

# **EQM-BSW**

**Intel® Pentium® and Celeron® N3000 Series SoC Processors  
Qseven Module**

## **User's Manual**

**1<sup>st</sup> Ed – 05 November 2015**

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**Part No.E2047287300R**

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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 EQM-BSW Qseven Module
- 1 x Driver/Utility DVD-ROM



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

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### 1.3 Document Amendment History

| Revision        | Date          | By     | Comment         |
|-----------------|---------------|--------|-----------------|
| 1 <sup>st</sup> | November 2015 | Avalue | Initial Release |

### 1.4 Manual Objectives

This manual describes in details Avalue Technology EQM-BSW QSeven Module.

We have tried to include as much information as possible but we have not duplicated information that is provided in the standard IBM Technical References, unless it proved to be necessary to aid in the understanding of this board.

We strongly recommend that you study this manual carefully before attempting to set up EQM-BSW QSeven Module or change the standard configurations. Whilst all the necessary information is available in this manual we would recommend that unless you are confident, you contact your supplier for guidance.

Please be aware that it is possible to create configurations within the CMOS RAM that make booting impossible. If this should happen, clear the CMOS settings, (see the description of the Jumper Settings for details).

If you have any suggestions or find any errors regarding this manual and want to inform us of these, please contact our Customer Service department with the relevant details.

## 1.5 System Specifications

|                               |   |
|-------------------------------|---|
| <b>System</b>                 |   |
| <b>CPU</b>                    | Intel® Atom™ Braswell Platform  |
| <b>BIOS</b>                   | Insyde 64M -bit SPI BIOS  |
| <b>System Chipset</b>         | Braswell SoC integrated   |
| <b>I/O Chipset</b>            | EC: NPCCE388NA0DX   |
| <b>System Memory</b>          | Onboard DDR3L 1600, up to 4GB   |
| <b>eMMC</b>                   | Optional On board 4GB up to 64GB  |
| <b>Watchdog Timer</b>         | Reset: 1 sec.~65535 sec. and 1 sec. step  |
| <b>H/W Status Monitor</b>     | Monitoring system temperature, voltage. Auto trotting control when CPU<br>CPU temperature monitoring<br>V-Core Voltages monitoring<br>5V Voltage monitoring |
| <b>Expansion</b>              | 3 PCIe x 1 Supported*<br>1 PCIe1/1 PCIe x 2 Supported<br>*When user needs PCIe#1, 2, 3, make sure PCIe#2 is activated.                                      |
| <b>I/O</b>                    |   |
| <b>MIO</b>                    | 2 x SATA ports to baseboard   |
| <b>USB</b>                    | 5 x USB 2.0 and 1 x USB3.0 to baseboard   |
| <b>SD</b>                     | SDIO Support  |
| <b>eMMC</b>                   | eMMC 64GB optional  |
| <b>Others</b>                 | LPC, SMBus, I2C (Chip)<br>UART<br>CAN Bus   |
| <b>External I/O Connector</b> | Qseven spec 2.0 connector for expansions  |
| <b>Display</b>                |   |
| <b>Chipset</b>                | Braswell SoC integrated Graphics  |
| <b>Resolution</b>             | HDMI :2560 x 1600 @60 Hz<br>LVDS mode: 1920 x 1080 @60Hz  |
| <b>Multiple Display</b>       | HDMI (or DP ) + LVDS  |
| <b>LCD Interface</b>          | Dual channel 24-bit LVDS  |
| <b>Audio</b>                  |   |
| <b>Audio interface</b>        | HD audio I/F  |
| <b>Ethernet</b>               |   |
| <b>LAN Chip</b>               | RealTek RTL8119   |
| <b>Ethernet Interface</b>     | 10/100/1000 Base-Tx Compatible  |
| <b>Mechanical &amp;</b>       |   |

## EQM-BSW

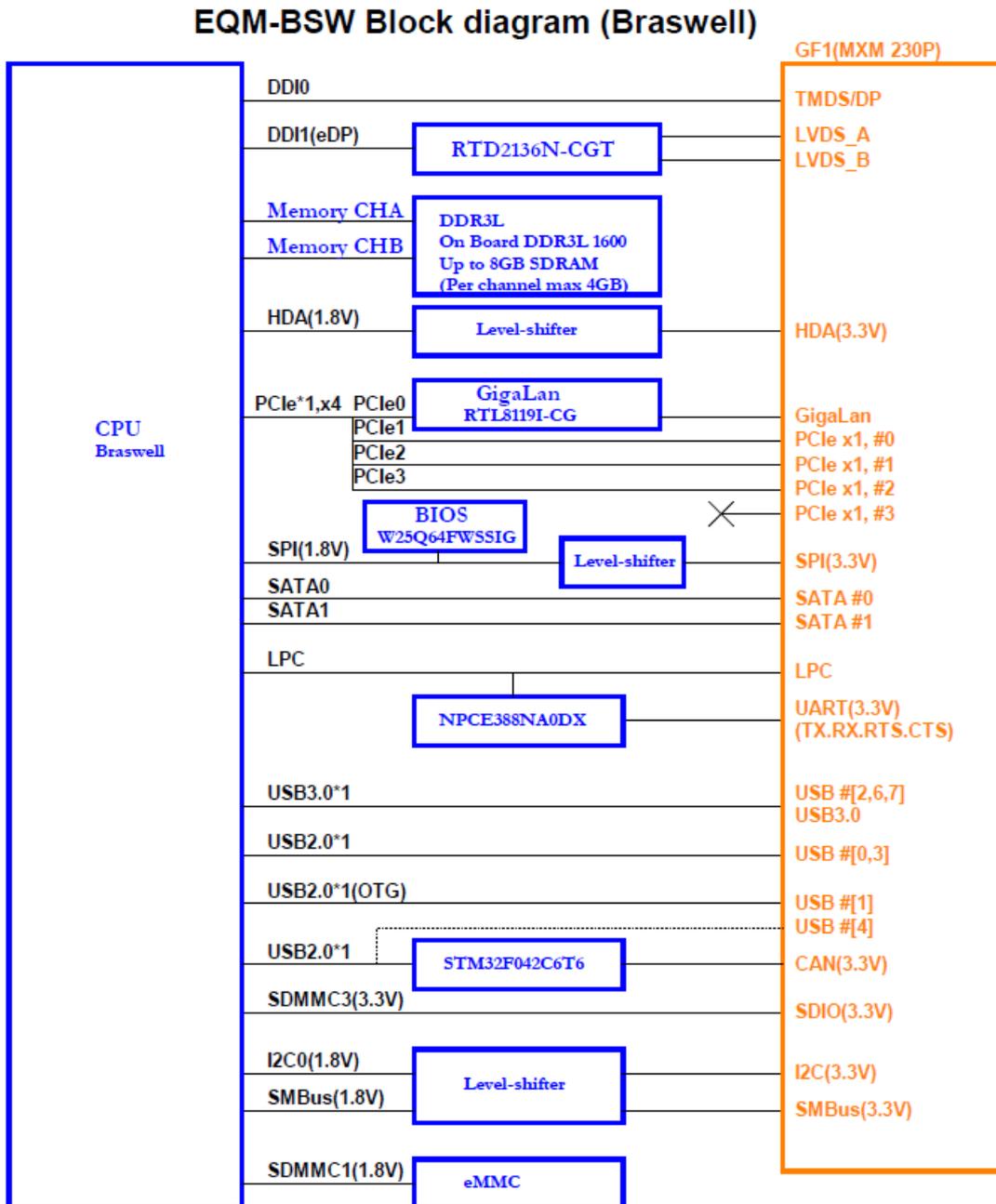
|                           |  |
|---------------------------|--|
| <b>Environmental</b>      |  |
| <b>Power Requirement</b>  | +5V  |
| <b>ACPI</b>               | Single Power ATX Support S0, S3, S4, S5 ACPI 3.0 Compliant |
| <b>Power Type</b>         | Qseven Power Spec  |
| <b>Operating Temp.</b>    | Standard: 0 to 60 deg C                                    |
| <b>Storage Temp.</b>      | -20°C to 85°C  |
| <b>Operating Humidity</b> | 0% ~ 90% Relative Humidity, Non-condensing                 |
| <b>Size (L x W)</b>       | 70mm x 70mm  |
| <b>Weight</b>             | 0.041 lbs (0.03 Kg)  |
| <b>OS Support</b>         | Windows 8.1 / Windows 7 / Linux Yocto                      |



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

## 1.6 Architecture Overview—Block Diagram

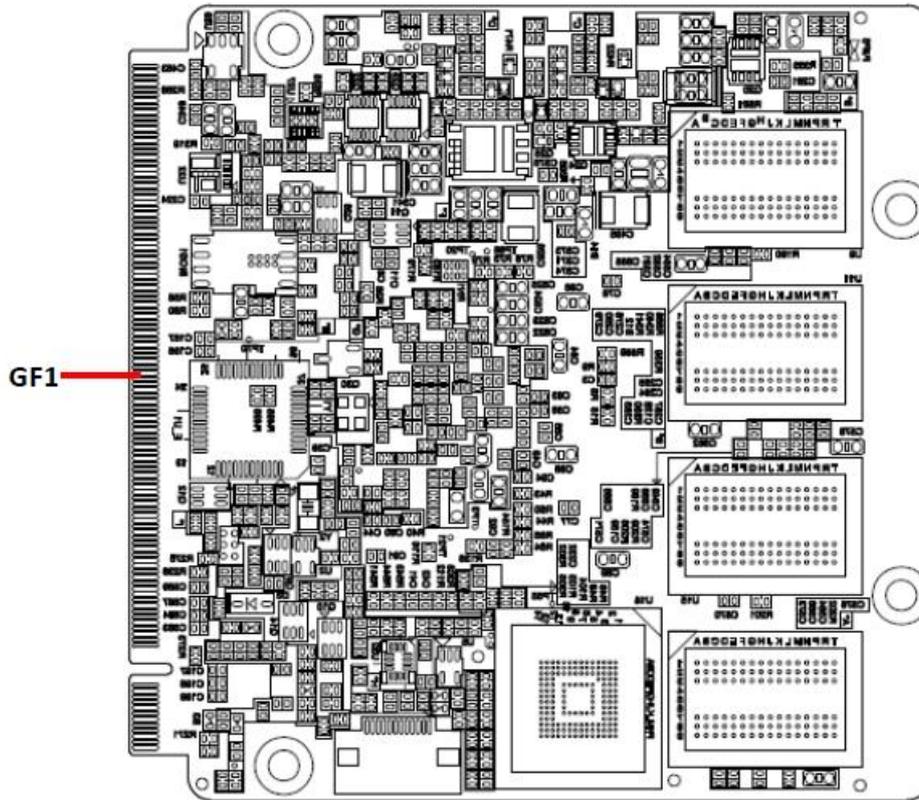
The following block diagram shows the architecture and main components of EQM-BSW QSeven Module.



