OFP320 Series
31.5” Full HD Digital Signage Display

User’s Manual

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Safety Approvals

- CE Marking
- FCC Class A

FCC Compliance

This equipment has been tested in compliance with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are meant to provide reasonable protection against harmful interference in a residential installation. If not installed and used in accordance with proper instructions, this equipment might generate or radiate radio frequency energy and cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following methods:

1. Increase the separation between the equipment and receiver.
2. Connect the equipment to another outlet of a circuit that doesn't connect with the receiver.
3. Consult the dealer or an experienced radio/TV technician for help.

Shielded interface cables must be used in order to comply with the emission limits.

Safety Precautions

Before getting started, please read the following important safety precautions.

1. The OFP320 series does not come equipped with an operating system. An operating system must be loaded first before installing any software into the computer.
2. 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.
3. Disconnect the power cord from the OFP320 before any installation. Be sure both the system and external devices are turned OFF. A sudden surge of power could ruin sensitive components that the OFP320 must be properly grounded.
4. Make sure it is the correct voltage of the power source before connecting the equipment to the power outlet.
5. The brightness of the flat panel display will be getting weaker as a result of frequent usage. However, the operating period varies depending on the application environment.
6. The flat panel display is not susceptible to shock or vibration. When assembling the OFP320 series, make sure it is securely installed.
7. Do not leave this equipment in an uncontrolled environment where the storage temperature is below 0℃ or above 40℃. It may damage the equipment.
8. External equipment intended for connection to signal input/out or other connectors shall comply with relevant UL/IEC standard.
9. Do not open the back cover of the system. 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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CHAPTER 1
INTRODUCTION

This chapter contains general information and detailed specification of the OFP320 Chapter 1 includes the following sections:

- General Description
- Specification
- Dimensions
- I/O Outlets
- Package List

1.1 General Description

- Full HD TFT LCD

OFP320 model is a Digital Signage display which is equipped with 31.5-inch Full HD (1920x1080p) TFT-LCD which meets worldwide first Intel Open Pluggable Specification–compliant digital signage

- Easy maintenance

OFP320 offers a best solution for digital signage market. Compliant with Intel OPS architecture, digital signage players are capable of deploying interchangeable systems faster easing upgrading/maintenance, while lowering costs for development and implementation. Additionally, having the ability to simply slot-in and out the unique pluggable engine box makes daily hassle easier and faster for users.
OFP320 supports Intel open pluggable specification that allow users to change or upgrade the pluggable module as their requirements change, quickly and simply as slot-in and out which is highly flexible and user-friendly for digital signage applications

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- VESA FPMPMI compliant flat panel mounting

OFP320 supports the FPMPMI (Flat Panel Monitor Physical Mounting Interface) which is for VESA suspension mounting.

NOTE Due to protecting LCD, we suggest to use OPF320 in the upright position.

1.2 Specifications

1.2.1 System Specification

- 31.5" TFT LCD
  - Brightness – 400nits(LED backlight)
  - Resolution - 1920 x 1080
- Net Weight
  - 19.44 Kg (42.96 lb) without OPS module
- Dimension (Main Body Size)
  - 781mm(W)x 118mm(D) x 471mm(H)
- Operation Temperature
  - 0℃ to 40℃

1.2.2 Support OPS module Slot

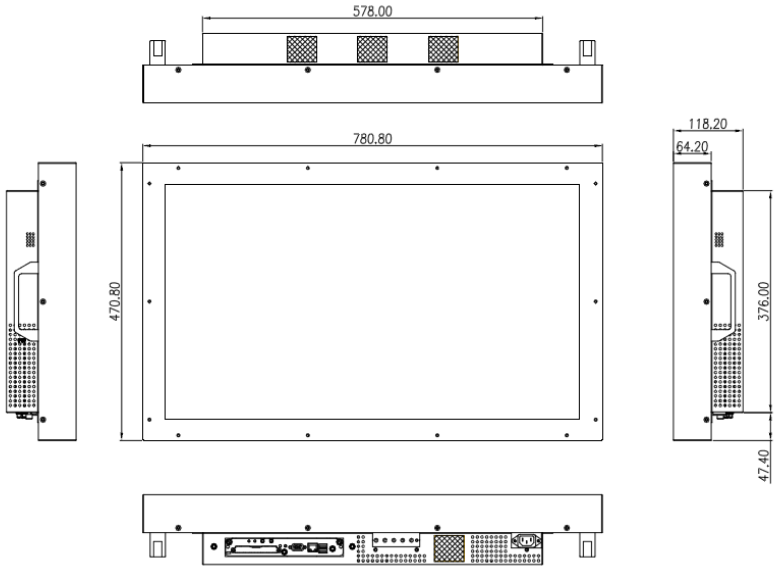
The Option board slot is compliant with Intel's OPS standard. You can use an option board which is compliant with Intel's OPS standard.
Please refer the specifications information for Axiomtek Intel ® Open Pluggable Specification (OPS) box products

