

# MPC 21” Series

21” Multifunctional Touch Panel PC

## Quick Reference Guide

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1<sup>st</sup> Ed – 28 october 2010

# 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

- 1 x MPC 21" Series Panel PC
- 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
  - WiFi drivers and utilities
  - Touch controller drivers and utilities
  - Chipset drivers and utilities
- 1 x Power Adapter (12V/7A)
- 4 x screws for VESA (M4 x 6mm)
- 4 x screws for 2.5" HDD device (M3 x 5mm)
- 4 x screws for mPCIe device (M2 x 4mm)



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

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## 1.3 System Specifications

Panel 		
Model	MPC-21W3	MPC-21W5
LCD size	21.6", 16:9	
Display type	Full HD	
Resolution	1920 x 1080	
Color	16.7M	
Pixel pitch	0.248mm(H) x 0.248mm(V)	
Luminance	300 cd/m <sup>2</sup>	
Contrast ratio	1000	
Viewing angle	80(U), 80(D), 85(L), 85(R)	
Response time	5 ms	
Backlight	CCFL	
Touch type (Optional)	Optional 5 Wires resistive	
Touch interface	USB	
System 		
Board	EBM-945GSE	EBM-PNV
CPU	Onboard Intel Atom N270 1.6GHz (2.5W)	Onboard Intel® Atom™ Dual Core 1.8GHz CPU
BIOS	Award 8 Mbit Flash BIOS	AMI 8Mbit Flash BIOS
System Chipset	Intel 945GSE + ICH7-M	Intel® ICH8M Chipset (2.4 W)
I/O Chipset	ITE 8712F	Winbond W83627DHG-P
System Memory	Onboard 1GB DDR2, extra one SODIMM supports up to 2GB 400/533 SDRAM	Onboard 1GB, one 200-pin SODIMM supports up to 3GB
SSD	One CF socket supports Type I / II Compact Flash Card.	
HDD	Optional 2.5" SATA HDD or 44-pin enhanced IDE HDD	1 x 2.5" SATA HDD
WiFi	Optional USB WiFi 802.11b/g	Optional USB WiFi 802.11b/g/n
Watchdog Timer	Reset: 1 ~ 65535 sec./min. and 1 min./step	
Display	Intel 945GSE GMCH integrated GMA950 graphics	Intel Pineview integrated, Gen3.5 + GFX Core @ 400MHz
Audio	Realtek ALC 655 supports 5.1-CH Audio	Realtek ALC888 supports 5.1-CH Audio
Ethernet	Dual Realtek RTL8111C Gigabit LAN, supports wake on LAN	Intel® 82574L Gigabit LAN (optional dual 82574L Gigabit LAN)

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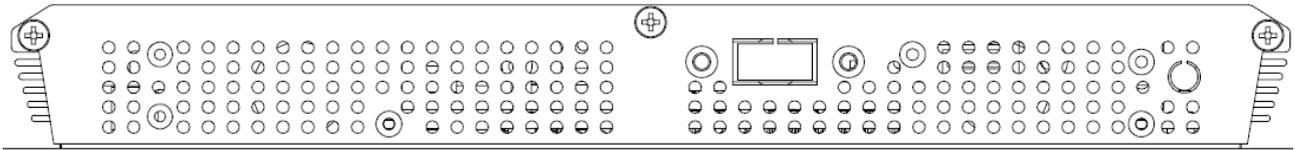
External I/O Ports 		
COM Port	1 x RS-232/422/485 setting by BIOS*, optional extra 1 x RS-232/422/485	
Ethernet Port	2 x RJ-45	1 x RJ-45
VGA / LCD Port	1 x DB-15	
Audio Port	Line-out	Line-out
USB Port	2 x USB 2.0	
Power Supply Unit 		
Power Input	12V	
Power Output	7A (84W)	
Environment & Mechanical 		
Operating Temperature	0~50°C (32~122°F)	0 to 50°C (32 to 122°F)
Storage Temperature	-20 to +75°C (-4~167°F)	
Relative Humidity	5 to 90% @ 40°C (104°F), relative humidity, non-condensing	
Dimension (W x D x H)	508 x 301 x 49 mm	
Weight	6 Kgs	
Mounting	Desktop (VESA Compliance)	



