

EES-CDV

Fanless Intel® Atom™ D2550 Tiny Box PC

with Intel® NM10 Express Chipset

Quick Reference Guide

1st Ed – 21 June 2012

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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 EES-CDV (with ECM-CDV)
- 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 HDD/SSD fixing
 - AC to DC Adapter
 - Power Cord



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

1.3 System Specifications

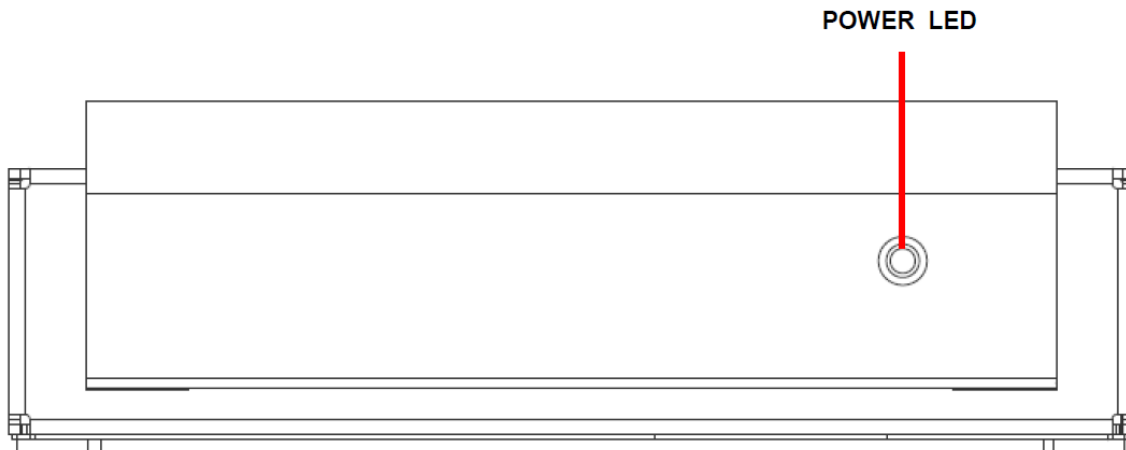
System	
Board	ECM-CDV
CPU	Onboard Intel® Atom™ D2550 1.86GHz CPU
BIOS	AMI 16Mbit SPI BIOS
System Chipset	Intel® NM10 Express Chipset
System Memory	One 204-pin DDR3 SODIMM Socket Supports Up to 4GB DDR3 800/ 1066 SDRAM
SSD	One CompactFlash Type I/II Socket
HDD	1 x 2.5" SATA HDD/ SSD
Watchdog Timer	Reset: 1sec. ~ 65535sec./min. and 1sec. or 1min./step
H/W Status Monitor	Monitoring System Temperature, Voltage with Auto Throttling Control
External I/O	
COM Port	1 x RS-232, 1 x RS-232/ 422/ 485 (Setting by Jumper & BIOS)
LAN Port	2 x RJ-45
Antenna	2 Knockouts for Antenna Mounting (Options to Add WiFi & 3G)
VGA	1 x VGA
HDMI	1 x HDMI
Audio Port	Mic-in, Line-in, Line-out
USB Port	5 x USB 2.0
Expansions	1 x Mini-PCIe Socket
Display	
Chipset	Intel® Cedarview Integrated Graphics
Resolution	CRT Mode: 1920 x 1200 @ 60Hz
Audio	
Chipset	Realtek ALC655 supports 5.1-CH Audio
Audio Interface	Mic in, Line in, Line out
Ethernet	
LAN Chip	2 x Intel® 82574L Gigabit Ethernet
Ethernet Interface	10/ 100/ 1000 Base-Tx Gigabit Ethernet Compatible

Environment & Mechanical	
Power Requirement	+12 ~ +26Vdc (+12V/ 5A Lockable DC Plug Adapter is an Accessory to This System)
ACPI	Single Power ATX Support S0, S3, S4, S5 ACPI 3.0 Compliant
Power Type	AT/ ATX (ATX is The Default Setting)
Operating Temp.	0 ~ 50°C (32 ~ 122°F) (w/ CF & SSD), Ambient w/ Air Flow 0 ~ 40°C (32 ~ 104°F) (w/ HDD), Ambient w/ Air Flow
Storage Temp.	-40 ~ 75°C (-40 ~ 167°F)
Relative Humidity	0% ~ 90% Relative Humidity, Non-condensing
Vibration Protection	With CF/ SSD: 1.5Grms, IEC 60068-2-64, Random, 10 ~ 500Hz, 30min/axis
Shock Protection	With CF/ SSD: 10G, IEC 60068-2-27, Half Sine, 11ms, Z axis
Dimension (W x D x H)	8.7" x 2.8" x 5.8" (220mm x 66.1mm x 147mm)
Weight	2.7lbs (1.2kg)
Mounting	Wall Mount Kit

