

CPC-2102

21.5" Intel® Celeron® Processor N3160 Fanless PCAP Touch
Panel PC

Quick Reference Guide

1st Ed –07 March 2017

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Part No. E2017CP22A0R

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.

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CONTENT

- 1. Getting Started4**
 - 1.1 Safety Precautions4
 - 1.2 Packing List4
 - 1.3 System Specifications5
 - 1.4 System Overview.....8
 - 1.4.1 Front View 8
 - 1.4.2 Rear/Side View 8
 - 1.5 System Dimensions.....10
- 2. Hardware Configuration.....11**
 - 2.1 CPC-2102 connector mapping12
 - 2.1.1 Serial port connector (COM) 12
 - 2.1.2 VGA connector (VGA)..... 12
 - 2.2 Installing Hard Disk.....13

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 CPC-2102 21.5" Intel® Celeron® Processor N3160 Fanless PCAP Touch Panel PC
- Other major components include the followings:
 - 1 x Power Cord
 - 1 x Adapter
 - 2 x Ornaments
 - 1 x Screws pack



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

1.3 System Specifications

Component	
Mother Board	<ul style="list-style-type: none"> Mother Board of EMX-BSWB (EMX-BSWB-A1R)
CPU	<ul style="list-style-type: none"> Intel® Celeron® Processor N3160 (2M Cache, up to 2.24 GHz)
LVDS in	<ul style="list-style-type: none"> 2CH 18/24bits LVDS 1920 x 1080 input
Memory	<ul style="list-style-type: none"> 2 x 204-pin DDR3L 1600 MHz SO-DIMM supports up to 8GB (Default 1x 4GB DDR3L)
Storage	<ul style="list-style-type: none"> 1 x 2.5" Storage
Power Supply	<ul style="list-style-type: none"> DC in
Adapter	<ul style="list-style-type: none"> 60W (BCC-ADP-060N-02R)
System Fan	<ul style="list-style-type: none"> Fanless
Speaker	<ul style="list-style-type: none"> 2 x 3W Speakers
Camera	<ul style="list-style-type: none"> 1.0M pixel, HD 720P Webcam (Optional)
Panel	
LCD Panel	<ul style="list-style-type: none"> 21.5" 16:9 Full HD 1920 x 1080 panel with PACP (w/ Touch Control Board)
B/L Inverter/Converter	<ul style="list-style-type: none"> LED Driver Board ZX-L0712-2247R
Touch Screen	<ul style="list-style-type: none"> 21.5" PCAP
Touch Controller	<ul style="list-style-type: none"> USB Control board
Others	<ul style="list-style-type: none"> 1 x Button for power ON/OFF, 1 x Reserve button
External I/O	
USB Port	<ul style="list-style-type: none"> 2 x USB3.0, 2 x USB 2.0
Video Port	<ul style="list-style-type: none"> 1 x VGA 1 x HDMI
Audio Port	<ul style="list-style-type: none"> 1 x Mic-in, 1 x Line-out
LAN Port	<ul style="list-style-type: none"> 1 x RJ45
Wireless LAN Antenna	<ul style="list-style-type: none"> 2 x PIFA Antenna
Indicator Light	<ul style="list-style-type: none"> 1 x Power LED
Expansion Slots	<ul style="list-style-type: none"> Right Side IO: 1 x USB Left Side IO: 1 x COM
Mechanical	
Power Type	<ul style="list-style-type: none"> +12V DC in
Power Connector Type	<ul style="list-style-type: none"> DC Jack
Dimension	<ul style="list-style-type: none"> 528 x 345 x 62 mm
Weight	<ul style="list-style-type: none"> 8.4 kg

Color	<ul style="list-style-type: none"> Plastic White
Fanless	<ul style="list-style-type: none"> Yes
Reliability	
EMI Test	<ul style="list-style-type: none"> CE/FCC Class A
Safety	<ul style="list-style-type: none"> UL/CB design compatible
Vibration Test	<ul style="list-style-type: none"> <u>Sine Vibration test (Non-operation)</u> <ul style="list-style-type: none"> Test Fc : Vibration sinusoidal <ol style="list-style-type: none"> Test Acceleration : 2G Test frequency : 5 ~ 500 Hz Sweep : 1 Oct/ per one minute. (logarithmic) Test Axis : X,Y and Z axis Test time : 10 min. each axis System condition : Non-Operating mode Reference IEC 60068-2-6 Testing procedures <u>Package Vibration Test</u> <ul style="list-style-type: none"> PSD: 0.026G²/Hz, 2.16 Grms Non-operation mode Test Frequency : 5-500Hz Test Axis : X,Y and Z axis 30 min. per each axis IEC 60068-2-64 Test:Fh <u>Random Vibration Operation</u> <ul style="list-style-type: none"> Reference IEC60068-2-64 Testing procedures Test Fh : Vibration boardband random Test <ul style="list-style-type: none"> PSD: 0.00050513G²/Hz, 0.5 Grms Operation mode Test Frequency : 5-500Hz Test Axis : X,Y and Z axis 30 minutes per each axis IEC 60068-2-64 Test: Fh Storage : N/A
Mechanical Shock Test	<ul style="list-style-type: none"> <u>Bump Test</u> <ul style="list-style-type: none"> Wave form : Half Sine wave Acceleration Rate : 10g for operation mode Duration Time : 11ms No. of Shock : Z axis 300 times Test Axis: Z axis Operation mode