# 2. Hardware Configuration

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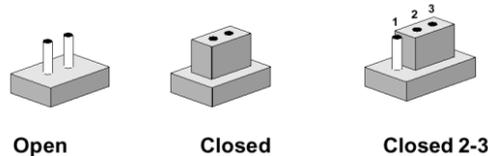
## 2.1 Product Overview



## 2.2 Connector List

You can configure your board to match the needs of your application by setting jumpers. A jumper is the simplest kind of electric switch.

It consists of two metal pins and a small metal clip (often protected by a plastic cover) that slides over the pins to connect them. To “close” a jumper you connect the pins with the clip. To “open” a jumper you remove the clip. Sometimes a jumper will have three pins, labeled 1, 2, and 3. In this case, you would connect either two pins.



The jumper settings are schematically depicted in this manual as follows:



A pair of needle-nose pliers may be helpful when working with jumpers.

Connectors on the board are linked to external devices such as hard disk drives, a keyboard, or floppy drives. In addition, the board has a number of jumpers that allow you to configure your system to suit your application.

If you have any doubts about the best hardware configuration for your application, contact your local distributor or sales representative before you make any changes.

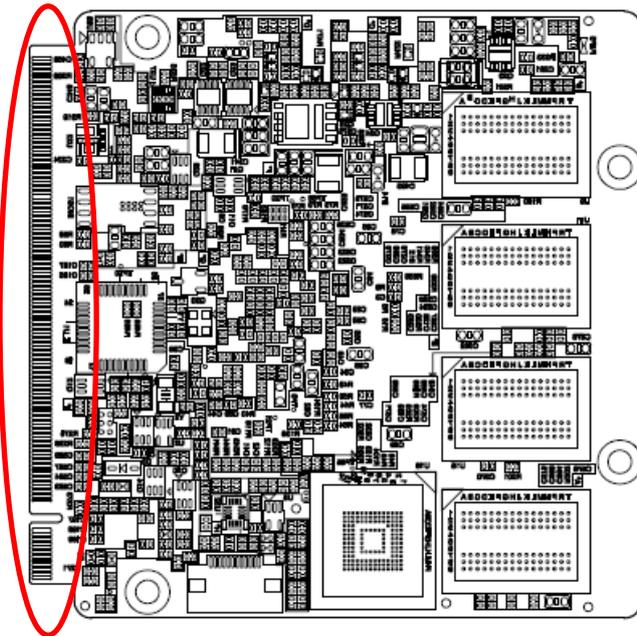
The following tables list the function of each of the board's jumpers and connectors.

### Connectors

| Label | Function         | Note |
|-------|------------------|------|
| GF1   | QSeven connector |      |

## 2.3 Setting Connectors

### 2.3.1 QSeven connector (GF1)



\*Default

| Signal       | PIN | PIN | Signal       |
|--------------|-----|-----|--------------|
| GND          | 1   | 2   | GND          |
| GBE_MDI3-    | 3   | 4   | GBE_MDI2-    |
| GBE_MDI3+    | 5   | 6   | GBE_MDI2+    |
| GBE_LINK100# | 7   | 8   | GBE_LINK100# |
| GBE_MDI1-    | 9   | 10  | GBE_MDI0-    |
| GBE_MDI1+    | 11  | 12  | GBE_MDI0+    |
| GBE_LINK#    | 13  | 14  | GBE_ACT#     |
| GBE_CTREF    | 15  | 16  | SUS_S5#      |
| WAKE#        | 17  | 18  | SUS_S3#      |
| SUS_STAT#    | 19  | 20  | PWRBTN#      |
| NC           | 21  | 22  | NC           |
| GND          | 23  | 24  | GND          |
| GND          | 25  | 26  | PWGIN        |
| BATLOW#      | 27  | 28  | RSTBTN#      |
| SATA0_TX+    | 29  | 30  | SATA1_TX+    |
| SATA0_TX-    | 31  | 32  | SATA1_TX-    |
| SATA_ACT#    | 33  | 34  | GND          |
| SATA0_RX+    | 35  | 36  | SATA1_RX+    |
| SATA0_RX-    | 37  | 38  | SATA1_RX-    |

| Signal        | PIN | PIN | Signal      |
|---------------|-----|-----|-------------|
| GND           | 39  | 40  | GND         |
| BIOS_DISABLE# | 41  | 42  | SDIO_CLK#   |
| SDIO_CD#      | 43  | 44  | NC          |
| SDIO_CMD      | 45  | 46  | SDIO_WP     |
| SDIO_PWR#     | 47  | 48  | SDIO_DAT1   |
| SDIO_DAT0     | 49  | 50  | SDIO_DAT3   |
| SDIO_DAT2     | 51  | 52  | NC          |
| NC            | 53  | 54  | NC          |
| NC            | 55  | 56  | RSVD56      |
| GND           | 57  | 58  | GND         |
| HDA_SYNC      | 59  | 60  | SMB_CLK     |
| HDA_RST#      | 61  | 62  | SMB_DAT     |
| HDA_BCLK      | 63  | 64  | SMB_ALERT#  |
| HDA_SDI       | 65  | 66  | I2C_CLK     |
| HDA_SDO       | 67  | 68  | I2C_DAT     |
| THRM#         | 69  | 70  | WDTRIG#     |
| THRMTRIP#     | 71  | 72  | WDOUT       |
| GND           | 73  | 74  | GND         |
| SS_USB_TXN    | 75  | 76  | SS_USB_RXN  |
| SS_USB_TXP    | 77  | 78  | SS_USB_RXP  |
| USB_6_7_OC#   | 79  | 80  | USB_4_5_OC# |
| NC            | 81  | 82  | USB_P4-     |
| NC            | 83  | 84  | USB_P4+     |
| USB_2_3_OC#   | 85  | 86  | USB_0_1_OC# |
| USB_P3-       | 87  | 88  | USB_P2-     |
| USB_P3+       | 89  | 90  | USB_P2+     |
| NC            | 91  | 92  | NC          |
| USB_P1-       | 93  | 94  | USB_P0-     |
| USB_P1+       | 95  | 96  | USB_P0+     |
| GND           | 97  | 98  | GND         |
| LVDS_A0+      | 99  | 100 | LVDS_B0+    |
| LVDS_A0-      | 101 | 102 | LVDS_B0-    |
| LVDS_A1+      | 103 | 104 | LVDS_B1+    |

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| Signal           | PIN | PIN | Signal       |
|------------------|-----|-----|--------------|
| LVDS_A1-         | 105 | 106 | LVDS_B1-     |
| LVDS_A2+         | 107 | 108 | LVDS_B2+     |
| LVDS_A2-         | 109 | 110 | LVDS_B2-     |
| LVDS_PPEN        | 111 | 112 | LVDS_BLEN    |
| LVDS_A3+         | 113 | 114 | LVDS_B3+     |
| LVDS_A3-         | 115 | 116 | LVDS_B3-     |
| GND              | 117 | 118 | GND          |
| LVDS_A_CLK+      | 119 | 120 | LVDS_B_CLK+  |
| LVDS_A_CLK-      | 121 | 122 | LVDS_B_CLK-  |
| LVDS_BLT_CTRL    | 123 | 124 | NC           |
| LVDS_DID_DAT     | 125 | 126 | NC           |
| LVDS_DID_CLK     | 127 | 128 | NC           |
| CAN_TX           | 129 | 130 | CAN_RX       |
| DP_L3+_TMDS_CLK+ | 131 | 132 | NC           |
| DP_L3+_TMDS_CLK- | 133 | 134 | NC           |
| GND              | 135 | 136 | GND          |
| DP_L1+_TMDS_L1+  | 137 | 138 | DP_AUXP      |
| DP_L1-_TMDS_L1-  | 139 | 140 | DP_AUXN      |
| GND              | 141 | 142 | GND          |
| DP_L2+_TMDS_L0+  | 143 | 144 | NC           |
| DP_L2-_TMDS_L0-  | 145 | 146 | NC           |
| GND              | 147 | 148 | GND          |
| DP_L0+_TMDS_L2+  | 149 | 150 | HDMI_DDC_SDA |
| DP_L0-_TMDS_L2-  | 151 | 152 | HDMI_DDC_SCL |
| DP_HDMI_HPD#     | 153 | 154 | DP_HPD#      |
| PCIE_CLK_REF+    | 155 | 156 | PCIE_WAKE#   |
| PCIE_CLK_REF-    | 157 | 158 | PCIE_RST#    |
| GND              | 159 | 160 | GND          |
| NC               | 161 | 162 | NC           |
| NC               | 163 | 164 | NC           |
| GND              | 165 | 166 | GND          |
| PCIE_TXP_1       | 167 | 168 | PCIE_RXP_1   |
| PCIE_TXN_1       | 169 | 170 | PCIE_RXN_1   |

