panel Cover.....	35
Figure 3-4: HDD Bracket Retention Screws .....	35
Figure 3-5: HDD Retention Screws .....	36
Figure 3-6: HDD Installation .....	36
Figure 3-7: SO-DIMM Socket Location .....	37
Figure 3-8: DDR SO-DIMM Module Installation .....	38
Figure 3-9: Internal CF Card Socket Location .....	39
Figure 3-10: CF Card Installation.....	40

# List of Tables

---

Table 1-1: iS-810WL Specifications .....	6
Table 1-2: Packing List.....	9
Table 1-3: iS-810WL Supported Formats.....	14
Table 2-1: Output Resolution.....	30





Chapter

1

# Introduction

---

## 1.1 Important Notice

---



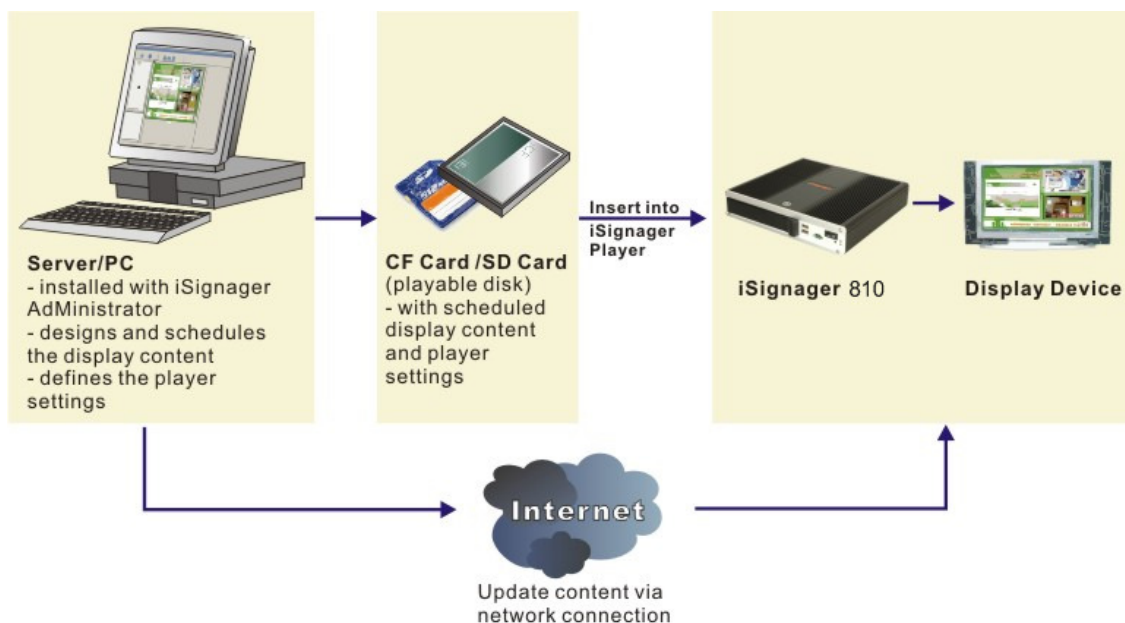
### NOTE:

This iS-810WL user manual only contains the hardware information. For the detailed information of the iSignager AdMinistrator software, please refer to the iSignager AdMinistrator user manual.

---

## 1.2 iS-810WL Overview

The iS-810WL is a multimedia digital signage player developed by INDS to design and display dynamic, visual and audio contents for a target audience. The user can update the display sources anytime anywhere. With the iS-810WL an advertising station is easily established and promotes the product and services in the simplest way.



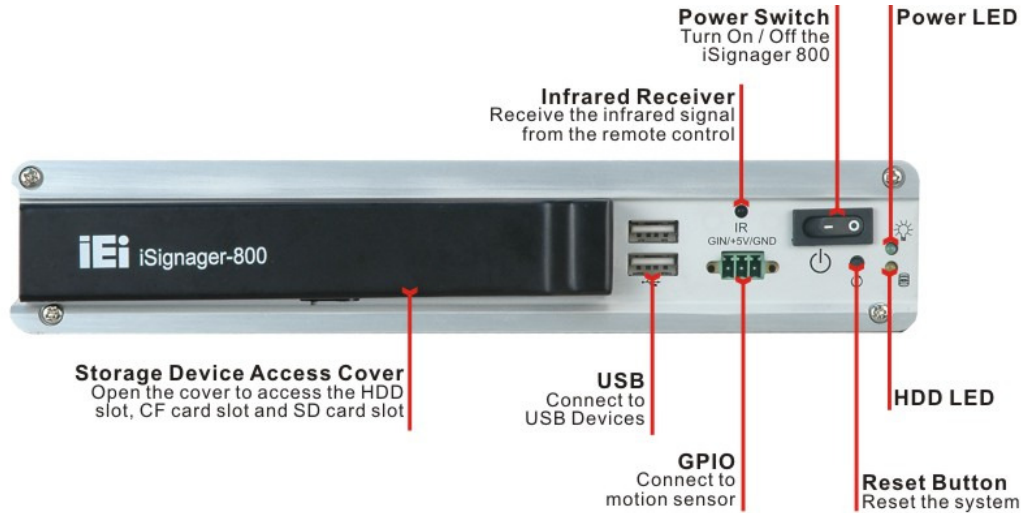
### 1.3 Features

Some of the iS-810WL features are listed below.

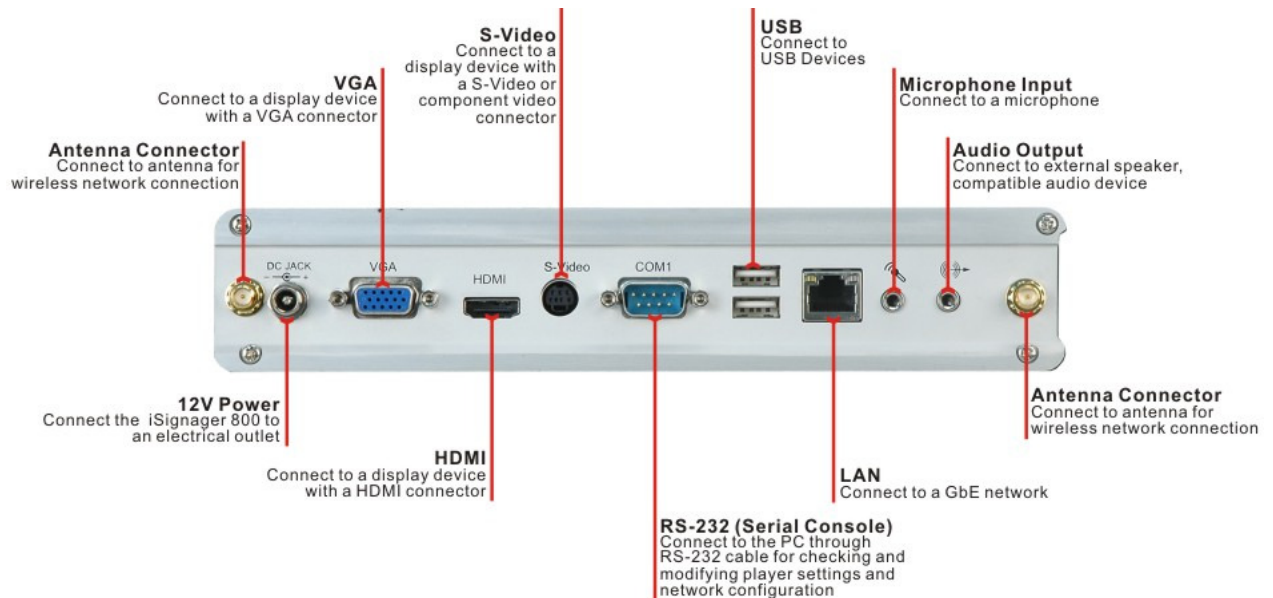
- PC-based structure allows low power consumption and provides superior reliability
- Fanless and slim design
- Preinstalled with the following components:
  - Dual Processor with Intel® Embedded processor and crystal HD video engine
  - 1.0 GB DDR2 SO-DIMM
  - 4.0 GB CF card
  - 2.5" 160 GB SATA HDD
  - Wireless LAN module
- Full HD(1080p) Video x1 and Live Video-in x1 Playback
- Free bundle with content management software, scheduling software and administration software
- Pass Vibration Test and Good for Transportation Vertical
- Fanless and slim design
- VGA/ HDMI/ S-Video/ component connectors suitable for various display
- Support 2.5" SATA HDD, CF card and SD card as the storage devices
- Built-in IR remote controller for player setting (Start Up, Shut Down, Reset)
- Built-in mini PCIe slot for extension for TV (optional)
- Support external USB capture card for Live Video & Audio input (optional)
- Built-in LAN or Wireless LAN for remote
- iSignager Software
  1. Content Management
  2. Scheduling
  3. Player Administration (Internet & LAN)