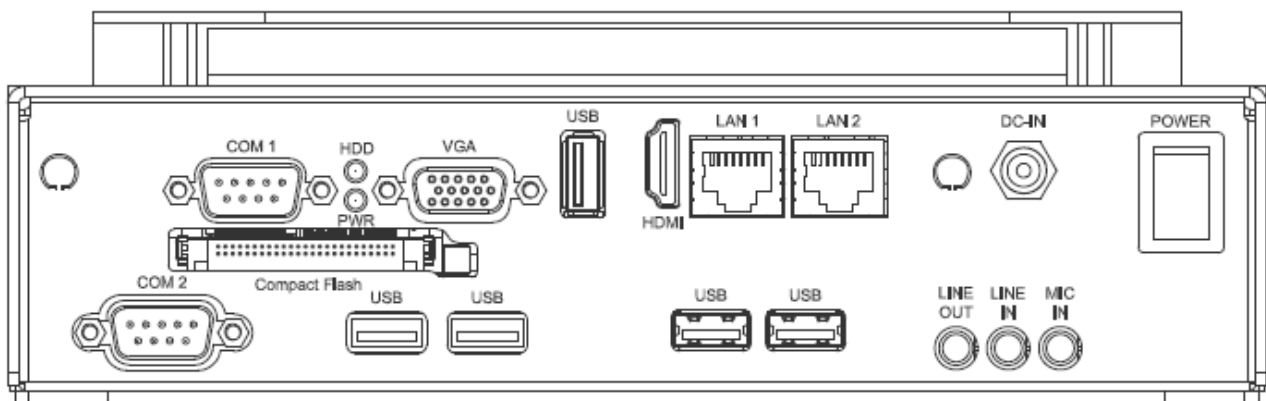
1.4 System Overview

1.4.1 Front & Rear View

Front View

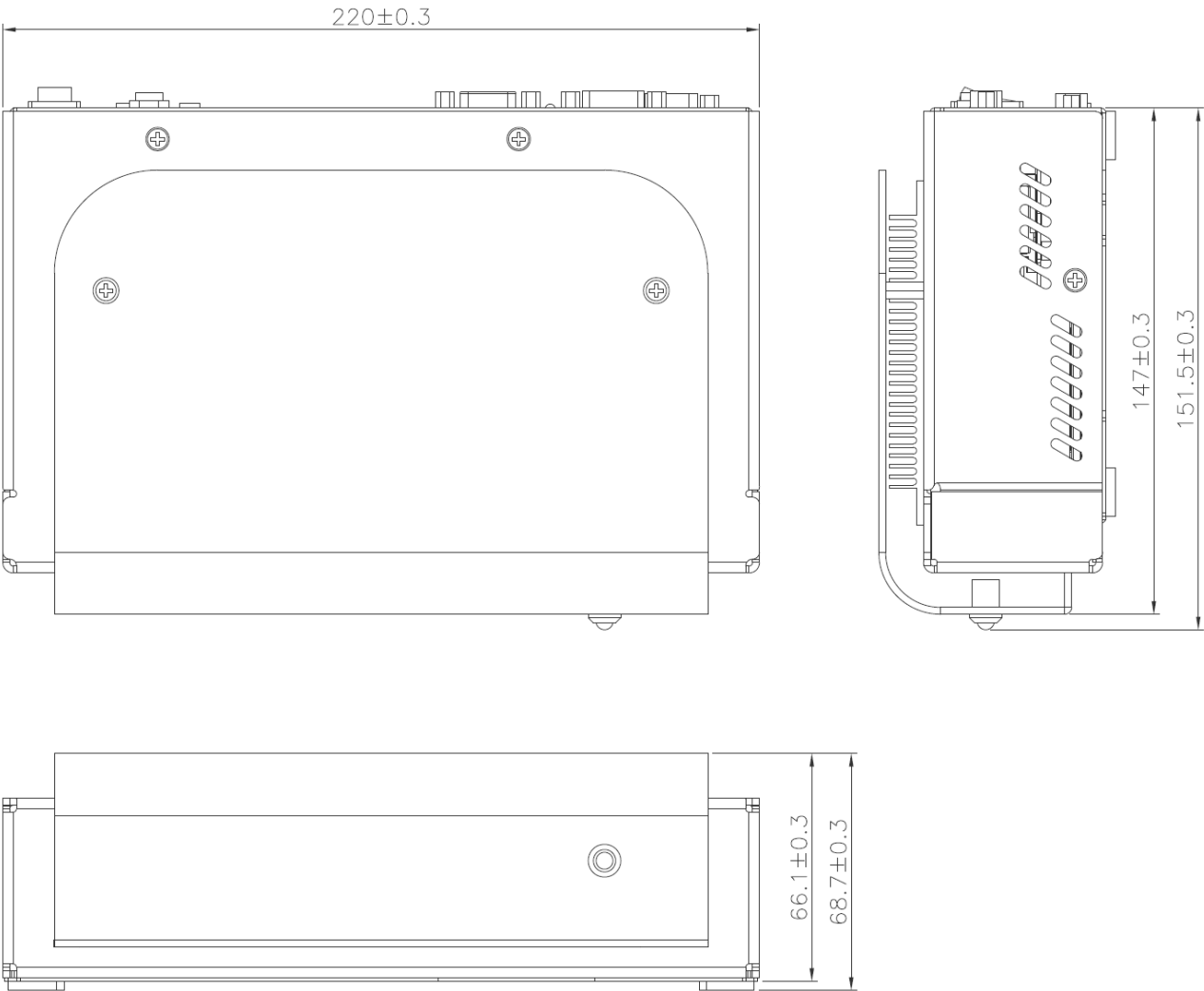


Rear View



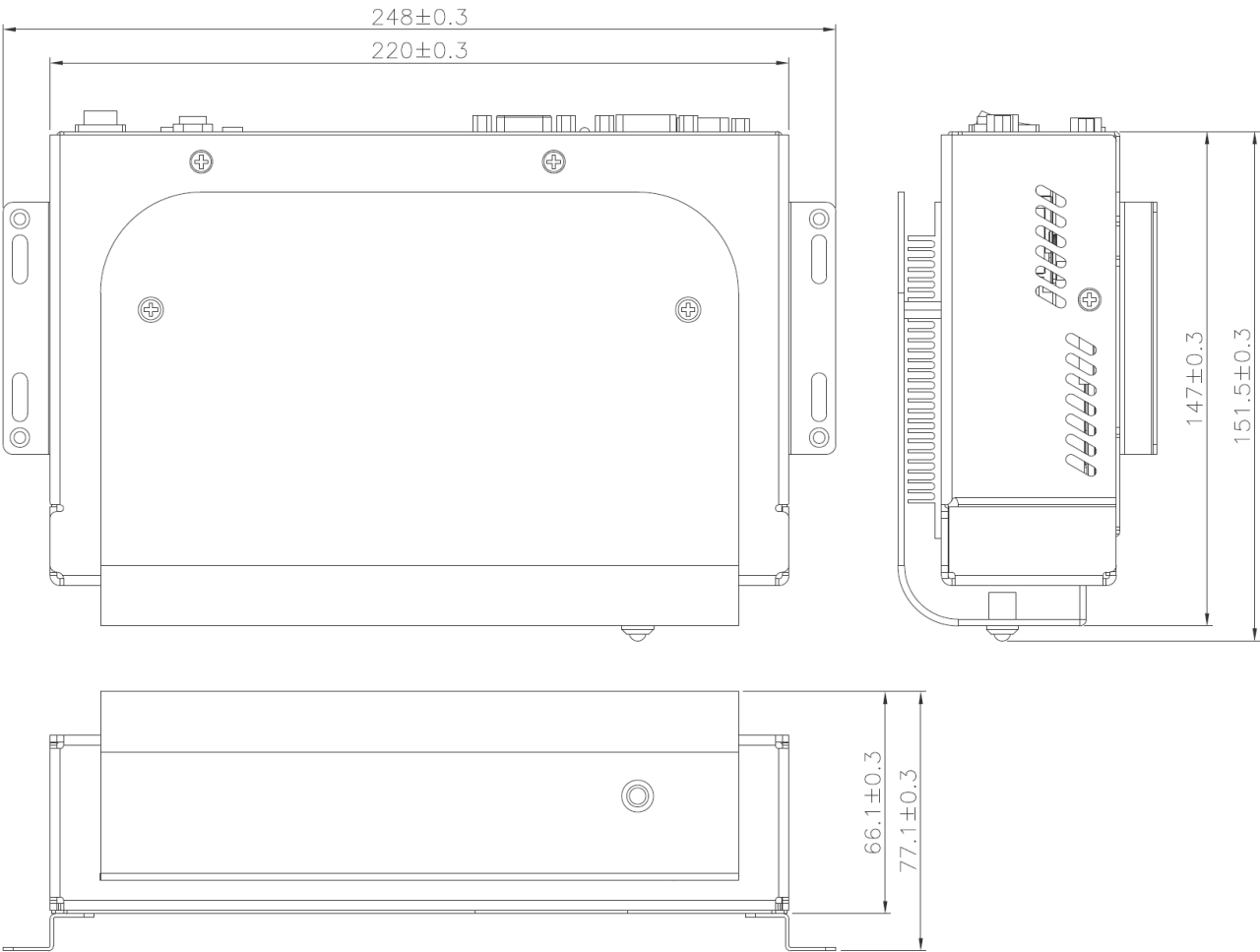
1.5 System Dimensions

1.5.1 Top/ Front & Side (with rubber foot)



(Unit: mm)

1.5.2 Top/ Front & Side (with wallmount)



(Unit: mm)

2. Hardware Configuration

Please refer to ECM- CDV Quick Installation Guide or User's Manual for advanced information.



