EPS Series

EPS-QM67/EPS-QM77E

Fanless Intel® Core™ i7/ i5/ i3/ Cerlon
Rugged Embedded System with Intel® QM67 Chipset
/Fanless Intel® CoreTM i7/ i5/ i3
Rugged Embedded System with Intel® QM77

Quick Reference Guide

1ST Ed –4 December 2012

Part No. E20173833A1R

1. Getting Started

1.1 Safety Precautions

Warning!

Always completely disconnect the power cord from your chassis whenever you work with the hardware. Do not make connections while the power is on. Sensitive electronic components can be damaged by sudden power surges. Only experienced electronics personnel should open the PC chassis.

Caution!

Always ground yourself to remove any static charge before touching the CPU card. Modern electronic devices are very sensitive to static electric charges. As a safety precaution, use a grounding wrist strap at all times. Place all electronic components in a static-dissipative surface or static-shielded bag when they are not in the chassis.

1.2 Packing List

- 1x EPS-QM67 (with EPI-QM67 inside) or 1x EPS-QM77E(with EPI-QM77 inside)
- 1 x Quick Reference Guide
- 1 x DVD-ROM contains the followings:
  - User's Manual (this manual in PDF file)
  - Ethernet driver and utilities
  - VGA drivers and utilities
  - Audio drivers and utilities
- Other major components include the followings:

— Screw kit for 2.5" Drive Bay Fixing

— AC/DC adapter

— Power Cord

If any of the above items is damaged or missing, contact your retailer.