## 1.4 System Overview

### 1.4.1 iS-810WL System Overview (Front View)



### 1.4.2 iS-810WL System Overview (Rear View)



## 1.5 iS-810WL Specifications

The iS-810WL specifications are listed below.

	<b>iS-810WL</b>
<b>Processor</b>	Dual Processor with Intel® Embedded processor and crystal HD video engine
<b>Chipset</b>	Intel® 945GSE + ICH7-M
<b>Support Video Hardware Decode</b>	Support Hardware Decode Up to 1080p: H.264/ AVC, MPEG-2, VC-1, WMV9, MPEG-4, DivX, Xvid, AVS
<b>Memory</b>	1.0 GB DDR2 SO-DIMM preinstalled
<b>Video Output</b>	1 x VGA 1 x HDMI 1 x S-Video (also supports component video through S-Video to component cable)
<b>Audio Output</b>	1 x Mic-in 1 x Line-out
<b>Audio Controller</b>	Realtek ALC883 High Definition Audio controller
<b>LAN</b>	One RJ-45 GbE connector by Realtek RTL8111CP Ethernet controller
<b>Wireless LAN</b>	802.11 b/g PCIe mini card
<b>USB</b>	Four USB ports (two on the front, two on the rear)
<b>COM</b>	One RS-232 port
<b>HDD</b>	Preinstalled one 2.5" 160 GB SATA HDD
<b>Storage</b>	Two CF card slots - Built-in 4.0 GB CF card as C drive - One CF card slot on the front panel One SD card slot on the front panel
<b>Expansion</b>	One PCIe mini card slot for digital or analog TV card



iNDS Technology, Inc.

## iS-810WL Digital Signage Player

<b>Mounting</b>	VESA MIS-D 75 and MIS-D 100
<b>Infrared</b>	Infrared receiver for remote control
<b>Power Input</b>	12 V input

**Table 1-1: iS-810WL Specifications**

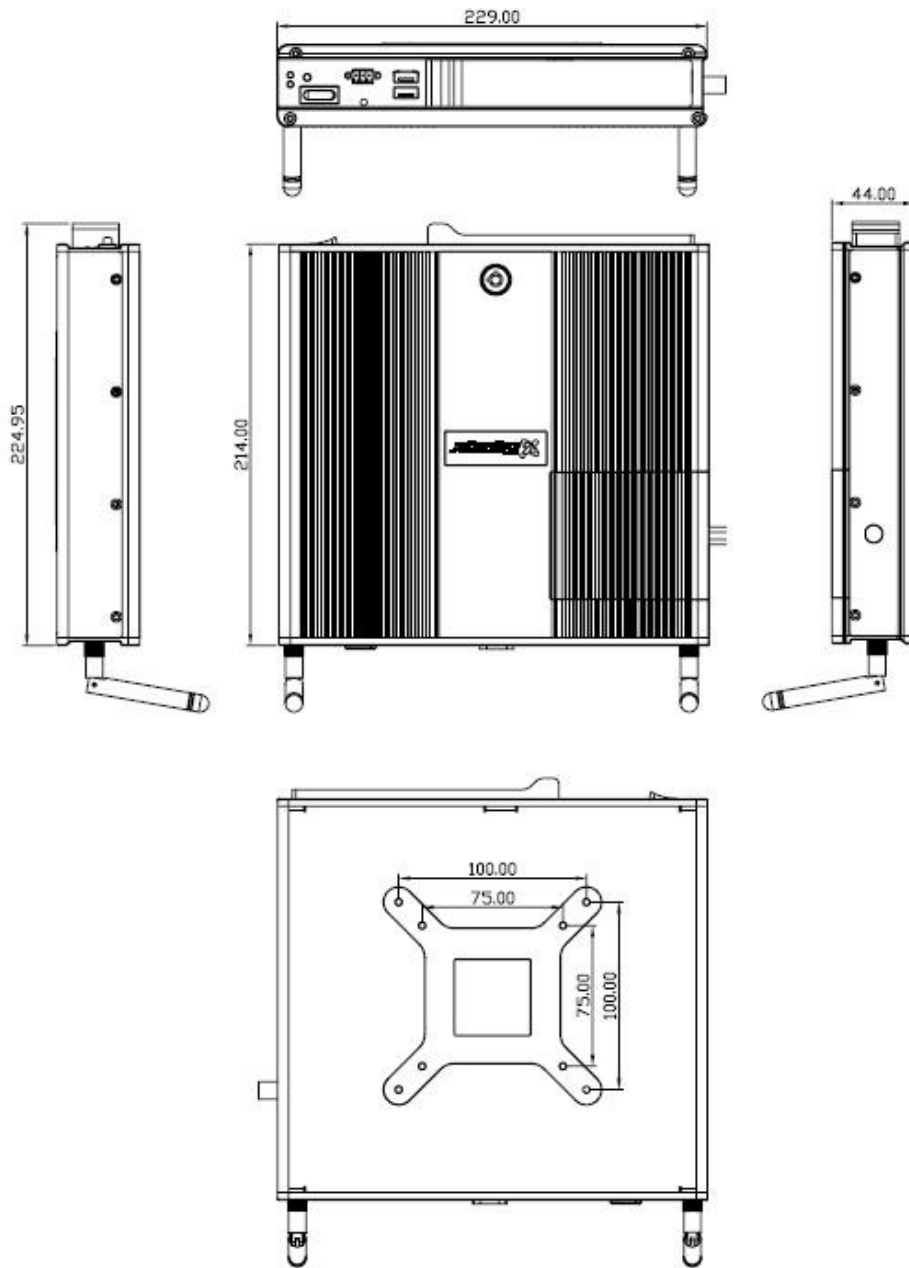
### 1.6 Dimensions

The dimensions of the iS-810WL are shown below.

