USER'S MANUAL

P7180

18.5" FHD TFT Railway Monitor

User's Manual

AXIOMTEK

www.axiomtek.com

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Nov 2018, Version A3

Printed in Taiwan

Safety Precautions

Before getting started, read the following important cautions.

1. Be sure to ground yourself to prevent static charge when installing the internal components. Use a grounding wrist strap and place all electronic components in any static-shielded devices. Most electronic components are sensitive to static electrical charge.

2. Disconnect the power cords from the P718O Series before making any installation. Be sure both the system and the external devices are turned OFF. Sudden surge of power could ruin sensitive components. Make sure the P718O Series is properly grounded.

3. Do not open the system's top cover. If opening the cover for maintenance is a must, only a trained technician is allowed to do so. Integrated circuits on computer boards are sensitive to static electricity. To avoid damaging chips from electrostatic discharge, observe the following precautions:

    - Before handling a board or integrated circuit, touch an unpainted portion of the system unit chassis for a few seconds. This will help to discharge any static electricity on your body.

    - When handling boards and components, wear a wrist-grounding strap, available from most electronic component stores.

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Table of Contents

Chapter 1
Introduction

This chapter contains general information and detailed specifications of the P718O. Chapter 1 includes the following sections:

- **General Description**
- **Features**
- **Specifications**
- **Dimensions and Outlines**
- **I/O Outlets**
- **Package List**

1.1 General Description

The P718O is an industrial and rail grade 18.5" LCD monitor with slim, lightweight, and reliable design to replace traditional bulky CRT in the transportation market. Its unique and flat design fit for panel mounting and VESA mounting. The display interface offers DVI-D, HDMI and VGA for different image input sources from computer or multimedia system. That allows you to upgrade the display without changing your current configuration. The rugged LCD monitor is a perfect fit for train and other mobile vehicles.

This LCD monitor builds in color active matrix thin-film-transistor (TFT) liquid crystal display to provide superior display performance. A maximum resolution of 1920x1080 is ideal for displaying complex graphics and high-definition images. Other outstanding designs to enhance the LCD monitor user experience include Plug & Play compatibility, OSD (On Screen Display) control pad and remote control. The remote control allows you to make setting adjustments via a computer from a distance.

1.2 Features

- **High contrast 18.5" FHD TFT LCD display supports resolution up to 1920x1080**
- **High brightness and ultra-wide viewing angle.**
- **VESA standard power management conformity**
- **Advanced OSD control for picture quality adjustment**
- **Remote OSD function control and management (refer to Appendix C)**