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

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

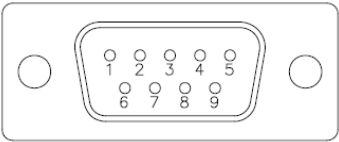
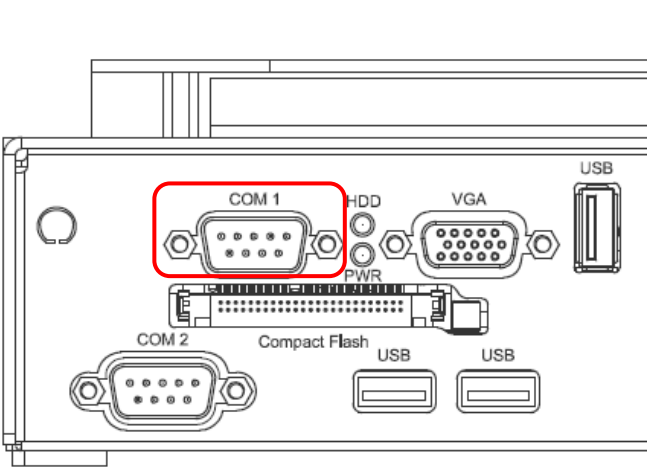
2.1 EES-CDV connector list

Connectors

Label	Function	Note
COM1	Serial port 1 connector	
COM2	Serial port 2 connector	
Compact Flash	Compact Flash card connector	Type I/II x 1
