

DS-081

Ultra Slim Digital Signage Player

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Enabling an Intelligent Planet

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Product Warranty (24 months)

Advantech warrants to you, the original purchaser, that each of its products will be free from defects in materials and workmanship for two years from the date of purchase.

This warranty does not apply to any products which have been repaired or altered by persons other than repair personnel authorized by Advantech, or which have been subject to misuse, abuse, accident or improper installation. Advantech assumes no liability under the terms of this warranty as a consequence of such events.

Because of Advantech's high quality-control standards and rigorous testing, most of our customers never need to use our repair service. If an Advantech product is defective, it will be repaired or replaced at no charge during the warranty period. For outof-warranty repairs, you will be billed according to the cost of replacement materials, service time and freight. Please consult your dealer for more details.

If you think you have a defective product, follow these steps:

- Collect all the information about the problem encountered. (For example, CPU speed, Advantech products used, other hardware and software used, etc.) Note anything abnormal and list any onscreen messages you get when the problem occurs.
- Call your dealer and describe the problem. Please have your manual, product, and any helpful information readily available.
- If your product is diagnosed as defective, obtain an RMA (return merchandise authorization) number from your dealer. This allows us to process your return more quickly.
- Carefully pack the defective product, a fully-completed Repair and Replacement Order Card and a photocopy of the proof of purchase date (such as your sales receipt) in a shippable container. A product returned without proof of the purchase date is not eligible for warranty service.
- Write the RMA number visibly on the outside of the package and ship it prepaid to your dealer.

Declaration of Conformity

– FCC Class B

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Technical Support and Assistance

1. Visit the Advantech website at www.advantech.com/support where you can find the latest information about the product.
2. Contact your distributor, sales representative, or Advantech's customer service center for technical support if you need additional assistance. Please have the following information ready before you call:
 - ◆ Product name and serial number
 - ◆ Description of your peripheral attachments
 - ◆ Description of your software (operating system, version, application software, etc.)
 - ◆ A complete description of the problem
 - ◆ The exact wording of any error messages

Warnings, Cautions and Notes



Warning! Warnings indicate conditions, which if not observed, can cause personal injury!



Caution! Cautions are included to help you avoid damaging hardware or losing data. e.g. There is a danger of a new battery exploding if it is incorrectly installed. Do not attempt to recharge, force open, or heat the battery. Replace the battery only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.



Note! Notes provide optional additional information.

Safety Instructions

1. Read these safety instructions carefully.
2. Keep this User Manual for later reference.
3. Disconnect this equipment from any AC outlet before cleaning. Use a damp cloth. Do not use liquid or spray detergents for cleaning.
4. For plug-in equipment, the power outlet socket must be located near the equipment and must be easily accessible.
5. Keep this equipment away from humidity.
6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall may cause damage.
7. The openings on the enclosure are for air convection. Protect the equipment from overheating. **DO NOT COVER THE OPENINGS.**
8. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
10. All cautions and warnings on the equipment should be noted.
11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient overvoltage.
12. Never pour any liquid into an opening. This may cause fire or electrical shock.
13. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.
14. If one of the following situations arises, get the equipment checked by service personnel:
 - The power cord or plug is damaged
 - Liquid has penetrated the equipment.
 - The equipment has been exposed to moisture.
 - The equipment does not work well, or you cannot get it to work according to the user's manual.
 - The equipment has been dropped and damaged.
 - The equipment has obvious signs of breakage.
15. **DO NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT WHERE THE STORAGE TEMPERATURE MAY GO BELOW -20° C (-4° F) OR ABOVE 60° C (140° F). THIS COULD DAMAGE THE EQUIPMENT. THE EQUIPMENT SHOULD BE IN A CONTROLLED ENVIRONMENT.**
16. **CAUTION: DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED. REPLACE ONLY WITH THE SAME OR EQUIVALENT TYPE RECOMMENDED BY THE MANUFACTURER, DISCARD USED BATTERIES ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.**
17. The sound pressure level at the operator's position according to IEC 704-1:1982 is no more

than 70 dB (A).

18. **RESTRICTED ACCESS AREA:** The equipment should only be installed in a Restricted Access Area.
19. **DISCLAIMER:** This set of instructions is given according to IEC 704-1. Advantech disclaims all responsibility for the accuracy of any statements contained herein.