| Signal      | PIN | PIN | Signal     |
|-------------|-----|-----|------------|
| UART_TXD    | 171 | 172 | UART_RTS#  |
| PCIE_TXP_3  | 173 | 174 | PCIE_RXP_3 |
| PCIE_TXN_3  | 175 | 176 | PCIE_RXN_3 |
| UART_RXD    | 177 | 178 | UART_CTS#  |
| PCIE_TXP_2  | 179 | 180 | PCIE_RXP_2 |
| PCIE_TXN_2  | 181 | 182 | PCIE_RXN_2 |
| GND         | 183 | 184 | GND        |
| LPC_AD0     | 185 | 186 | LPC_AD1    |
| LPC_AD2     | 187 | 188 | LPC_AD3    |
| LPC_CLK     | 189 | 190 | LPC_FRAME# |
| SERIRQ      | 191 | 192 | LPC_LDRQ#  |
| VCC_RTC     | 193 | 194 | SPKR       |
| FAN_TACHOIN | 195 | 196 | FAN_PWMOUT |
| GND         | 197 | 198 | GND        |
| SPI_MOSI    | 199 | 200 | SPI_CS0#   |
| SPI_MISO    | 201 | 202 | RSVD202    |
| SPI_CLK     | 203 | 204 | NC         |
| VCC_5V_SB1  | 205 | 206 | VCC_5V_SB2 |
| NC          | 207 | 208 | NC         |
| NC          | 209 | 210 | NC         |
| VCC1        | 211 | 212 | VCC2       |
| VCC3        | 213 | 214 | VCC4       |
| VCC5        | 215 | 216 | VCC6       |
| VCC7        | 217 | 218 | VCC8       |
| VCC9        | 219 | 220 | VCC10      |
| VCC11       | 221 | 222 | VCC12      |
| VCC13       | 223 | 224 | VCC14      |
| VCC15       | 225 | 226 | VCC16      |
| VCC17       | 227 | 228 | VCC18      |
| VCC19       | 229 | 230 | VCC20      |

# 3. BIOS Setup

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### 3.1 Introduction

The BIOS setup program allows users to modify the basic system configuration. In this following chapter will describe how to access the BIOS setup program and the configuration options that may be changed.

### 3.2 Starting Setup

Insyde BIOS™ is immediately activated when you first power on the computer. The BIOS reads the system information contained in the NVRAM and begins the process of checking out the system and configuring it. When it finishes, the BIOS will seek an operating system on one of the disks and then launch and turn control over to the operating system.

While the BIOS is in control, the Setup program can be activated in one of two ways:

By pressing <F2> immediately after switching the system on, or

By pressing the <F2> key when the following message appears briefly at the left-top of the screen during the POST (Power On Self Test).

**Press <F2> to enter SETUP**

If the message disappears before you respond and you still wish to enter Setup, restart the system to try again by turning it OFF then ON or pressing the "RESET" button on the system case. You may also restart by simultaneously pressing <Ctrl>, <Alt>, and <Delete> keys.

### 3.3 Using Setup

In general, you use the arrow keys to highlight items, press <Enter> to select, use the PageUp and PageDown keys to change entries, press <F1> for help and press <Esc> to quit. The following table provides more detail about how to navigate in the Setup program using the keyboard.

| Button  | Description   |
|---------|---|
| ↑       | Move to previous item   |
| ↓       | Move to next item   |
| ←       | Move to the item in the left hand   |
| →       | Move to the item in the right hand  |
| Esc key | Main Menu -- Quit and not save changes into NVRAM<br>Status Page Setup Menu and Option Page Setup Menu -- Exit current page and return to Main Menu |
| + key   | Increase the numeric value or make changes  |
| - key   | Decrease the numeric value or make changes  |
| F1 key  | General help, only for Status Page Setup Menu and Option Page Setup Menu  |
| F9 key  | Optimized defaults  |
| F10 key | Save & Exit Setup   |

- **Navigating Through The Menu Bar**

Use the left and right arrow keys to choose the menu you want to be in.



**Note:** Some of the navigation keys differ from one screen to another.

- **To Display a Sub Menu**

Use the arrow keys to move the cursor to the sub menu you want. Then press <Enter>. A “>” pointer marks all sub menus.

### 3.4 Getting Help

Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window press <Esc> or the F1 key again.

### 3.5 In Case of Problems

If, after making and saving system changes with Setup, you discover that your computer no longer is able to boot, the Insyde BIOS supports an override to the NVRAM settings which resets your system to its defaults.

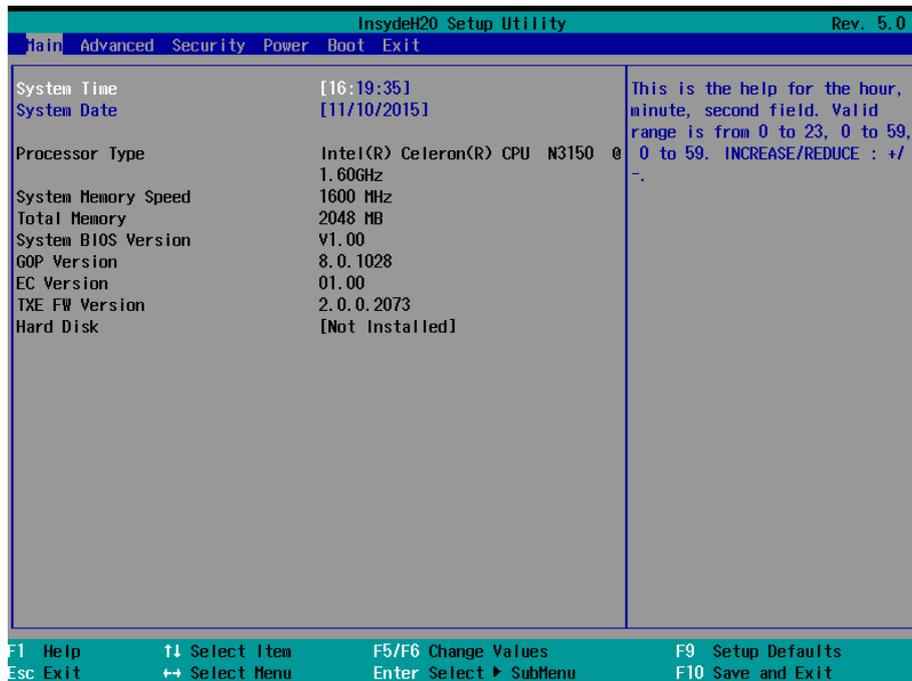
The best advice is to only alter settings which you thoroughly understand. To this end, we strongly recommend that you avoid making any changes to the chipset defaults. These defaults have been carefully chosen by both BIOS Vendor and your systems manufacturer to provide the absolute maximum performance and reliability. Even a seemingly small change to the chipset setup has the potential for causing you to use the override.

## 3.6 BIOS setup

Once you enter the InsydeH2O Setup Utility, the Main Menu will appear on the screen. The Main Menu allows you to select from several setup functions and exit choices. Use the arrow keys to select among the items and press <Enter> to accept and enter the sub-menu.

### 3.6.1 Main Menu

This section allows you to record some basic hardware configurations in your computer and set the system clock.



#### 3.6.1.1 System Time

Use the system time option to set the system time. Manually enter the hours, minutes and seconds.

#### 3.6.1.2 System Date

Use the system date option to set the system date. Manually enter the day, month and year.

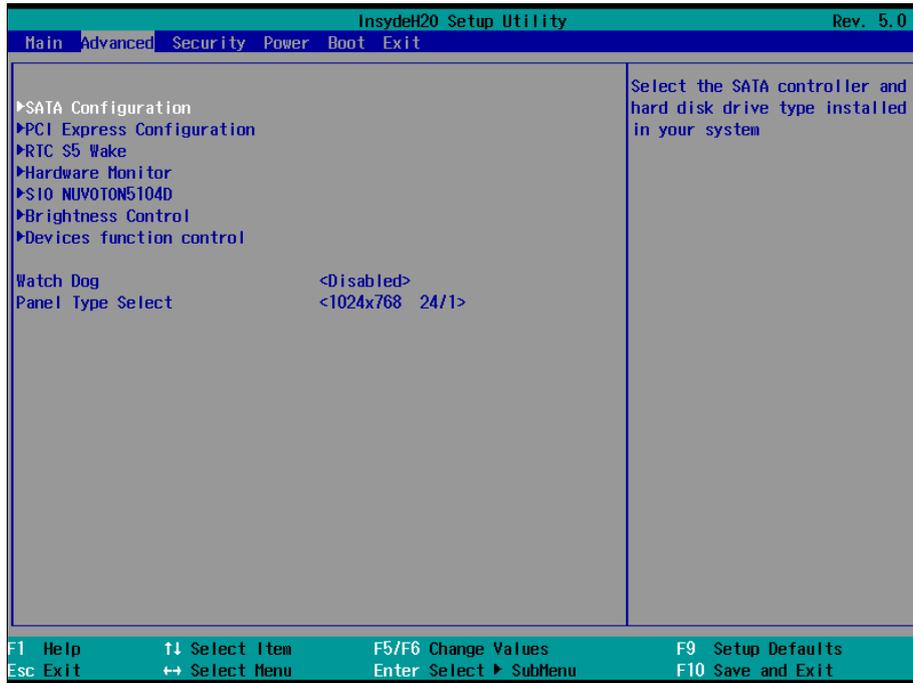


**Note:** The BIOS setup screens shown in this chapter are for reference purposes only, and may not exactly match what you see on your screen. Visit the Avalue website ([www.avalue.com.tw](http://www.avalue.com.tw)) to download the latest product and BIOS information.