DC-IN	DC power-in connector	
LAN1	RJ-45 Ethernet 1	
LAN2	RJ-45 Ethernet 2	
LINE IN	Line-in audio jack	
LINE OUT	Line-out audio jack	
MIC IN	Mic-in audio jack	
Power	System power switch	
HDD	HDD indicator	
USB1~5	USB 1~5 connector	
PWR	System power indicator	
VGA	VGA connector	D-sub 15-pin, female
HDMI	HDMI connector	

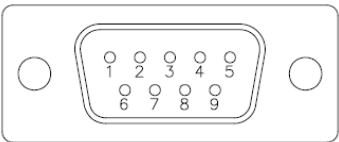
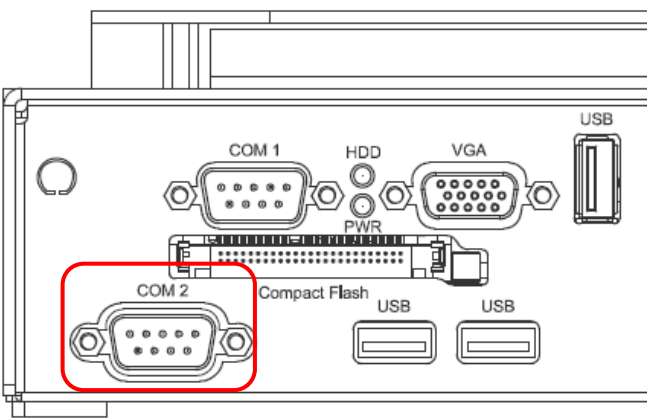
2.2 EES-CDV connector mapping

