

LPC-1208/1508/1708

12.1"/15"/17" Fanless Multifunctional Touch Panel Computer

Quick Reference Guide

1st Ed – 30 December 2015

Copyright Notice

Copyright © 2015 Avalue Technology Inc., ALL RIGHTS RESERVED.

FCC Statement



THIS DEVICE COMPLIES WITH PART 15 FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:

- (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE.
- (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRE OPERATION.

THIS EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS "A" 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.

A Message to the Customer

Avalue Customer Services

Each and every Avalue's product is built to the most exacting specifications to ensure reliable performance in the harsh and demanding conditions typical of industrial environments. Whether your new Avalue device is destined for the laboratory or the factory floor, you can be assured that your product will provide the reliability and ease of operation for which the name Avalue has come to be known.

Your satisfaction is our primary concern. Here is a guide to Avalue's customer services. To ensure you get the full benefit of our services, please follow the instructions below carefully.

Technical Support

We want you to get the maximum performance from your products. So if you run into technical difficulties, we are here to help. For the most frequently asked questions, you can easily find answers in your product documentation. These answers are normally a lot more detailed than the ones we can give over the phone. So please consult the user's manual first.

To receive the latest version of the user's manual; please visit our Web site at:

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

Contents

1.	Getting Started	4
1.1	Safety Precautions	4
1.2	Packing List	4
1.3	System Specifications	5
1.4	System Overview	8
1.4.1	Top View	8
1.4.2	Bottom View	8
1.5	System Dimensions	10
1.5.1	LPC-1208 Front and Rear side	10
1.5.2	LPC-1508 Front and Rear side	11
1.5.3	LPC-1708 Front and Rear side	12
2.	Hardware Configuration	13
2.1	LPC-1208/1508/1708 connector mapping	14
2.1.1	External Serial Port connector (COM1)	14
2.2	Installing Hard Disk & Memory (For LPC-1208)	15
2.3	Installing Hard Disk & Memory (For LPC-1508/1708)	17

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 LPC-1208/1508/1708 12.1"/15"/17" Fanless Multifunctional Touch Panel Computer
- 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



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

1.3 System Specifications

Panel			
Model	LPC-1208	LPC-1508	LPC-1708
LCD size	12.1", 4:3	15", 4:3	17", 4:3
Display Type	XGA		SXGA
Resolution	1024 x 768		1280x1024
Pixel pitch	0.240mm(H) x 0.240mm(V)	0.297mm(H) x 0.297mm(V)	0.264mm(H) x 0.264mm(V)
Luminance	600 cd/m ²	400 cd/m ²	350 cd/m ²
Contrast ratio	700		800
Viewing angle	70(U), 70(D), 80(L), 80(R)		80(U), 80(D), 85(L), 85(R)
Response time	16 ms		30 ms
Backlight	LED		
Touch Type	5 Wires resistive		
Touch Light transmission	80 %		
Touch Interface	Onboard USB touch (EETI)		
System			
SBC	EBM-QM87U		
Processor	4th Gen Intel® Core™ i5-4300U, 2-Core, 1.9GHz processor		
I/O Chip	E/C ITE IT8528E		
System Memory	2 x 204-pin DDR3L 1333/1600 SO-DIMM up to 16GB		
Watchdog Timer	H/W Reset, 1sec. ~ 65535sec. and 1sec./step		
H/W Status Monitor	Monitoring SYSTEM Temperature and Voltage with Auto Throttling Control		
Expansion			
Expansion	1 x Mini PCIe Support mSATA 1 x Mini PCIe Supports SIM Card		
Storage			
Storage	1 x CompactFlash Type I/II Socket 1 x 2.5" Drive Bay		
I/O			
USB	2 x USB 3.0		
SATA	1 x SATA II		
COM Port	1 x RS-232		
Other	1 x HDMI 1 x Knockouts for Antenna Mounting		
Display			

Chipset	Intel® Lynx Poing Integrated Graphics Supports dual display		
Resolution	HDMI: Max. resolution 4000 x 2000 @60Hz		
Audio			
Chipset	Realtek ALC892		
Audio Interface	Line-Out		
Ethernet			
Chipset	1 x Intel® I210AT 1 x Intel® I218LM		
Ethernet Interface	10/100/1000 Base-Tx GbE compatible		
LAN Port	2 x RJ-45		
Power Requirement			
Power Connector	Lockable DC Jack		
Power Requirement	+12V ~ +26V		
Power Type	AT/ATX (ATX is default setting)		
Adapter	Input: 100 ~ 240Vac/ 50 ~ 60Hz		
Mechanical & Environmental			
System Fan	Fanless		
Construction - Front	Silver Aluminum		
Construction - Rear	Black		
Dimensions	283 x 222 x 45 mm	350 x 273.9 x 53.1mm	382 x 320 x 58.8 mm
Weight	2.84 Kgs	4.2 Kgs	5.2 Kgs
Operating	0°C ~ 40°C (32°F ~ 104°F)		-10°C ~ 50°C (14°F ~ 122°F)
Storage Temperature	-20°C ~ 60°C (-4°F ~ 140°F)		
Operating Humidity	0% ~ 90% Relative Humidity, Non-condensing		
Vibration Test	With SSD/mSATA : 1.5Grms, IEC 60068-2-64, Random, 5 ~ 500Hz, 30min/axis		
Mounting	Wall / Stand / VESA 75mm x 75mm	Wall / Stand / VESA 75mm x 75mm, 100mm x 100mm	
Shock Test	With CF/SSD : 10Grms, IEC 60068-2-27, Half Sine, 11ms		
Certifications			
Certification	CE		