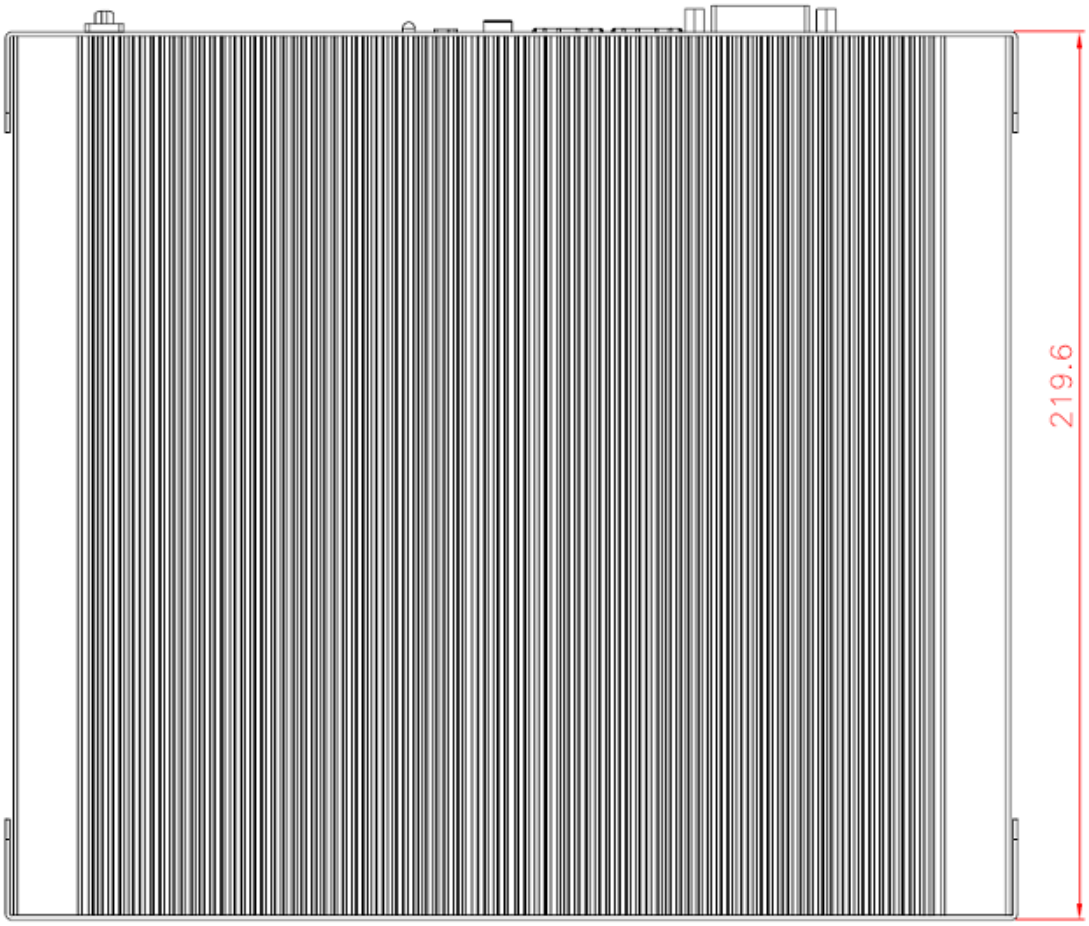
1.3 System Specifications

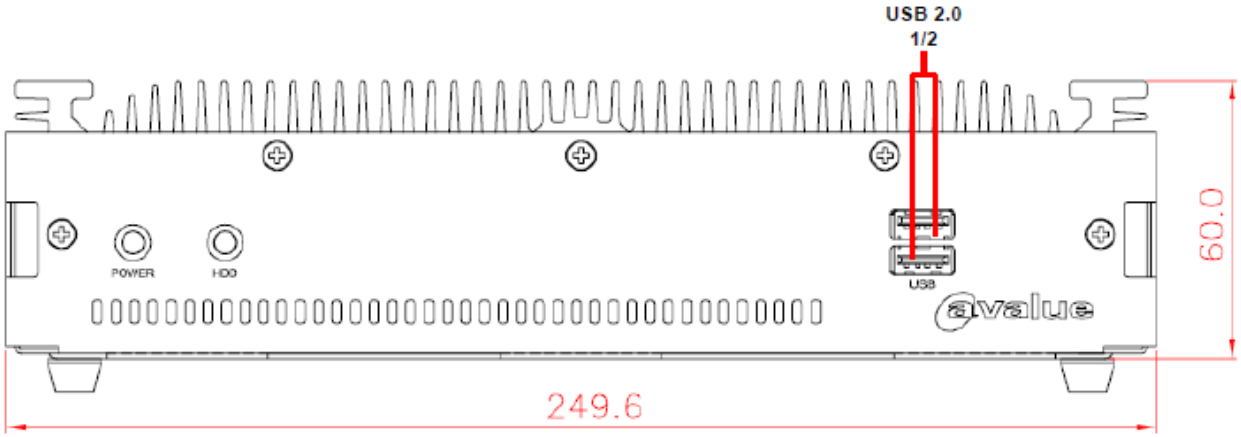
System		
Model	**EPS-QM67**	**EPS-QM77E**
CPU	Intel® Core™ i7-2710QE, 2-Core, 2.1GHz, 6M Cache Intel® Core™ i5-2510E, 2-Core, 2.5GHz, 3M Cache Intel® Core™ i3-2330E, 2-Core, 2.2GHz, 3M Cache Intel® Celeron® B810, 2-Core, 1.6GHz, 2M Cache	Intel® Core™ i7-3610QE, 4-Core, 2.3GHz, 3M Cache Intel® Core™ i5-3610ME, 2-Core, 2.7GHz, 3M Cache Intel® Core™ i3-3120ME, 2-Core, 2.4GHz, 3M Cache
BIOS	AMI 8M-bit SPI BIOS	AMI 64Mbit SPI BIOS
System Chipset	Intel® QM67 Chipset	Intel® QM77 Chipset
System Memory	One 204-pin DDR3 SODIMM up to 8GB DDR3 1066/1333 SDRAM	
I/O Chip	Nuvoton NTC6776F	
Display	Intel® QM67 with Integrated Graphics Engine	Intel® QM77 with Integrated Graphics Engine
Audio	Realtek ALC892 supports 5.1-CH Audio	
Ethernet	Dual Intel® Gigabit Ethernet	
System Indicators	2 LED Indicators Show Power and HDD status	
Storage	1 x mSATA, 1 x SATA	1 x mSATA, 2 x SATA
Watchdog Timer	Reset: 1 sec.~65535 sec./min. and 1 sec. or 1 min./step	