## EQM-BSW

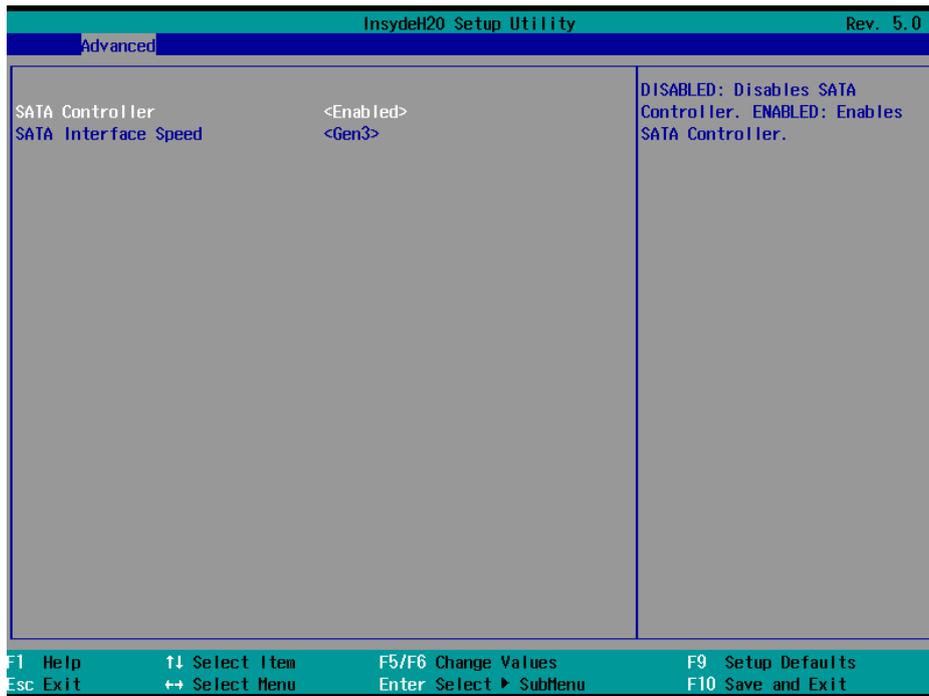
### 3.6.2 Advanced Menu

This section allows you to configure your CPU and other system devices for basic operation through the following sub-menus.



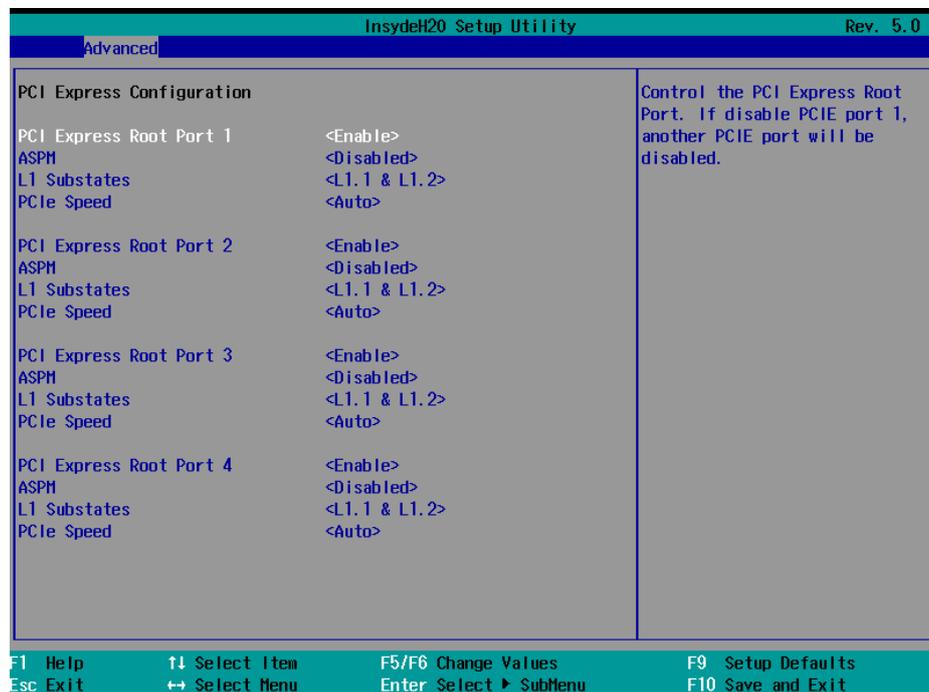
| Item              | Options  | Description                    |
|-------------------|--|--------------------------------|
| Watch Dog         | Disabled[Default],<br>30 sec<br>40 sec<br>50 sec<br>1 min<br>2 min<br>10 min<br>30 min   | Select WatchDog items.         |
| Panel Type Select | 1024x768 24/1[Default]<br>800x600 18/1<br>1024x768 18/1<br>1366x768 18/1<br>1024x600 18/1<br>1280x800 18/1<br>1920x1200 24/2<br>640x480 18/1<br>800x480 18/1<br>1920x1080 18/2<br>1280x1024 24/2<br>1440x900 18/2<br>1600x1200 24/2<br>1366x768 24/1<br>1920x1080 24/2<br>1680x1050 24/2 | Select Panel Type for display. |

### 3.6.2.1 SATA Configuration



| Item                 | Options                       | Description                  |
|----------------------|-------------------------------|------------------------------|
| SATA Controller      | Disabled, Enabled[Default]    | SATA Controller.             |
| SATA Interface Speed | Gen1<br>Gen2<br>Gen3[Default] | Select SATA Interface Speed. |

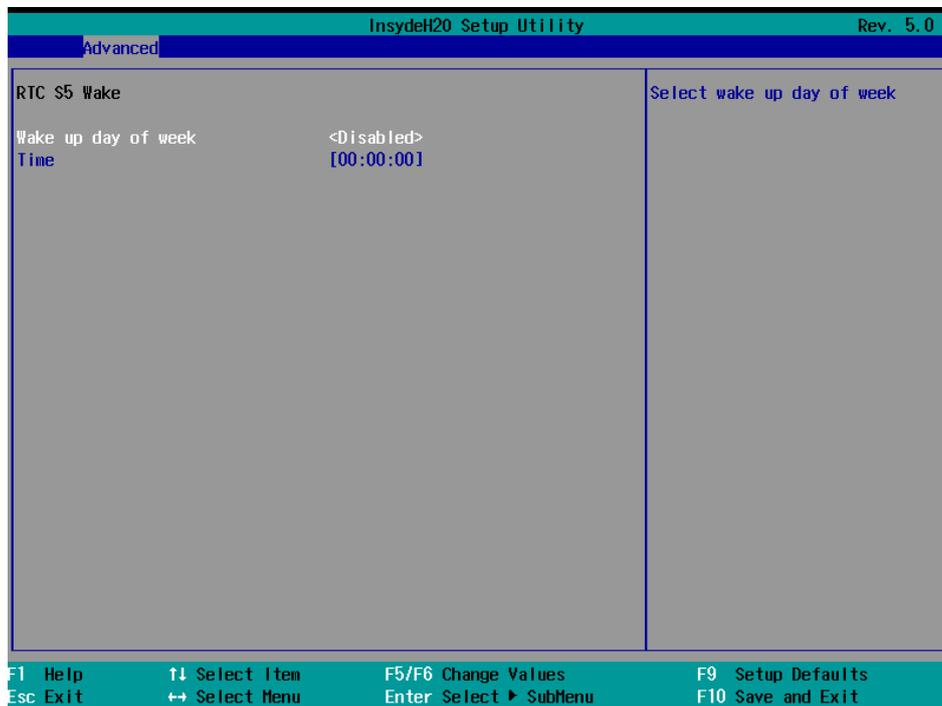
### 3.6.2.2 PCI Express Configuration



## EQM-BSW

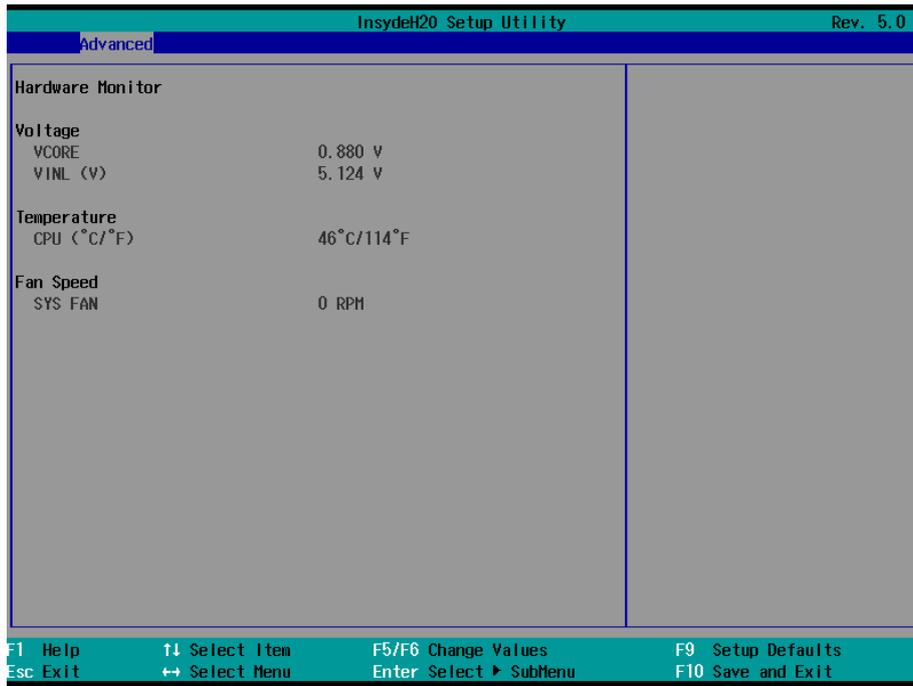
| Item                          | Options  | Description  |
|-------------------------------|--|--|
| PCI Express Root Port 1/2/3/4 | Disabled<br>Enabled[Default],                    | Control the PCI Express Root Port. If disable PCIE port 1, another PCIE port will be disabled. |
| ASPM                          | Disabled[Default]<br>L0s<br>L1<br>L0sL1          | PCI Express Active State Power Management settings.  |
| L1 Substates                  | Disabled[Default]<br>L1.1 & L1.2<br>L1.1<br>L1.2 | PCI Express L1 Substates settings.   |
| PCIe Speed                    | Auto[Default]<br>Gen 1<br>Gen 2                  | Configure PCIe Speed.  |