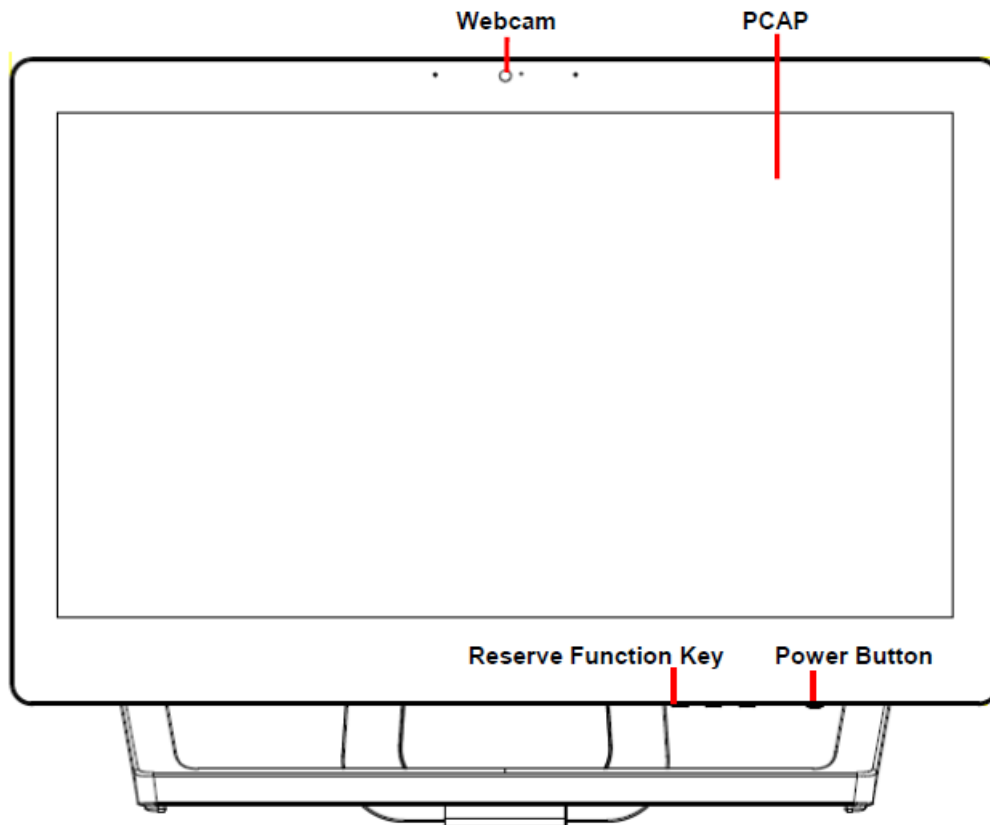
	7. Reference IEC 60068-2-29 Testing procedures Test Eb : Bump Test
Drop Test	<ul style="list-style-type: none"> • <u>Packing Drop</u> 1. One corner , three edges, six faces 2. ISTA 2A, IEC-60068-2-32 Test:Ed
Operating Temperature	<ul style="list-style-type: none"> • 0°C ~ 40°C (32°F ~ 104°F), ambient w/ air flow
Operating Humidity	<ul style="list-style-type: none"> • 0 ~ 90% Relative Humidity, Non-condensing
Storage Temperature	<ul style="list-style-type: none"> • -20°C ~ 60°C (-4°F ~ 140°F)