Information	FCC Class B
Software Support	
OS Information	Win 7 Win 8 Linux

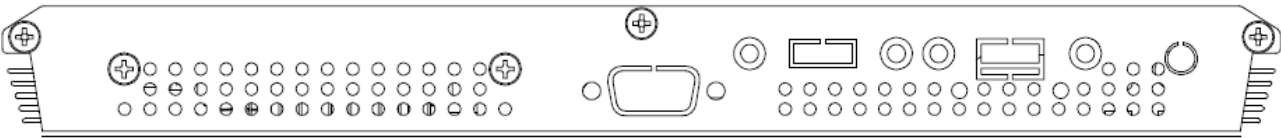


Note: Specifications are subject to change without notice.

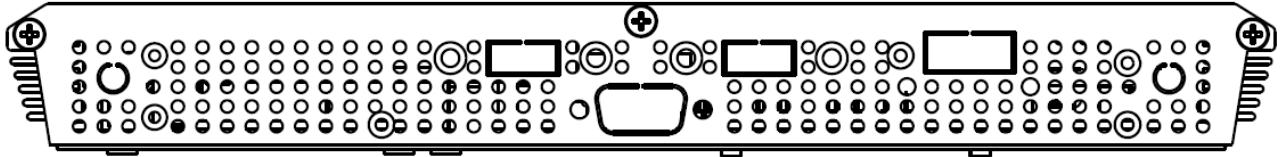
1.4 System Overview

1.4.1 Top View

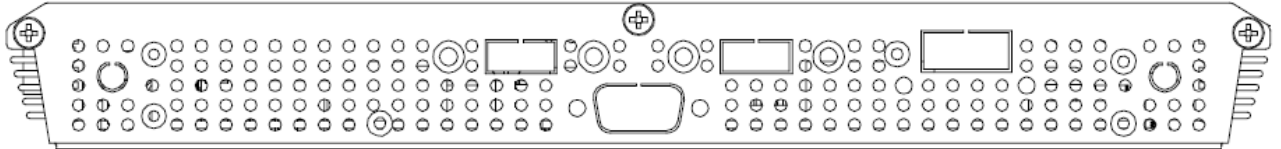
LPC-1208



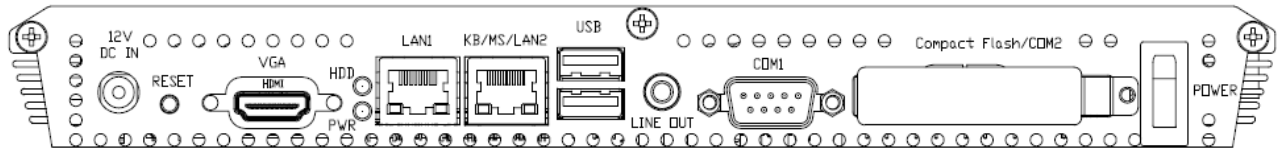
LPC-1508



LPC-1708



1.4.2 Bottom View

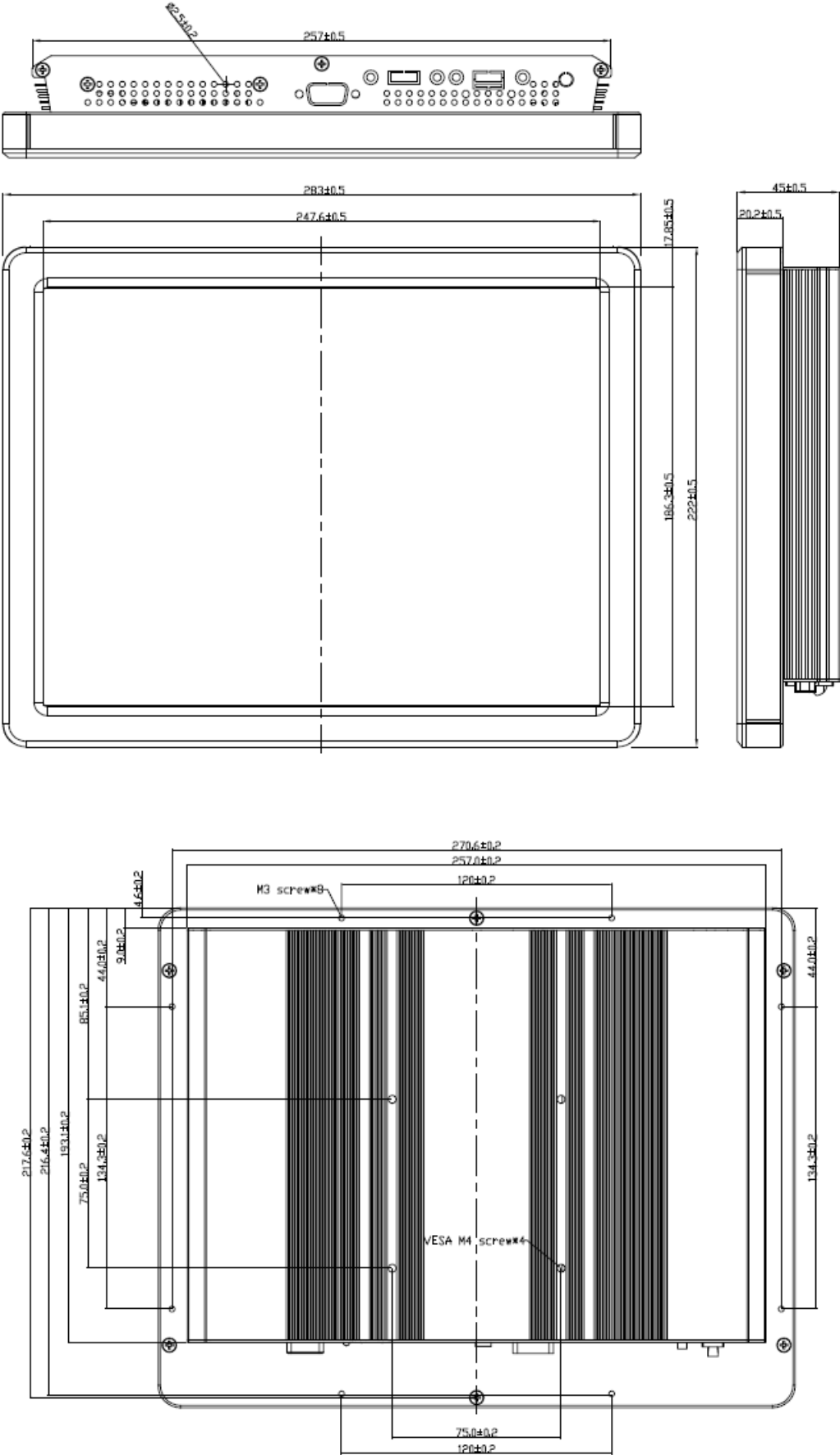


Connectors		
Label	Function	Note
POWER	Power on button	
Compact Flash/COM2	CF Type I/II Socket with Ejector	Optional for 2 nd COM port
COM1	External Serial Port connector	DB-9 male connector
LINE OUT	Line-out audio jack	
USB	2 x USB 3.0 connector	Dock USB
LAN1	RJ-45 Ethernet connector 1	
KB/MS/LAN2	RJ-45 Ethernet connector 2 Optional PS/2	

HDD	HDD indicator
PWR	System power indicator
HDMI	HDMI connector
RESET	Reset button
DC-IN	DC Power-in connector

