

# BMX-T521-BYT

Intel® Celeron® J1900 Processor Fanless Mini-ITX Barebone System

## Quick Reference Guide

1<sup>st</sup> Ed –28 January 2016

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Part No. E2017T521A0R

## **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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# 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 BMX-T521-BYT Intel® Celeron® J1900 Processor Fanless Mini-ITX Barebone System
- Other major components include the followings:
  - Adapter
  - Power Cord



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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

System	
<b>Mother Board</b>	<ul style="list-style-type: none"> <li>EMX-BYT2</li> </ul>
<b>CPU</b>	<ul style="list-style-type: none"> <li>Onboard Intel® Celeron® Processor Intel® Celeron® Processor J1900 (2M Cache, up to 2.42 GHz)</li> </ul>
<b>CPU Cooler (Type)</b>	<ul style="list-style-type: none"> <li>Fanless</li> </ul>
<b>Memory</b>	<ul style="list-style-type: none"> <li>2 x 204-pin DDR3L 1333 MHz SO-DIMM socket, supports up to 8GB Max (Default: 1 x 2GB DDR3L)</li> </ul>
<b>Adapter</b>	<ul style="list-style-type: none"> <li>60W Adapter (DC in 12V@5A)</li> </ul>
<b>Microphone</b>	<ul style="list-style-type: none"> <li>1 x Mic-in</li> </ul>
<b>Bluetooth</b>	<ul style="list-style-type: none"> <li>By Mini PCI-e module (optional)</li> </ul>
<b>Operating System</b>	<ul style="list-style-type: none"> <li>Windows/ Linux</li> </ul>
<b>SIM card slot</b>	<ul style="list-style-type: none"> <li>1 x SIM card slot</li> </ul>
Storage	
<b>Hard Disk Drive</b>	<ul style="list-style-type: none"> <li>2 x 2.5" HDD Bays</li> </ul>
External I/O	
<b>Serial Port</b>	<ul style="list-style-type: none"> <li>6 x RS-232</li> </ul>
<b>USB Port</b>	<ul style="list-style-type: none"> <li>4 x USB3.0, 2 x USB2.0</li> </ul>
<b>DIO Port</b>	<ul style="list-style-type: none"> <li>8-bit GPIO (by external cable optional)</li> </ul>
<b>Video Port</b>	<ul style="list-style-type: none"> <li>1 x HDMI, 1 x VGA</li> </ul>
<b>Audio Port</b>	<ul style="list-style-type: none"> <li>1 x Line-out, 1 x Mic-in</li> </ul>
<b>LAN Port</b>	<ul style="list-style-type: none"> <li>2 x Intel I211AT Gigabit Ethernet</li> </ul>
<b>Wireless LAN Antenna</b>	<ul style="list-style-type: none"> <li>2 x SMA Connector (Optional)</li> </ul>
<b>Switch</b>	<ul style="list-style-type: none"> <li>1 x Power on/off membrane with Power LED</li> </ul>
<b>Indicator Light</b>	<ul style="list-style-type: none"> <li>1 x HDD LED,</li> <li>2 x LAN Activity Indicator LED</li> </ul>
<b>Expansion Slots</b>	<ul style="list-style-type: none"> <li>1 x full size Mini PCI-e socket support mSATA only (SATA II and mSATA Switchable Through jumper)</li> <li>1 x full size Mini PCI-e support WiFi &amp; 3G/4G module</li> <li>1 x SD card slot support SD/ SDHC Card</li> </ul>
Mechanical	
<b>Power Type</b>	<ul style="list-style-type: none"> <li>AT / ATX mode Switchable Through Jumper</li> </ul>
<b>Power Connector Type</b>	<ul style="list-style-type: none"> <li>Lockable DC Jack</li> </ul>
<b>Dimension</b>	<ul style="list-style-type: none"> <li>180 x 182 x 76 (L x W x H)</li> </ul>
<b>Weight</b>	<ul style="list-style-type: none"> <li>2.3 kg</li> </ul>
<b>Color</b>	<ul style="list-style-type: none"> <li>Black</li> </ul>
<b>Fanless</b>	<ul style="list-style-type: none"> <li>Yes</li> </ul>