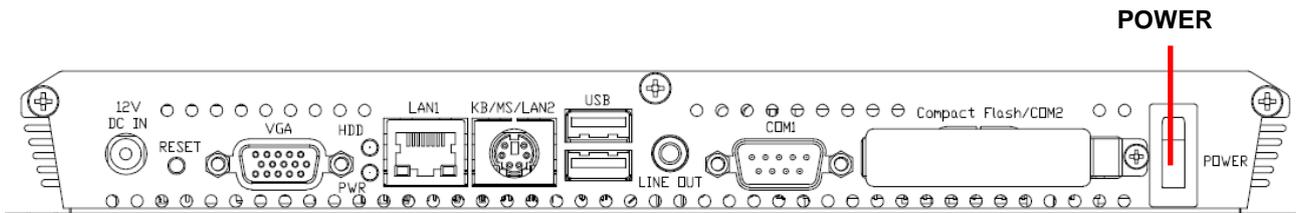
**Note:** \*To know more detail of RS232/422/485 setting by BIOS, please refer to chapter 2.1.

## 1.4 System Overview

### 1.4.1 Front View



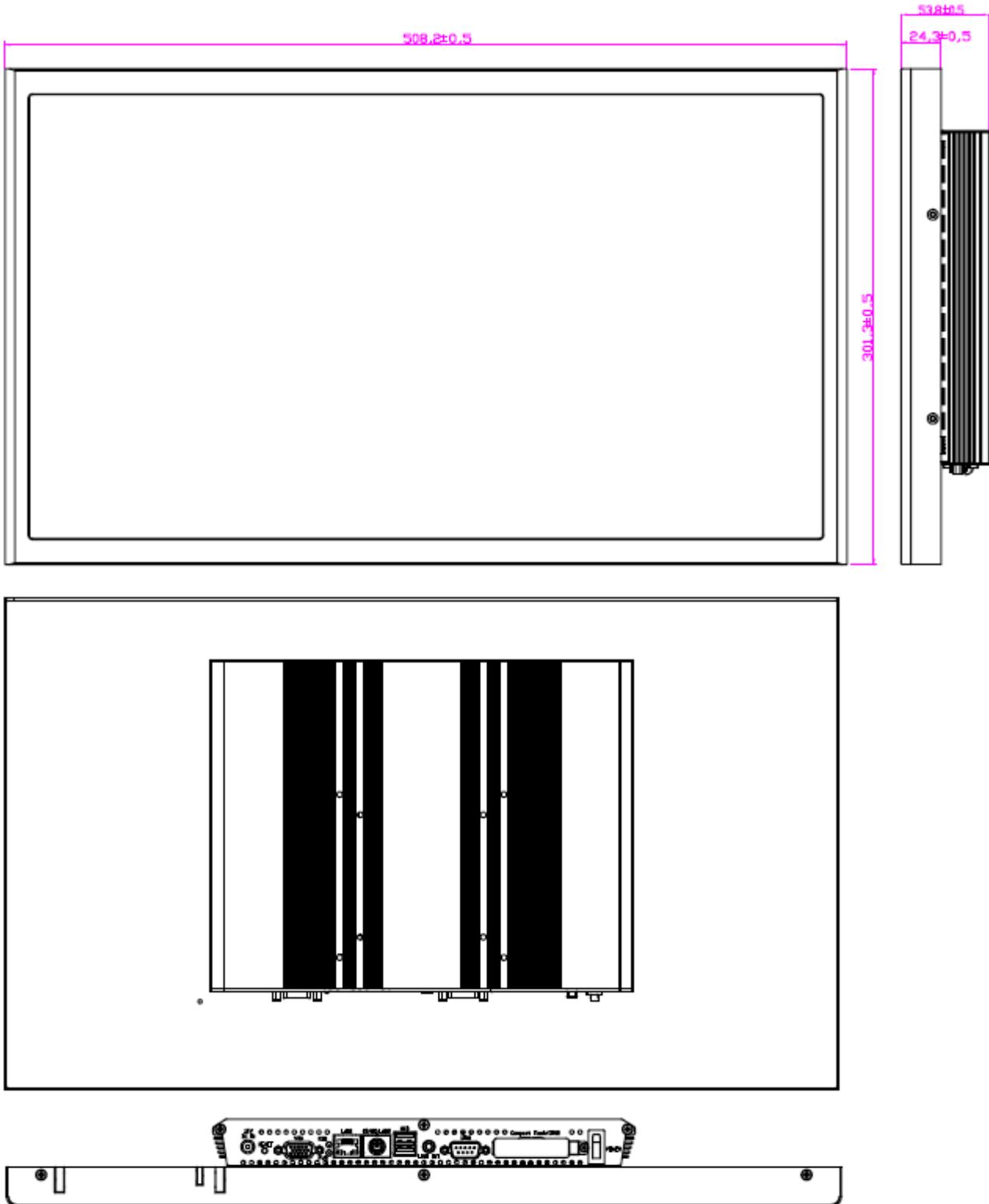
### 1.4.2 Rear View



## Connectors

Label	Function	Note
<b>POWER</b>	Power on button	
<b>CF</b>	CF Type I/II Socket with Ejector	Optional for 2 <sup>nd</sup> COM port
<b>COM</b>	Serial port	DB-9 male connector
<b>LINE OUT</b>	Line-out audio jack	
<b>USB</b>	2 x USB 2.0 connector	Dock USB
<b>LAN1</b>	RJ-45 Ethernet connector 1	
<b>LAN2</b> <b>(KB/MS)</b>	RJ-45 Ethernet connector 2 <a href="#">(LAN2 is default for MPC-21W3, KB/MS is default for MPC-21W5)</a>	
<b>HDD</b>	HDD indicator	
<b>PWR</b>	System power indicator	
<b>VGA</b>	CRT connector	DB-15 female connector
<b>RESET</b>	Reset button	
<b>DC-IN</b>	DC Power-in connector	