- **Height:** 44.00 mm
- **Width:** 229.00 mm
- **Length:** 214.00 mm









# iS-810WL Digital Signage Player



### 1.7 Packing List

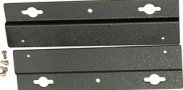

The iS-810WL is shipped with the following components. Should there be any missing parts or defects in the package, please contact INDS immediately.

Quantity	Item	Image
1	iS-810WL	
1	AC power adaptor	
1	Power cord	
1	TV-out to S-Video and component video cable	
2	Wireless antennas	
2	Keys	
1	Remote control	
1	VESA wall-mount kit	



# iS-810WL Digital Signage Player



2	Wall mount brackets	
1	Companion CD	

**Table 1-2: Packing List**

## 1.8 Before Start

### 1.8.1 Understand the Display Device

Various types of display devices are supported including,

- CRT TV
- LCD monitors
- LCD TV
- HDTV

Different devices support different input interfaces and resolutions. Please refer to the user guide of the display device for detailed information.

The iS-810WL has various output interfaces including HDMI, TV-out (to S-Video and component video), and VGA, but **only one output port can be used to deliver content at a time.**

The exact output destination and output resolution has to be configured in the iSignager AdMinistrator. Please refer to **Section 2.2** to see the connection between an iS-810WL and a display device.

### 1.8.2 Mass Storage Device – HDD, CF Card or SD Card

The iS-810WL is preinstalled with one 2.5" 160 GB SATA HDD as the system D drive in default. A CF card slot and a SD card slot are also available for another mass storage device options. Device settings and display content are saved in the mass storage device.



### 1.8.3 Web Management Console

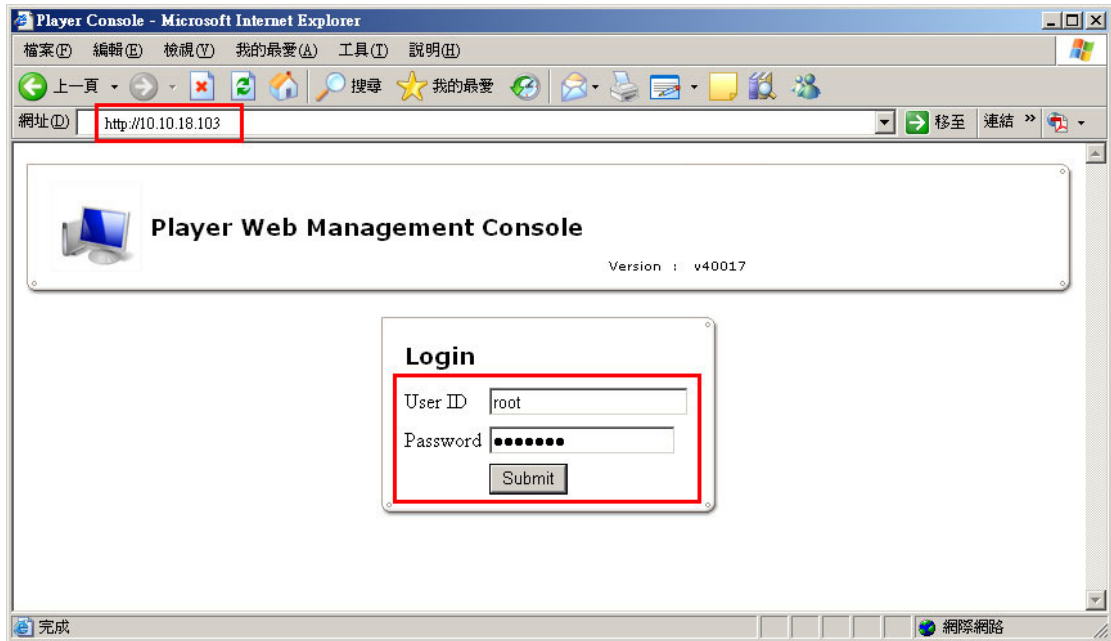
The player web management console is where user setup the player settings through network. To access the web console, the user needs to get the IP address of the player. The player IP address is shown on the boot-up screen (**Figure 1-1**).

```
Player Name : 1800_4  Version : y40017  IP Address : 10.10.18.103  Server : http://10.10.18.17:8080  
Free Space : [C: 2325.75 MB] [D: 1824.42 MB]
```

**Figure 1-1: iS-810WL Boot-up Screen**

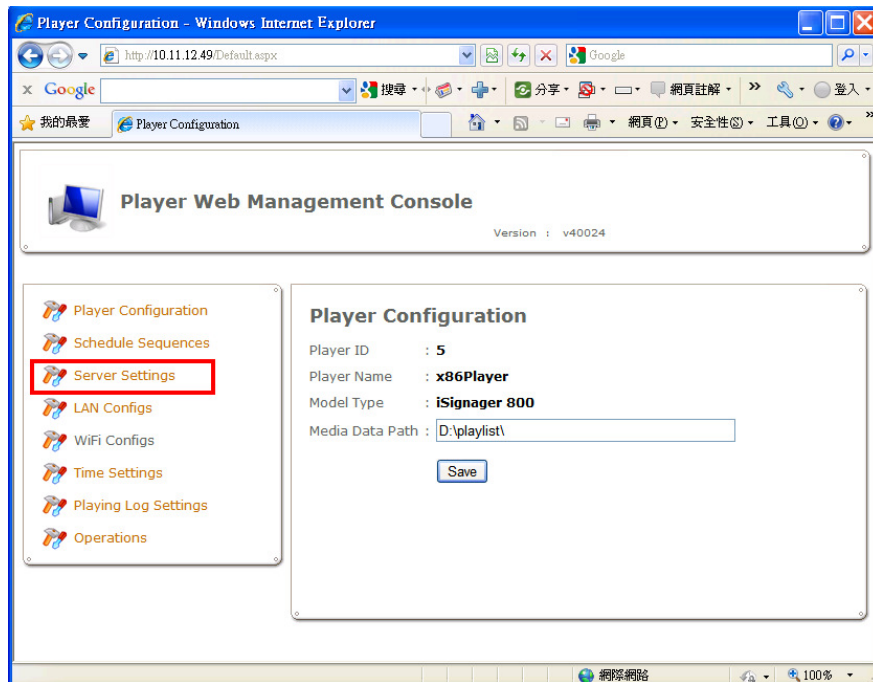
Open a web browser and input the player IP address to access the web console. Enter the user ID and password to login. The default user ID and password are as following:

- User ID: root
- Password: signage



**Figure 1-2: Player Web Management Console**

After end user login, end use need to input the sever ip address or hostname in web management console as following. End use can use the test button to confirm player can connect to server. After player connect to sever, end user can use the scan function to add a player in server control list. For more information about the player web management console, please refer to the iSignager AdAdministrator manual.



### 1.8.4 The Concept of the iSignager AdMinistrator

The iSignager AdMinistrator is the software the user can use to design and transfer the display contents for the iS-810WL. 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 AdMinistrator. For the detailed information of the iSignager AdMinistrator, please refer to the iSignager AdMinistrator user manual.

#### Layout

To design a layout is to arrange what and where the content is displayed. A layout can contains 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.

## Player

A player refers to an iS-810WL. Before transferring the sequence to the iS-810WL for broadcast, a new player must be added and configured correctly in the Player Manager of the iSignager AdMinistrator. More than one player can be added in the Player Manager of the iS-810WL.