Packing List

Before installation, please ensure the following items have been shipped:

- 1 x DS-081 series player
- 1 x Driver/Utility Disk
- 1 x China RoHS Sheet
- 1 x Simplified Chinese User manual
- 1 x Traditional Chinese User manual
- 1 x Mounting kit
- 1x 19V power adapter

DS-081 Series Part Number:

DS-081GB-U2A1E
DS-081GF-U2A1E
DS-081GB-U3A1E
DS-081GF-U3A1E
DS-081GB-U4A1E
DS-081GB-U4A1E

DS081GB1701-T	DS081GB1801-T	DS081GB1901-T	DS081GB2001-T	DS081GB2101-T
DS081GB1702-T	DS081GB1802-T	DS081GB1902-T	DS081GB2002-T	DS081GB2102-T
DS081GB1703-T	DS081GB1803-T	DS081GB1903-T	DS081GB2003-T	DS081GB2103-T
DS081GB1704-T	DS081GB1804-T	DS081GB1904-T	DS081GB2004-T	DS081GB2104-T
DS081GB1705-T	DS081GB1805-T	DS081GB1905-T	DS081GB2005-T	DS081GB2105-T
DS081GB1706-T	DS081GB1806-T	DS081GB1906-T	DS081GB2006-T	DS081GB2106-T
DS081GB1707-T	DS081GB1807-T	DS081GB1907-T	DS081GB2007-T	DS081GB2107-T
DS081GB1708-T	DS081GB1808-T	DS081GB1908-T	DS081GB2008-T	DS081GB2108-T
DS081GB1709-T	DS081GB1809-T	DS081GB1909-T	DS081GB2009-T	DS081GB2109-T
DS081GB1710-T	DS081GB1810-T	DS081GB1910-T	DS081GB2010-T	DS081GB2110-T

Chapter 1

General Introduction

This chapter gives background information on DS-081 series

1.1 Introduction

DS-081 series is powered by Intel® Core™ i5/i3 processors for UHD video playback performance. DS-081 series is a media player that delivers advanced graphics performance for all your signage applications. DS-081 series has dual HDMI to provide multi display outputs simultaneously. For better connectivity, it supports 2x LAN, internal 1 x Mini PCIe interface for add-on functions such as wireless network/Bluetooth fulfill different requirements. It also supports 4x USB 3.0, 1xCOM ports for system integration and applications.

1.2 Product Features

1.2.1 General

- Supports Intel® Core™ i5/i3 processors
- Supports 2 x HDMI、 2 x GbE、 4 x USB、 1 x COM (RS-232)
- Supports 2.5” SATA HDD drive bay (Height 7mm)
- Built-in MiniPCIe slot for easy expansion
- Ultra Slim Features, easy to install. Easy integration and easy maintenance

1.2.2 Display

- Support up to 4096 x 2304 @ 24Hz video playback performance (subject to the video media format and playback software)

1.2.3 Power Consumption

- **Idle:** 5.859 W (6th Gen Intel® Core™ i5-6300U 2.4 GHz)
- **Max:** 41.331 W (6th Gen Intel® Core™ i5-6300U 2.4 GHz)

1.3 Hardware Specifications

- **CPU:** Intel® Core™ i5/i3 processors
- **System Chipset:** Integrated in SOC
- **Graphic chipset:** Integrated graphics built in Processor
- **BIOS** AMI uEFI 128 Mbit
- **System Memory:** 2 x 260pin DDR4 SODIMM, Up to 16GB single DIMM
- **HDD:** Supports 2.5” SATA HDD drive bay (Height 7mm)
- **Watchdog Timer:** supported by Advantech SUSIAccess
- **IO Interfaces**
 - 1 x RS-232
 - 2 x HDMI
 - 4 x USB 3.0 compliant
 - 1 x (SPDIF/Line-out/ Mic-in), support Jack Sense

- **Ethernet Chipset:** 1 x Intel I2119LM; 1 x RTL8111G
 - Speed: 100/1000 Mbps
 - Interface: 2 x RJ-45 jacks with LED
 - Standard: IEEE 802.3z/ab (1000 Base-T) 或 IEEE 802.3u 100 Base-T compliant
- **Resolution:**
 - 4096 x 2304 @ 24Hz
- **Expansion**
 - MiniPCle: 1 socket internal

1.4 Mechanical Specification

1.4.1 Dimension

180 x 190 x 19mm (L x W x H)