### 3.6.2.3 RTC S5 Wake

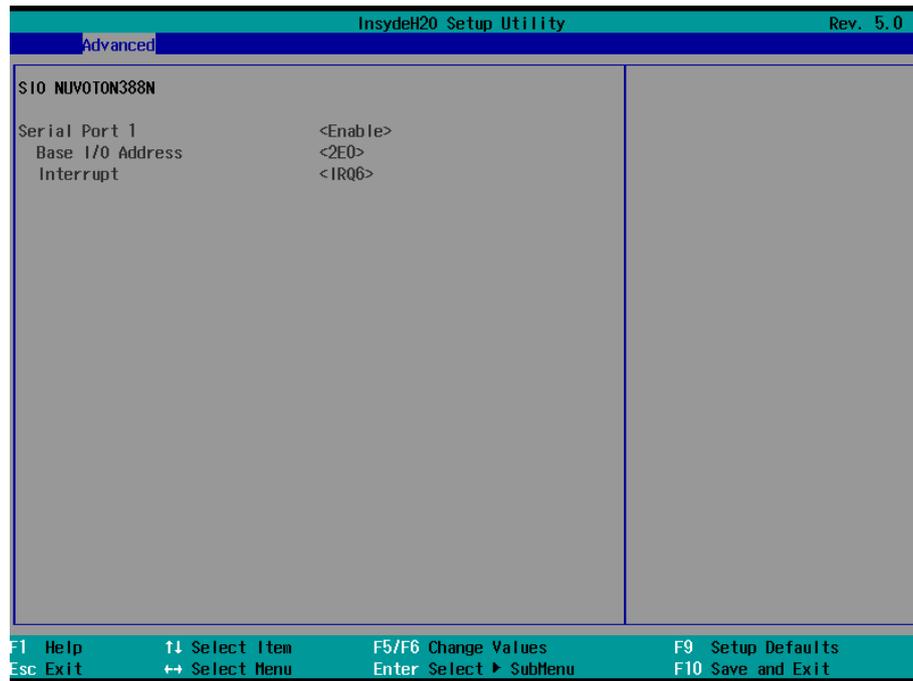


| Item                | Options  | Description   |
|---------------------|--|---|
| Wake up day of week | Monday-Friday<br>Monday-Saturday<br>Every Day<br>Disabled[Default] | Select wake up day of week.   |
| Time                | [00:00:00][Default]  | This is the help for the hour, minute second field. Valid range is from 0 to 23, 0 to 59, 0 to 59. INCREASE/REDUCE : +/-. |

### 3.6.2.4 Hardware Monitor

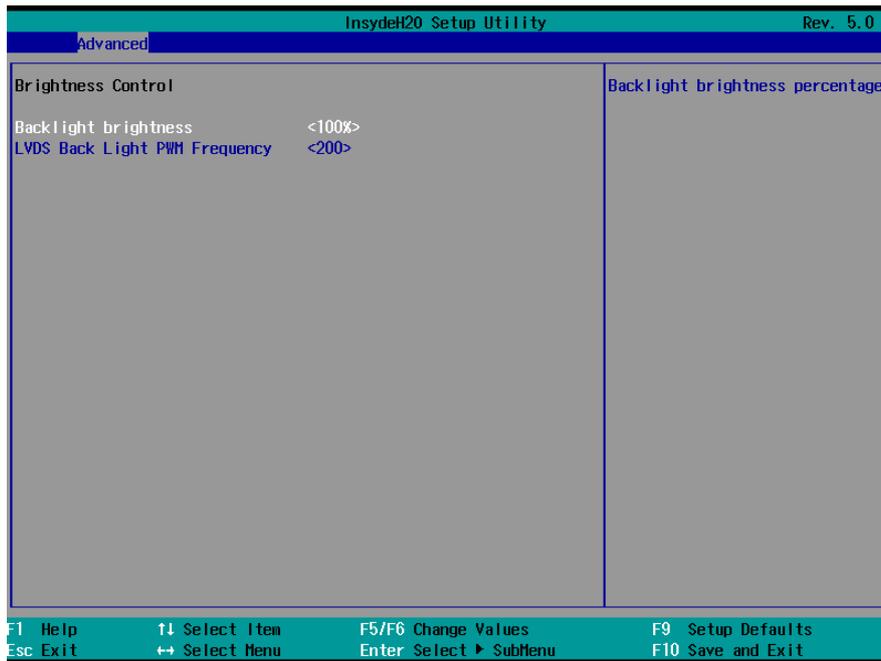


### 3.6.2.5 SIO NUVOTON5104D



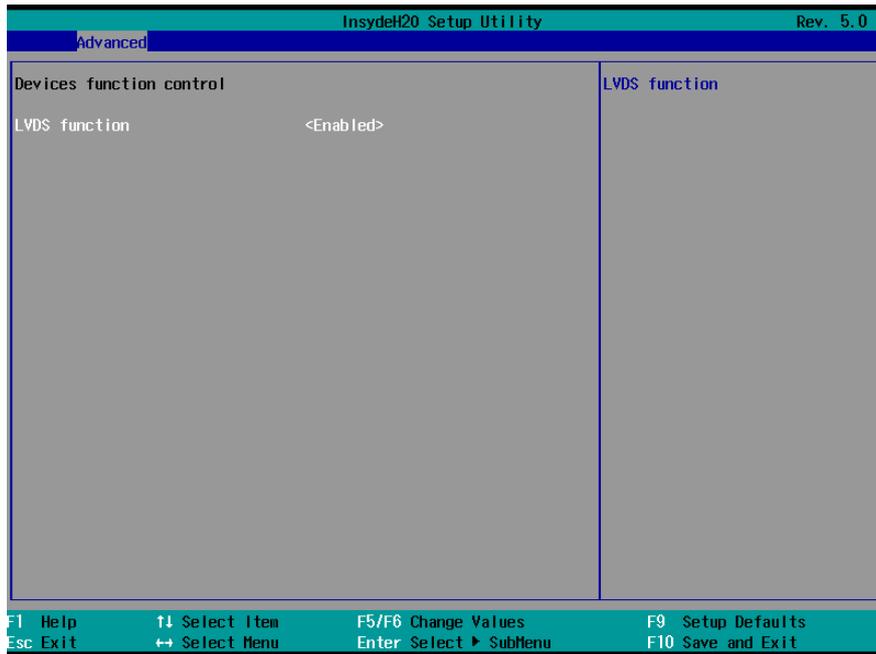
# EQM-BSW

## 3.6.2.6 Brightness Control



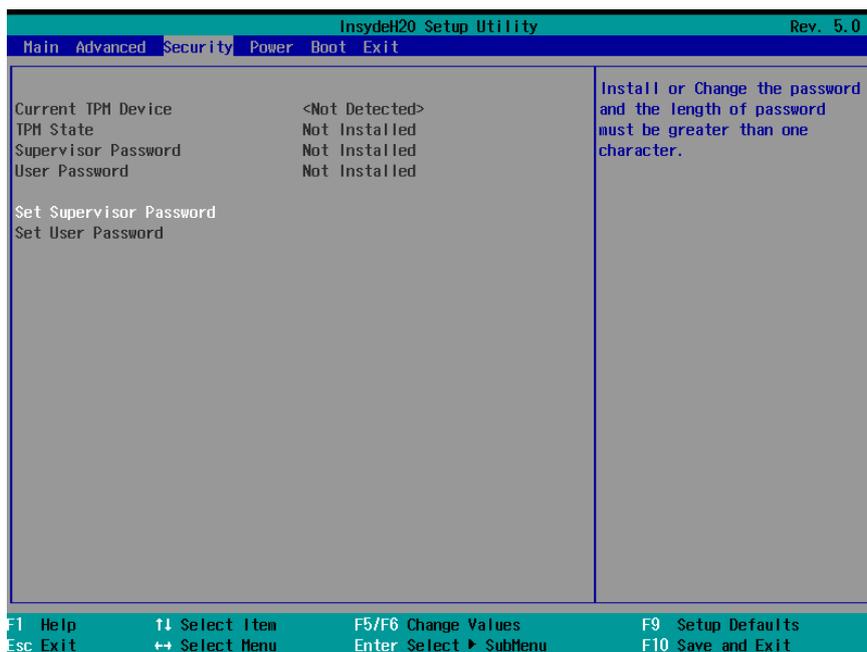
| Item                                 | Options  | Description                      |
|--------------------------------------|--|----------------------------------|
| <b>Backlight brightness</b>          | 0%<br>25%<br>50%<br>75%<br>100% <b>[Default]</b>                                       | Backlight brightness percentage. |
| <b>LVDS Back Light PWM Frequency</b> | 200 <b>[Default]</b><br>300<br>400<br>500<br>700<br>1k<br>2k<br>3k<br>5k<br>10k<br>20k | LVDS Back Light PWM Frequency.   |