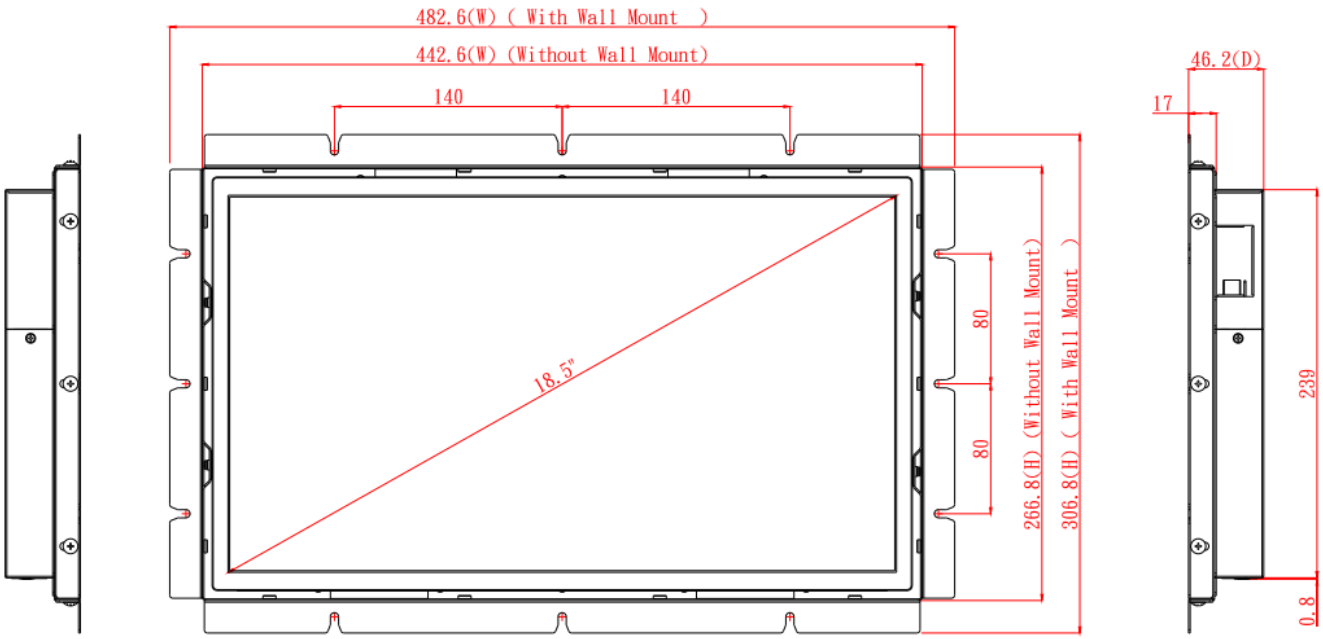
1.3 Specifications

- **18.5" FHD (1920x1080) LCD with LED backlight**
- **Control: OSD (On Screen Display) control pad**
- **Mounting: Panel mounting and VESA mounting**
- **Net Weight**
  - P718O: 3.42Kg
- **Dimension (Main Body)**
  - P718O: 442.6mm(W)*266.8mm(H)*46.2mm(D)
- **Operation Temperature**
  - -25℃ to 55℃
- **Relative Humidity**
  - 0% to 95% @ 45℃, non-condensing
- **Power input**
  - M12 A-coded Male 5 pin 24~110VDC power input

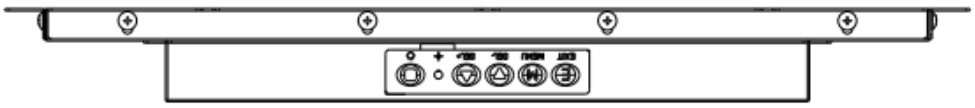
NOTE: All specifications and images are subject to change without notice.

1.4 Dimensions and Outlines

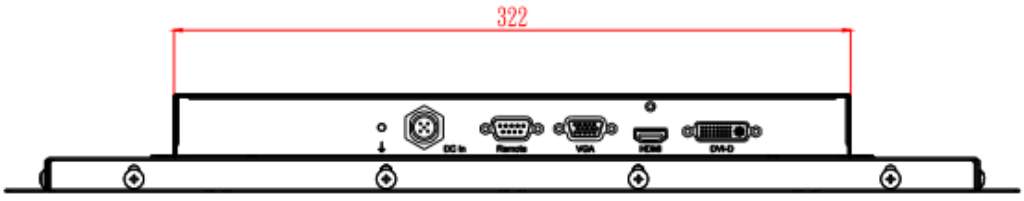
The following diagrams show the dimensions and outlines of P718O