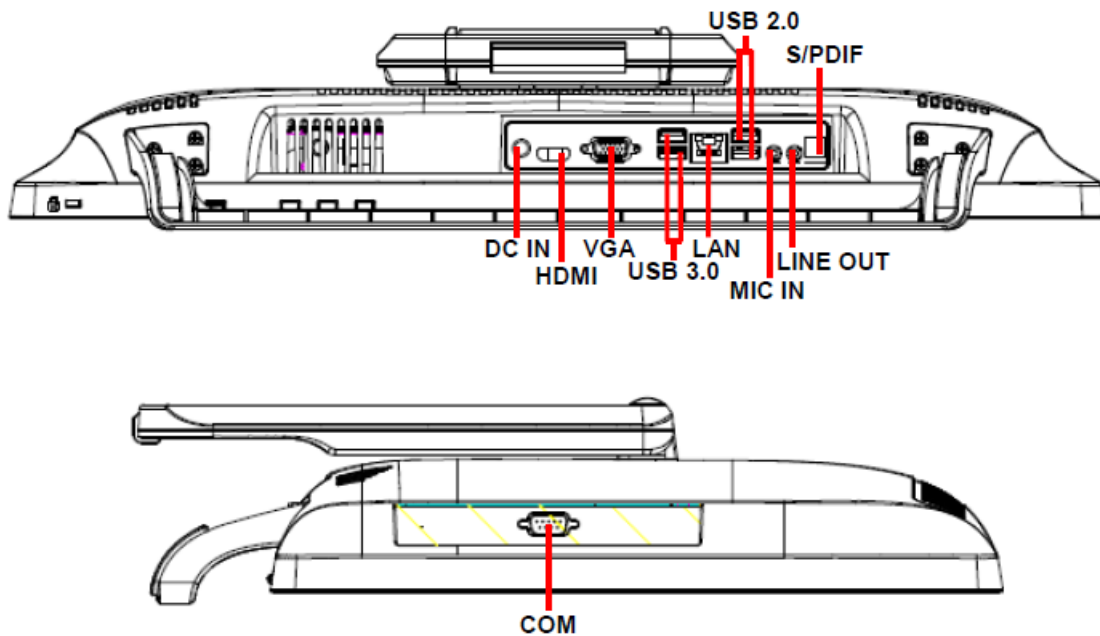
Note: Specifications are subject to change without notice.