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

1.3 Mechanical Assembly

1.3.1 Dimensions

This diagram shows you dimensions and outlines of the OFP320



1.3.2 I/O outlets

The following figures show you the locations of the OFP320 Series I/O outlets.

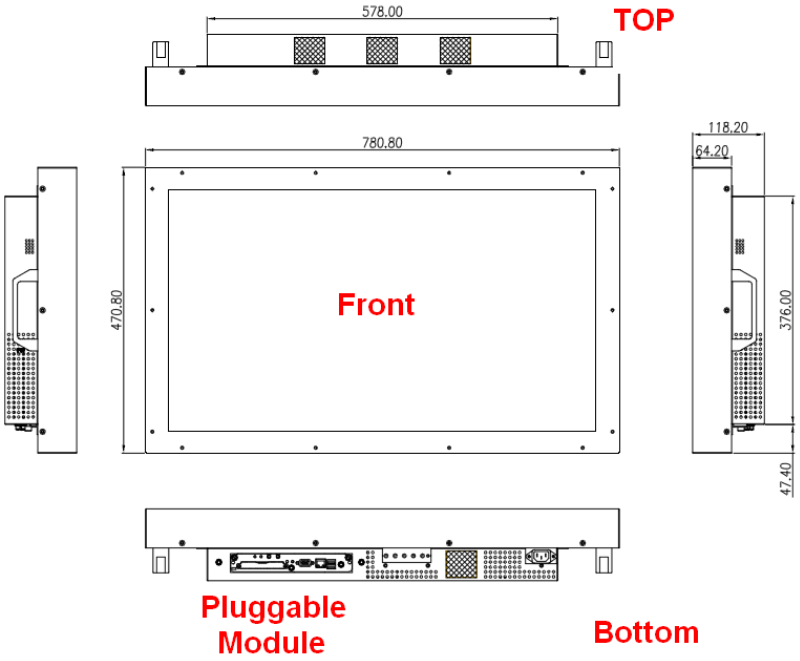
No.	Connector	No.	Connector
1	AC Power inlet	**2**	OSD Button: EXIT
3	OSD button: Brightness adjust **+**	**4**	OSD Button: Brightness adjust **-**
5	OSD button - Menu	**6**	OSD Button: LCD Power switch
7	Intel OPS slot		

1.3.3 Mechanical Specifications

- Pluggable Module Docked in the OFP320

The Pluggable Module docked at a display panel OFP320.
In this reference design, the module is docked and undocked in the vertical direction.

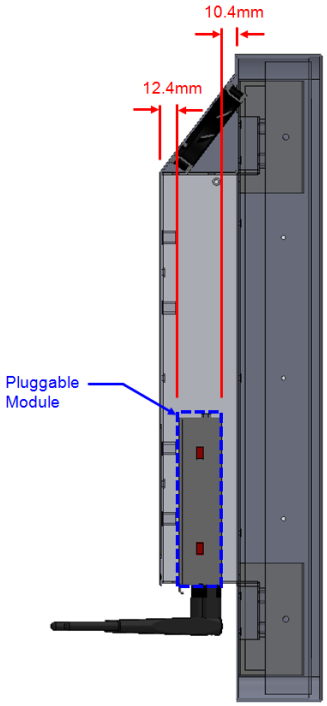
NOTE Please contact Axiomtek for available option display panel.



- Cross-section Showing Recommended Clearance between Pluggable Module and the OFP320.