## 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.

## 1.9 Supported Formats

The iS-810WL supports many kinds of video, audio and graphic formats. The supported formats are listed in **Table 1-3**. Detailed descriptions of each format can be found in **Appendix A**.



### NOTE:

The video in .mpe format can be run by iS-810WL, but the video length information will not be available.

---

<b>iS-810WL Supported Formats</b>
-----------------------------------

<b>Video</b>	Support Hardware Decode Up to 1080p: H.264/ AVC, MPEG-2, VC-1, WMV9, MPEG-4, DivX, Xvid, AVS
	Support Software Decode Up to 710p: MPEG-1 VCD format (1.15 Mbps CBR) [.mpg, .mpe, .mpeg, .dat, .m1v] SD and HD MPEG-2 up to 15 Mbps [.mpg, .mpe, .mpeg, .m2v, .vob, .vro] SD and HD MPEG-4 (OpenDivX, XviD, RMP4) [.avi, .divx, .mp4] AVI audio codec: MP3, AC3, PCM, WMA  <b>PS: Only can player 1 Video File or 1 Video File + Live Video In in a layout in the same time. iS-810WL will try to use hardware decode for a video file and than try to use software decoding.</b>
<b>Audio</b>	MPEG-1 Layer 1 (MP1) [.mp1, .mpa] MPEG-1 Layer 2 (MP2) [.mp2] MPEG-1 Layer 3 (MP3) [.mp3] Microsoft® PCM Wave (WAV) [.wav] Advanced Audio Coding (AAC, ADIF, ADTS) [.aac] Apple MPEG-4 AAC Audio (M4A) [.m4a] Microsoft® Windows® Media Audio version 1 and version 2 (WMA) [.wma, .asf] Microsoft® Windows® Media Audio Professional (WMA Pro) [.asf]
<b>Graphic</b>	16/24/32-bit color BMP, GIF, PNG, JPEG

**Table 1-3: iS-810WL Supported Formats**

Chapter

2

# Installation

---

### 2.1 Hardware Installation

#### 2.1.1 iS-810WL Set-Up

To set up the iS-810WL, follow the steps below:

**Step 1:** Connect the player to the display device. Please refer to **Section 2.2** for connection of various kinds of video and audio output signals. To be able to configure various display devices, please install the iSignager AdAdministrator first and add a new player in the player setting.

**Step 2:** Install the TV card (refer to **Section 2.1.4**) and connect video input to the player (if available).

**Step 3:** Connect the iS-810WL to the network.

**LAN:** connect the LAN cable to the RJ-45 connector of the iS-810WL.

**Wireless LAN:** connect the antenna to the antenna connectors of the iS-810WL.

**Step 4:** Mount the iS-810WL. (Refer to **Section 2.1.6**)

**Step 5:** Connect the player to the power supply and turn on the iS-810WL.



**NOTE:**

After the hardware installation, please use the iSignager AdAdministrator to design the display content and transfer the content to the iS-810WL through network. If the network is failed, a CF card or a SD card can be used to update the display content and player settings.

---



### 2.1.2 CF Card Installation (Optional)

The iS-810WL series has one CF Type II slot on the front panel. To install the CF card with display content and player settings generated by iSignager AdMinistrator, follow the instructions below.

- Step 1:** Generate a playable disk to the CF card. Follow the steps described in *Generate a Playable Disk Section* of the iSignager AdMinistrator user manual to copy the player settings and the sequence to the CF card. Disconnect the CF card from the computer.
- Step 2:** Open the protection cover from the front panel of the iS-810WL. Unlock the cover first if it is locked.
- Step 3:** Locate the CF slot on the front panel.
- Step 4:** Insert the playable CF card into the slot (**Figure 2-1**).



Figure 2-1: CF Card Location (Front Panel)

- Step 5:** Close the plastic cover.

### 2.1.3 SD Card Installation (Optional)

The iS-810WL series has one SD card slot on the front panel. To install the SD card with display content and player settings generated by iSignager AdMinistrator, follow the instructions below.

- Step 1:** Generate a playable disk to the SD card. Follow the steps described in *Generate a Playable Disk Section* of the iSignager AdMinistrator user manual to copy the player settings and the sequence to the SD card. Disconnect the SD card from the computer.
- Step 2:** Open the protection cover from the front panel of the iS-810WL. Unlock the cover first if it is locked.
- Step 3:** Locate the SD card slot on the front panel.
- Step 4:** Insert the playable SD card into the slot (**Figure 2-2**).

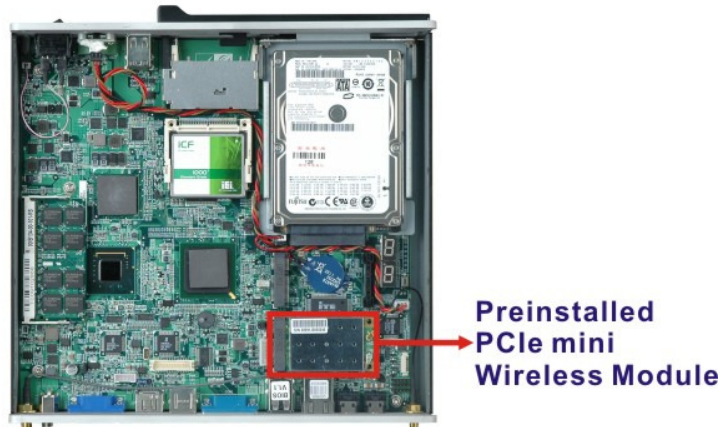


**Figure 2-2: SD Card Location (Front Panel)**

- Step 5:** Close the plastic cover.

## 2.1.4 Wireless LAN Antenna Installation

The iS-810WL is preinstalled with a PCIe mini wireless module to support wireless network connection.



**Figure 2-3: PCIe mini Wireless Module**

To ensure the uninterrupted connection, the antenna must be installed. Please follow the steps below to install the antenna.

**Step 1:** Locate the antenna connectors on the rear of the iS-810WL.

**Step 2:** Install the antenna to the connectors.



**Figure 2-4: Wireless Antenna Installation**

### 2.1.5 PCIe mini TV Card Installation (Optional)

The iS-810WL has one PCIe mini socket for installing TV card to support TV input signal. To install the PCIe mini TV card and antenna, follow the steps below.

**Step 1:** Remove the PCIe mini socket access panel from the iS-810WL. To remove the access panel, remove the retention screw of the side panel of the iS-810WL and lift the panel off. (**Figure 2-5**)