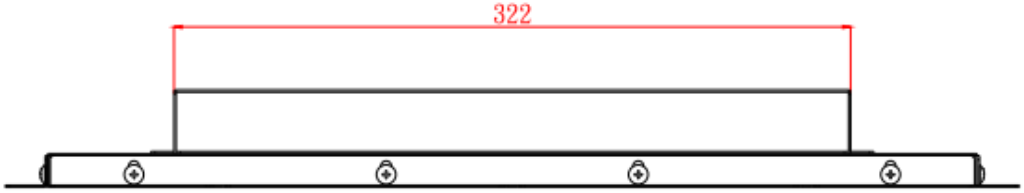
TOP Side



Bottom Side

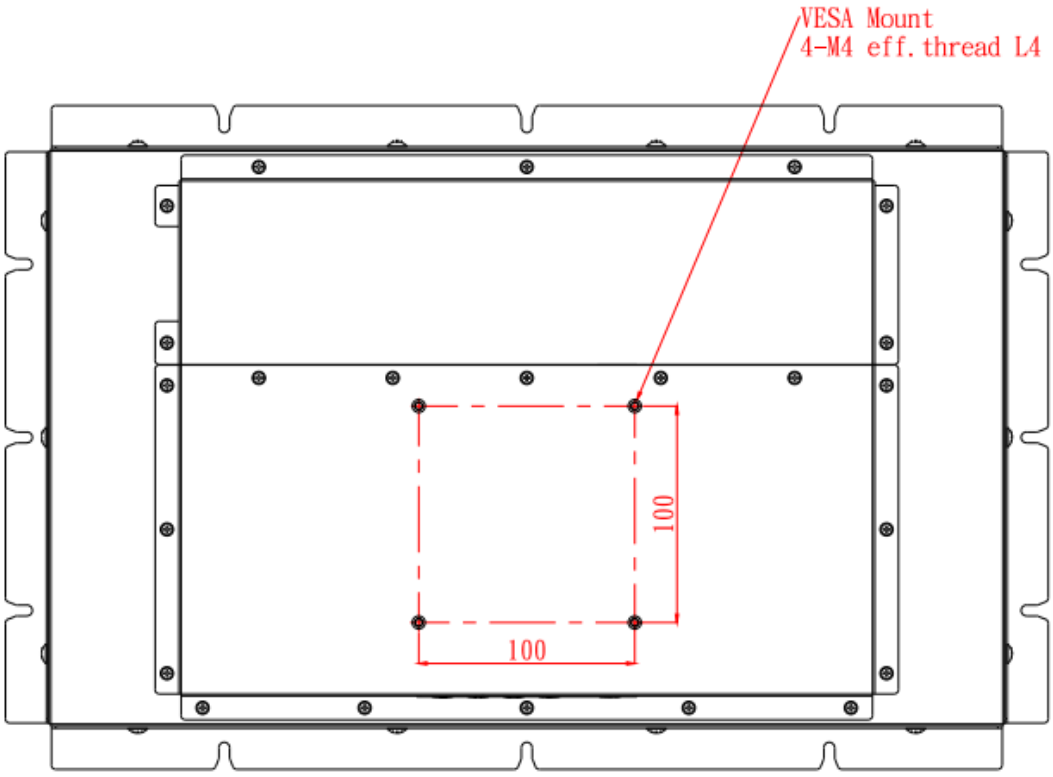


Without Junction Box

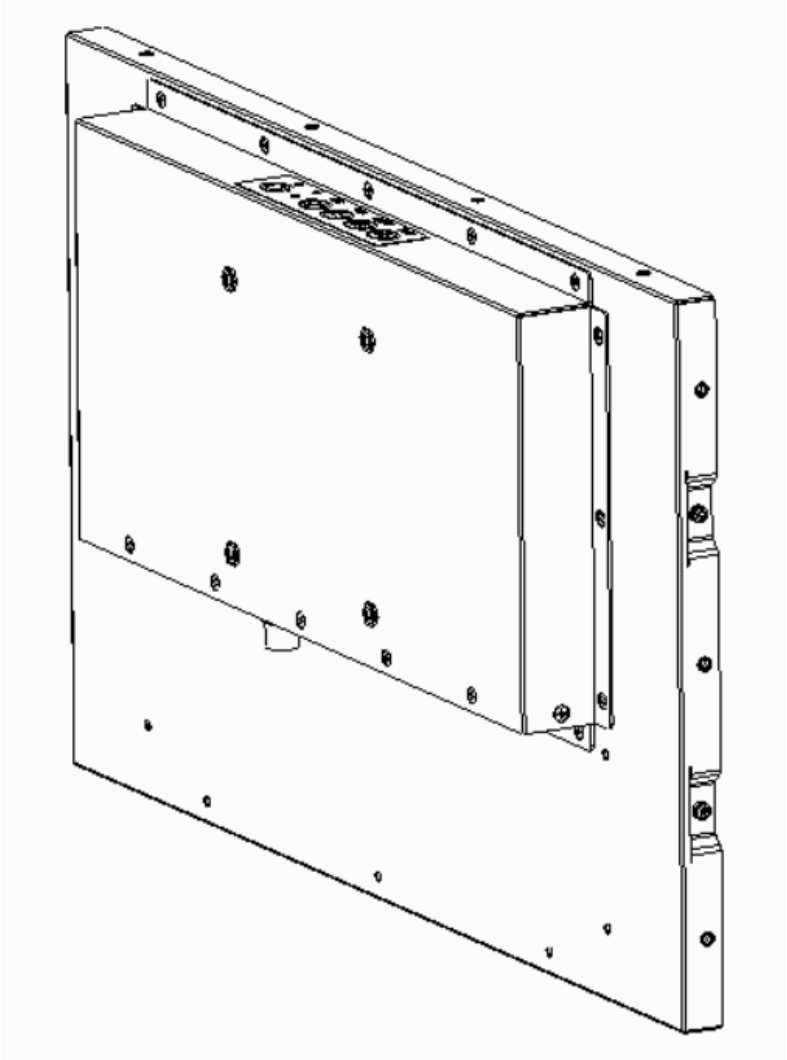


With Junction Box

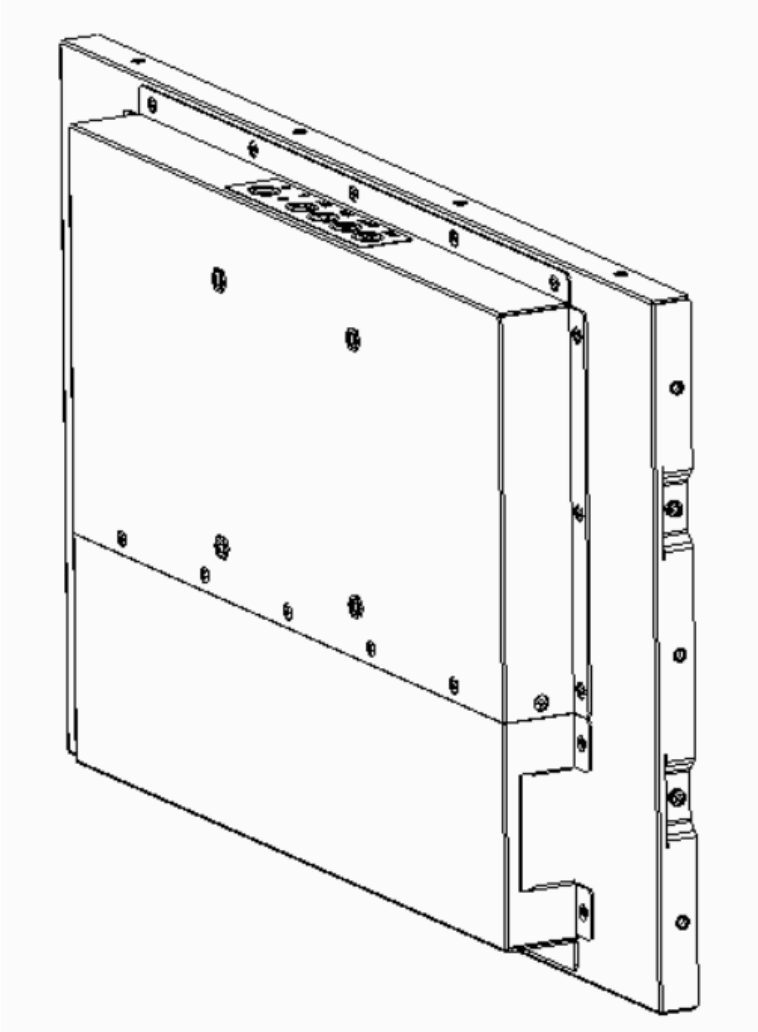
The following diagram shows the VESA mounting and cut-out dimension of P718O