H/W Status Monitor	Monitoring system temperature and voltage. Auto trotting control when CPU overheats	
External I/O		
COM Port	1 x RS232 1x RS232/422/485	
LAN Port	2 x RJ45	
Antenna	2 Knockouts for Antenna Mounting (Options to Add WiFi & 3G)	
Display Port	1 x DVI-I; 1 x HDMI	
Audio Port	Mic In, Line In and Line Out	
USB Port	6 x USB 2.0 (Front x 2; Rear X 4)	4 x USB 3.0 on rear, 2 x USB 2.0 on front
Power Supply Unit		
Power Input	100~240Vac / 50~60Hz	
Power Output	12Vdc/ 7A (Lockable DC Plug)	12Vdc/ 7A & 19V/ 6.32A (Lockable DC Plug)
Mechanical & Environmental		
Power Requirement	+12V~19V (Lockable DC Jack)	
ACPI	Single power ATX Support S0, S3, S4, S5 ACPI 1.0b and 2.0 Compliant	
Power Type	AT/ATX	
Operating Temp.	-10 ~ 60°C (w/ SSD), Ambient w/ Air Flow; i5 -10 ~ 50°C (w/ SSD), Ambient w/ Air Flow; i7	
Storage Temp.	-40 ~ 75°C (-4~167°F)	
Operating Humidity	0%~90% relative humidity, non-condensing	
Vibration Protection	With SSD: 5Grms, IEC 60068-2-64, Random, 10 ~ 500Hz, 1hr/axis	