This reference design there is 10.4 mm clearance between the Pluggable Module and the OFP320 in order to avoid heating from the panel

NOTE Please contact Axiomtek for available option pluggable module

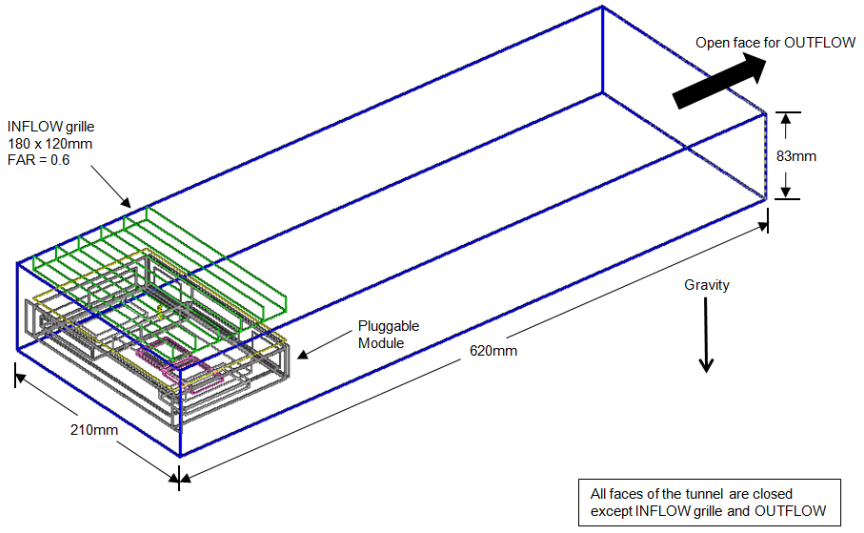


1.3.4 Thermal Specification

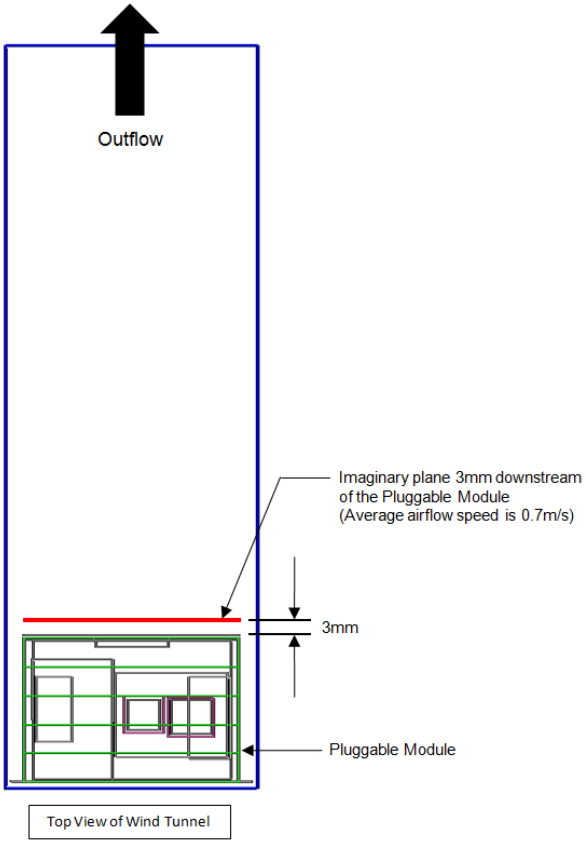
This section describes a wind tunnel test to quantify the thermal performance of the pluggable module. The thermal model of an arbitrary wind tunnel where the pluggable Module is situated at the front of the tunnel. Air flows in from the top grille with specified Free Area Ratio (FAR) so that air at room temperature enters the heat sink of the module. In this test, the FAR is set at 0.6 for reference. The outflow is controlled to obtain the desired airflow flowing through the module. It is required that module be designed to pass all component thermal specifications in this test setup with ambient temperature at 54°C and airflow speed of 0.7m/s Immediately downstream of the module. All Pluggable Modules must be designed to pass this temperature and airflow requirement to ensure the module ingredients comply with thermal specification.

The top view of the wind tunnel test and the location of the imaginary plane 3 mm downstream from the module outlet.