## 1.5 System Dimensions



# 2. Hardware Configuration

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

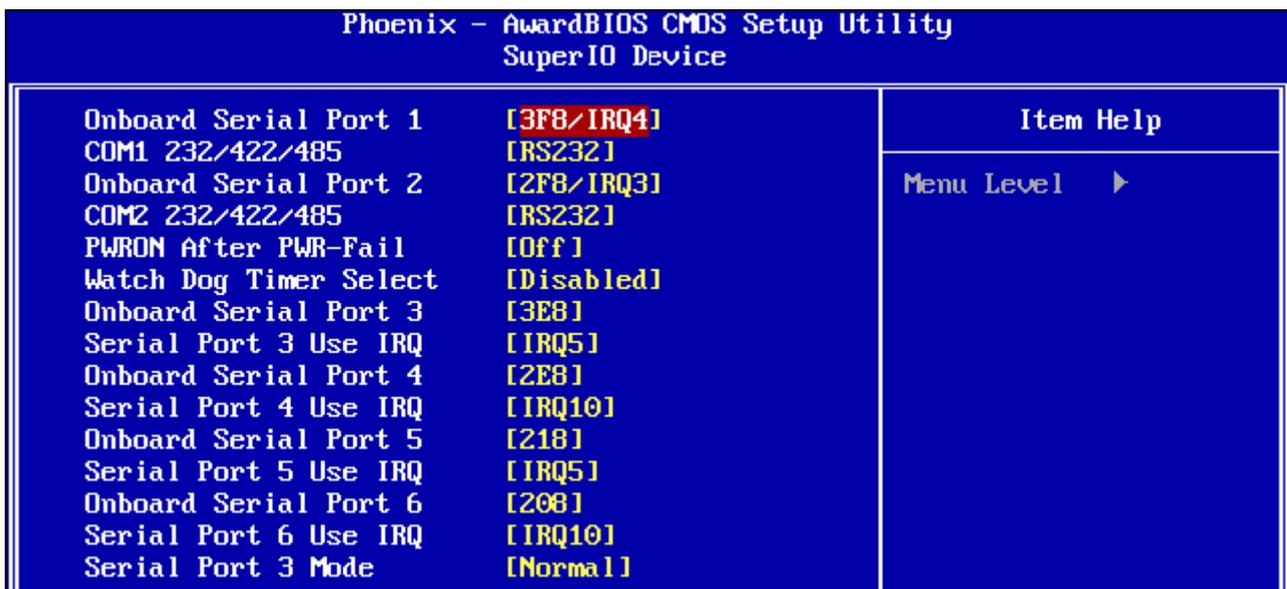
<http://www.avalue.com.tw>

## 2.1 BIOS settings

### 2.1.1 MPC-21W3 RS232/422/485 setting by BIOS

The COM port setting of MPC-21W3, which applies for EBM-945GSE M/B, can be configured by BIOS; the path is shown as below.

[BIOS Menu] → [Integrated Peripherals] → [Super IO Device]  
→ [COMPORT 232/422/485]