Shock Protection	With SSD: 50G, IEC 60068-2-27, Half Sine,11ms
Size (L x W x H)	250mm x 220mm x 60mm
Weight	7.7lbs (3.5Kgs)
Mounting	VESA Compliance

1.4 System Overview

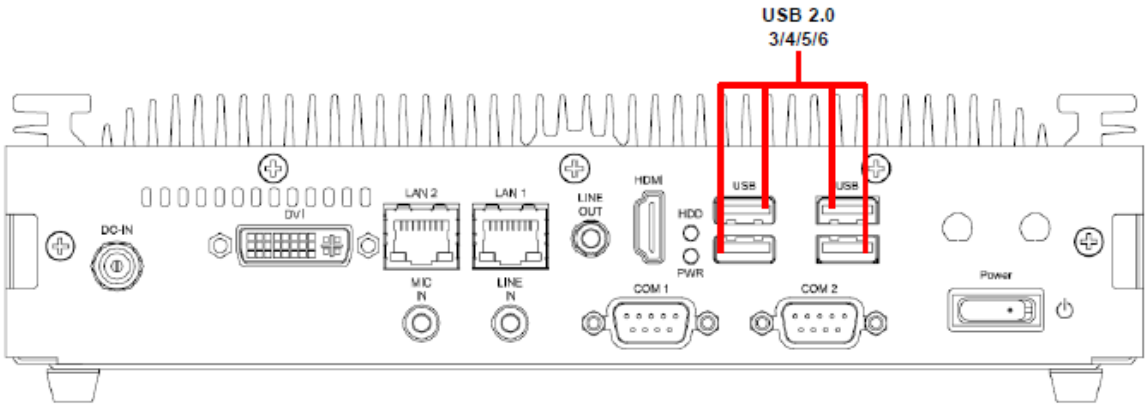
1.4.1 Front & Top View



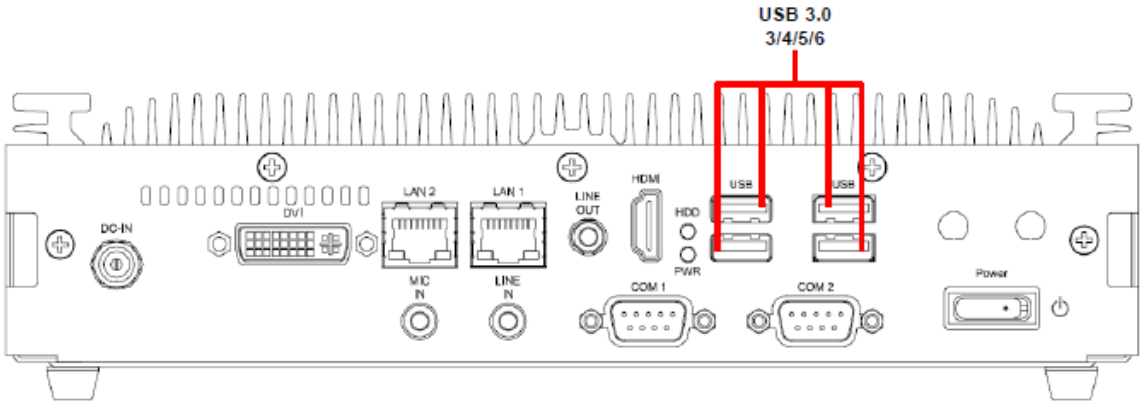


1.4.2 Rear View

EPS-QM67



EPS-QM77E



Connectors

Label	Function	Note
COM1~2	Serial port connector1~2	
DC-IN	DC power-in connector (lockable DC Jack)	
HDD	HDD Indicator	
PWR	Power Indicator	
LAN1	RJ-45 Ethernet 1	
LAN2	RJ-45 Ethernet 2	
LINE IN	Line-in audio jack	
LINE OUT	Line-out audio jack	
MIC IN	Microphone-in audio jack	
Power	System power switch	
HDMI	HDMI connector	
DVI	DVI connector	
USB1~6	USB 2.0 connector 1~6 (EPS-QM67)	
USB1~2	USB 2.0 connector 1~2 (EPS-QM77E)	
USB3~6	USB 3.0 connector 3~6 (EPS-QM77E)	

2. Hardware Configuration

Jumper and Connector Setting, Driver and BIOS Installing

For advanced information, please refer to:

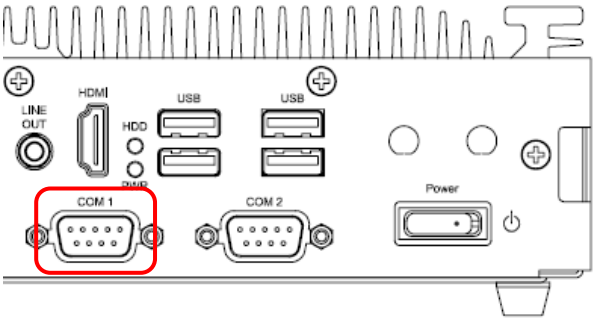
1- EPI-QM67 Quick Installation Guide or User's Manual
2- EPI-QM77 Quick Installation Guide or User's Manual

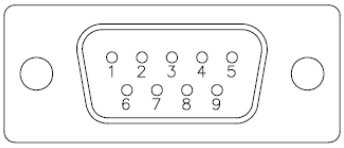
Note: If you need more information, please visit our website:

http://www.avalue.com.tw

2.1 EPS Series connector mapping

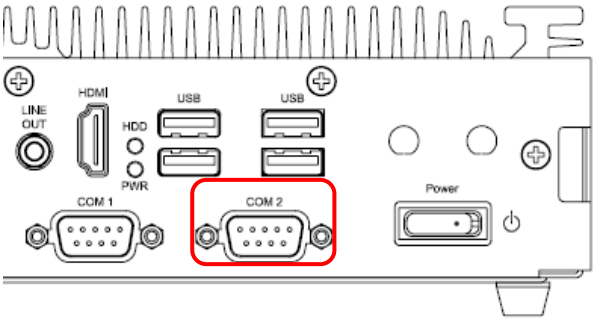
2.2.1 External Serial Port 1 connector (COM1)

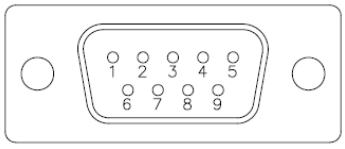




Signal	PIN	PIN	Signal
DCD1	1	6	DSR1
RXD1	2	7	RST1
TXD1	3	8	CTS1
DTR1	4	9	RI1
GND	5	10	NC