2.2.1 External Serial Port 1 connector (COM1)



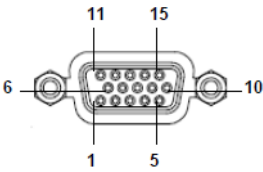
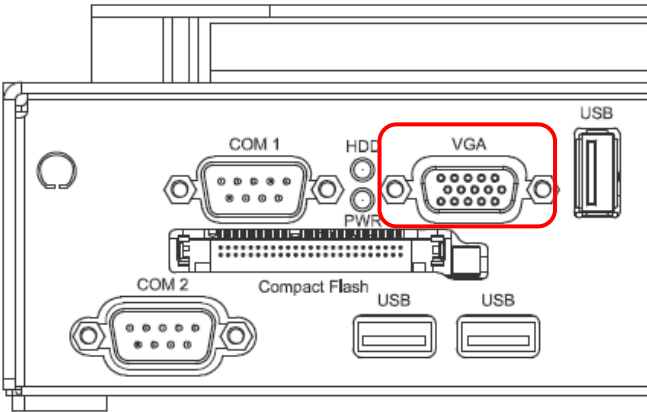
Signal	PIN	PIN	Signal
DCDA#	1	2	RxDA
TxDA	3	4	DTRA#
GND	5	6	DSRA#
RTSA#	7	8	CTSA#
RIA#	9	10	NC

2.2.2 External Serial Port 2 connector (COM2)



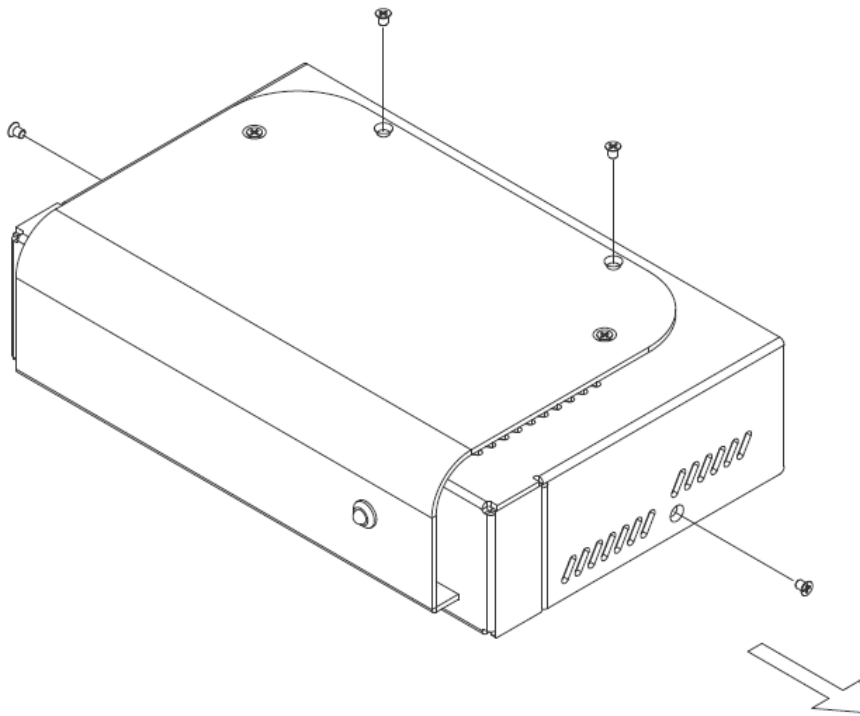
Signal	PIN	PIN	Signal
DCDB#	1	2	RxDB
TxDB	3	4	DTRB#
GND	5	6	DSRB#
RTSB#	7	8	CTSB#
RIB#	9	10	NC