The panel backlight of MPC-21W3, which applying EBM-945GSE M/B, can as well be configured by;

[BIOS Menu] → [Advanced Chipset Features] → [LVDS Back Light]

To know more about other settings, please refer to **EBM-945GSE** Quick Installation Guide or User's Manual.

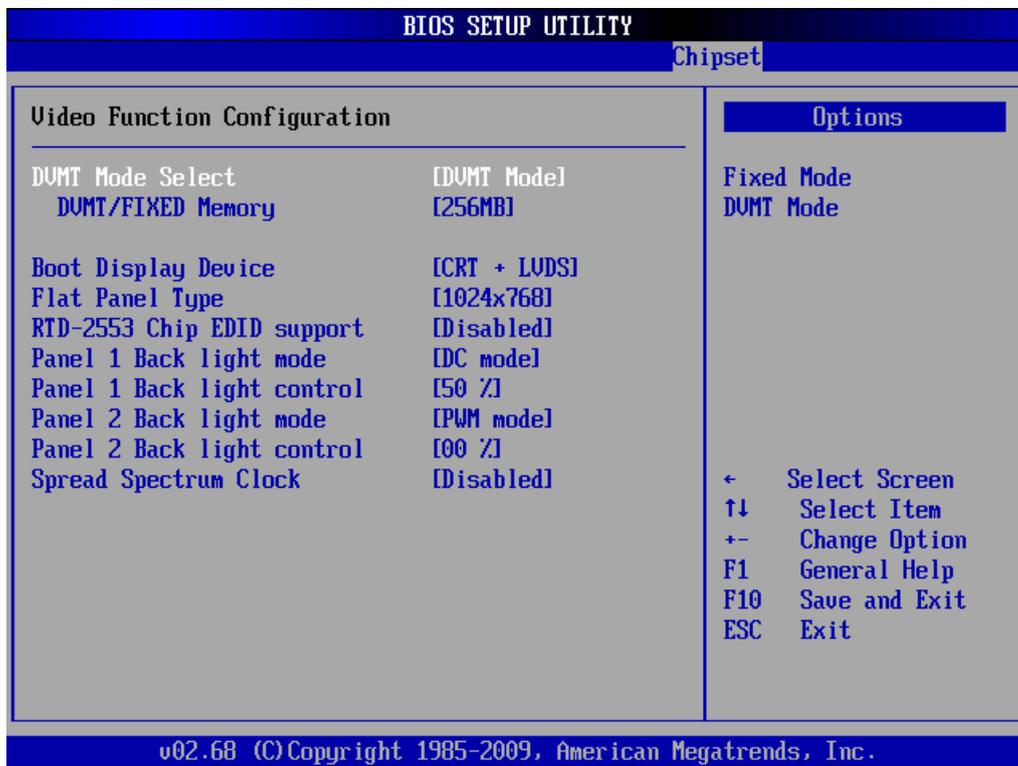
## 2.1.2 MPC-21W5 backlight control setting by BIOS

The Backlight control setting for MPC-21W5, which applies for EBM-PNV M/B, can be configured by BIOS; the path is shown as below.