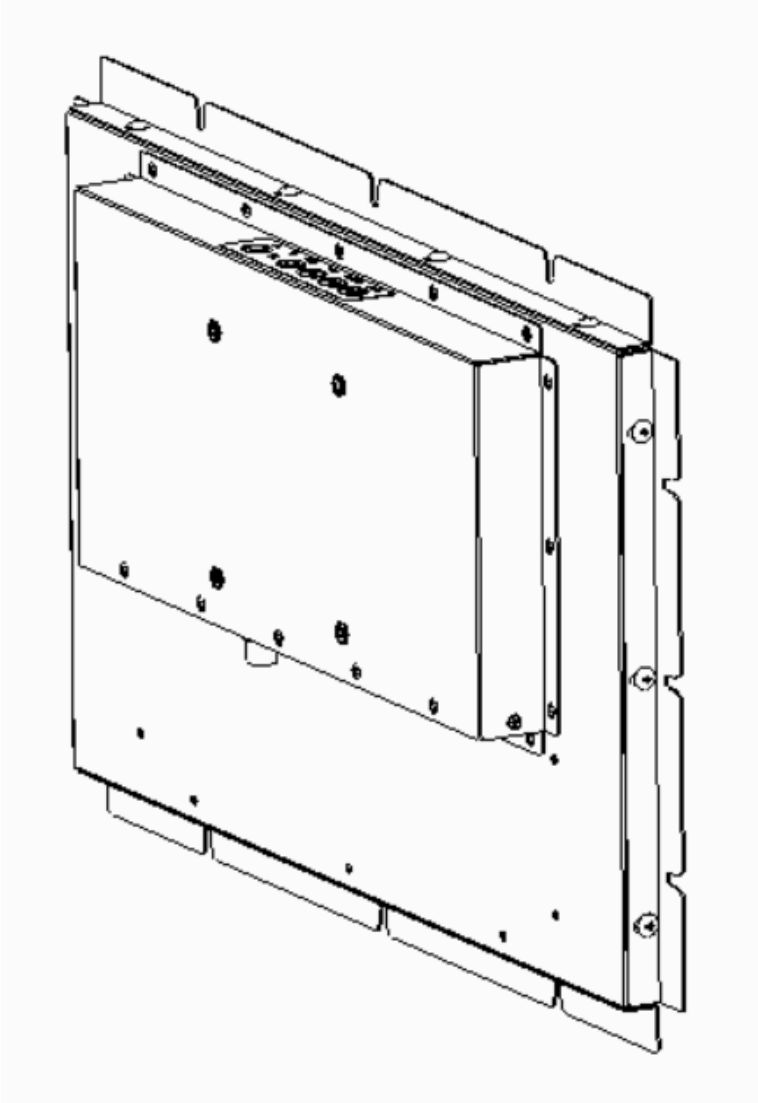
VESA Mount only (default)



With Junction Box (option)

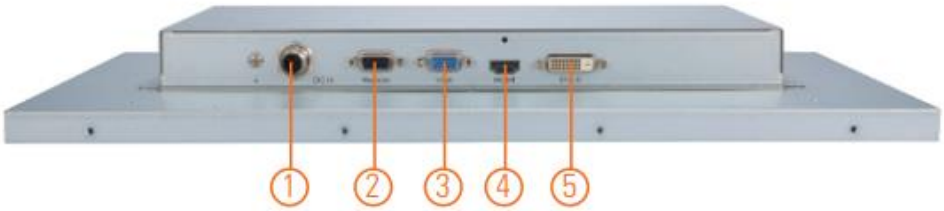


With Wall Mount (option)



1.5 I/O Outlets

The following pictures show the I/O outlets on the P718O.



No	Function	No	Function
1	M12 A-coded Male 5 pin DC power input	7	Menu (Enter function)
2	Remote control	8	SEL-
3	VGA-	9	SEL+
4	HDMI	10	Power LED
5	DVI-D	11	Power Switch
6	Exit		

1.6 Packing List

When you receive the P718O, the bundled package should contain the following items:

- **P718O unit x 1**
- **HDMI bracket x1**
- **Cable tie x1**
- **Screw M3*5L x1**

If you cannot find the package or any items are missing, please contact Axiomtek distributors immediately.