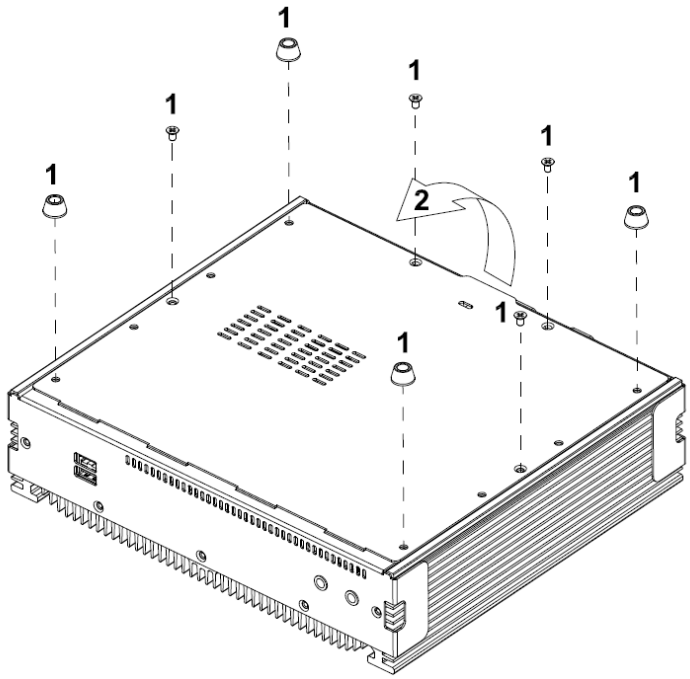
2.2.2 External Serial Port 2 connector (COM2)





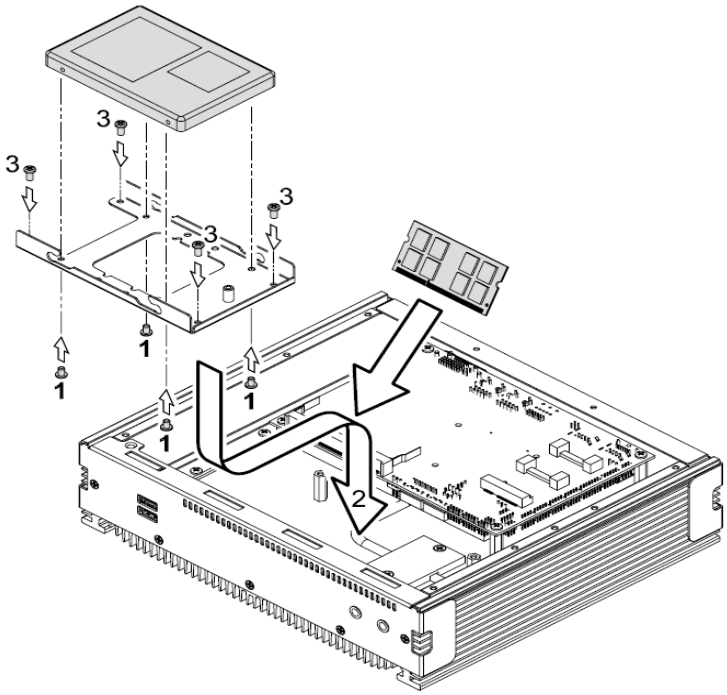
Signal	PIN	PIN	Signal
DCD2	1	6	DSR2
RXD2	2	7	RST2
TXD2	3	8	CTS2
DTR2	4	9	RI2
GND	5	10	NC

2.2 Installing Hard Disk & Memory (EPS-QM67)



Step 1. Remove 8 screws from the bottom of your system.

Step 2. Remove the chassis cover.



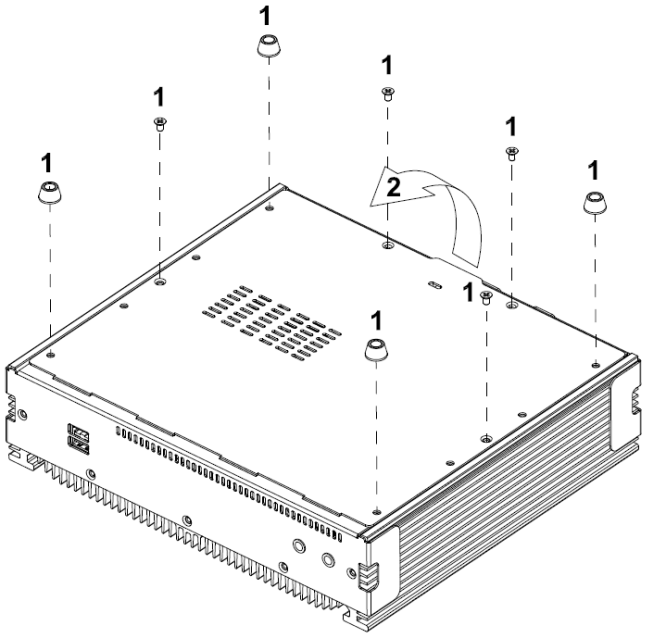
Step 1. Slide HDD into its bracket until properly seated.