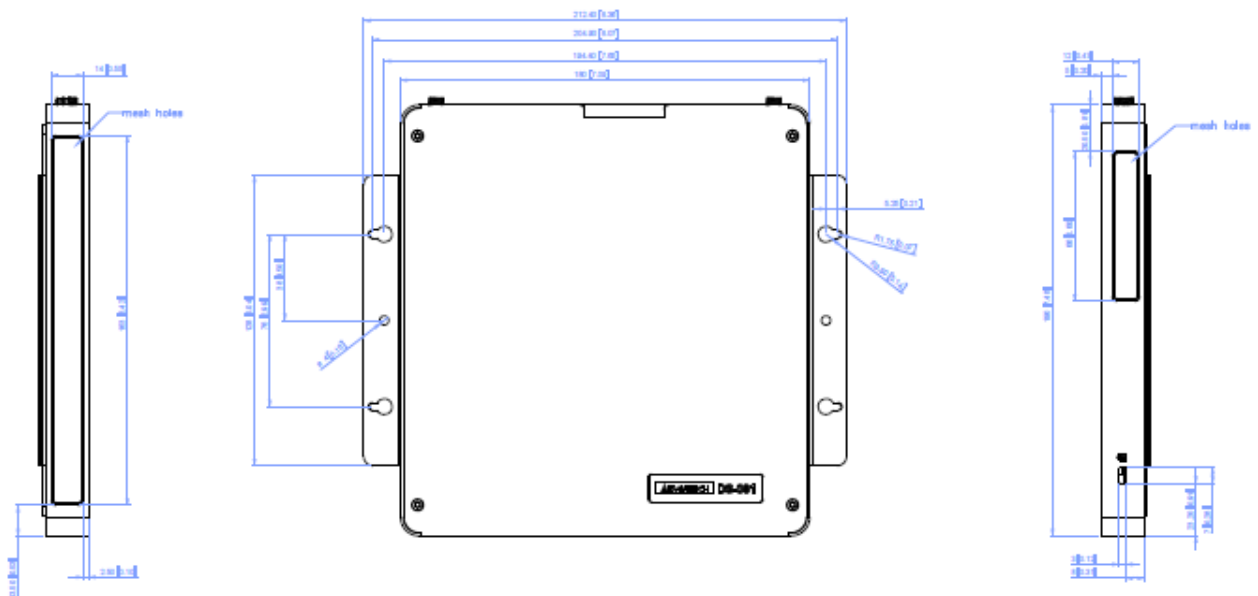


Figure1.1 : Dimensions

1.4.2 Weight

0.87 kg (1.92 lbs)

1.5 Power Requirements

1.5.1 System Power

Minimum power input: DC19V, 3.42A

1.5.2 RTC Battery

3V/200mAH BR2032

1.6 Environmental Specifications

1.6.1 Operating Temperature

0° C - 40°C (32~122°F) with 0.7 m/s airflow

1.6.2 Relative Humidity

95% @ 40°C (Non Condensing)

1.6.3 Storage Temperature

-20 ~ 60°C (-4~140°F)

1.6.4 Vibration Loading During Operation

0.5 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 hr/axis.

1.6.5 Shock During Vibration

20 G, IEC 60068-2-27, half sine, 11 ms duration

1.6.6 Safety

UL, BSMI, CCC

1.6.7 EMC

CE, FCC Class B, BSMI, CCC

Chapter 2

Hardware Installation

This chapter introduces external IO
and the installation of DS-081 series
Hardware

2.1 DS-081 Series I/O Connectors



Figure 2.1: Front View



Figure 2.2: Rear View

2.2 DS-081 Series External I/O Connectors

2.2.1 Power ON/OFF Button

DS-081 Series has a power ON/OFF button on the front side. Push this button to turn the system ON and OFF. It also supports a 5 second delay soft power off.



Figure 2.3: Power Button

2.2.2 DC Input Connector

DS-081 Series supports 19VDC DC power in.



Figure 2.4: DC Input Connector

2.2.3 LAN Connector

DS-081 Series provides two RJ-45 LAN interface connector, fully compliant with IEEE802.3u 10/100/1000 Base-T CSMA/CD standards. The Ethernet port provides a standard RJ-45 jack connector with LED indicators to show its Active/Link status and speed status.