## BMX-T521-BYT

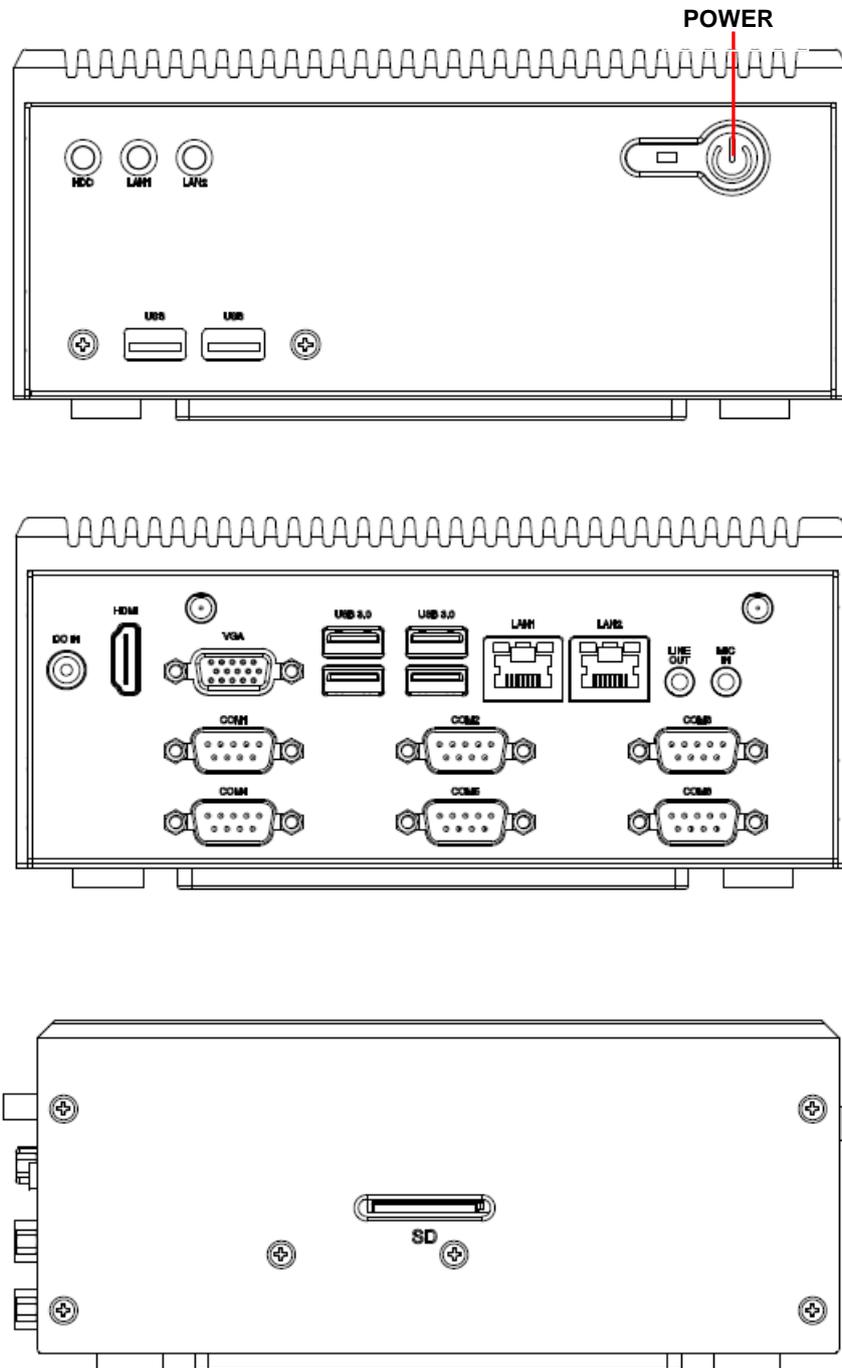
Reliability	
EMI Test	<ul style="list-style-type: none"><li>• CE/FCC Class B design compatible</li></ul>
Safety	<ul style="list-style-type: none"><li>• UL/CB design compatible</li></ul>
Vibration Test	<ul style="list-style-type: none"><li>• Avalue standard</li></ul>
Mechanical Shock Test	<ul style="list-style-type: none"><li>• Avalue standard</li></ul>
Drop Test	<ul style="list-style-type: none"><li>• Avalue standard</li></ul>
Operating Temperature	<ul style="list-style-type: none"><li>• 0°C ~ 40°C (32°F ~ 104°F) (w/HDD), ambient w/ air flow</li><li>• 0°C ~ 50°C (32°F ~ 122°F) (w/SSD, mSATA), ambient w/ air flow</li></ul>
Operating Humidity	<ul style="list-style-type: none"><li>• 0% ~ 90% Relative Humidity, Non-condensing</li></ul>
Storage Temperature	<ul style="list-style-type: none"><li>• -20°C ~ 75°C (-4°F ~ 167°F)</li></ul>