Step 2. Secure HDD by means of 4 screws.

Step 3. Connect necessary cables to the HDD.

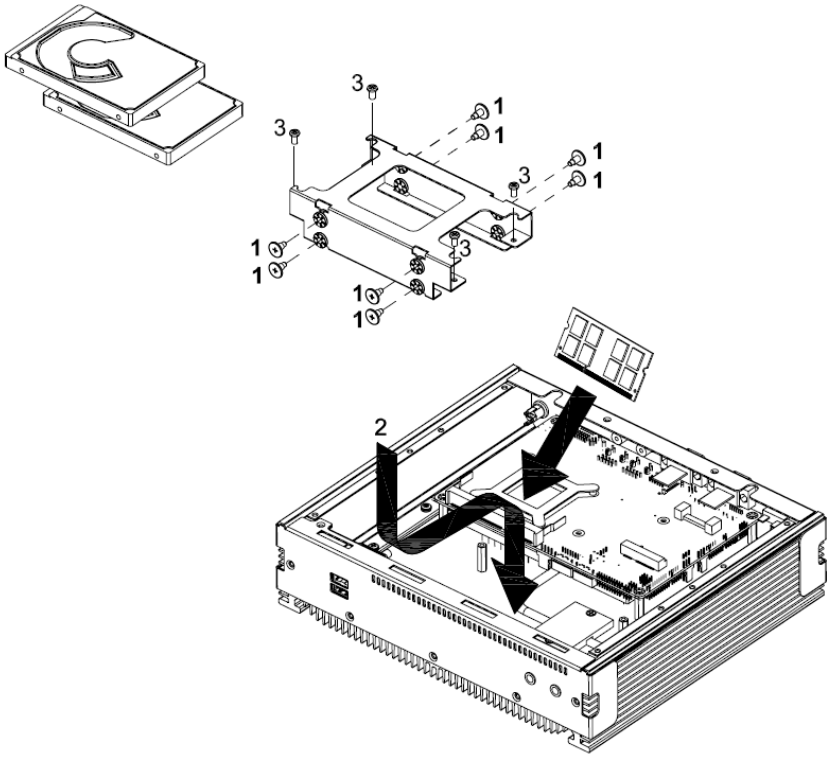
Step 4. Slide the DDR3 SODIMM into the memory socket and press it down until properly seated.

2.3 Installing Hard Disk & Memory (EPS-QM77E)



Step 1. Remove 8 screws from the bottom of your system.

Step 2. Remove the chassis cover.



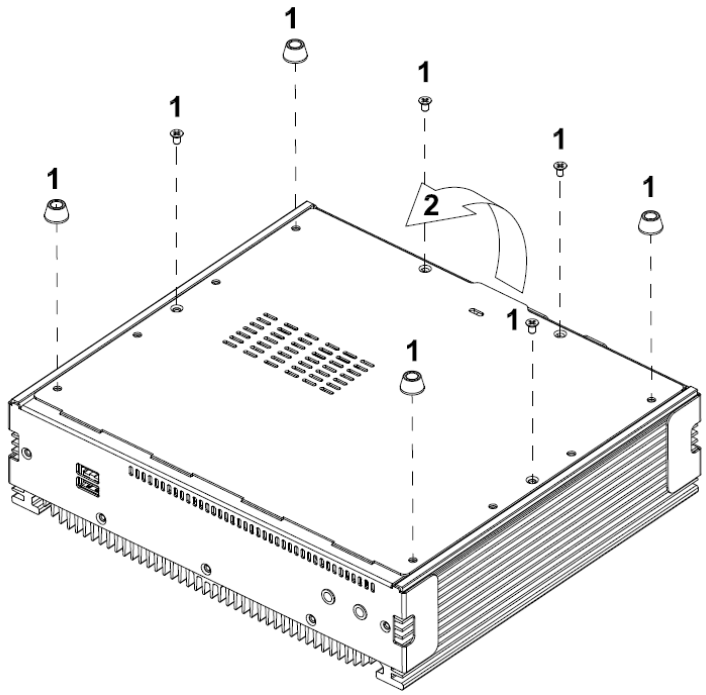
Step 1. Slide HDDs into its bracket until properly seated.

Step 2. Secure HDDs by means of 8 screws (4 for each).