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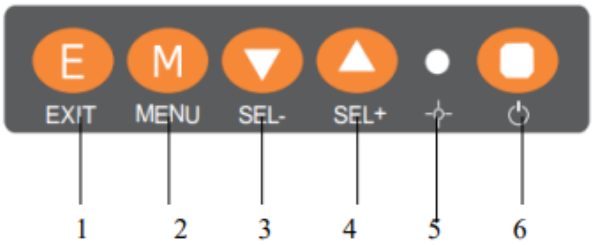
Chapter 2
System Setup

This chapter details the system parts and components with figures. Sections include:

- **System Configuration**
- **Panel Mounting**
- **VESA Mounting**
- **I/O Pin Assignment**
  - **M12 A-coded Male 5 pin DC power input**
  - **Remote control**
- **HDMI bracket installation**
- **Remote control cable**

2.1 System Configuration

The figure shows the OSD on the side of the monitor.



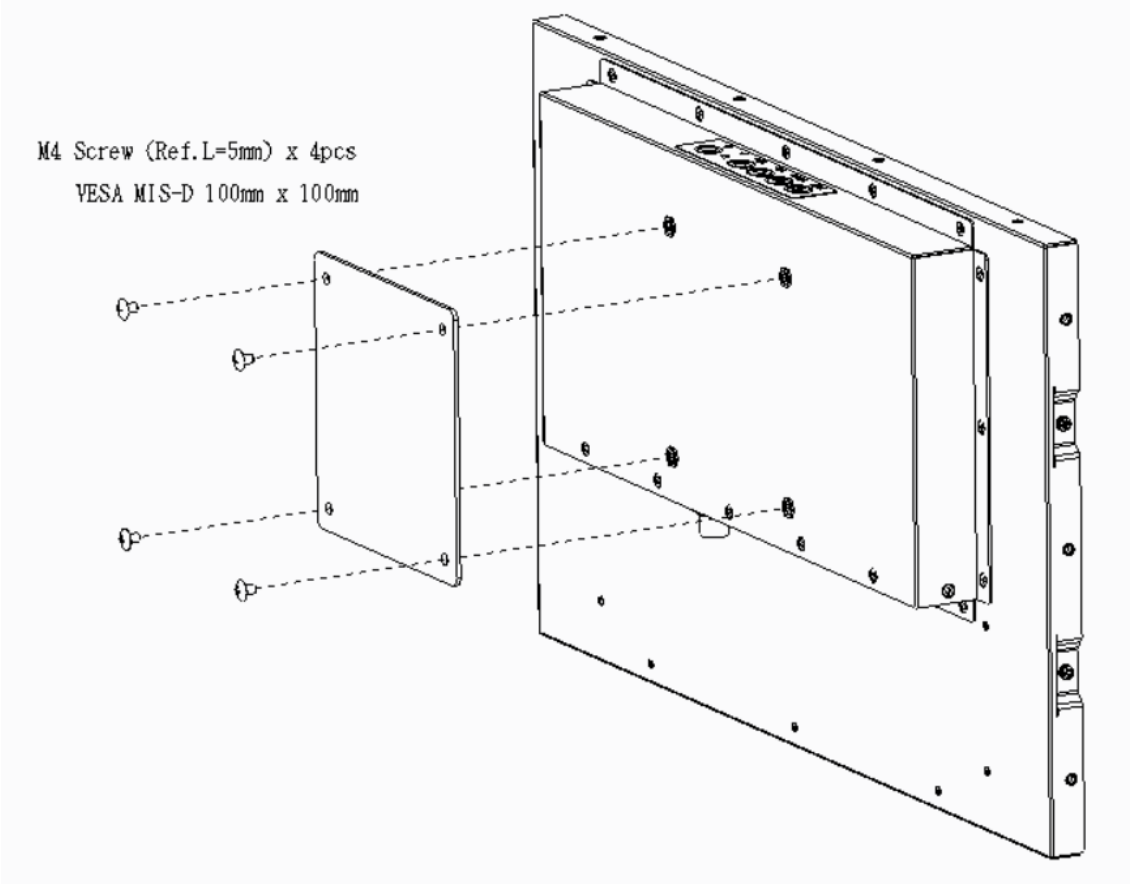
OSD Key Function	
1. Exit	When the menu is displayed on the screen, short press to exit
	When the menu is not displayed on the screen, press for Auto Adjust (VGA only)
2. Menu	Press to turn on/off the OSD main menu
	Press to execute selected items
3. SEL-	Press to scroll down the menu
	Press to decrease the level of the selected item
4. SEL+	Press to scroll up the menu
	Press to increase the level of the selected item
5. Status LED	The light turns green when the power is on
	The green light will be flashing when the monitor goes into standby mode
6. Power Key	Press to turn on/off the monitor