**Note:** Specifications are subject to change without notice.

## 1.4 System Overview

### 1.4.1 Front/Rear/Side View



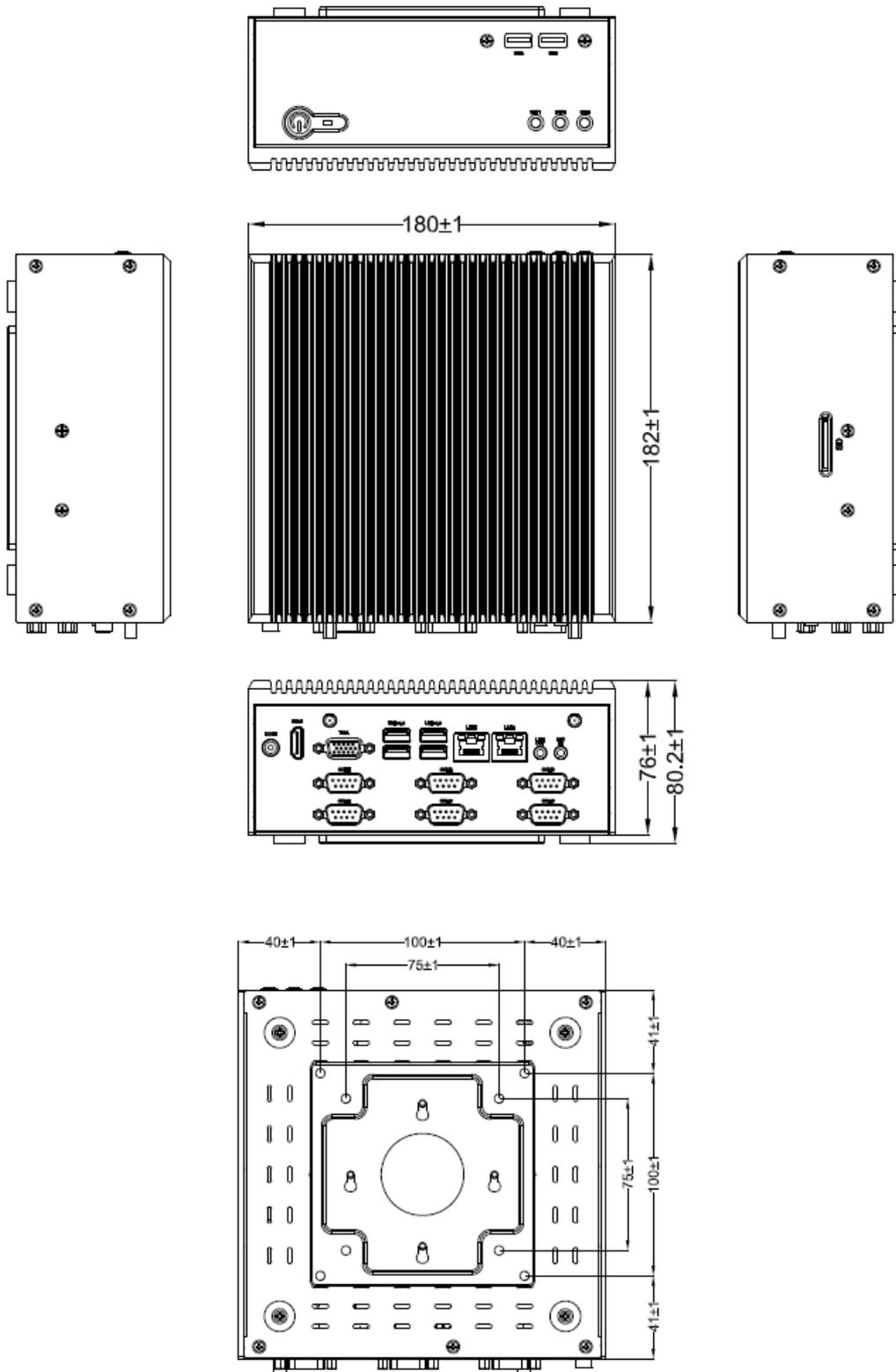
#### Connectors

Label	Function	Note
POWER	Power on button	
HDD	HDD Indicator	

## **BMX-T521-BYT**

<b>LAN1/2</b>	RJ-45 Ethernet 1/2
<b>USB</b>	2 x USB2.0 connector 4 x USB2.0 connector
<b>HDD</b>	HDD Indicator
<b>USB</b>	2 X USB2.0 connector
<b>USB3.0</b>	4 X USB3.0 connector
<b>COM1~6</b>	Serial port connector 1~6
<b>DC IN</b>	DC power-in connector
<b>HDMI</b>	HDMI connector
<b>LINE OUT</b>	Line-out audio jack
<b>MIC IN</b>	Mic-in audio jack
<b>VGA</b>	VGA connector
<b>SD</b>	SD card slot