**[Chipset] → [North Bridge Configuration] → [Video Function Configuration]**

**Panel 2 Back light mode:** PWM mode

**Panel 2 Back light control:** 100%



### Note:

**Panel 1 Back light mode :** DC mode

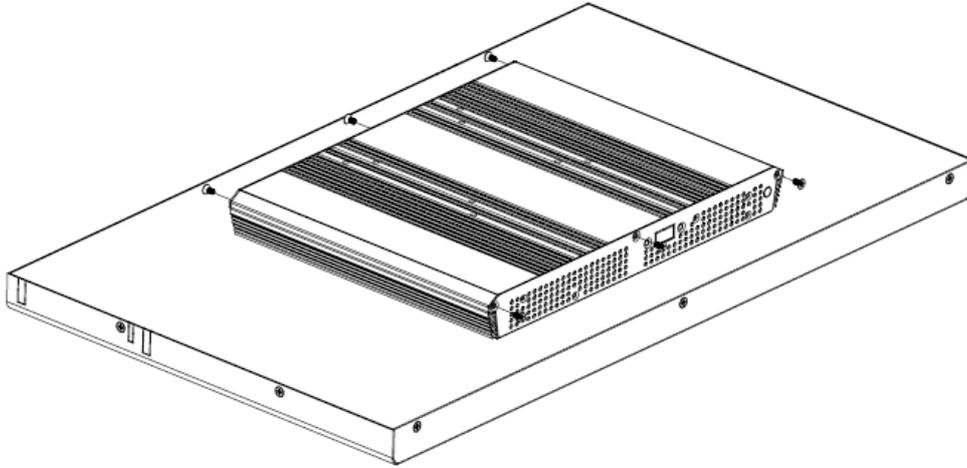
**Panel 1 Back light control :** 50%

Panel 1 control for 18bit LVDS panel.

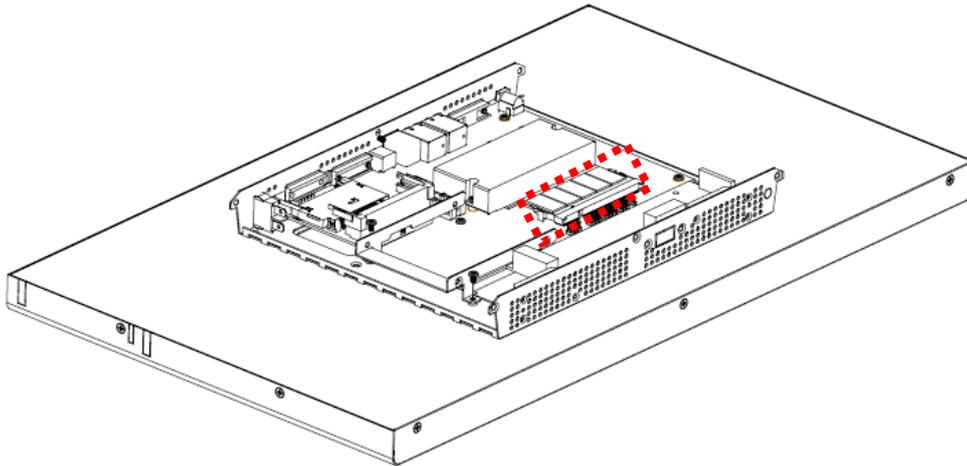
To know more about other settings, please refer to **EBM-PNV** Quick Installation Guide or User's Manual.