Hot Key	
SEL+	When the menu is not displayed on the screen, press for brightness setting

Combo Key	
(Menu) +(SEL+)	Press (Menu) + (SEL+) key for three seconds to make OSD key lock on When OSD key lock on , press any key will display Key Lock On to the monitor
	Press (Menu) + (SEL+) key again for three seconds to release the OSD lock on state

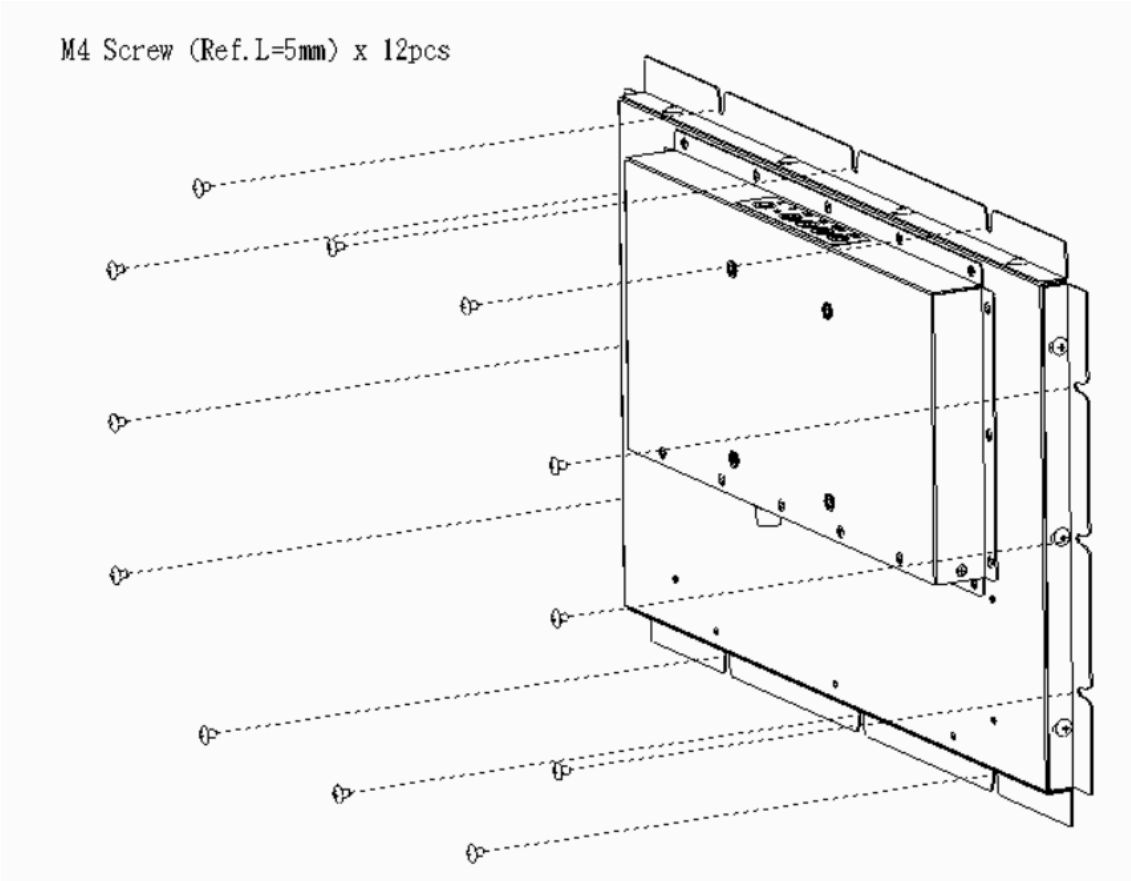
2.2 VESA Mounting

The P718O is VESA compliant. Tighten the four screws firmly to fix the kit on the back chassis.



2.3 Wall Mounting (Option)

The P718O supports Wall Mounting.
To mount the P718O, the standard holes are on the front side of the P718O.



2.4 I/O Pin Assignment

The P718O supports M12 A-coded Male 5 pin DC power input connector, remote control, VGA, HDMI, DVI-D. The diagrams below show the detailed pin assignment.

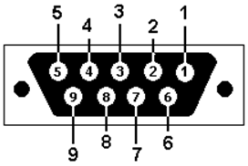
2.4.1 DC power connector

M12 A-coded Male 5 pin power input：24~110Vdc

Pin	Signal
1.	Power input
2.	Power input
3.	GND
4.	GND
5.	Earth ground

2.4.2 Remote control

Pin	Define	Pin	Define
1	Remote RXD	6	N.C
2	N.C	7	N.C
3	N.C	8	Remote TXD
4	N.C	9	N.C.
5	Ground		



2.5 HDMI bracket installation

Step 1 Align the hole on the bracket with the hole on the chassis, insert the M3 screw and fasten the screw tightly to the bracket, as the pictures shown below.

Step 2 Connect the HDMI cable to the port, insert the cable tie through the loop of the cable fixing plate to bind the HDMI connector with the bracket, as the picture shown below.