### 3.6.2.7 Device function Control



| Item          | Options                      | Description                                    |
|---------------|------------------------------|--|
| LVDS function | Enabled[Default]<br>Disabled | Enable or Disable LVDS panel display function. |

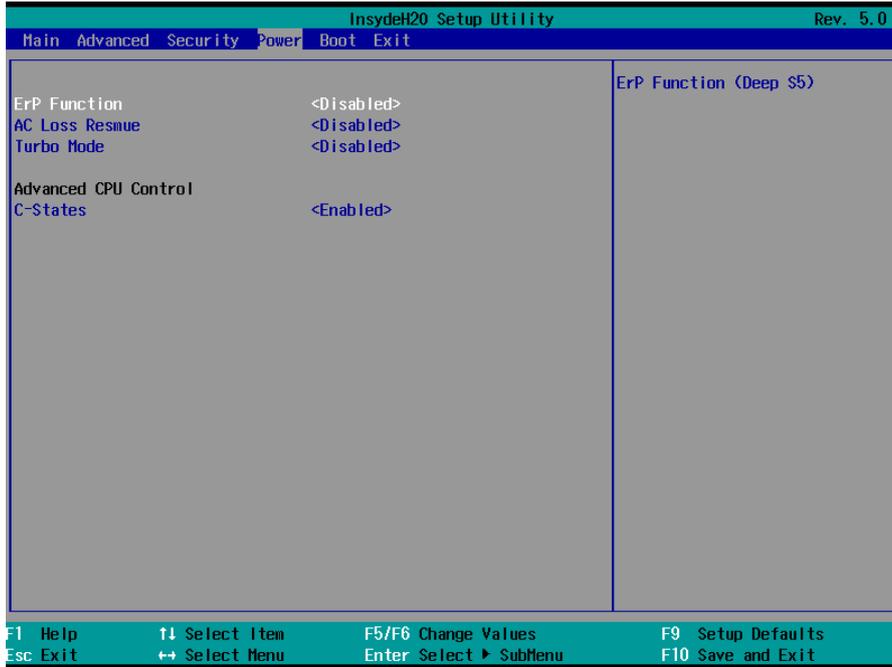
### 3.6.3 Security



| Item                    | Description  |
|-------------------------|--|
| Set Supervisor Password | Set Supervisor Password. Install or Change the password and the length of password must be greater than on character |

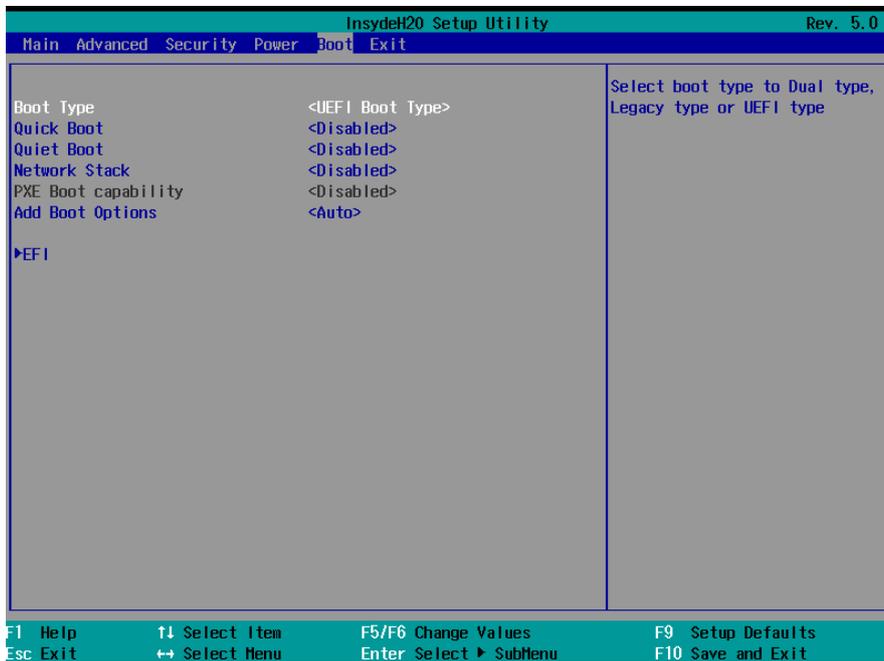
# EQM-BSW

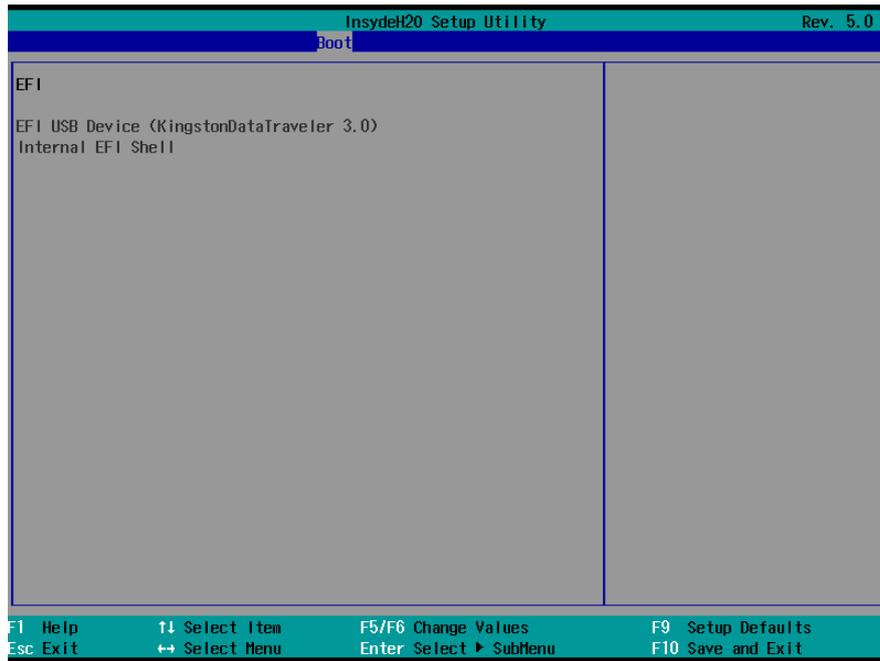
## 3.6.4 Power



| Item           | Option                       | Description  |
|----------------|------------------------------|--|
| Erp Function   | Disabled[Default]<br>Enabled | ErP Function (Deep S5).                                  |
| AC Loss Resume | Disabled[Default]<br>Enabled | AC Loss Resume setting.                                  |
| Turbo Mode     | Disabled[Default]<br>Enabled | Enable processor Turbo Mode(requires EMTTM enabled too). |
| C-States       | Disabled<br>Enabled[Default] | Enable processor idle power saving states (C-States).    |

## 3.6.5 Boot

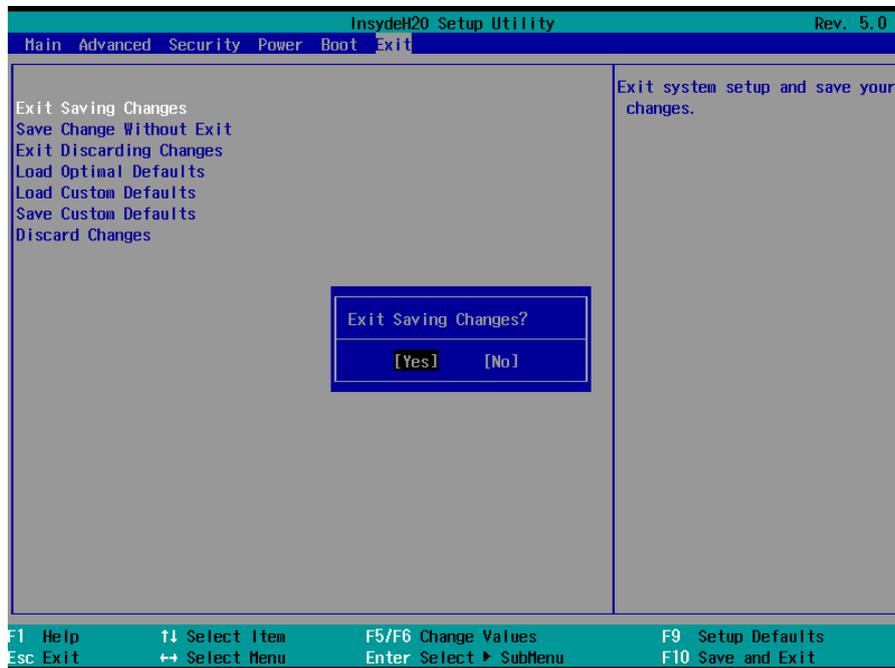
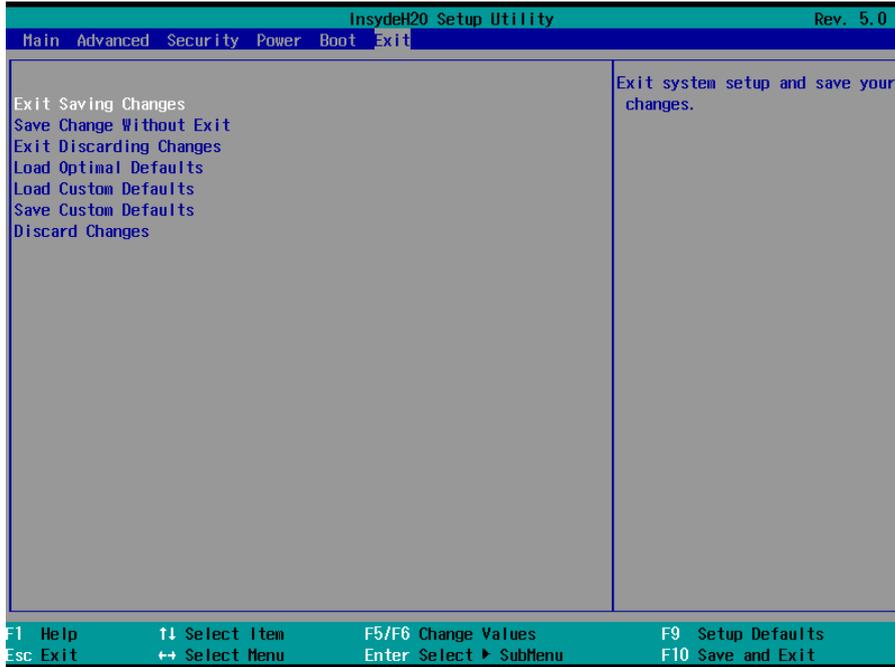