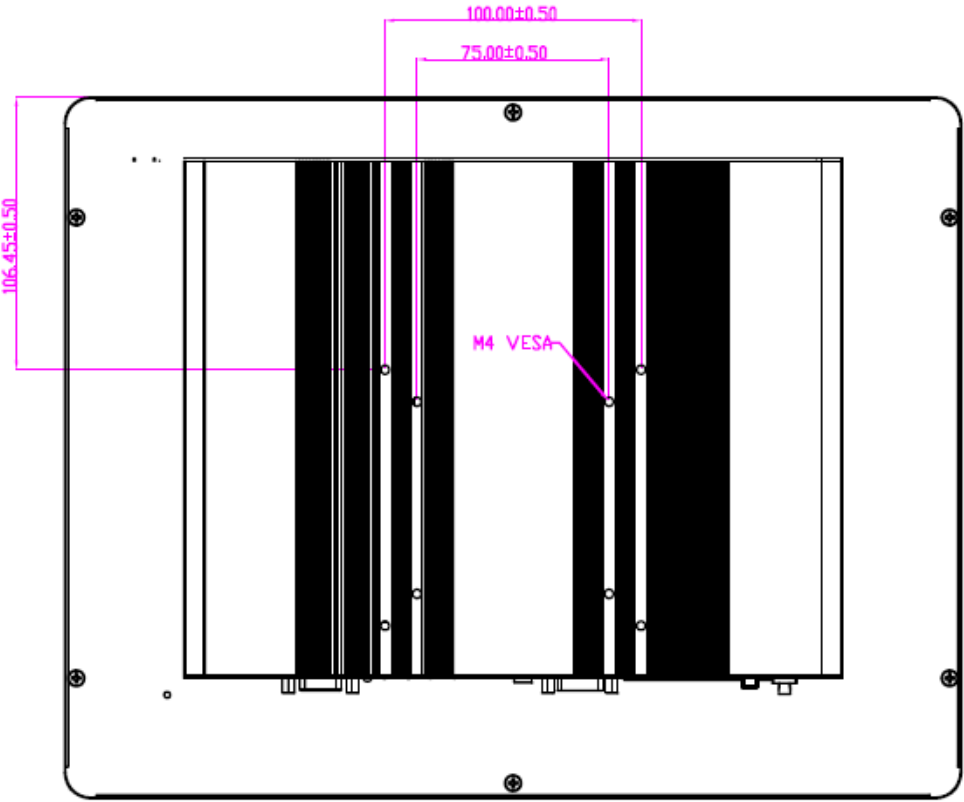
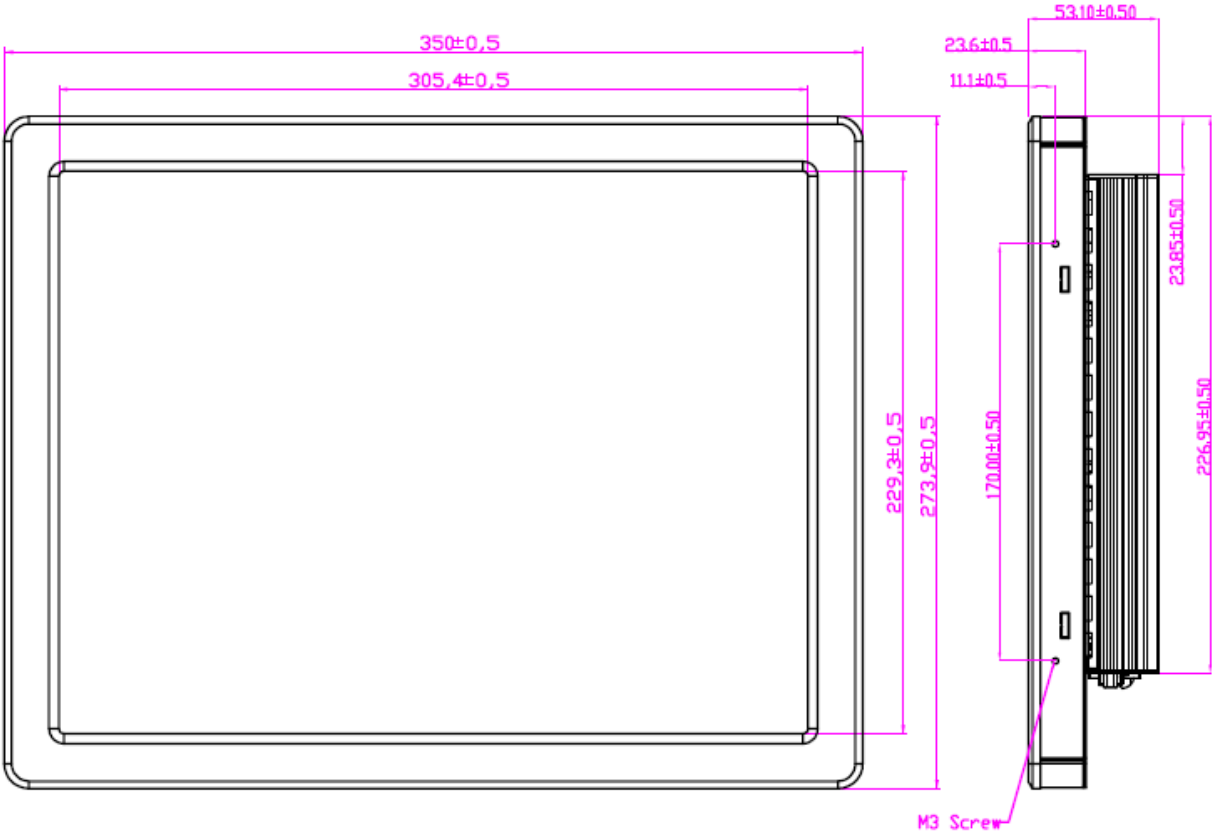
1.5 System Dimensions