2.6 Remote control cable

Can be available for self-made by referring to the following correspondence:

Wiring Table

Connector	A	B
Type	DB9-male	DB9-female
System	P718O	PC-Remote
Pin	1	3 (Remote RXD)
	2	N.C.
	3	N.C.
	4	N.C.
	5	5 (Ground)
	6	N.C.
	7	N.C.
	8	2 (Remote TXD)
	9	N.C.

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Appendix A
Supported Input Timing Modes

VGA		HDMI		DVI-D	
Resolution	**Refresh rate**	**Resolution**	**Refresh rate**	**Resolution**	**Refresh rate**
640 x 480	60 Hz	640 x 480	60 Hz	640 x 480	60 Hz
640 x 480	72 Hz	640 x 480	72 Hz	640 x 480	72 Hz
640 x 480	75 Hz	640 x 480	75 Hz	640 x 480	75 Hz
720 x 400	70 Hz	720 x 400	70 Hz	720 x 400	70 Hz
800 x 600	56 Hz	800 x 600	56 Hz	800 x600	56 Hz
800 x 600	60 Hz	800 x 600	60 Hz	800 x600	60 Hz
800 x 600	72 Hz	800 x 600	72 Hz	800 x600	72 Hz
800 x 600	75 Hz	800 x 600	75 Hz	800 x600	75 Hz
1024 x 768	60 Hz	1024 x 768	60 Hz	1024 x 768	60 Hz
1024 x 768	70 Hz	1024 x 768	70 Hz	1024 x 768	70 Hz
1024 x 768	75 Hz	1024 x 768	75 Hz	1024 x 768	75 Hz
1280 x 720	60 Hz	1280 x 720	60 Hz	1280 x 720	60 Hz
1280 x 1024	60 Hz	1280 x 1024	60 Hz	1280 x 1024	60 Hz
1280 x 1024	75 Hz	1280 x 1024	75 Hz	1280 x 1024	75 Hz
1360 x 768	60 Hz	1360 x 768	60 Hz	1360 x 768	60 Hz
1440 x 900	60 Hz	1440 x 900	60 Hz	1440 x 900	60 Hz
1600 x 900	60 Hz	1600 x 900	60 Hz	1600 x 900	60 Hz
1680 x 1050	60 Hz	1680 x 1050	60 Hz	1680 x 1050	60 Hz
1920 x 1080	60 Hz	1920 x 1080	60 Hz	1920 x 1080	60 Hz

NOTE: Timing depends on LCD Panel's requirement.

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Appendix B
OSD Operation

Function Description of OSD Menu

※The layout and format of OSD are constructed as below:

Level 0	Level 1	Level 2	Value
Picture	Brightness		0-100
	Contrast		0-100
	Sharpness		1-4
Display	Auto Adjust		
	H Position		0-100
	V Position		0-100
	Clock		0-100
	Phase		0-100
	Rotate	0°/180°	0° (default)
Color	Gamma	Off/1.8/2.2/2.2/2.4	Off (default)
	Temperature	5800/6500/7500/9300/User	6500 (default)
	Color Effect	Standard/Game/Move/ Photo/Vivid/User	Standard (default)
	Hue		0-100
	Saturation		0-100
Advance	Aspect Ratio	Full/16:9/4:3/5:4/1:1	Full (default)
	Over Scan	Off/On	Off (default)
	DDCI/CI	Off/On	Off (default)
Input	Auto select		
	VGA		
	HDMI		
	DVI		
Other	Reset		
	Menu Time		10-60 (seconds)
	OSD H Position		0-100
	OSD V		0-100

	Position		
	Language	**English** **Spanish** **France** **German** **Italy** **Portugal** **Russia** **Chinese**	**English (default)**
	Transparency		**0-255**
	OSD Rotate	**0°/90°/180°/270°**	**0° (default)**
	Power On Status	**On/Off/User**	**On (default)**
Information	**Input Source**		
	Resolution		
	Timing Clock		
	FW Version		

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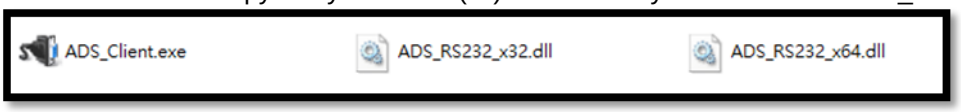
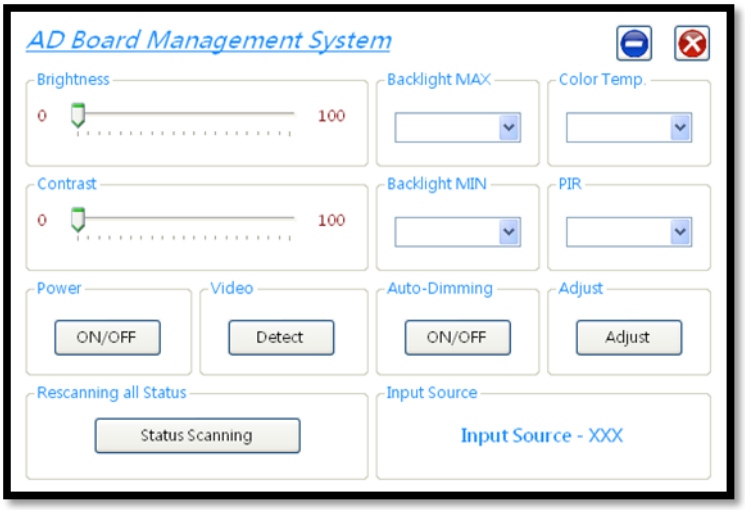
Appendix C
Remote Control Utility