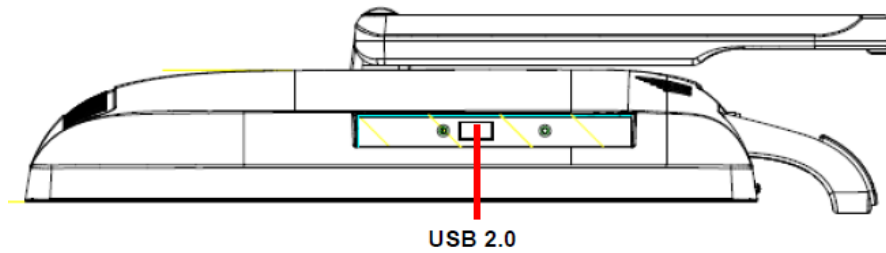
1.4 System Overview

1.4.1 Front View



1.4.2 Rear/Side View

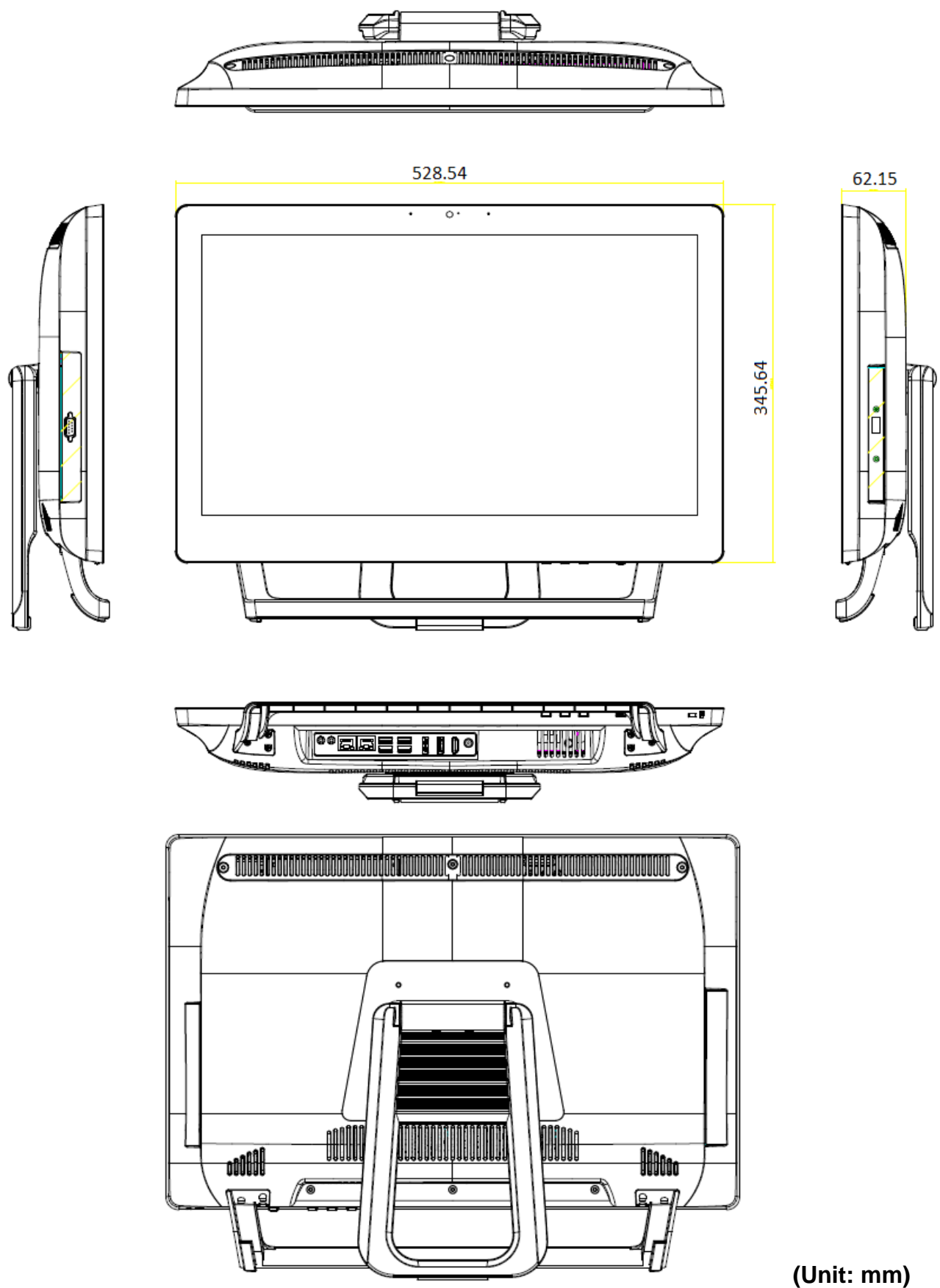




Connectors

Label	Function	Note
DC IN	DC power-in connector	
HDMI	HDMI connector	
VGA	VGA connector	
USB 2.0	3 x USB2.0 connector	
USB 3.0	2 x USB3.0 connector	
LAN	RJ-45 Ethernet	
LINE OUT	Line-out audio jack	
MIC IN	Mic-in audio jack	
COM	Serial port connector	
S/PDIF	Sony/Philips Digital Interface	

1.5 System Dimensions



2. Hardware Configuration

For advanced information, please refer to:

- 1- EMX-BSWB User's Manual

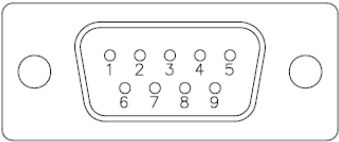
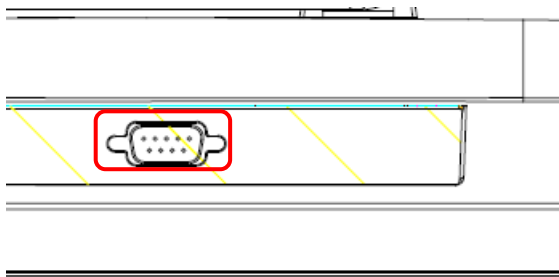


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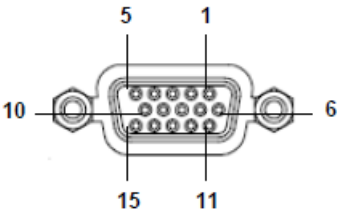
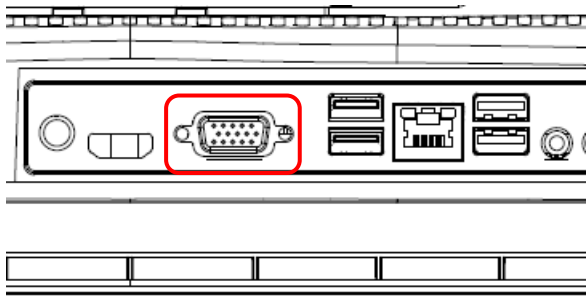
2.1 CPC-2102 connector mapping