| Item                    | Option                                      | Description  |
|-------------------------|---|--|
| <b>Boot Type</b>        | Legacy Boot Type<br>UEFI Boot Type[Default] | Select boot type to Legacy type or UEFI type.  |
| <b>Quick Boot</b>       | Disabled[Default]<br>Enabled                | Allows InsydeH20 to skip certain tests while booting. This will decrease the time needed to boot the system. |
| <b>Quiet Boot</b>       | Disabled[Default]<br>Enabled                | Disables or enables booting in Text Mode.  |
| <b>Network Stack</b>    | Disabled[Default]<br>Enabled                | Network Stack Support: Windows 8 BitLocker Unlock UEFI IPv4/ IPv6 PXE Legacy PXE OPROM.                      |
| <b>Add Boot Options</b> | First<br>Auto[Default]                      | Position in Boot Order for Shell, Network and Removables.  |

# EQM-BSW

## 3.6.6 Exit



### 3.6.6.1 Exit Saving Changes

Exit system setup and save your changes.

### 3.6.6.2 Save Change Without Exit

Save your changes and without exiting system.

### 3.6.6.3 Exit Discarding Changes

Exit system setup and without saving your changes.

**3.6.6.4 Load Optimal Defaults**

Load Optimal Defaults.

**3.6.6.5 Load Custom Defaults**

Load Custom Defaults.

**3.6.6.6 Save Custom Defaults**

Save Custom Defaults.

**3.6.6.7 Discard Changes**

Discard Changes.

# 4. Drivers Installation

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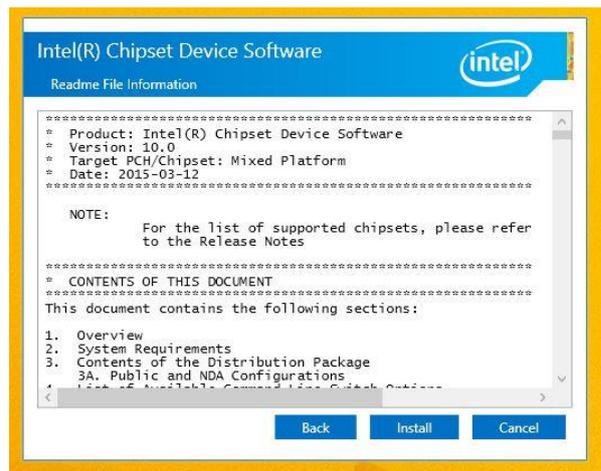
**Note:** Installation procedures and screen shots in this section are for your reference and may not be exactly the same as shown on your screen.

## 4.1 Install Chipset Driver

Insert the Supporting DVD-ROM to DVD-ROM drive, and it should show the index page of Avalue's products automatically. If not, locate Index.htm and choose the product from the menu left, or link to `\Driver_Chipset\Intel\EQM-BSW`.



**Note:** The installation procedures and screen shots in this section are based on Windows 8.1 operation system. If the warning message appears while the installation process, click Continue to go on.



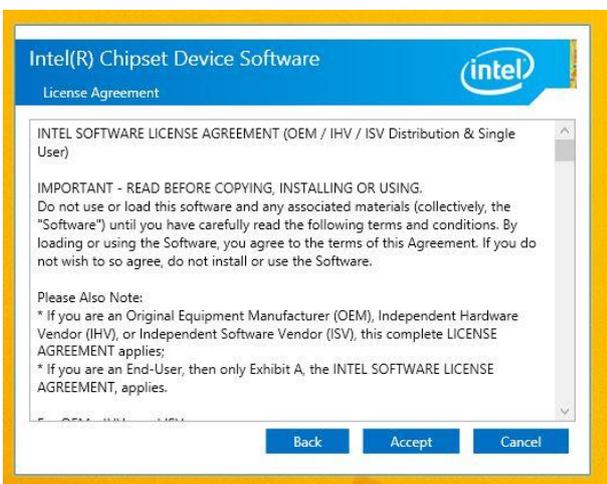
**Step 3. Click Install.**



**Step1. Click Next.**



**Step 4. Click Finish to complete setup.**



**Step 2. Click Accept.**

## 4.2 Install TXE Driver

Insert the Supporting DVD-ROM to DVD-ROM drive, and it should show the index page of Avalue's products automatically. If not, locate Index.htm and choose the product from the menu left, or link to `\\Utility\EQM-BSW_TXE`.



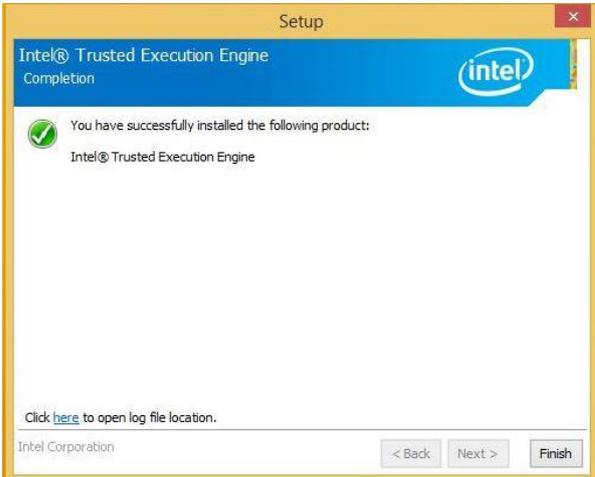
**Note:** The installation procedures and screen shots in this section are based on Windows 8.1 operation system. If the warning message appears while the installation process, click Continue to go on.



**Step 3.** Click **Next** to continue installation.



**Step1.** Click **Next** to start installation.



**Step 4.** Click **Finish** to complete setup.



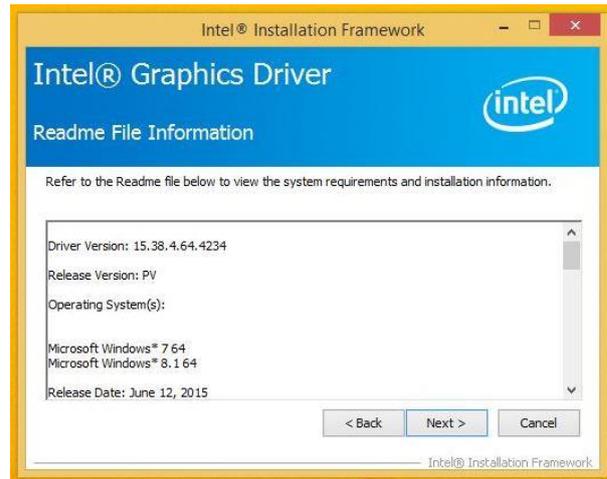
**Step 2.** Click **Next**.

## 4.3 Install VGA Driver

Insert the Supporting DVD-ROM to DVD-ROM drive, and it should show the index page of Avalue's products automatically. If not, locate Index.htm and choose the product from the menu left, or link to \VGA\EQM-BSW.



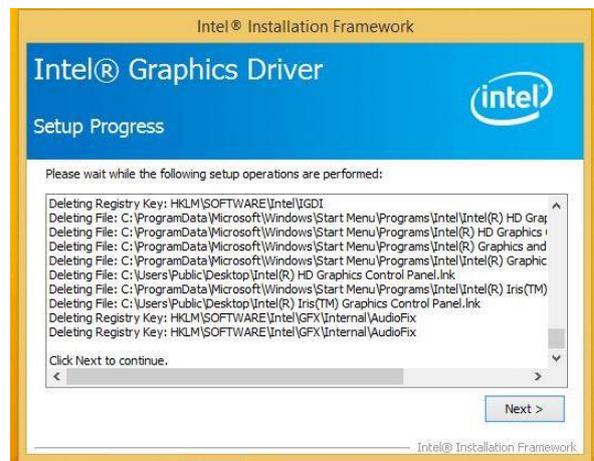
**Note:** The installation procedures and screen shots in this section are based on Windows 8.1 operation system.