## 1.5 System Dimensions



(Unit: mm)

# 2. Hardware Configuration

## Jumper and Connector Setting, Driver and BIOS Installing

For advanced information, please refer to:

- 1- EMX-BYT2 User's Manual

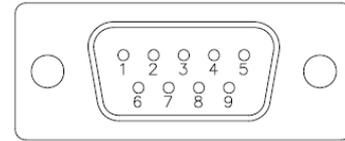
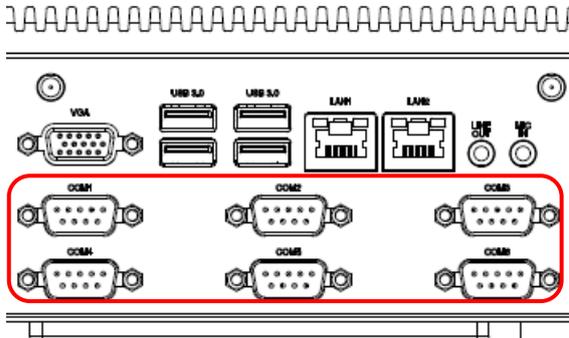


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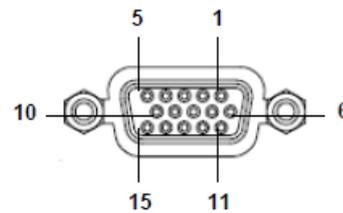
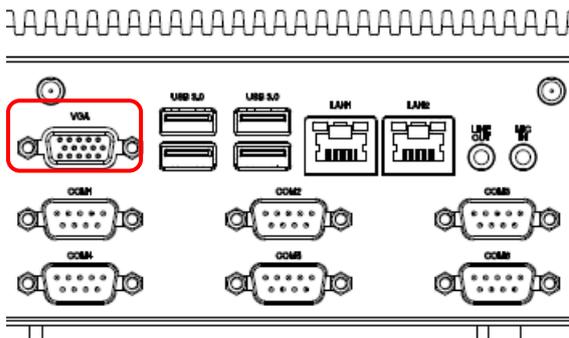
## 2.1 BMX-T521-BYT connector mapping

### 2.1.1 Serial port connector 1~6 (COM1~6)



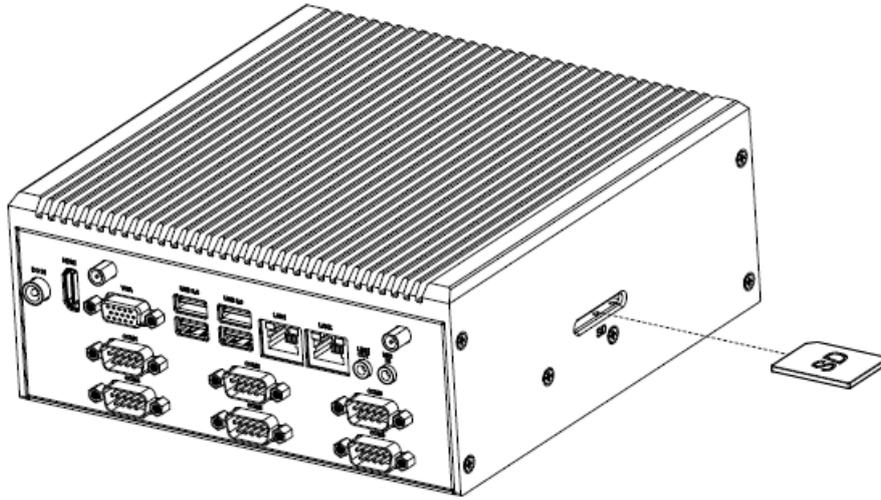
Signal	PIN	PIN	Signal
DCD	1	6	DSR
RXD	2	7	RTS
TXD	3	8	CTS
DTR	4	9	RI
GND	5		