2.1.1 Serial port connector (COM)



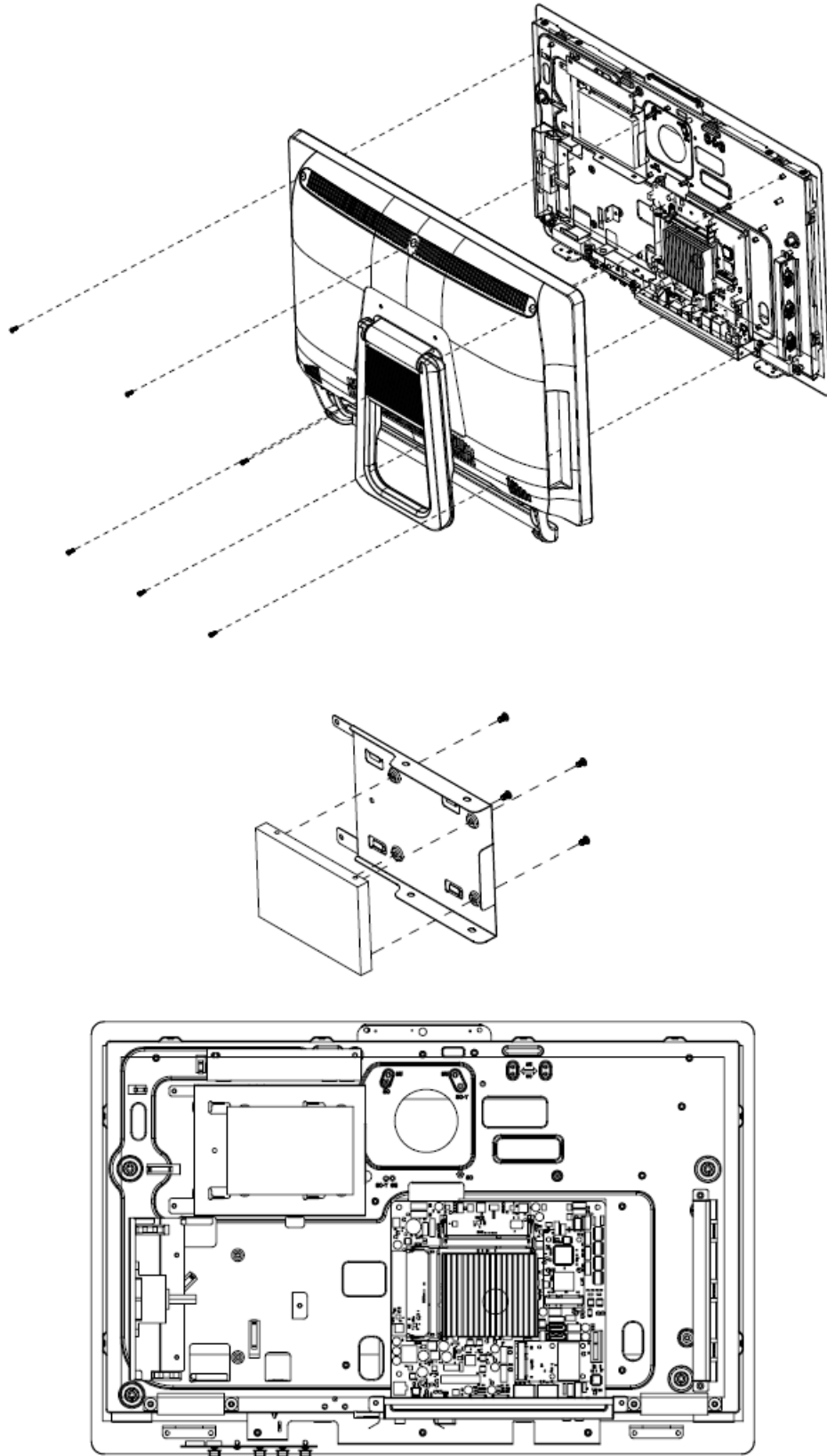
Signal	PIN	PIN	Signal
NDCD#	1	6	NDSR#
NRXD	2	7	NRTS#
NTXD	3	8	NCTS#
NDTR#	4	9	NRI#
GND	5		

2.1.2 VGA connector (VGA)



PIN	Signal	PIN	Signal	PIN	Signal
1	RED	6	GND	11	NC
2	GREEN	7	GND	12	DDCDAT
3	BLUE	8	GND	13	HSYNC
4	NC	9	+5V	14	VSYSNS
5	GND	10	GND	15	DDCCLK

2.2 Installing Hard Disk



Step1. Unfasten 6 screws of the back cover and take it off.

Step2. Secure HDD by means of 4 screws.

Step3. Re-assemble your system back through previous steps to complete the installation.