**Figure 2-5: PCIe mini Socket Access Panel Removal**

**Step 2:** Use a screw driver to open the hole for installing antenna connector (**Figure 2-6**).



**Figure 2-6: Open Antenna Connector Hole**

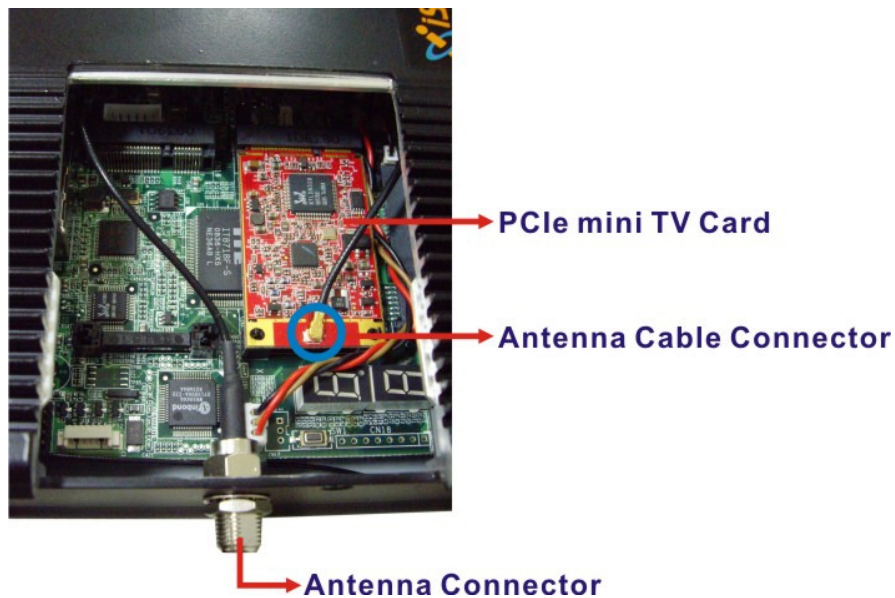
## iS-810WL Digital Signage Player



**Step 3:** Insert the antenna connector into the hole and secure it to the iS-810WL (**Figure 2-7**).

**Step 4:** Install the PCIe mini TV card to the PCIe mini socket.

**Step 5:** Connect the antenna cable to the PCIe mini TV card (**Figure 2-7**).



**Figure 2-7: TV Card and Antenna Connector Installation**

### 2.1.6 Mounting the iS-810WL

#### 2.1.6.1 Mounting the System with VESA Wall Mount Kit

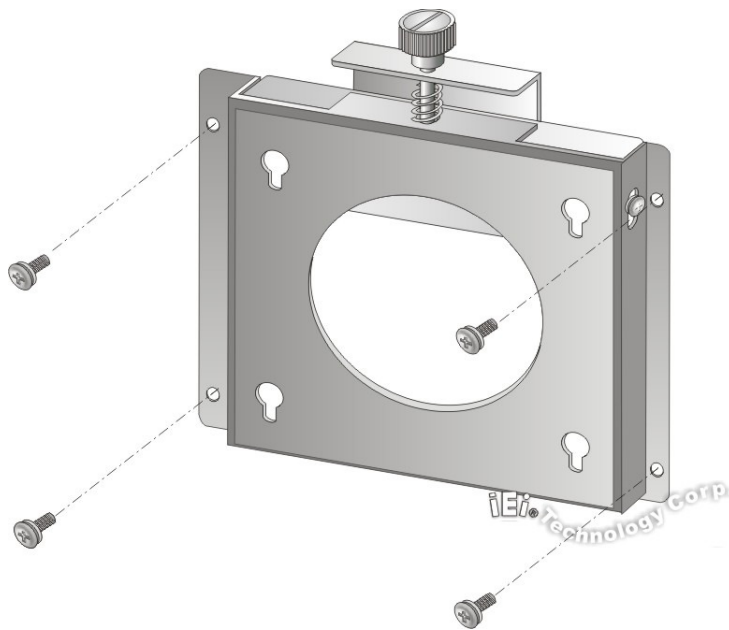
To mount the iS-810WL onto a wall using the VESA MIS-D 75 or 100 wall mount kit, please follow the steps below.

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

**Step 2:** Carefully mark the locations of the four bracket 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 2-8**).



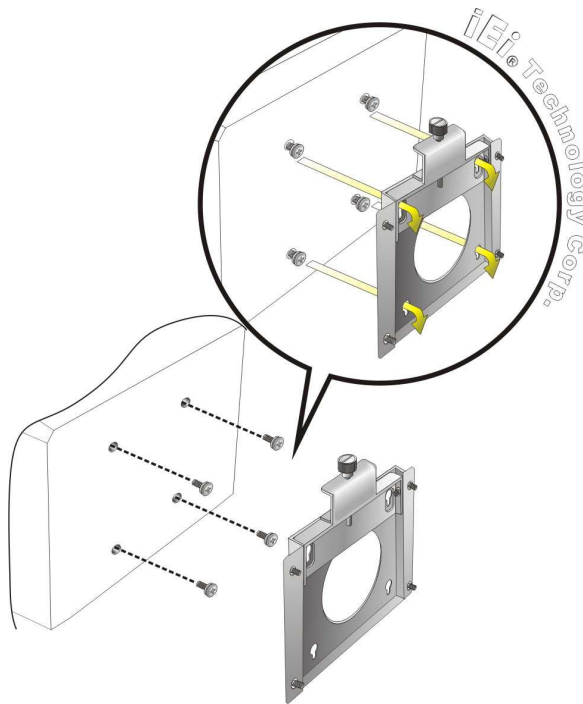
**Figure 2-8: Wall-mounting Bracket**

- Step 6:** Insert the four monitor mounting screws provided in the wall mounting kit into the four screw holes on the bottom panel of the system and tighten until the screw shank is secured against the bottom panel.
- Step 7:** Align the mounting screws on the iS-810WL bottom 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 iS-810WL rests securely in the slotted holes. Ensure that all four of the mounting screws fit snugly into their respective slotted holes.



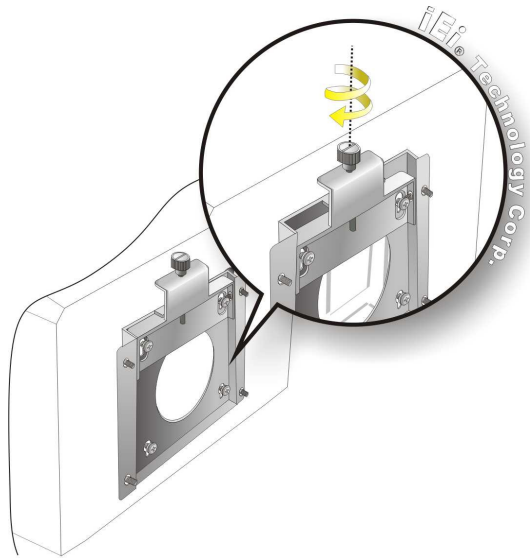
**NOTE:**

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



**Figure 2-9: Chassis Support Screws**

**Step 9:** Secure the embedded system by fastening the retention screw of the wall-mounting bracket.



**Figure 2-10: Secure the Panel PC**

### 2.1.6.2 Mounting the System with Mounting Brackets

To mount the iS-810WL onto a wall or some other surface using the two mounting brackets, please follow the steps below.

**Step 1:** Turn the iS-810WL over.

**Step 2:** Align the two retention screw holes in each bracket with the corresponding retention screw holes on the sides of the bottom surface.

**Step 3:** Secure the brackets to the system by inserting two retention screws into each bracket.





**Figure 2-11: Mounting Bracket Retention Screws**

- Step 4:** Drill holes in the intended installation surface.
- Step 5:** Align the mounting holes in the sides of the mounting brackets with the predrilled holes in the mounting surface.
- Step 6:** Insert four retention screws, two in each bracket, to secure the system to the wall.