### 2.1.2 VGA connector (VGA)



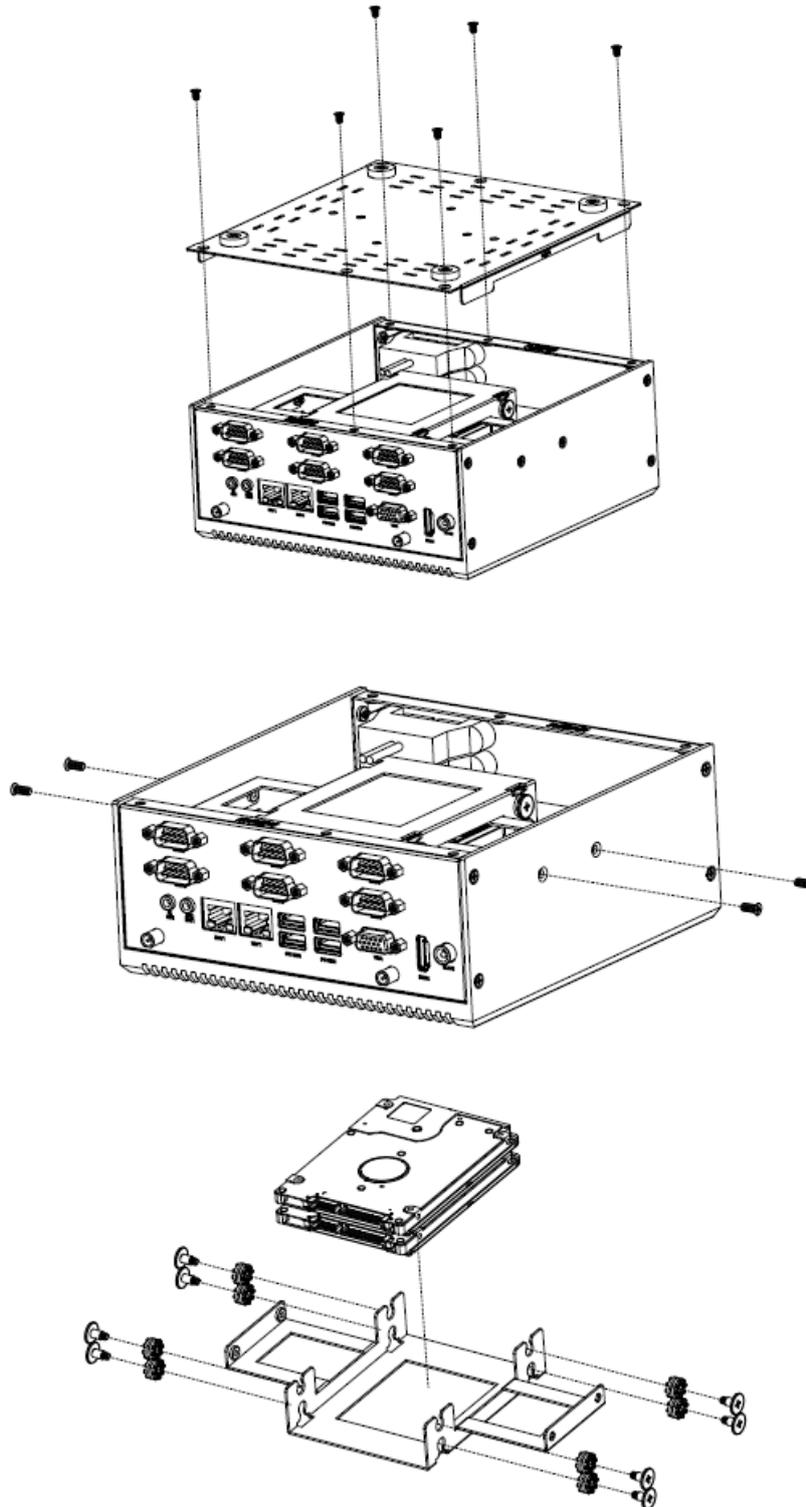
PIN	Signal	PIN	Signal	PIN	Signal
1	RED	6	GND	11	NC
2	GREEN	7	GND	12	DDCDAT
3	BLUE	8	GND	13	HSYNC
4	NC	9	+5V	14	VSYNS
5	GND	10	GND	15	DDCCLK

## 2.2 Installing SD card (BMX-T521-BYT)



**Step 1.** Insert SD card into SD slot.

## 2.3 Installing Hard Disk (BMX-T521-BYT)



**Step1.** Remove 10 screws from rear and each side before removing back cover.

**Step2.** Secure HDD by means of 8screws.

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