## 2.2 Installing Hard Disk & Memory

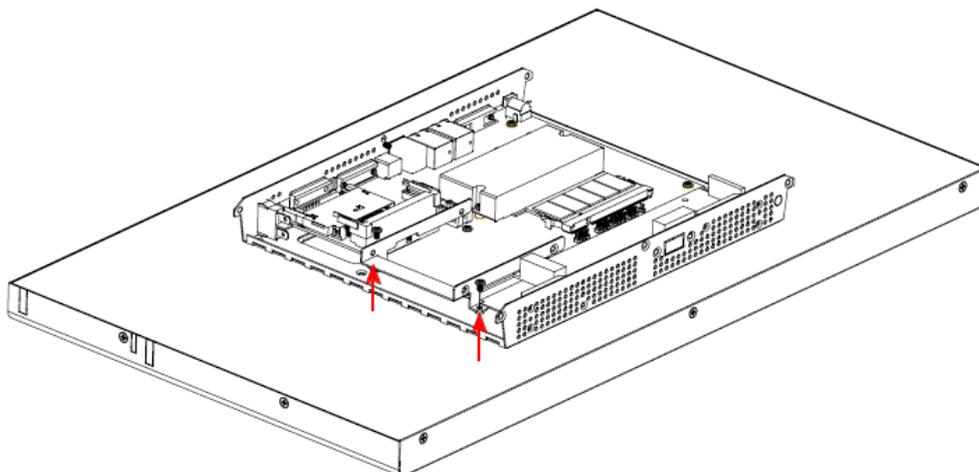
**Step 1. Memory Installation:** Unfasten 6 screws from the case to take off the top chassis.



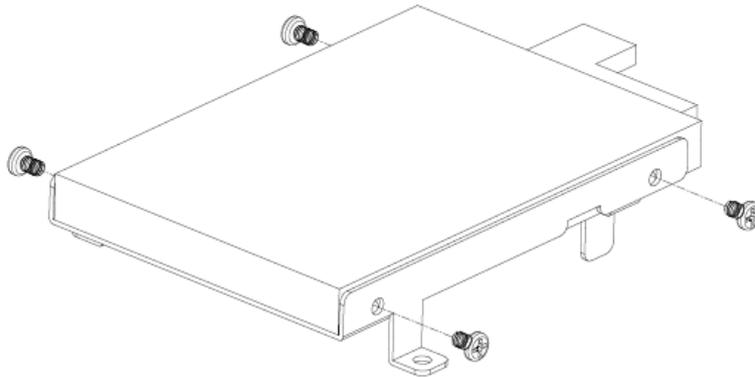
**Step 2.** Insert the SODIMM into the memory socket.



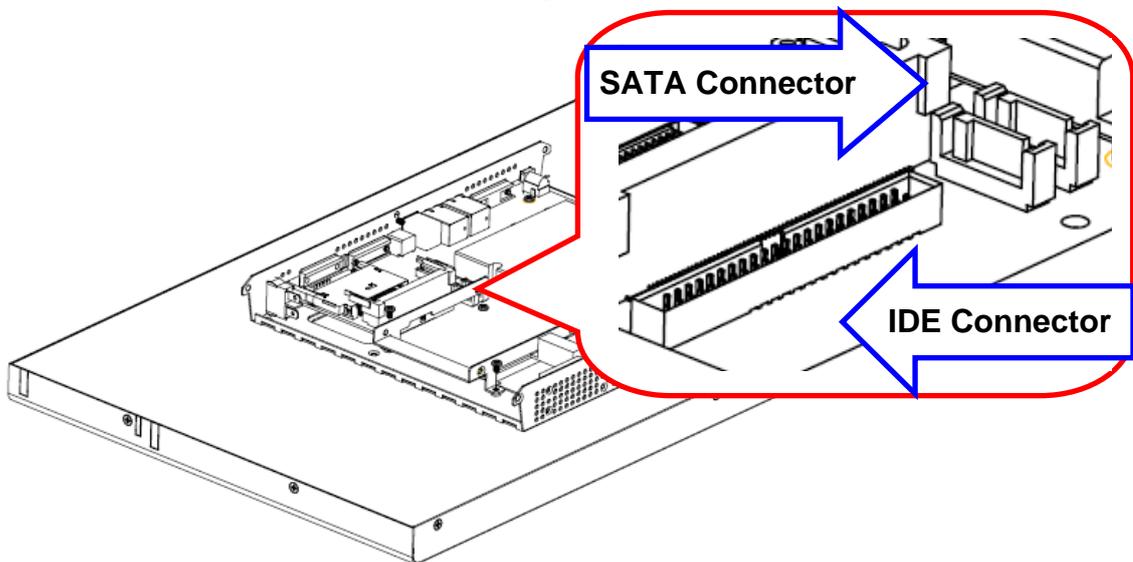
**Step 3-1. HDD Installation:** Unfasten 2 screws of the HDD bracket and take it off.