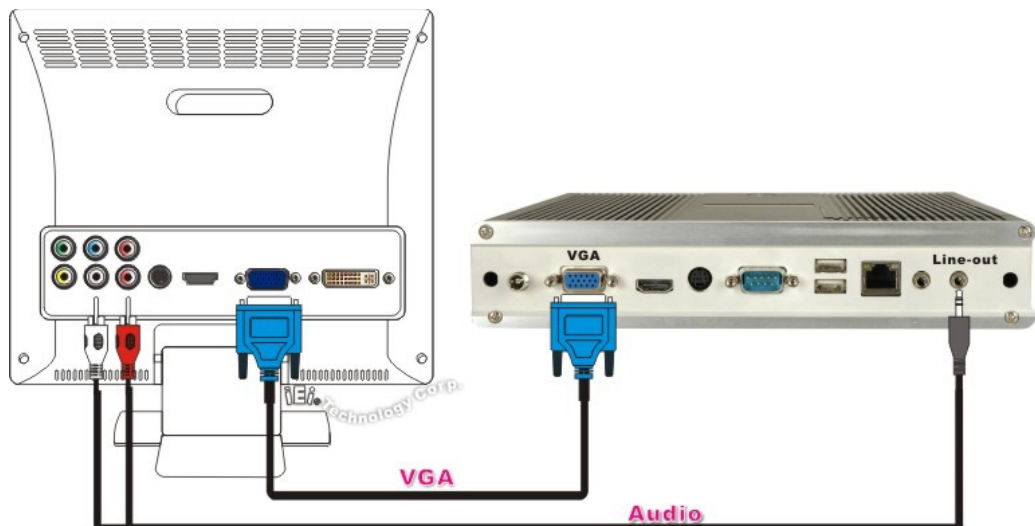
**Figure 2-12: Wall Mount**

### 2.2 iS-810WL and Display Device Connection

#### 2.2.1 VGA Connection

To connect the iS-810WL to a VGA display device, follow the instructions below.

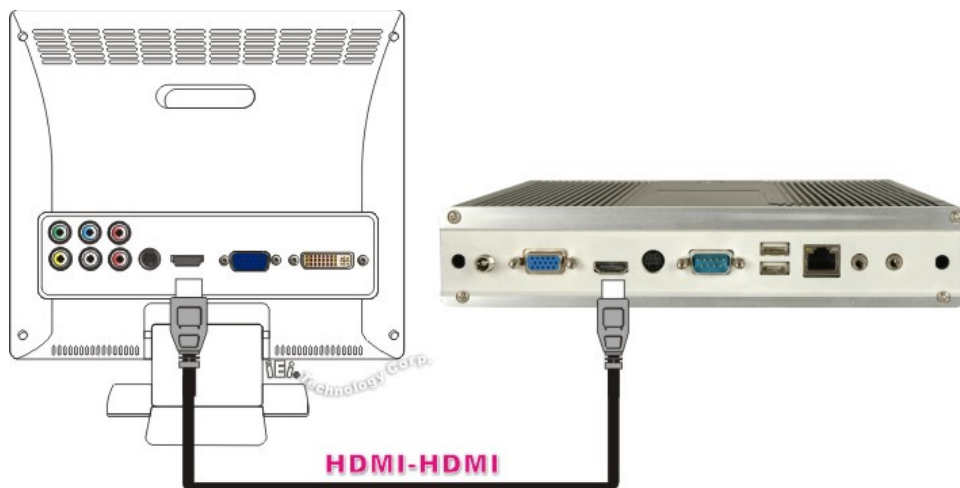
- Step 1:** Connect the VGA cable to the VGA port on the rear panel of the iS-810WL. Connect the other side of the VGA cable to the display device.
- Step 2:** Connect the audio cable to the audio output ports on the rear panel of the iS-810WL. Connect the other side of the audio cable to the audio input ports of the display device.



## 2.2.2 HDMI Connection

To connect the iS-810WL to a HDMI display device, follow the instructions below.

- Step 1:** Connect the HDMI cable (optional item from INDS) to the HDMI port on the rear panel of the iS-810WL. Connect the other side of the HDMI cable to the HDMI port of the display device.
- Step 2:** Connect the audio cable to the audio output port on the rear panel of the iS-810WL. Connect the other side of the audio cable to the audio input port of the display device.



### 2.2.3 TV Connection

To connect the iS-810WL to a TV, please use the TV-out to component video/S-Video cable (**Figure 2-13**) that come with the iS-810WL.

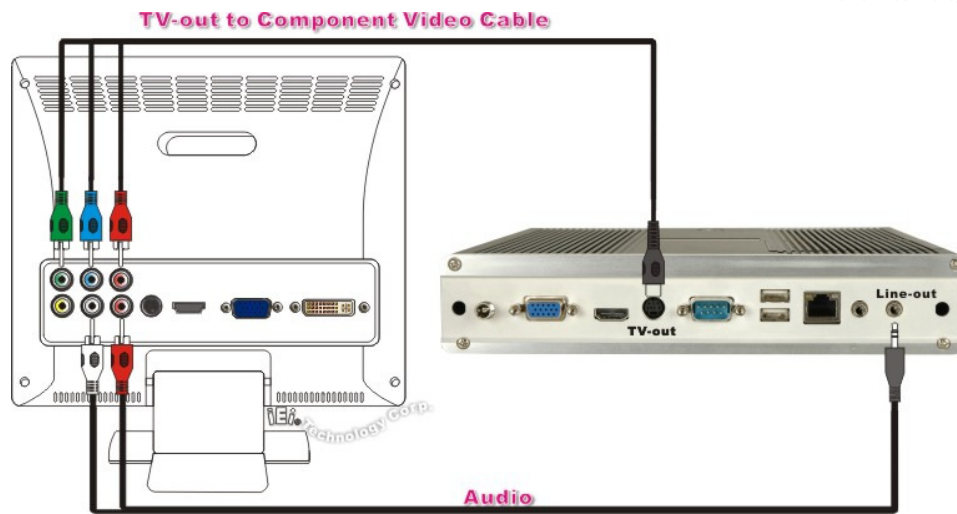


**Figure 2-13: TV-out to Component Video/S-Video Cable**

#### 2.2.3.1 Component Video Connection

To connect the iS-810WL to a TV with component video interface, follow the instructions below.

- Step 1:** Connect the TV-out to component video/S-Video cable to the TV output port on the rear panel of the iS-810WL. Connect the component video connectors on the other side of the cable to the component video ports of the display device.
- Step 2:** Connect the audio cable to the audio output port on the rear panel of the iS-810WL. Connect the other side of the audio cable to the audio input ports of the display device.

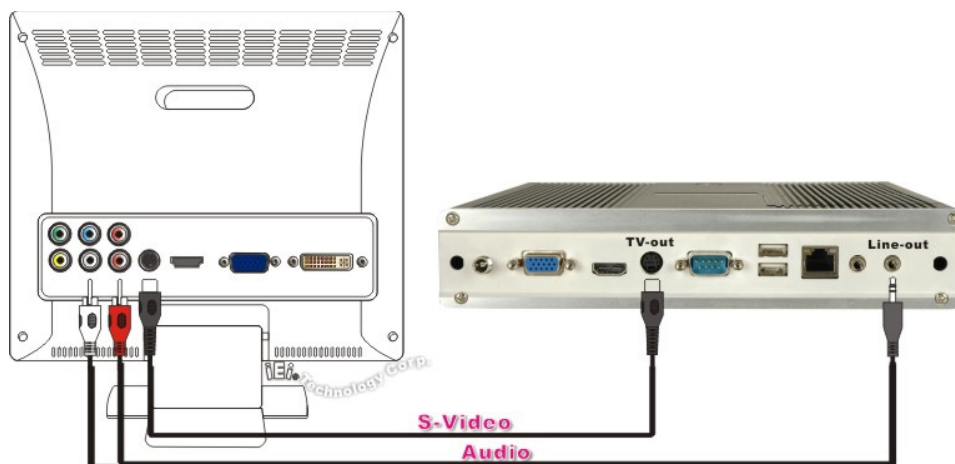


## 2.2.3.2 S-Video Connection

To connect the iS-810WL to a TV with S-Video interface, follow the instructions below.