- Wind Tunnel Test for the Pluggable Module

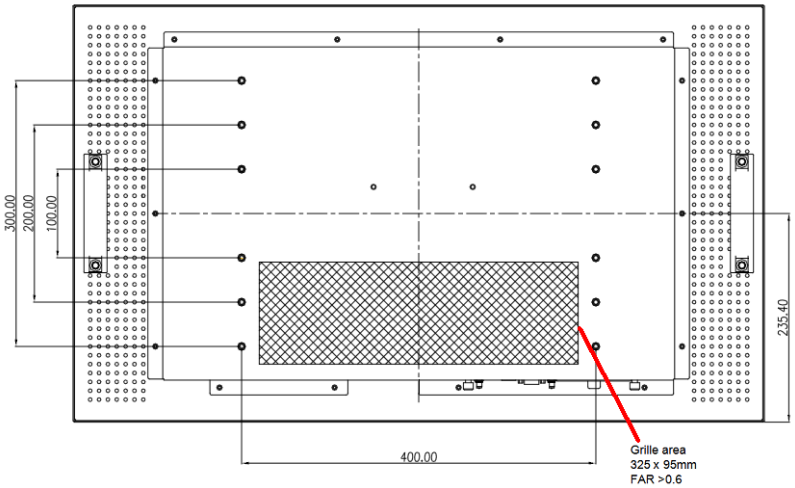


- Airflow Speed Requirement Downstream of the Pluggable Module in Wind Tunnel Test



- Ventilation Grille on the Display Back Panel

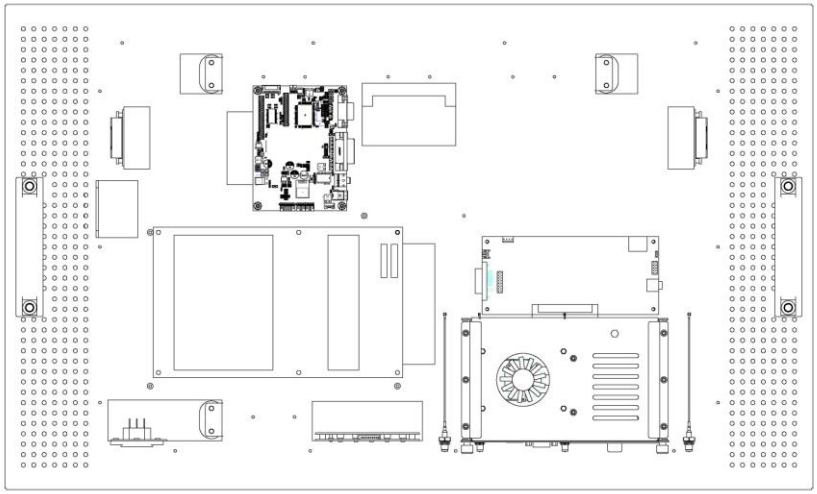
The back cover of the OFP320 have vent holes with FAR > 0.6 to provide sufficient airflow to the module.



1.3.5 Reference Design

Display Panel Rear View – Internal

The digital signage OPS860 prototype is based on a 32" display panel with the functional blocks illustrated in Figure 18. It is mainly a 3-board partitioning design consisting of the pluggable module, docking board and the panel control board.



1.4 Package List

When you receive the OFP320, the bundled package should contain the following items:

- OFP320 device x 1
- Power cord x 1
- Optional Open Pluggable Module
- Screw x 2

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

CHAPTER 2
HARDWARE INSTALLATION

2.1 Using Option Axiomtek's OPS Board

The OPF320 offers a convenient drive bay module for users to install option OPS product . Please follow the steps:

Step 1 Turn off the system, and unplug the power cord.

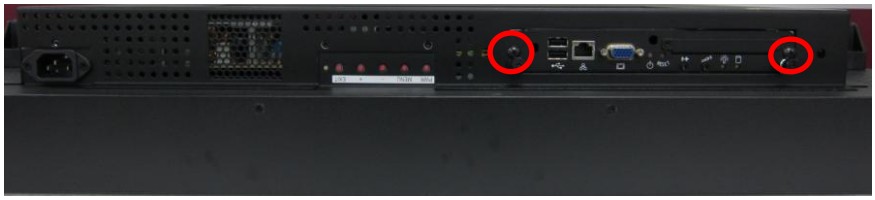
Step 2 Remove the attached slot cover by unscrewing the installed screws

Step 3 Insert option board in to the monitor

Place the cover for the option board slot over the option board. This is included with the monitor.