2.2.3 VGA connector (VGA)



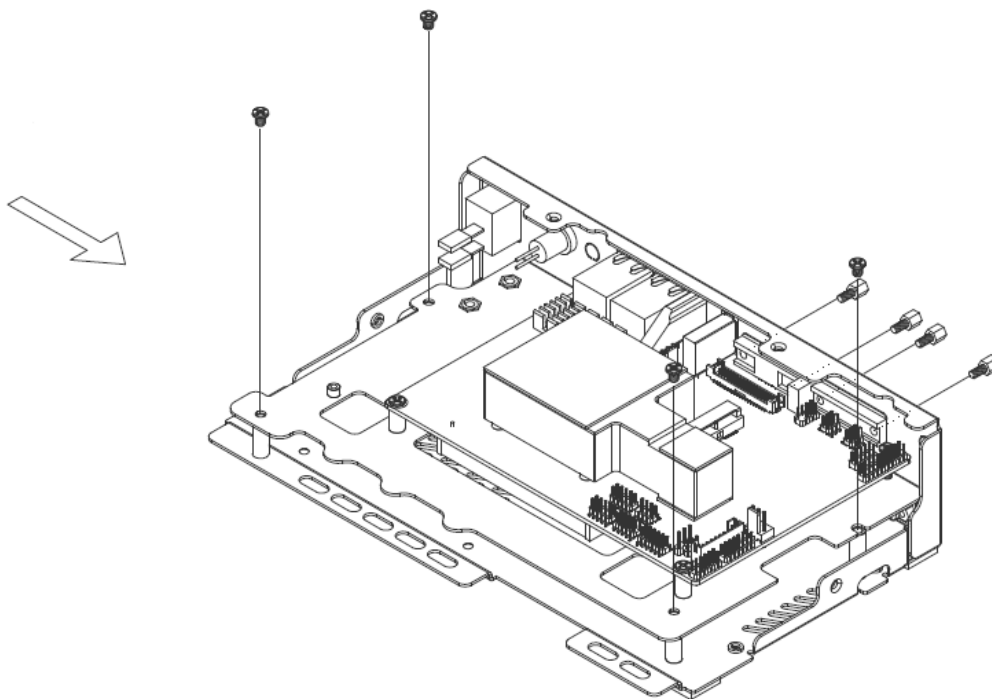
PIN	Signal	PIN	Signal	PIN	Signal
1	R	6	GND	11	NC
2	G	7	GND	12	DATA
3	B	8	GND	13	HSYNC
4	NC	9	+5V	14	VSYNC
5	GND	10	EN#	15	CLK

2.3 HDD Installation



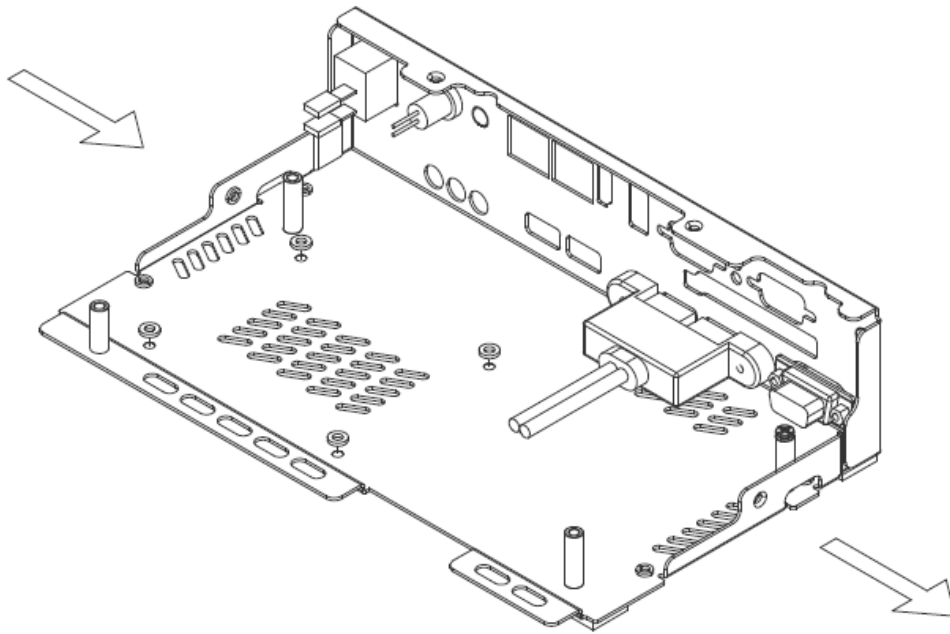
Step1.