1.5.1 LPC-1208 Front and Rear side



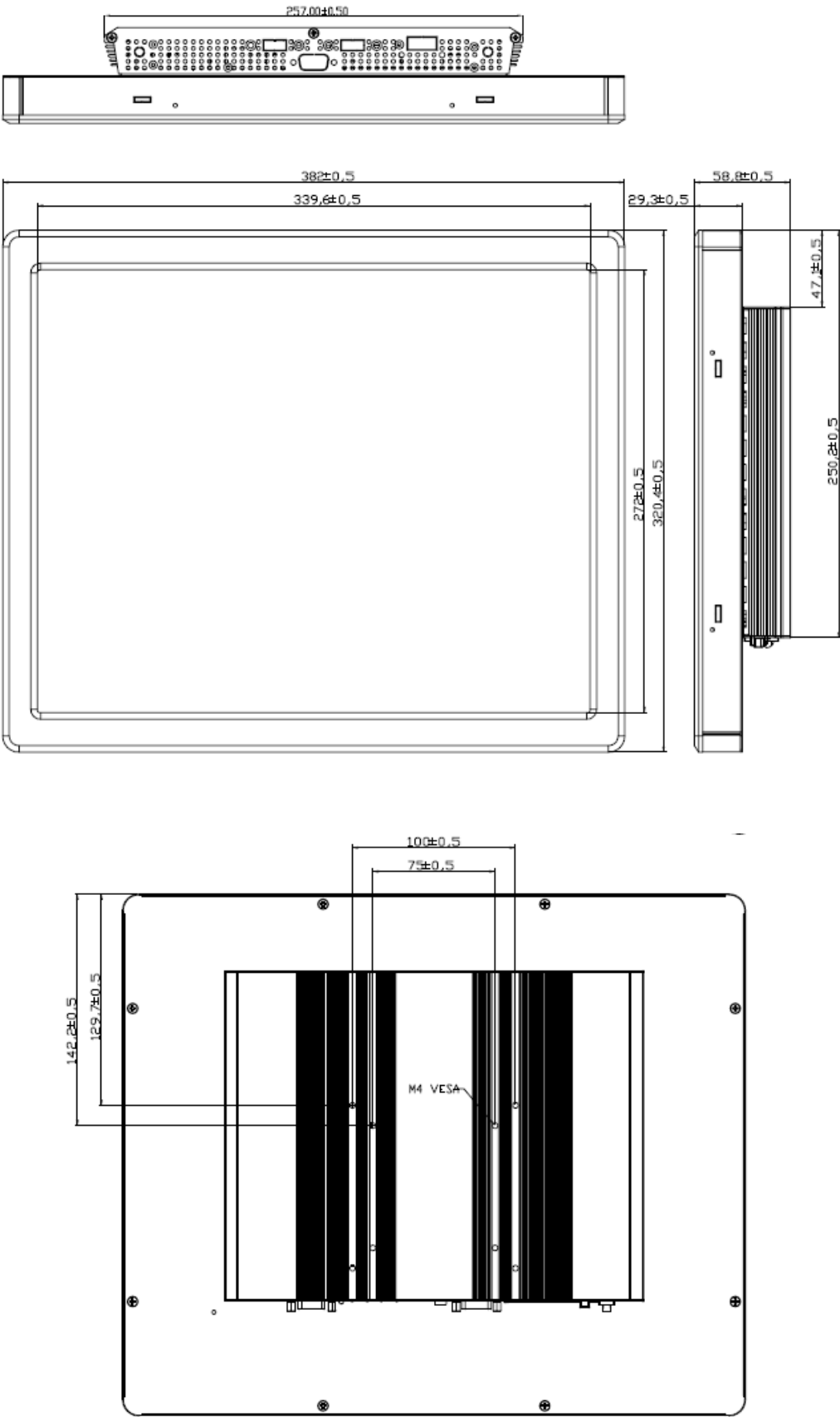
(Unit: mm)

1.5.2 LPC-1508 Front and Rear side



(Unit: mm)

1.5.3 LPC-1708 Front and Rear side



(Unit: mm)

2. Hardware Configuration

Please refer to EBM-QM87U User's Manual for advanced information.

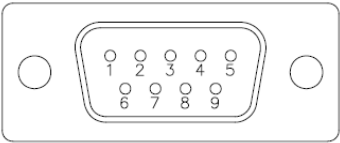
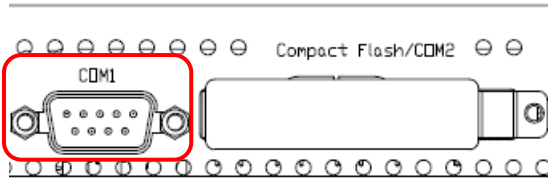


Note: If you need more information, please visit our website:

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

2.1 LPC-1208/1508/1708 connector mapping

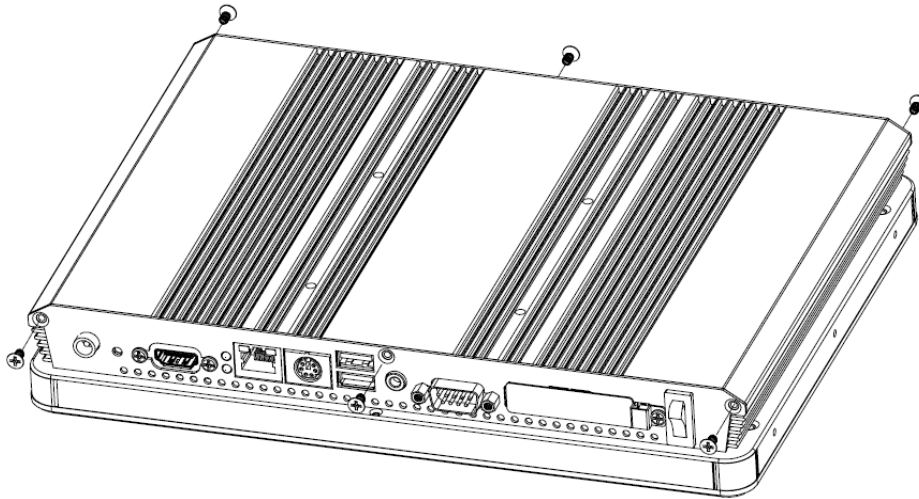
2.1.1 External Serial Port connector (COM1)