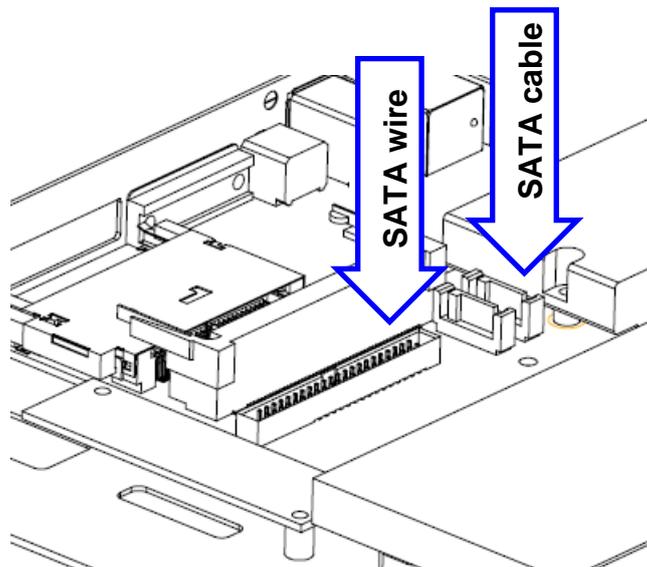
**Step 3-2.** Insert the HDD into the bracket and fasten 4 screws.



**Step 3-3.** Insert the cable to connect HDD and SATA connectors.

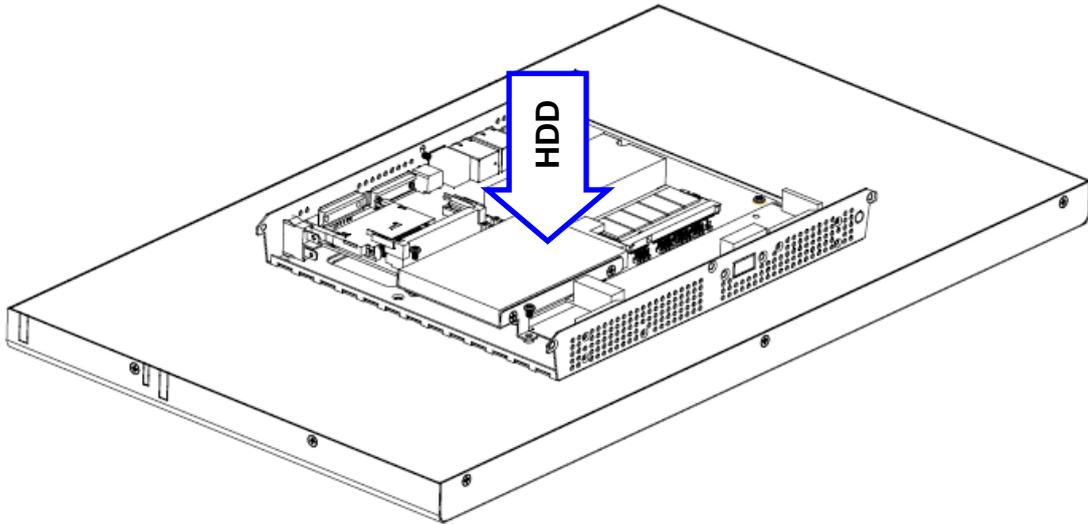


**Step 3-4. SATA HDD Installation:** By default, SATA cables had been inserted to respective connectors. Connect to SATA HDD with the two cables.



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**Step 3-5.** Insert the HDD back and fasten 2 screws.



**Step 4.** Place back the chassis with 6 screws locked.