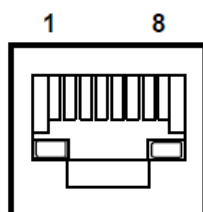


Figure 2.5: LAN Connector

LAN Port Pin Assignments	
Pin	Signal
1	MDI0+
2	MDI0-
3	MDI1+
4	MDI1-
5	GND
6	GND
7	MDI2+
8	MDI2-
9	MDI3+
10	MDI3-
11	VCC
12	ACT
13	+V3.3 & Link1000#
14	+V3.3 & Link100#

2.2.4 HDMI Connector

The HDMI (High-Definition Multimedia Interface) provides an all-digital audio/video interface to transmit the uncompressed audio/video signals and is HDCP compliant. Connect the HDMI audio/video device to this port. HDMI technology can support a maximum resolution of 4096 x 2304 @ 24 Hz but the actual resolution supported depends on the monitor being used.

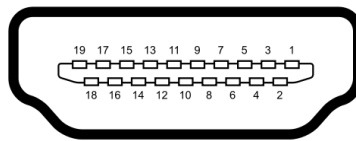


Figure 2.6: HDMI Connector

HDMI Pin Assignments	
Pin	Signal
1	TMDS Data 2+
2	TMDS Data 2 shield
3	TMDS Data 2-
4	TMDS Data 1+
5	TMDS Data 1 shield
6	TMDS Data 1-
7	TMDS Data 0+
8	TMDS Data 0 shield
9	TTMDS Data 0-
10	TMDS Clock+
11	TMDS Clock shield
12	TMDS Clock-
13	CEC
14	Reserved
15	SCL
16	SDA
17	DDC/CEC Ground
18	+5V
19	Hot Plug Detect

2.2.5 USB Connectors

DS-081 Series provides four USB interface connectors, which gives complete Plug & Play and hot swapping capability for up to 127 external devices. The USB interface is compliant with USB UHCI, Rev. 3.0. The USB interface supports Plug and Play, which enables you to connect or disconnect a device without turning off the system.

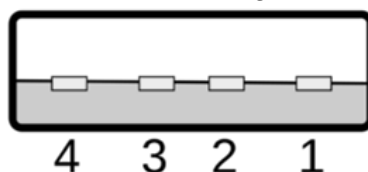


Figure 2.7: USB Connector

USB Port Pin Assignments	
Pin	Signal
1	VCC
2	USB Data-
3	USB Data+
4	GND

2.2.6 COM Connector

DS-081 Series provides one D-sub 9-pin connectors serial communication interface port. The ports support RS-232 communications.

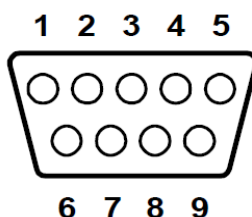


Figure 2.8: COM Connector

COM Port Pin Assignments	
Pin	Signal
1	DCD
2	RxD
3	TxD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	RI

2.2.7 Audio Connectors

DS-081 Series S/PDIF can be connected to Stereo speakers, earphone or surround speakers.

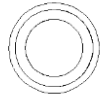


Figure 2.9: Audio Connector

2.3 Hardware Installation

2.3.1 Attached HDD Thermal Pads

- (1) Attached thermal pads on DS-081 HDD bracket

2.3.2 HDD Bracket Installation

- (1) Fix HDD with screws on the HDD bracket

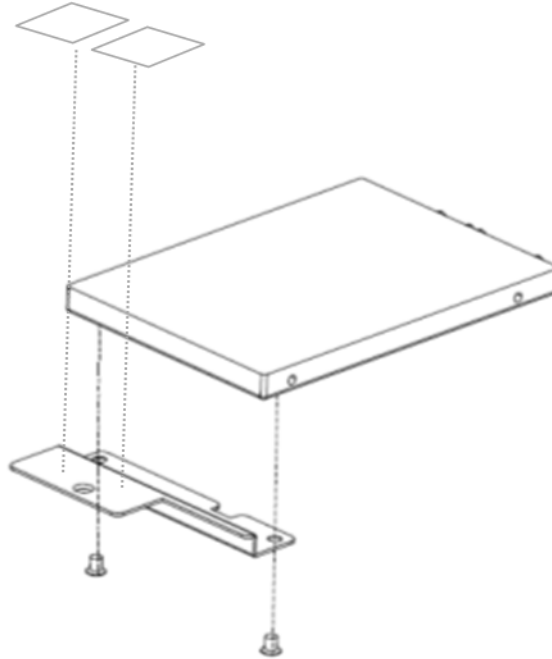


Figure 2.11: HDD Bracket Installation

2.3.3 HDD Installation

- (1) Remove the top cover by loosening the fixing screws
- (2) Connect HDD with on board SATA connector and then fix it with screws