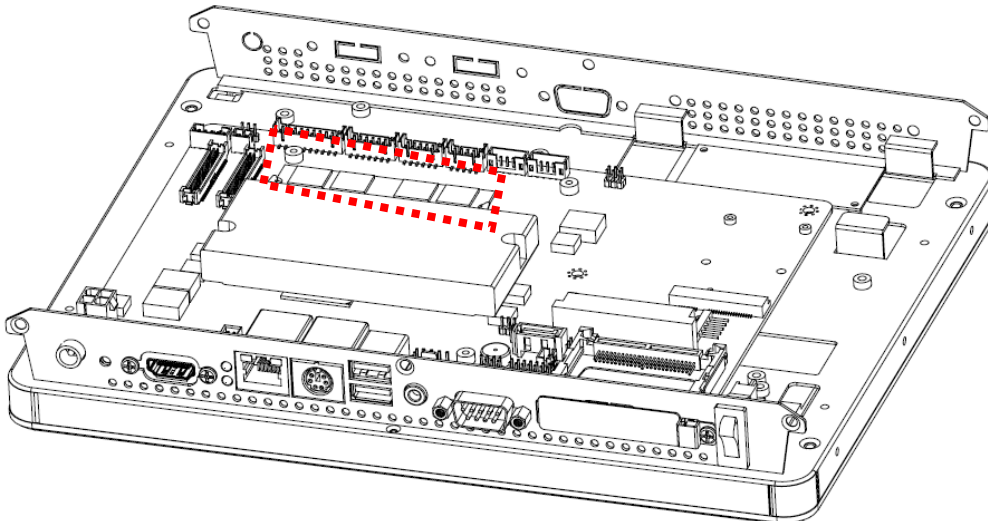
Signal	PIN	PIN	Signal
DCD	1	2	RXD
TXD	3	4	DTR
GND	5	6	DSR
RTS	7	8	CTS
RI	9	10	NC

2.2 Installing Hard Disk & Memory (For LPC-1208)

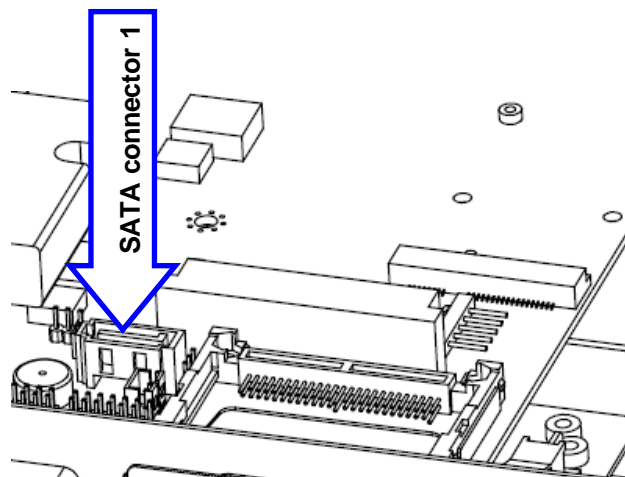
Step 1. Memory Installation: Unfasten 6 screws from the case. Then take off the top chassis.



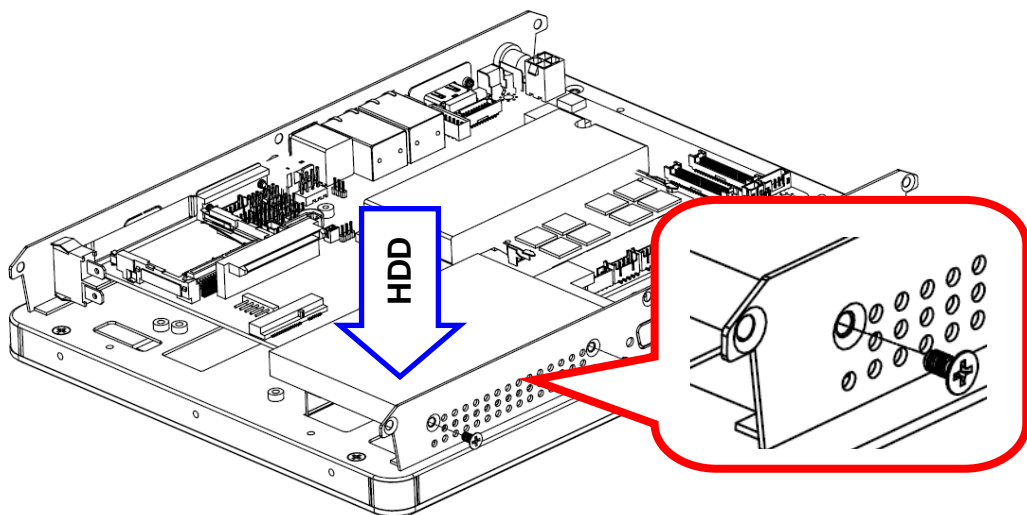
Step 2. Insert the SODIMM into the memory socket.



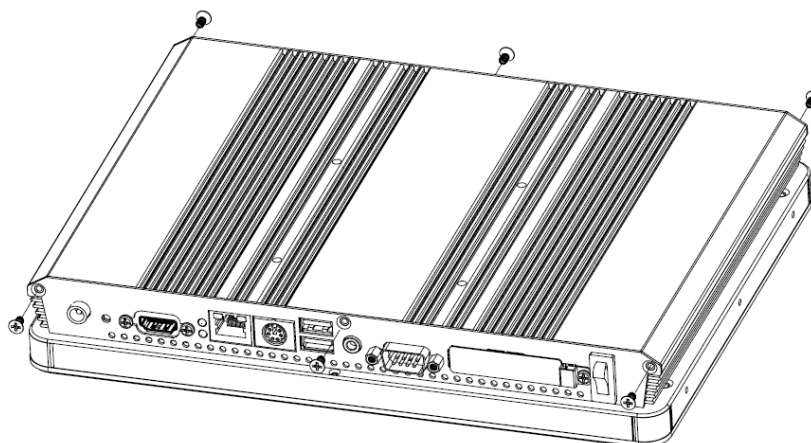
Step 3-1. SATA HDD Installation: By default, the SATA cables had been inserted to the according connectors. Just connect to SATA HDD with the two cables.