File:

1. ADS_Client.exe: main application
2. ADS_RS-232_x32.dll / ADS_RS-232_x64.dll: library for application reference, have to copy to System Disk(C:):\Windows\System32 or with ADS_Client.exe

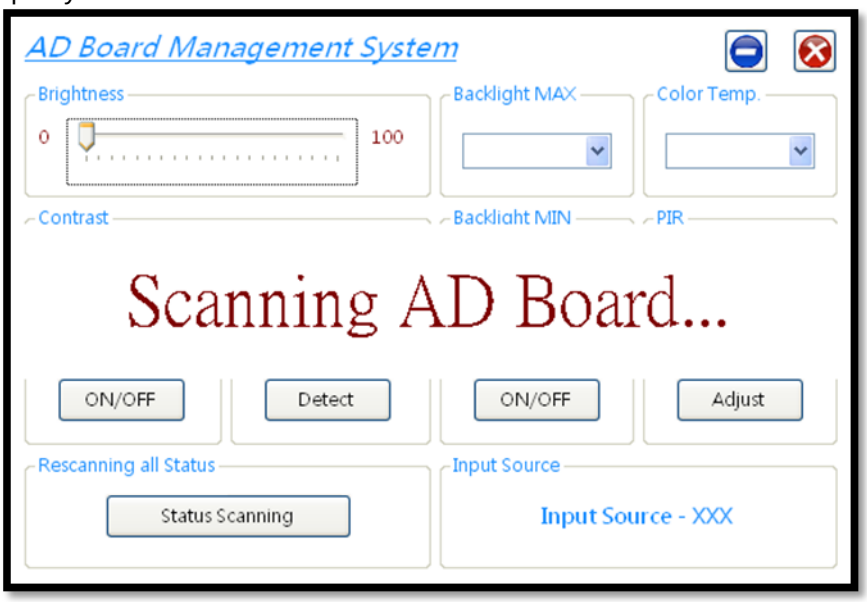


- UI



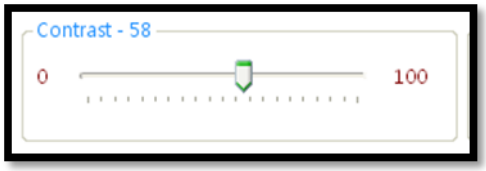
- The remote-control utility is for adjusting the system setting remote control port. The items are:
  1. Brightness scales get and set
  2. Contrast scales get and set
  3. Color Temperature scale get and set
  4. Power on/off set for monitor
  5. Adjust position of frame on the monitor (only works with monitor connecting on VGA)

- **Functions and UI on application**
  - When you start the system, it will auto scan all the serial port to find out correct port you connect to.

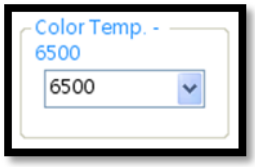


  - Control Items
    1. Brightness
       - Control: scroll bar
       - Range: 0 ~ 100
       - Remark: if the getting or setting fails, it will show "Brightness - Failed"

    2. Contrast
       - Control: scroll bar
       - Range: 0 ~ 100
       - Remark: if the getting or setting fails, it will show "Contrast - Failed"

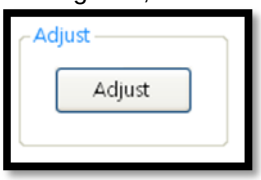


3. Color Temp.:
   - Control: drop-down list
   - Range: 6500, 7500 and 9300
   - Remark: if the getting or setting fails, it will show "Color Temp. - Failed"

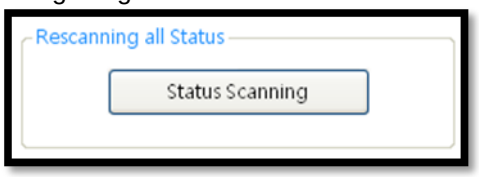


4. Power:
   - Control: button
   - Way: set only, ON and OFF
   - Remark: if the setting fails, it will show "Power - Failed"

5. Adjust:
   - Control: button
   - Way: set only, Adjust
   - Remark: if the setting fails, it will show "Adjust - Failed"



6. Rescanning all Status
   - Control: button
   - Remark: getting all status



7. Input Source
   - Control: Text box
   - Remark: showing which one is input source (DVI/VGA/HDMI)

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