**Step 1:** Connect the TV-out to component video/S-Video cable to the TV output port on the rear panel of the iS-810WL. Connect the S-Video connector on the other side of the cable to the S-Video port of the display device.

**Step 2:** Connect the audio cable to the audio output port on the rear panel of the iS-810WL. Connect the other side of the audio cable to the audio input ports of the display device.



## 2.2.4 Supported Output Ports and Resolutions

The iS-810WL supports multiple resolutions for different output ports. The supported output resolutions are listed in **Table 2-1**.

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

**Table 2-1: Output Resolution**

Chapter

3

# System Maintenance

---

### 3.1 System Maintenance Introduction

If the components of the iS-810WL series fail they must be replaced. Components that can be replaced include:

- HDD
- CF Module
- SO-DIMM module
- Wireless LAN module

Please contact the system reseller or vendor to purchase the replacement parts. Top cover removal instructions for the iS-810WL series are described below.

### 3.2 Anti-static Precautions

---



#### **WARNING:**

Failure to take ESD precautions during the maintenance of the iS-810WL may result in permanent damage to the iS-810WL and severe injury to the user.

---

Electrostatic discharge (ESD) can cause serious damage to electronic components, including the iS-810WL. Dry climates are especially susceptible to ESD. It is therefore critical that whenever the panel PC is accessed internally, or any other electrical component is handled, the following anti-static precautions are strictly adhered to.

- **Wear an anti-static wristband:** - Wearing a simple anti-static wristband can help to prevent ESD from damaging the board.
- **Self-grounding:** - Before handling the board touch any grounded conducting material. During the time the board is handled, frequently touch any conducting materials that are connected to the ground.
- **Use an anti-static pad:** - When configuring the iS-810WL, place it on an anti-static pad. This reduces the possibility of ESD damaging the iS-810WL.



- **Only handle the edges of the PCB:** - When handling the PCB, hold the PCB by the edges.

### 3.3 Turn off the Power

---



#### **WARNING:**

Failing to turn off the system before opening it can cause permanent damage to the system and serious or fatal injury to the user.

---

Before any maintenance procedures are carried out on the system, make sure the system is turned off.

### 3.4 Opening the System

#### 3.4.1 Removing the Top Panel

To access the iS-810WL internally the top panel must be removed. To remove the top panel, please follow the steps below.

**Step 1:** Follow all anti-static procedures. See Section 3.2.

**Step 2:** Turn off the power. See Section 3.3.

**Step 3:** Remove the retention screws on both side panels (Figure 3-1).



Figure 3-1: Top Cover Retention Screws (Side Panels)

**Step 4:** Remove the retention screws from the rear panel and front panel.



Figure 3-2: Top Cover Retention Screws (Front Panel and Rear Panel)

**Step 5:** Make sure the front cover is unlocked. If not, use the key to unlock the front cover.

**Step 6:** Lift the cover off the iS-810WL.

## 3.5 Replacing Components

### 3.5.1 HDD Replacement

The iS-810WL is preinstalled with a 160 GB SATA HDD. If the HDD is fail, follow the instructions below to replace the HDD.

**Step 1:** Open the protection cover from the front panel of the iS-810WL (Figure 3-3).

Unlock the cover first if it is locked.



Figure 3-3: Front Panel Cover

**Step 2:** Remove the HDD bracket. The HDD bracket is secured to the iS-810WL with two retention screws (Figure 3-4). Remove the two retention screws and pull the bracket out of the iS-810WL.



Figure 3-4: HDD Bracket Retention Screws

**Step 3:** Remove the HDD from the bracket by removing the four retention screws on both sides.

**Step 4:** Attach the HDD bracket to the new HDD. To do this, align the four retention screw holes on both sides of the HDD bracket with the retention screw holes on the sides of the HDD. Insert four retention screws into the HDD bracket. Connect the IDE cable to the rear of the HDD.



Figure 3-5: HDD Retention Screws

**Step 5:** Insert the HDD into the iS-810WL.



Figure 3-6: HDD Installation

**Step 6:** **Secure the HDD to the iS-810WL.** Align the retention screw holes in the HDD bracket with the retention screw holes on the iS-810WL. Insert the two previously removed retention screws.

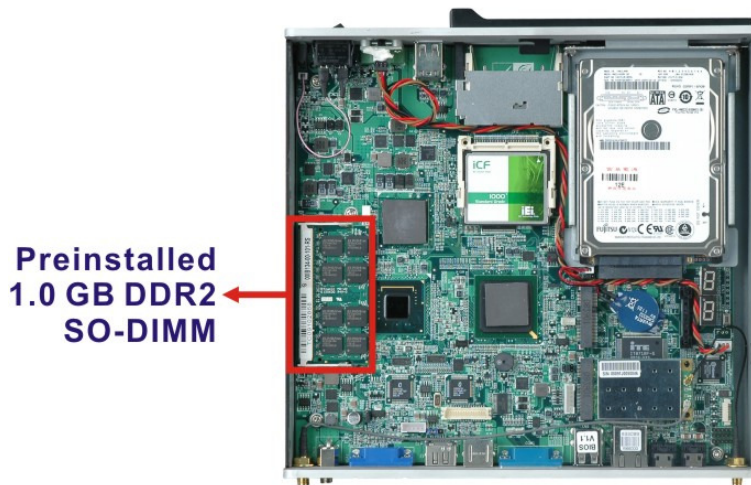
**Step 7:** Close and lock the protection cover.

## 3.5.2 Memory Module Replacement

The flat panel PC is preinstalled with a 1.0 GB DDR2 memory module. If the memory module is fail, follow the instructions below to replace the memory module.

**Step 1:** Remove the top cover. See **Section 3.4.1** above.

**Step 2:** Locate the DDR2 SO-DIMM on the motherboard (**Figure 3-7**).

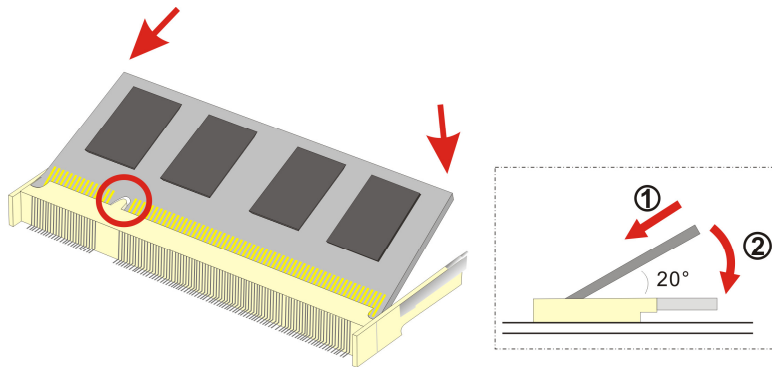


**Figure 3-7: SO-DIMM Socket Location**

**Step 3:** Remove the DDR memory module by pulling both the spring retainer clips outward from the socket.

**Step 4:** Grasp the DDR memory module by the edges and carefully pull it out of the socket.

- Step 5:** Install the new DDR memory module by pushing it into the socket at an angle (**Figure 3-8**).
- Step 6:** Gently pull the spring retainer clips of the SO-DIMM socket out and push the rear of the DDR memory module down (**Figure 3-8**).
- Step 7:** Release the spring retainer clips on the SO-DIMM socket. They clip into place and secure the DDR memory module in the socket.