Step 3-2. Insert the HDD into the Drive Bay. Remember to place the HDD down to the bottom exactly in order to screw the device tightly.

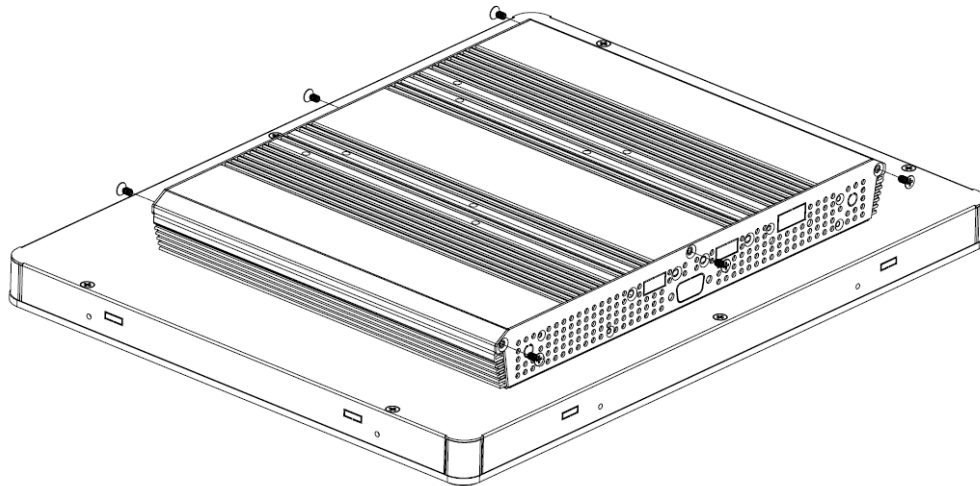


Step 4. Place back the chassis with 6 screws locked.

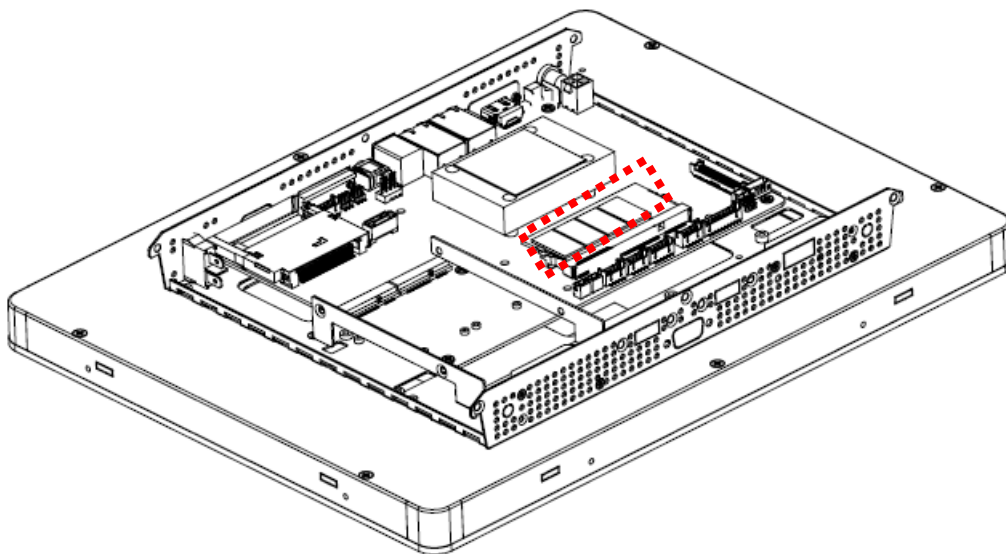


2.3 Installing Hard Disk & Memory (For LPC-1508/1708)

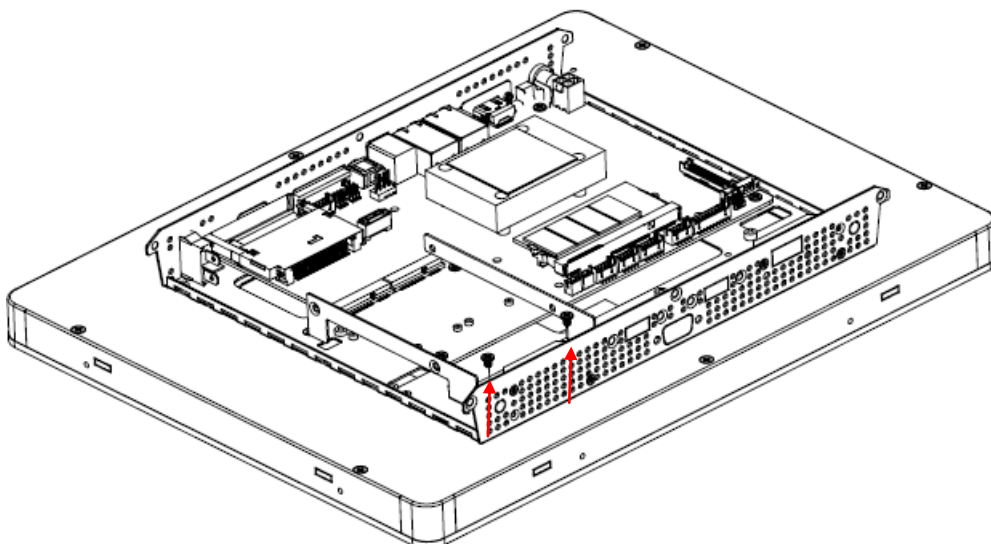
Step 1. Memory Installation: Unfasten 6 screws from the case to take off the top chassis.