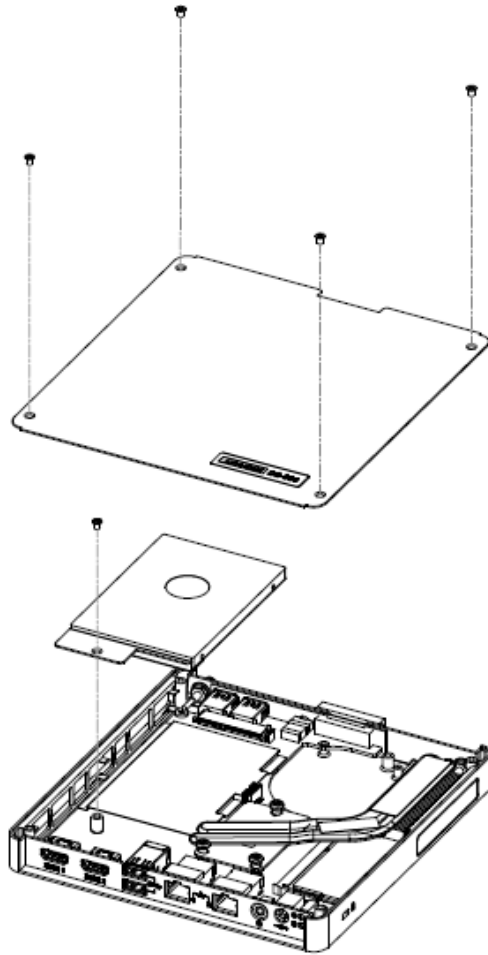


Figure 2.12: HDD Installation

2.3.4 Mini PCIe Card/Memory Module Installation

(1) Remove the bottom cover by loosening the fixing screws and then insert Mini PCIe and Memory Module into the socket.

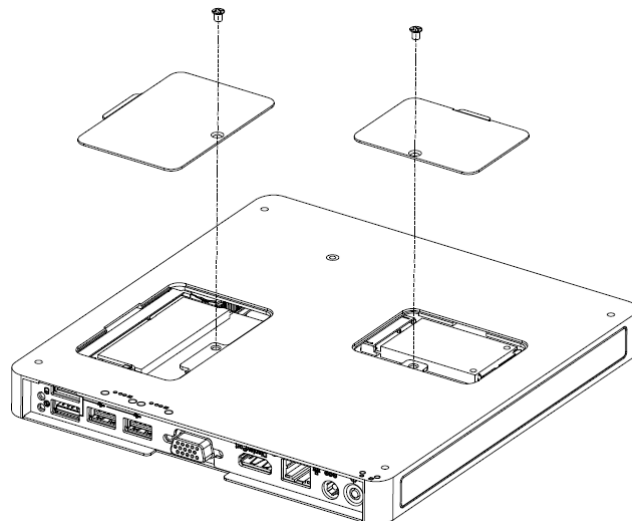


Figure 2.13: Mini PCIe Card/Memory Module Installation

2.3.5 Mounting Bracket Installation

(1) Using 4 pcs of M4-10L screws to mount the VESA bracket module behind the display.

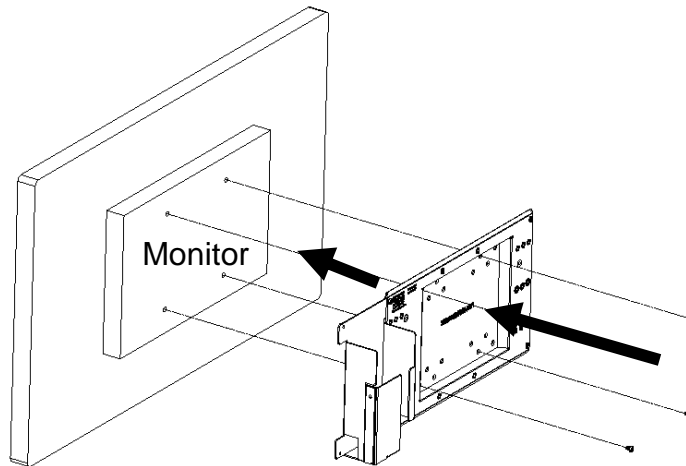


Figure 2.14: Mounting Bracket Installation (I)



Note! DS-081 is being mounted on the monitor and maximum loading is 0.8 kg

Note! Mounting plate is used to fix DS-081 in the back of the monitor.