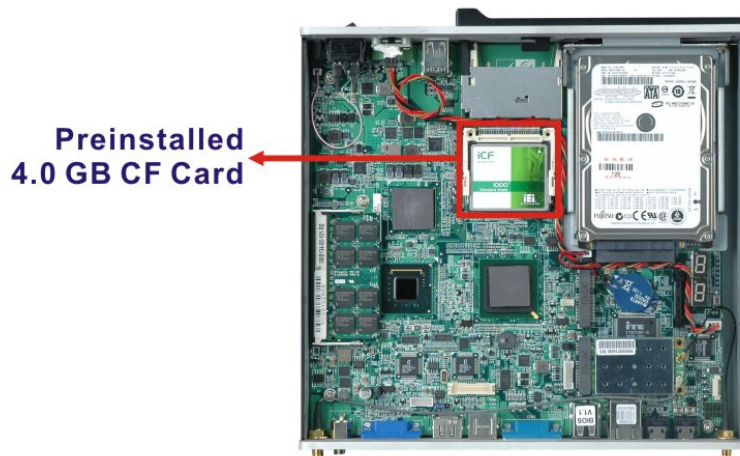


**Figure 3-8: DDR SO-DIMM Module Installation**

### 3.5.3 Internal CF Card Replacement

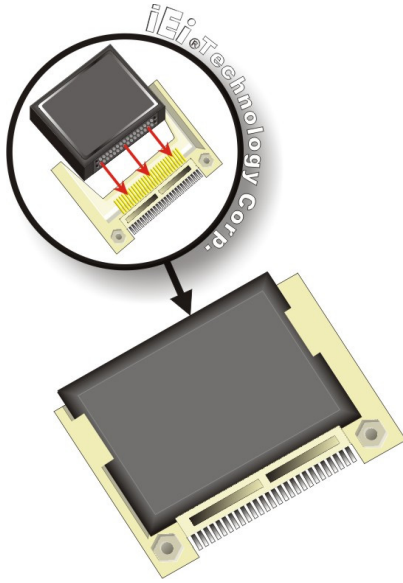
The iS-810WL series has one internal CF Type II slot on the motherboard. To replace the CF card internally, follow the instructions below.

- Step 1:** Follow all anti-static procedures. See **Section 3.2**.
- Step 2:** Turn off the power. See **Section 3.3**.
- Step 3:** Remove the top panel. See **Section 3.4.1**.
- Step 4:** Locate the CF card socket.



**Figure 3-9: Internal CF Card Socket Location**

- Step 5:** Remove the CF card from the socket.
- Step 6:** Align the new CF card. Make sure the CF card is properly aligned with the CF socket.
- Step 7:** Insert the new CF card. Gently insert the CF card into the socket making sure the socket pins are properly inserted into the socket. See **Figure 3-10**.



**Figure 3-10: CF Card Installation**



Appendix

A

# Video, Audio and Graphic Formats

---

### A.1 Overview of Video Formats

#### A.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.

#### A.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.

#### A.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.

#### A.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.

### **A.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.

### **A.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.

### **A.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).

### A.2 Overview of Audio Formats

#### A.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.

#### A.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.

#### A.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.

#### A.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.

#### A.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.

### A.3 Overview of Graphic Formats

#### A.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, .jif, .jpg, .JPG, or .JPE although .jpg is the most common on all platforms.

#### A.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.

#### A.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.

### A.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.

## A.4 Standard Definition (SD) Introduction

### A.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.

## A.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).

### A.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.

### A.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,



iNDS Technology, Inc.

## iS-810WL Digital Signage Player

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

B

# Connection Checking

---

### B.1 Checking Connection

There are several ways to check if the connection exists between the iS-810WL and PC.

#### B.1.1 Check the LED

Check the LEDs on the top of the LAN port in the rear panel of the iS-810WL. 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.

#### B.1.2 Ping in DOS Environment or Hyper Terminal Session

##### B.1.2.1 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
```

##### B.1.2.2 iS-810WL

To check if the specific IP connection exists in the client side, check in a Hyper Terminal session of the iS-810WL. To create a Hyper Terminal session, please refer to **Section B.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
```

### **B.1.3 Check the Status in the Player Manager**

The iSignager AdMinistrator 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.

### **B.2 iS-810WL Network Behavior**

The user can setup LAN and Wifi settings in the iS-810WL at the same time. However, the iS-810WL takes LAN as the first priority by default when booting up. If the LAN is successfully activated, the iS-810WL does not activate the Wifi settings. The Wifi settings is activated only when the LAN activation process is failed.

Appendix

C

# Hazardous Materials Disclosure

---

## **C.1 Hazardous Material Disclosure Table for IPB Products Certified as RoHS Compliant Under 2002/95/EC Without Mercury**

The details provided in this appendix are to ensure that the product is compliant with the Peoples Republic of China (China) RoHS standards. The table below acknowledges the presences of small quantities of certain materials in the product, and is applicable to China RoHS only.

A label will be placed on each product to indicate the estimated “Environmentally Friendly Use Period” (EFUP). This is an estimate of the number of years that these substances would “not leak out or undergo abrupt change.” This product may contain replaceable sub-assemblies/components which have a shorter EFUP such as batteries and lamps. These components will be separately marked.

Please refer to the table on the next page.

Part Name	Toxic or Hazardous Substances and Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (CR(VI))	Polybrominated Biphenyls (PBB)	Polybrominated Diphenyl Ethers (PBDE)
Housing	X	O	O	O	O	X
Display	X	O	O	O	O	X
Printed Circuit Board	X	O	O	O	O	X
Metal Fasteners	X	O	O	O	O	O
Cable Assembly	X	O	O	O	O	X
Fan Assembly	X	O	O	O	O	X
Power Supply Assemblies	X	O	O	O	O	X
Battery	O	O	O	O	O	O
<p>O: This toxic or hazardous substance is contained in all of the homogeneous materials for the part is below the limit requirement in SJ/T11363-2006</p> <p>X: This toxic or hazardous substance is contained in at least one of the homogeneous materials for this part is above the limit requirement in SJ/T11363-2006</p>						

## iS-810WL Digital Signage Player



此附件旨在确保本产品符合中国 RoHS 标准。以下表格标示此产品中某有毒物质的含量符合中国 RoHS 标准规定的限量要求。

本产品上会附有“环境友好使用期限”的标签，此期限是估算这些物质“不会有泄漏或突变”的年限。本产品可能包含有较短的环境友好使用期限的可替换元件，像是电池或灯管，这些元件将会单独标示出来。

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (CR(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
壳体	X	O	O	O	O	X
显示	X	O	O	O	O	X
印刷电路板	X	O	O	O	O	X
金属螺帽	X	O	O	O	O	O
电缆组装	X	O	O	O	O	X
风扇组装	X	O	O	O	O	X
电力供应组装	X	O	O	O	O	X
电池	O	O	O	O	O	O

O: 表示该有毒有害物质在该部件所有物质材料中的含量均在 SJ/T11363-2006 标准规定的限量要求以下。  
X: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T11363-2006 标准规定的限量要求。