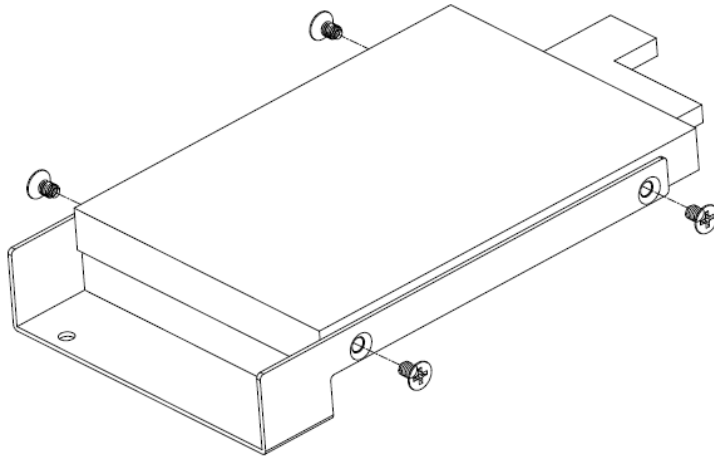
Step 2. Insert the SODIMM into the memory socket.



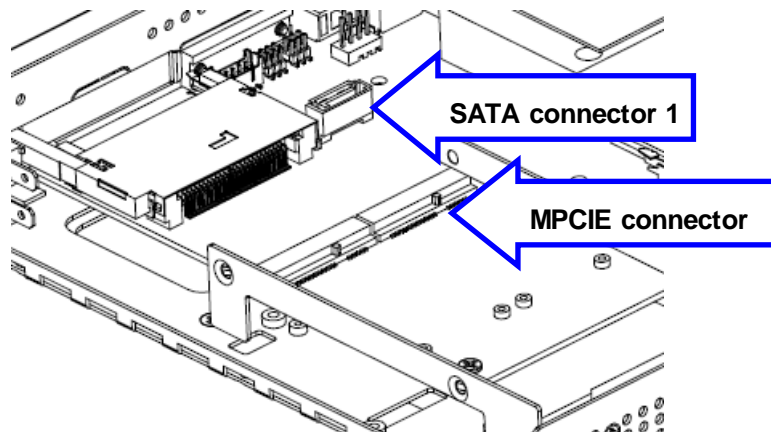
Step 3-1. HDD Installation: Unfasten 2 screws of the HDD bracket and take it off.



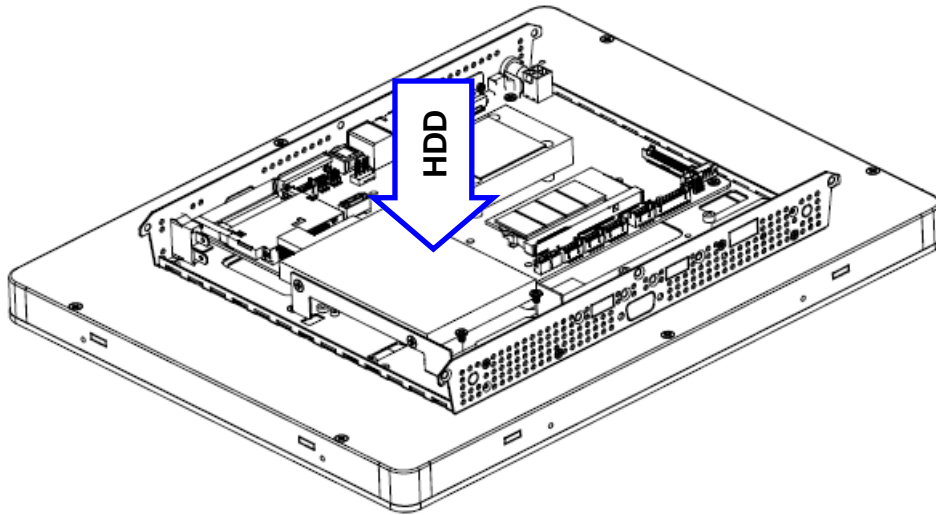
Step 3-2. Insert the HDD into the bracket and fasten 4 screws.



Step 3-3. SATA HDD Installation: By default, the SATA cables had been inserted to the according connectors. Just connect to SATA HDD with the two cables.



Step 3-4. Insert the HDD back and fasten 2 screws.



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