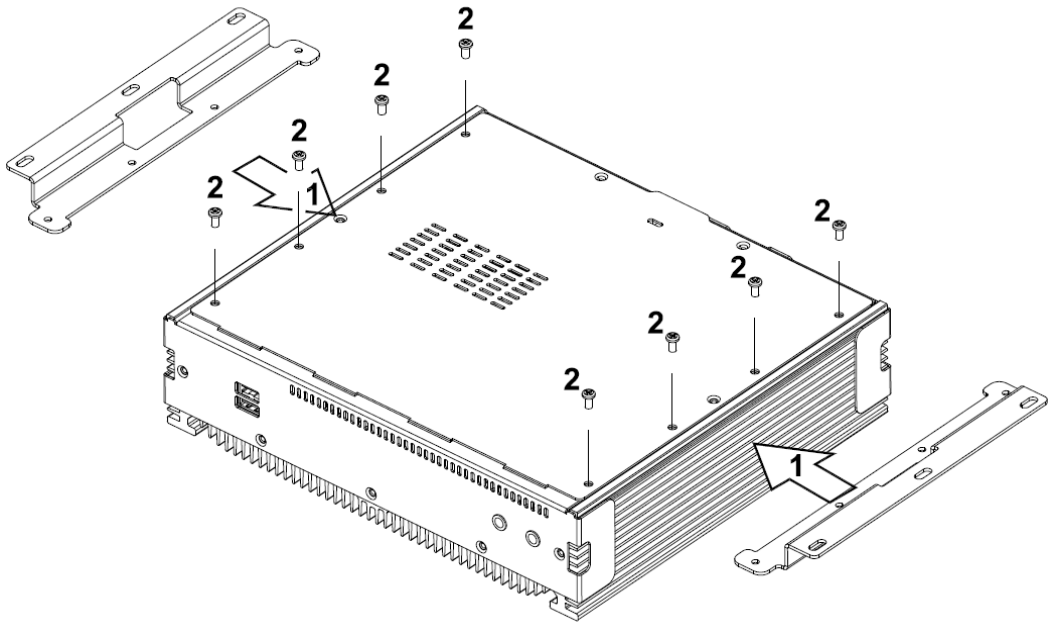
Step 3. Connect necessary cables to HDDs.

Step 4. Slide the DDR3 SODIMM into the memory socket and press it down until properly seated.

2.4 Installing Mounting Brackets (EPS Series)

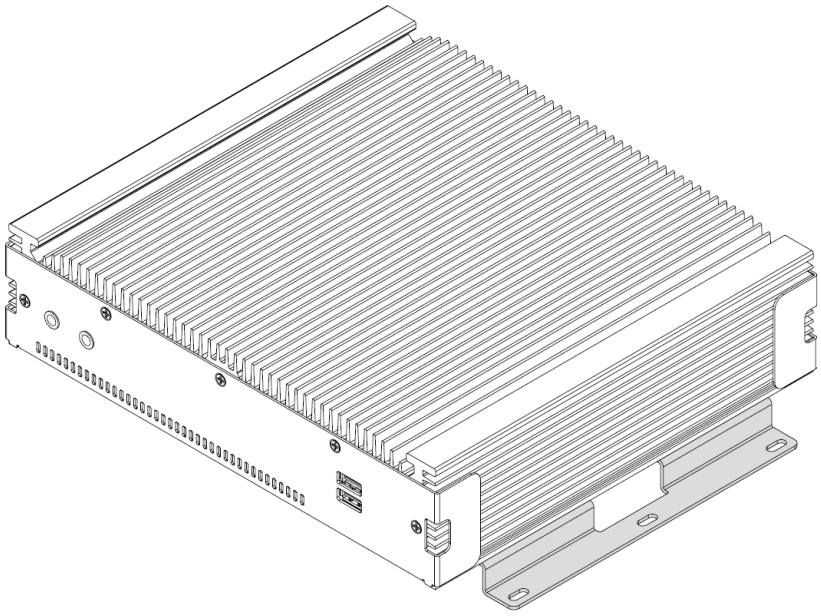


Step 1. Remove 8 screws from the back of your system to install brackets.



Step 2. Locate brackets on both sides, matching the holes on the system.

Step 3. Insert and fasten 4 screws on each side of the system to secure Mounting brackets.



Step 4. Installation completed.