Note! Screw size depends on the display specification. Please do check the display manual before assembly

(2) Find 4 pcs of M3 screws to affix the mounting brackets on system bottom. (The screws and mounting brackets are both included in the system accessory box)

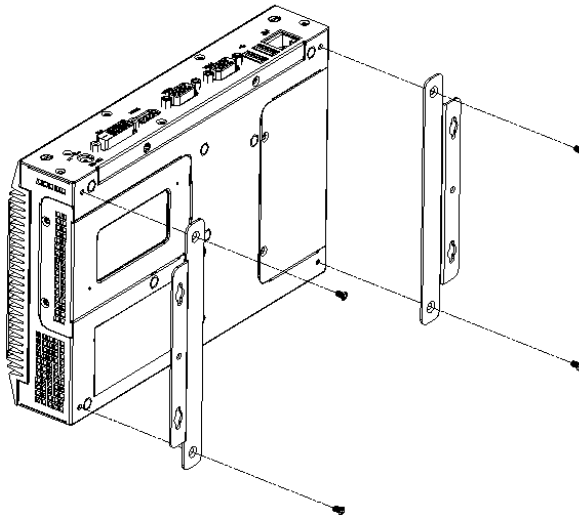


Figure 2.15: Mounting Bracket Installation (II)

(3) Using M3-6L screws to affix system on the VESA bracket module. (Note: Screws qty varies by system.)

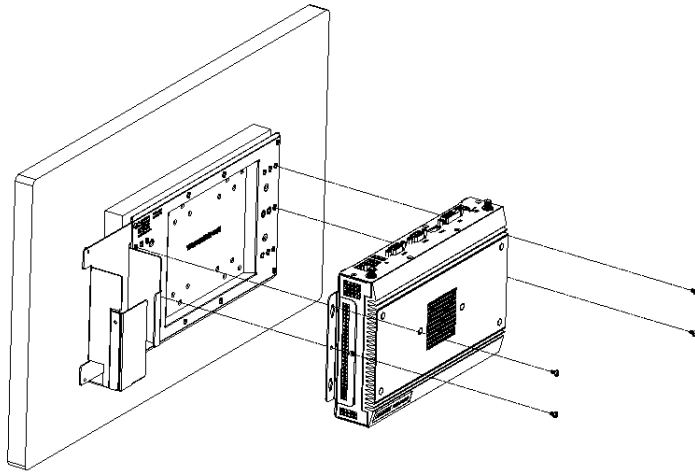


Figure 2.16: Mounting Bracket Installation (III)

2.3.6 Mounting Direction

(1) Flat View

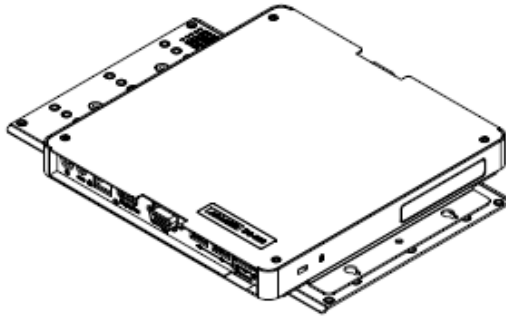


Figure 2.17: Flat View

(2) Vertical - Upright

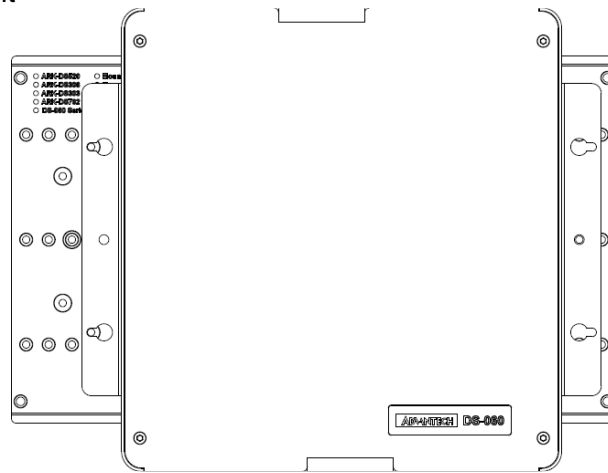


Figure 2.18: Vertical - Upright

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