Remove the 4 screws to disassemble the top cover.

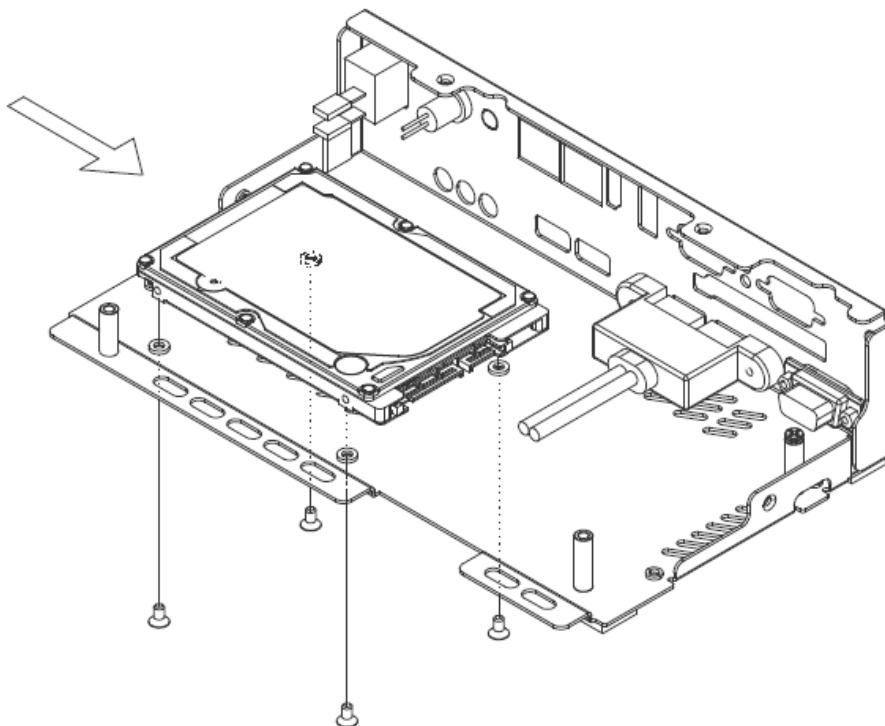


Step2.1

Remove 4 screws to detach board & metal frame assembly from system enclosure



Step2.2 detached board & metal frame assembly



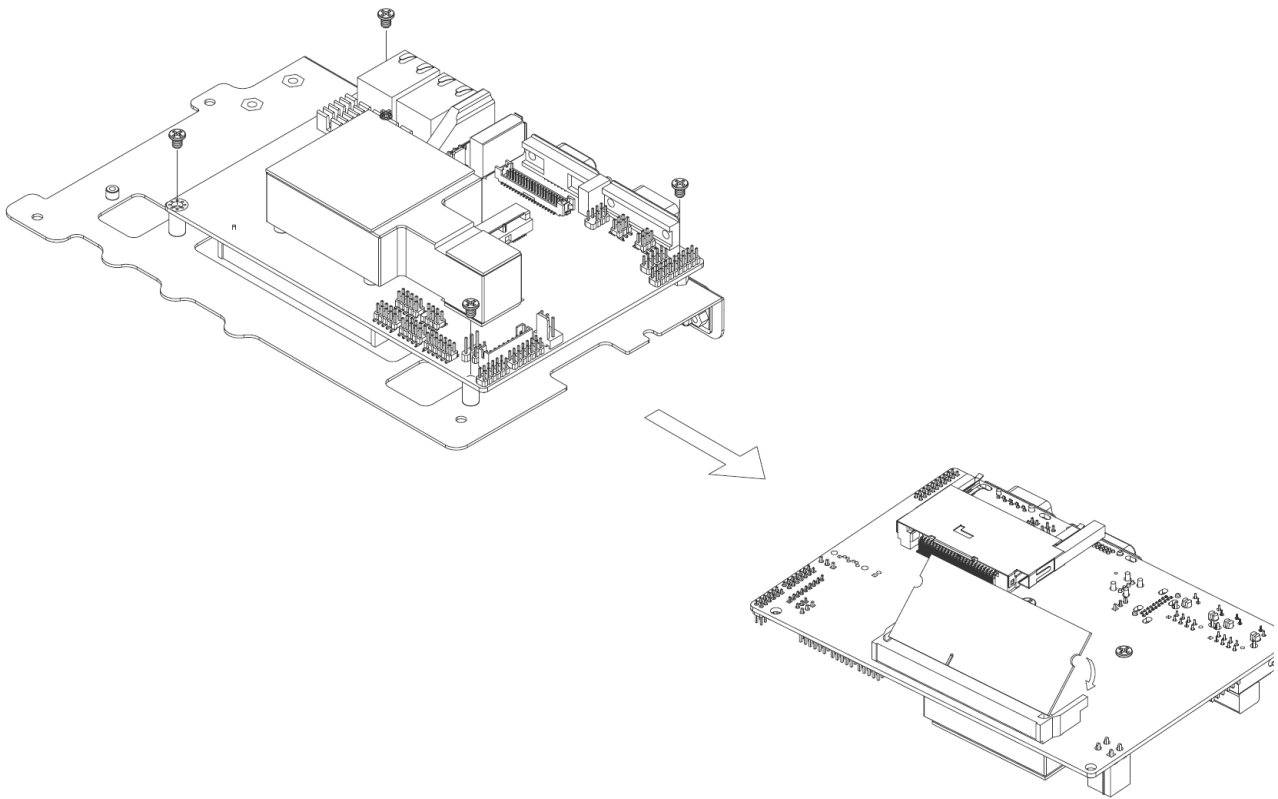
Step3.1

Properly locate HDD on the system enclosure so as to match HDD & enclosure screw holes.

Step3.2

Fasten 4 screws through the back of the system enclosure to secure HDD.

2.4 Memory Installation



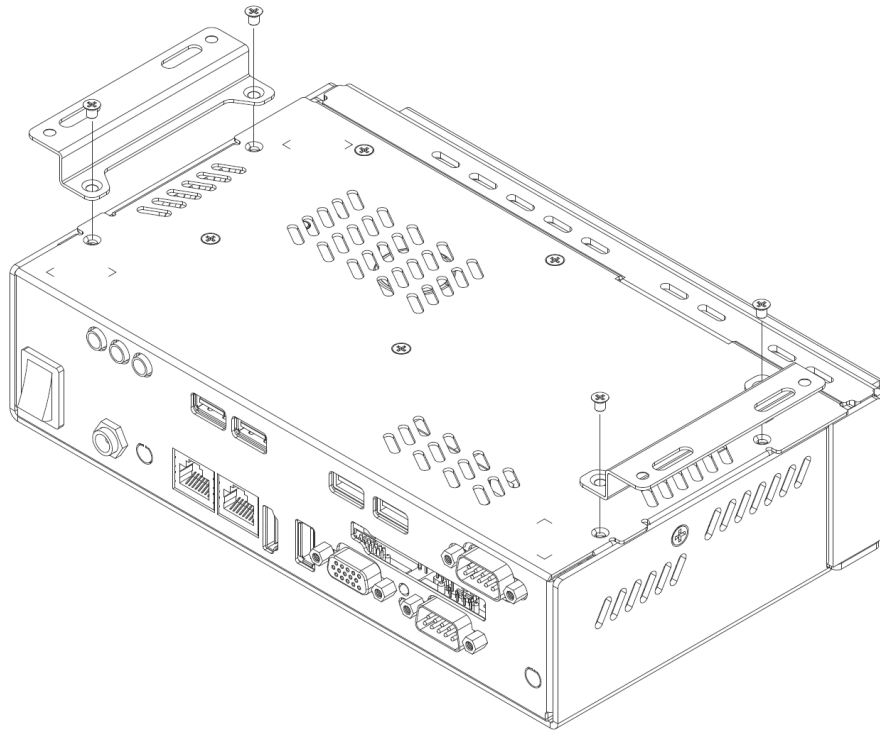
Step1.

Detach the board from the metal frame by removing 4 screws

Step 2.

Press the SODIMM module right down into the socket, until you hear a click, the two handles of the memory module will automatically lock the module in the correct position. (On the back of the board as above.) To uninstall the memory module, press both handles outward as to automatically eject the memory module.

2.5 Installing Mounting Bracket (Optional)



Step 1. Fasten 4 screws on both sides of EES Embedded System.