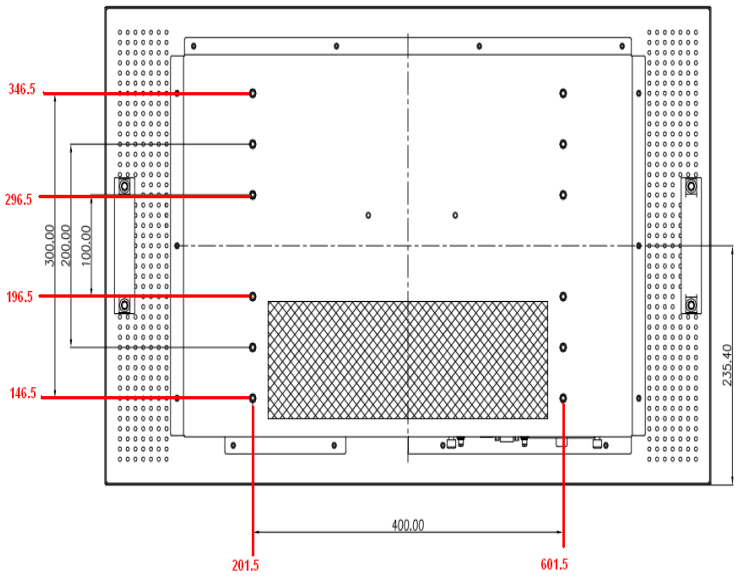
NOTE Please contact for available option boards.

Step 4 Secure the cover by using the two screws from step 2



2.2 VESA Mounting Method

OFP320 supports the standard VESA mount. The photo is as below.

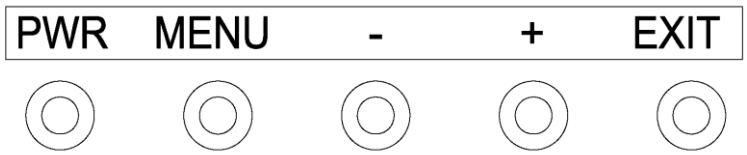


ME*MO:*

CHAPTER 3
OSD Menu Setup

3.1 Hot key-1

OFP320 uses OSD to configure brightness, audio…etc. You could configure it via hot key.



- Hot key Function Definition

OSD key	Function
POWER	POWER ON / OFF
MENU	OSD ON
－	ADJ－/ SEL－
＋	ADJ＋/SEL＋
EXIT	OSD EXIT

3.2 OSD Function

OSD MENU	Description
 General	General setting： ● Brightness ● Contrast
 Audio	Volume: Adjust speakers volume Mute: Speaker power ON/OFF.
 Color	Color Temperature-9300, 7500 and 6500, ● Higher color temperatures (5,000 or above) are called cool colors ● Lower color temperatures (2,700–3,000) are called warm colors
 Tools	Tool： ● OSD Time Out: (5~60) seconds. ● Gamma Selection: 0.8, 1, 1.2 and 1.6 ● Sharpness of the screen's image. ● Recall: "Yes" allows you to recover the preset mode.
 Sensors	● PIR sensor function: you could set PIR Motion time to turn off backlight (OFF,1,3,6,9,12,15, 30 minutes) (Optional function) ● Photosensitive: Set environment illumination sensor mode. Three modes are as listed: Off, Hi-Lux, Middle-lux and low-lux) ● Lamp Life Status: Good, Margin and repair. (Ps: Set [Photosensitive] OFF to show the current status.) ● External Temperature: show environment temperature. (Level: ↑ 50 C°c ,1~49°c , ↓ 0 °c)

APPENDIX
Power Supply Specification

Power Supply (AC100~240V Input)

1. Electrical requirements

The subject power supply will meet all electrical specifications below

- Input Current:

1. 5A max at 110Vac.
2. 2.4A max at 240Vac.

VDC for OPS module: 12V ,Max: 6A

NOTE OFP320 Power supply should be protected the system when it is superheat. If the system inside temperature is over 70 degree, it will enable overheating solution to turn off system power.