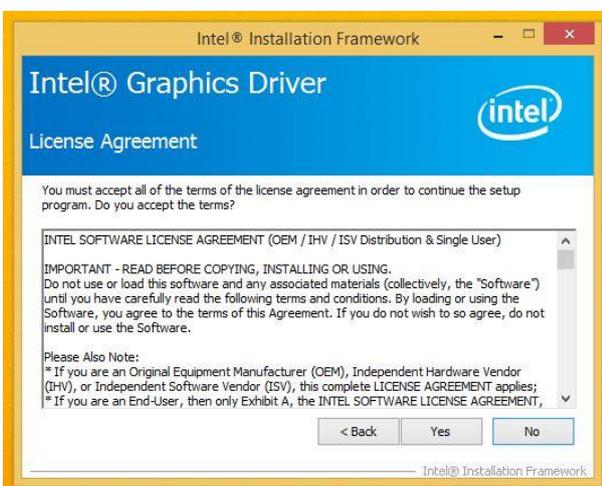
**Step 3. Click Next.**



**Step 1. Click Next** to continue installation.



**Step 4. Click Next.**



**Step 2.**  
Click **Yes** to accept license agreement.



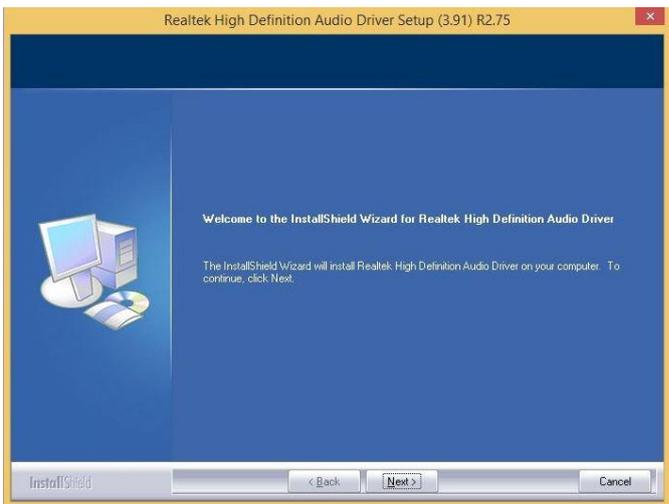
**Step 5. Click Finish** to complete setup.

## 4.4 Install Audio Driver (For Realtek ALC233)

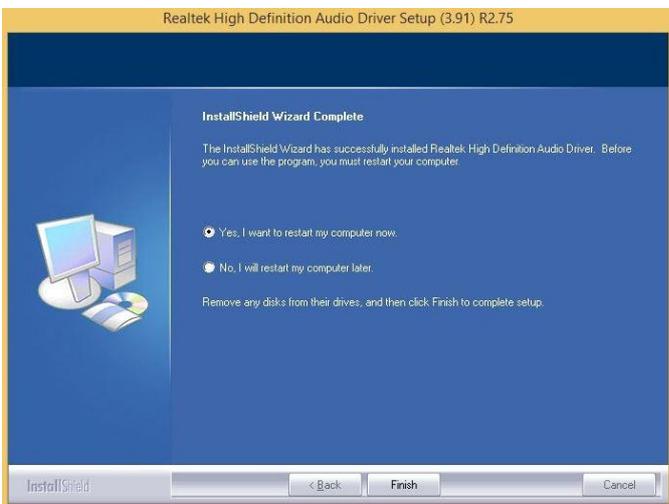
Insert the Supporting CD-ROM to CD-ROM drive, and it should show the index page of Avalue's products automatically. If not, locate Index.htm and choose the product from the menu left, or link to **\\Driver\_Audio\Realtek\ALC233\EQM-BSW\_Audio**.



**Note:** The installation procedures and screen shots in this section are based on Windows 8.1 operation system.



**Step 1.** Click **Next** to continue setup.



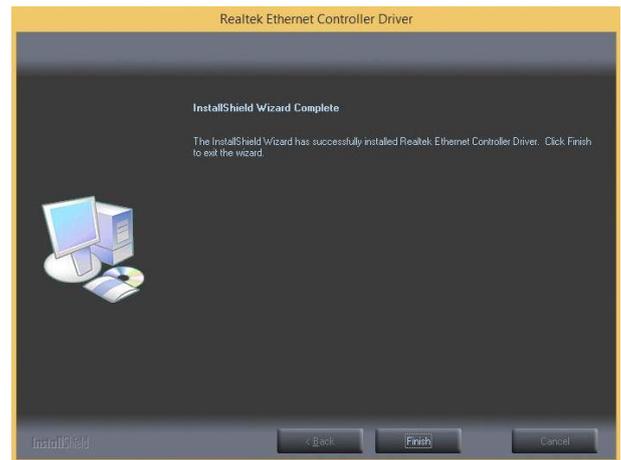
**Step 2.** Click **Finish** to complete the setup.

## 4.5 Install Ethernet Driver

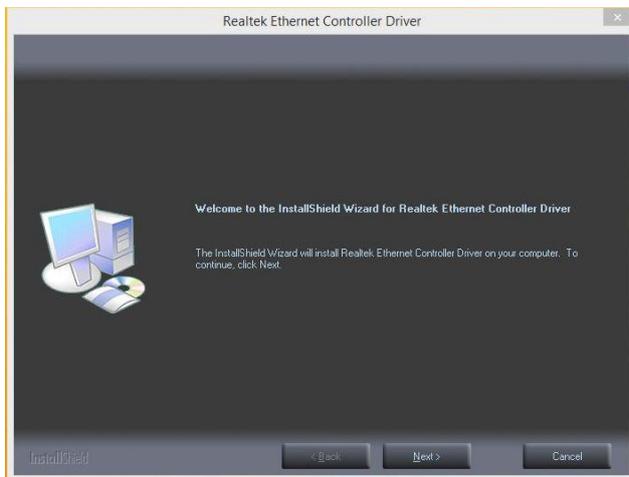
Insert the Supporting DVD-ROM to DVD-ROM drive, and it should show the index page of Avalue's products automatically. If not, locate Index.htm and choose the product from the menu left, or link to `\\Driver_Gigabit\Realtek\RTL8119\EQM-BSW_LAN`.



**Note:** The installation procedures and screen shots in this section are based on Windows 8.1 operation system.



**Step 3.** Click **Finish** to complete the setup.



**Step 1.** Click **Next**.



**Step 2.** Click **Install** to proceed.

## 4.6 Install Serial IO Driver

Insert the Supporting CD-ROM to CD-ROM drive, and it should show the index page of Avalue's products automatically. If not, locate Index.htm and choose the product from the menu left, or link to **Utility\EQM-BSW\_Serial IO**.



**Note:** The installation procedures and screen shots in this section are based on Windows 8.1 operation system.



**Step 1.** Click **Next** to continue setup.

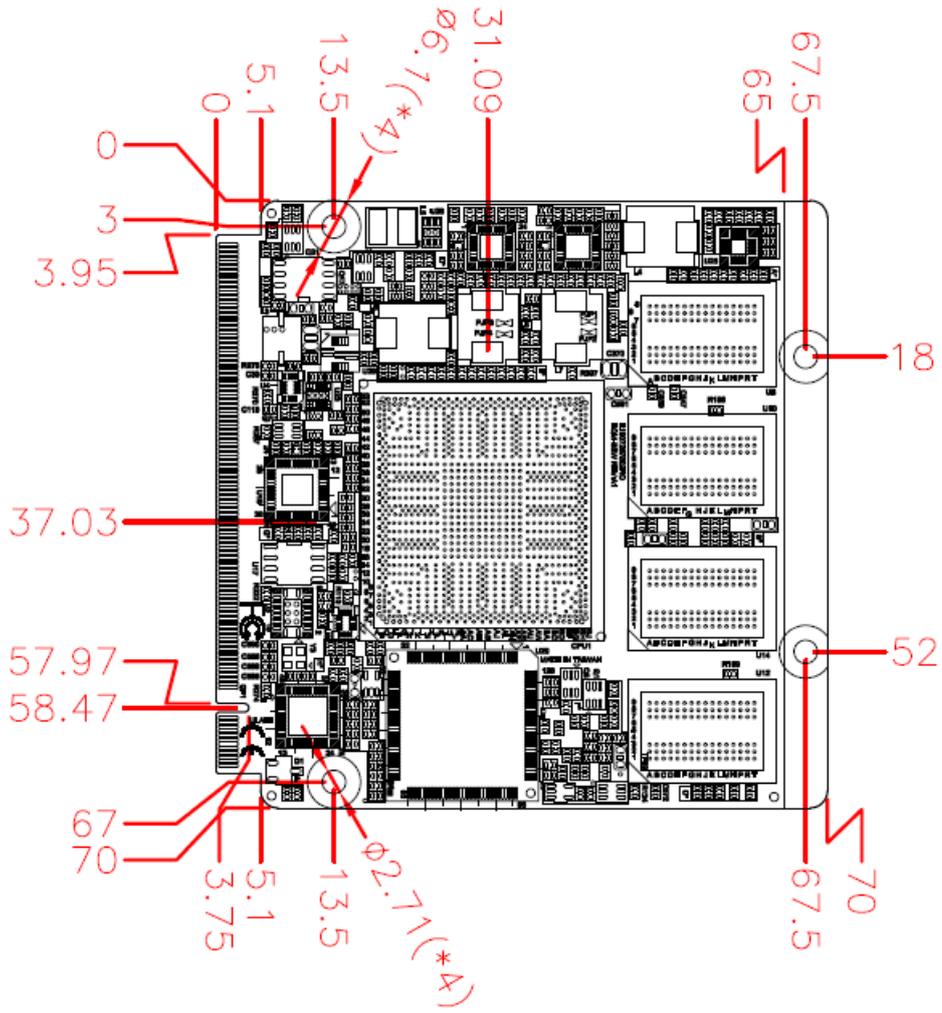


**Step 2.** Click **Finish** to complete the setup.

# 5. Mechanical Drawing

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# EQM-BSW



Unit: mm

